



Chino Basin Water  
Conservation District

# 2010 Hazard Mitigation Plan Update

Approved by the Board of Directors: November 08, 2010



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2010 Hazard Mitigation Plan Update  
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**Planning Team and Promulgation Authority**

This Hazard Mitigation Plan for Chino Basin Water Conservation District:

**Promulgation Authority**

The following Promulgation Authorities have adopted this Hazard Mitigation Plan (HMP) on November 08, 2010:

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: Gilbert Aldaco

Title: Director

Organization: Chino Basin Water Conservation District

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: Henry DeHaan Jr.

Title: Treasurer

Organization: Chino Basin Water Conservation District

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: Paul Hofer

Title: Vice President

Organization: Chino Basin Water Conservation District

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: Terry King

Title: Director

Organization: Chino Basin Water Conservation District

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: Kati Parker

Title: President

Organization: Chino Basin Water Conservation District

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: John Thomas Reddick

Title: Director

Organization: Chino Basin Water Conservation District

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: Geoffrey Vanden Heuvel

Title: Director

Organization: Chino Basin Water Conservation District

**Planning Team**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: Juan Zamora

Title: Conservation Specialist III

Organization: Chino Basin Water Conservation District

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: Eunice Ulloa

Title: General Manager

Organization: Chino Basin Water Conservation District

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: Debby Figoni

Title: Conservation Specialist / Education Coordinator

Organization: Chino Basin Water Conservation District

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: Shane Kemp

Title: Conservation Technician

Organization: Chino Basin Water Conservation District

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: Ann Macy

Title: Administrative Assistant

Organization: Chino Basin Water Conservation District

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: David Schroeder

Title: Conservation Specialist

Organization: Chino Basin Water Conservation District

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: Cheryl Vermette

Title: Conservation Technician

Organization: Chino Basin Water Conservation District

Approved by:

The Chino Basin Water Conservation District Board of Directors approved the Draft HMP on November 08, 2010. See meeting minutes for the Board Meeting. Pending acceptance by CAL EMA and FEMA the Chino Basin Water Conservation District board will adopted this Final Draft of the HMP as part of the San Bernardino Operational Area Multi-Jurisdictional Multi Hazard Mitigation Plan.

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# **Section 1: Introduction**

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## **1.1 Purpose of the Plan**

Emergencies and disasters cause death or leave people injured or displaced, cause significant damage to our communities, businesses, public infrastructure and our environment, and cost tremendous amounts in terms of response and recovery dollars and economic loss.

Hazard mitigation reduces or eliminates losses of life and property. After disasters, repairs and reconstruction are often completed in such a way as to simply restore to pre-disaster conditions. Such efforts expedite a return to normalcy; however, the replication of pre-disaster conditions results in a cycle of damage, reconstruction, and repeated damage. Hazard mitigation ensures that such cycles are broken and that post-disaster repairs and reconstruction result in a reduction in hazard vulnerability.

While no one can prevent disasters from happening, their effects can be reduced or eliminated through a well-organized public education and awareness effort, preparedness and mitigation. For those hazards which cannot be fully mitigated, the Chino Basin Water Conservation District must be prepared to provide efficient and effective response and recovery.

## **1.2 Authority**

The Disaster Mitigation Act of 2000 (DMA 2000), Section 322 (a-d) requires that local governments, as a condition of receiving federal disaster mitigation funds, have a mitigation plan that describes the process for identifying hazards, risks, and vulnerabilities, identify and

prioritize mitigation actions, encourage the development of local mitigation and provide technical support for those efforts. This mitigation plan serves to meet those requirements.

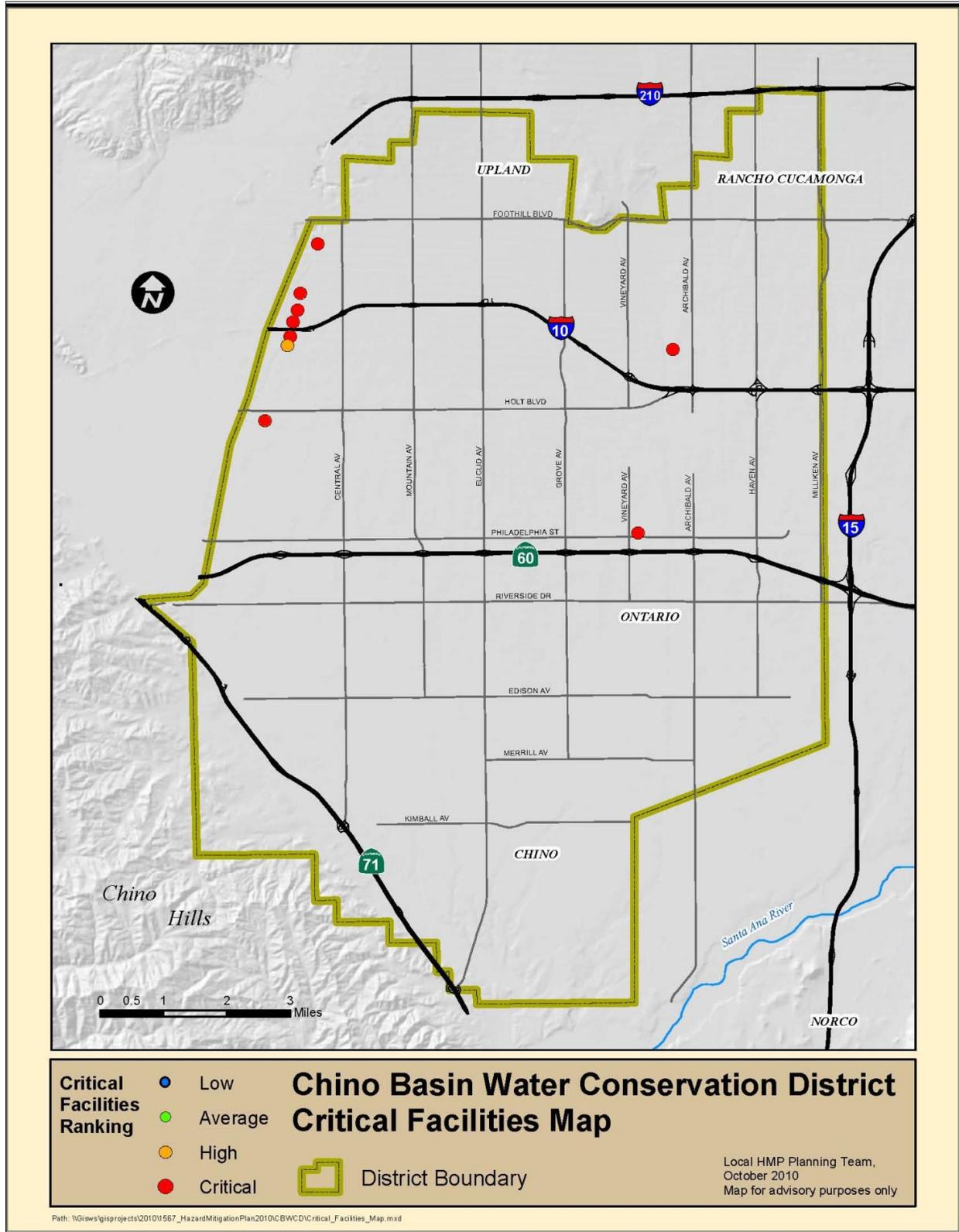
### **1.3 Community Profile**

Chino Basin Water Conservation District (CBWCD) is an independent special district that operates under the authority of Division 21 of the California Water Code. The District, established in 1949, provides education and outreach to the community. CBWCD is a water conservation district, and does not provide water to the community. The purpose of the district is to manage the replenishment of groundwater basins and provide water conservation education and outreach to the community. The District's mission is:

*“The Chino Basin Water Conservation District is a public agency whose goal is the protection of the Chino Groundwater Basin in order to guarantee that current and future water needs will be met. The Basin is protected by the capture and percolation of waters through the District's network of channels, basins and spreading grounds. Water conservation education is provided to the individuals and organizations within the service area to further promote the efficient use of our water resources.”*

The communities to which the District provides services includes portions of the cities of Chino, Chino Hills, Montclair, Ontario, Rancho Cucamonga, and Upland.

**Figure 1-1: Map of District Facilities**



### **1.3.1 Physical Setting**

The Chino Basin Water Conservation District's service area lies between 700 and 1,250 feet elevation above mean sea level, rising gently northward toward the San Gabriel Mountains, approximately six miles from the northernmost boundary of the District.

The Santa Ana River, located to the south of the District, is the largest river in Southern California. Its drainage basin spans four counties, which is home to more than 4 million people, including portions of San Bernardino County, Riverside County, Orange County and Los Angeles County. It begins high in the San Bernardino Mountains and flows over 100 miles southwesterly where it discharges to the Pacific Ocean in Huntington Beach. The Santa Ana River watershed, which receives an average annual rainfall of about 13 inches, covers over 2,650 square miles of widely varying terrain.

Under natural conditions, the river would be an intermittent stream with high run-off in the winter and spring seasons, and little or no flow in the summer months. In more recent years, the natural river supply has been, and continue to be, supplemented by highly treated effluent flows from wastewater treatment plants resulting in a perpetual stream of water that courses from the City of San Bernardino to the coastal plain of Orange County. As the river and its tributaries flow toward the sea, the water percolates into the sands and gravels of the stream system, recharging 29 groundwater basins that comprise the watershed. One of these basins is the Chino Groundwater Basin. This groundwater is used for municipal, industrial and agricultural uses.

The climate of the area overlying the service boundaries of the Chino Basin Water Conservation District is typical of inland non-mountainous Southern California communities with precipitation averaging approximately 15 to 16 inches per year, occurring mostly in the winter months (November through March) and highly variable from year to year. Temperatures range from 30 degrees to 60 degrees Fahrenheit in the winter and 50 to 100 degrees in the summer. Deviation from the average annual precipitation was experienced in 1998 due to El Nino conditions for the western United States. The last significant drought occurred in 1987-1992.

### **1.3.2 History**

Since its establishment in 1949, the Chino Basin Water Conservation District has actively protected and replenished the Chino Groundwater Basin with natural area rainfall and storm water discharge from the San Gabriel Mountains. The District's service area includes the cities of Chino, Chino Hills, Montclair, Ontario, Rancho Cucamonga, and Upland.

Recognizing that even in years of normal rainfall its service area depends heavily on groundwater, the Chino Basin Water Conservation District's network of basins and spreading grounds capture runoff to percolate into the resulting groundwater naturally available. The District believes that conservation will increasingly be necessary as an effective means of coping with the increased demand. The certainty of intermittent regional droughts occurring in the future demands the increased use of water conservation as a vital tool in the protection of our water resources.

Chino Basin Water Conservation District's commitment to conservation is two-pronged, consisting of the use percolation basins and spreading grounds to increase supply, and the commitment to water conservation education to diminish demand. The use of percolation basins and spreading grounds to replenish the Chino Basin Aquifer has made the District one of the first agencies in California to take a pro-active role in region-wide water conservation. The water conservation education approaches that have been undertaken at the District address individuals, school districts, organizations, and municipalities within its service area.

### **1.3.3 Demographics**

According to data from the 2000 Federal Census, the population within the District service area was approximately 396,114. While the District does not provide tangible services to the community such as water, residents within the District boundaries are eligible for the water conservation programs and other services, such as use of the District's facilities and Demonstration Garden. Records and details relating to the demographics of the population within the District boundaries are not kept by the District. (Refer to San Bernardino County Multi-Jurisdictional Plan).

### **1.3.4 Existing Land Use**

Land use data for each City located within the District's boundaries are not kept by the District. Land use data is reported by each city. As a Special District CBWCD works with water providers, but does not dictate any future growth. Among other purposes, in 1949 the Chino Basin Water Conservation District was formed to protect the water supplies locally available to the Chino Groundwater Basin. Since most irrigated agriculture and urban development was

occurring within the western half of the Chino Basin, the Conservation District's initial Water Conservation Plans were developed in response to the increased use of groundwater and over-draft occurring in that area. In order to maximize the capture and recharge of stormwater runoff to the greatest economic advantage of its constituents, the District's engineers determined that the three factors having the greatest influence over the "sitting" of its recharge basins were, "location, location, location." That is to say, the recharge basins had to be located where the largest flows of the best quality and most reliable sources of stormwater were found. Further, they had to be located where the surface and underlying soils were the most conducive for percolating captured stormwater, where there were no known pollution sources, and where the greatest over-draft was taking place. For economic reasons, the recharge sites had to be large undeveloped parcels and had to be located near the flood channels of existing streams. Finally, they had to be located such that area producers of groundwater had the opportunity to recapture and use the groundwater before it became "rising water" in the Santa Ana River. Interestingly, for the most part these early guidelines still apply for the location and construction of new recharge sites.

### **1.3.5 Development Trends**

The District does not influence or have any impact on growth in the region; therefore CBWCD does not keep records of this information. Because of this, the District does not have any data on the amount and location of growth that has occurred since 2005. Additionally, the District is not involved in development or planning for the cities of which fall within CBWCD boundaries; these activities are dictated with respect to each City within the District's boundaries.

In 2004-2005 the District entered into an agreement with the San Bernardino Flood Control District, the Inland Empire Utilities Agency, and the Watermaster for the Chino Groundwater Basin that, among other things, is intended to maximize the capture and recharge of stormwater. The guiding document for these agencies titled “The Optimum Basin Management Plan” identifies that new Recharge Basin sites will be located and developed in areas where and if the need arises. Further, the Conservation District is presently giving serious thought to the purchase of property for another recharge basin that will make use of the available water supplies conveyed by the Cucamonga Creek Channel. This work will be coordinated with the parties to the previously mentioned agreement should the District determine to move forward with its plans for a new Recharge Basin.

## **Section 2: Jurisdiction Information**

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### **2.1 Adoption by Local Governing Body**

This 2010 Hazard Mitigation Plan (HMP) has been adopted by the Chino Basin Water Conservation District Board of Directors on 11/08/2010. See meeting minutes in Appendix A. The Chino Basin Water Conservation District adopted this local HMP as part of the San Bernardino Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan.

### **2.2 Promulgation Authority**

The seven-member Board of Directors consists of members within the community who are elected at large. The Board of Directors serves four-year terms, with terms overlapping. The Board of Directors develops the policies that govern the District. The District's General Manager is appointed by the Board of Directors and oversees the day-to-day operations of the District. The public is invited to join the District's Board meetings, which are held at 11:00 am on the second Monday of each month at the District office.

### **2.3 Primary Point of Contact**

The Point of Contact for information regarding this plan is:

Juan Zamora  
Conservation Specialist III  
Chino Basin Water Conservation District  
4594 San Bernardino St.  
Montclair, CA 91763  
909-267-3224 (Direct)  
[jzamora@cbwcd.org](mailto:jzamora@cbwcd.org)

## **Section 3: Planning Process**

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The purpose of this section is to document the planning process that was taken to review, revise, and update the 2005 HMP. A comprehensive description of the planning process not only informs citizens and other readers about how the plan was developed, but also provides a permanent record of how decisions were reached so it can be replicated or adapted in future plan updates. An integral part of the planning process is documentation of how the public was engaged through the process.

This HMP was completed with the coordination and involvement in the San Bernardino Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan Update planning efforts. The update process was done with the assistance of a local Planning Team, consisting of members within the District who had a vested interest and were appropriate for the level of knowledge required for the local HMP.

This section includes a list of the planning team members, a summary of the meetings held, coordination efforts with surrounding communities/groups, and all Public Outreach efforts.

The Districts Hazard Mitigation Planning Team was chosen based on each individual's background, education, time with the District, and knowledge of the HMP process. The team brought together individuals with backgrounds in geography, hydrology, geology, environmental science, etc. The team leader was chosen based on his/her ability to guide the team as well as their knowledge of Hazard Mitigation Planning.

After the formation of the team, the first step was to familiarize the team with the District's 2005 Hazard Mitigation Plan. Each team member read through the plan section by section to identify

areas that needed to be updated as well as identify projects that have been completed and new hazards and mitigation strategies for the District. The Team also reviewed the District's Strategic Plan, Safety Plan, and the Standard Operating Procedures Manual. The team visited each site to get an idea of necessary mitigation projects as well as to inspect past mitigation measures.

The team used the STAPLEE criteria in the State and Local Mitigation Planning How-to-Guide as a basis for identifying mitigation actions. These worksheets were only used as a reference and therefore not included in the appendix of this plan. The team also used the worksheet job aids for sections two and three of the plan.

### **3.1 Preparing for the Plan**

A District planning team was formed to assist in the development of the plan. The planning team consisted of the District's General Manager, Conservation Specialist III, Conservation Specialist II, Conservation Specialist/Education Coordinator, Conservation Technicians and the District's Administrative Assistant. This team met every one to two weeks for the duration of the plan's development.

The District's local planning team reviewed the existing 2005 HMP and Crosswalk to determine which sections of the plan needed to be updated. Once the planning team reviewed these documents, a member of the team was assigned a section of the plan based on the individual member's areas of expertise. Team members added any new hazards and/or mitigation program information, and recommendations. The team met on a monthly basis to provide updates and receive input from other members of the team. As each member completed their section, the team got together to go over any changes and revise the plan.

Included at the bottom of this section are tables showing the meetings attended by members of the HMP team as well as the District's attempts to involve the public's participation in updating the plan.

**Table 3.1 – 1: List of Meetings attended by HMP Team Members**

Date	Activity	Location
10 June 2010	Mitigation Plan Kick off Meeting with County of San Bernardino OES to discuss how multi-jurisdictional, multi-functional HMP Update 2010 Process to work. See list of attendees	City of Ontario Police Department, 2500 S. Archibald Avenue, Ontario, CA 91761
12 August 2010	Mitigation Plan Meeting - Planning team held meeting at District offices to review mitigation goals and objectives and potential mitigation projects. See list of attendees.	City of Ontario Police Department, Community Room #1, 2500 S. Archibald Avenue, Ontario, CA 91762
08 August 2010	San Bernardino County Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan 2010 Update Stakeholders Meeting. Description: Conference call to discuss repetitive loss and severe repetitive loss properties.	Chino Basin Water Conservation District 4594 San Bernardino St. Montclair, CA 91763
01 September 2010	Hazard Mitigation Plan 2010 Update Planning Team Meeting. MVWD Planning Team Meeting to discuss public involvement/outreach, risk assessment, and milestone dates. Key representatives from City of Montclair and Chino Basin Water Conservation District also attended.	Monte Vista Water District, 10575 Central Ave. Montclair, CA 91763
15 September 2010	Members of the District's planning team met at the District office to review facilities and assessed values.	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91763
16 September 2010	Members of the District's planning team met at the District office to Update the team on HMP progress. Went over milestone dates.	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91763
23 September 2010	San Bernardino County Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan 2010 Update Stakeholders Meeting. Description: Conference call to discuss "courtesy review" by Cal-EMA	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91763
28 September 2010	Members of the District's planning team met at the District office to review the first draft of the HMP, HMP Board Agenda Item for October 2010 Board Meeting and discuss milestone dates.	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91763
10 November 2010	Members of the District's planning team met at the District office to review the first draft of the HMP, obtain information, finalize HMP report for submittal, and discuss milestone dates.	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91763

02 December 2010	San Bernardino County Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan 2010 Update Stakeholders Meeting. Description: Conference call to discuss updated guidance, hazard maps, upcoming completed HMP's to the portal for ICF review.	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91764
12 January 2011	Members of the District's planning team met at the District office to go over comments made by Andy Petrow on the First Draft of the HMP submitted in December 2010.	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91764

**Table 3.1 – 2:** List of Public Outreach Attempts

Date	Activity	Location
October 11, 2010	Public was welcome to comment on the HMP at Chino Basin Water Conservation District's October Board of Directors Meeting	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91763
November 8, 2010	Public was welcome to comment on the HMP at Chino Basin Water Conservation District's November Board of Directors Meeting	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91764
September 2, 2010	Joint Press Release with Monte Vista Water District and the City of Montclair announcing the HMP process	Advertised in the lobby and on the websites of each of the Districts: CBWCD, Monte Vista Water District, and the City of Montclair
October 23, 2010	Chino Basin Water Conservation District's annual Landscape and Water Conservation Fair. Members of the community were able to find information on the District HMP	The HMP process was advertised at Chino Basin Water Conservation District's welcome table at the District's facility located at 4594 San Bernardino St. Montclair, CA 91764
September 11, 2010	CBWCD staff announced that the District is working on the HMP and are seeking public comments/involvement at the September 11 residential workshop	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91764
September 25, 2010	CBWCD staff announced that the District is working on the HMP and are seeking public comments/involvement at the September 25 residential workshop	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91765
October 2, 2010	CBWCD staff announced that the District is working on the HMP and are seeking public comments/involvement at the September 25 residential workshop	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91766



### **3.1.1 Planning Team**

The 2010 HMP Update local planning team for the District was compiled, authored and reviewed by the following members:

#### **Juan Zamora, Conservation Specialist III**

Description of Involvement: Juan managed the current Hazard Mitigation Plan efforts for the District. He assembled the planning team, coordinated the team meetings, and participated in planning meetings, making sure the project met the required deadlines.

#### Contact Information:

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4594 San Bernardino St.  
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909-267-3224  
[jzamora@cwcd.org](mailto:jzamora@cwcd.org)

#### **Eunice Ulloa, General Manager**

Description of Involvement: Eunice's extensive knowledge of the Chino Basin and her involvement as the Chairman of the Chino Redevelopment Agency, as well being the City of Chino's representative to the Baldy View Public & Private Coalition (CLOUT), the Santa Ana Watershed Advisory Council and the Southern California Water Committee makes her uniquely qualified member of the team.

#### Contact Information:

Chino Basin Water Conservation District  
4594 San Bernardino St.  
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909-267-3220  
[eulloa@cbwcd.org](mailto:eulloa@cbwcd.org)

**Debby Figoni, Conservation Specialist/Education Coordinator**

Description of Involvement: Debby has been working in the public outreach and education field for seventeen years. She has assisted the District in getting the message about the updated 2010 HMP to residents and businesses within the District’s boundaries.

Contact Information:

Chino Basin Water Conservation District  
4594 San Bernardino St.  
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909-267-3230  
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**Shane Kemp, Conservation Technician**

Description of Involvement: Shane’s experience in the public sector along with his Bachelor’s Degree in Public Administration and certificate in Water Utility Science made him an asset to the team. Shane attended meetings, obtained district boundary maps and was an integral part of the review process.

Contact Information:

Chino Basin Water Conservation District  
4594 San Bernardino St.  
Montclair, CA 91763  
909-267-3225  
[skemp@cbwcd.org](mailto:skemp@cbwcd.org)

**Ann Macy, Administrative Assistant**

Description of Involvement: Ann has an excellent working knowledge of the district; she keeps and updates the District’s asset account and other financial records. Ann is a uniquely qualified member of the District’s Hazard Mitigation Plan Team, providing expertise in cost estimating and assisting in the mitigation planning process.

Contact Information:

Chino Basin Water Conservation District  
4594 San Bernardino St.  
Montclair, CA 91763  
909-267-3222  
[amacy@cbwcd.org](mailto:amacy@cbwcd.org)

**David Schroeder, Conservation Specialist**

Description of Involvement: As the District's Conservation Specialist, Dave is responsible for supervising and scheduling the maintenance efforts necessary to keep the District's facilities, structures, and other works in proper operating condition. Dave's primary duties associated with the District's Hazard Mitigation Plan have been to evaluate and assess the potential for damage to the District's facilities from natural hazards.

Contact Information:

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4594 San Bernardino St.  
Montclair, CA 91763  
909-267-3223  
[dschroeder@cbwcd.org](mailto:dschroeder@cbwcd.org)

**Cheryl Vermette, Conservation Technician**

Description of Involvement: Cheryl was very instrumental in putting together the HMP Report. She has a degree in Environmental Studies and a Certificate in Planning which made her a well qualified member of the team. Cheryl attended meetings, gathered information from other members and performed data entry and lay out of the report.

Contact Information:

Chino Basin Water Conservation District  
4594 San Bernardino St.  
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909-267-3226  
[cvermette@cbwcd.org](mailto:cvermette@cbwcd.org)

### **3.2 Coordination with other Jurisdictions, Agencies, and Organizations**

The District worked closely with the San Bernardino County Fire Department Office of Emergency Services (OES) in coordinating the update of the *San Bernardino County Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan*. The current *San Bernardino County Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan* process consists of information from 55 local HMPs, which are included as an annex to the County's Operational Area plan. The 55 participants include all 24 incorporated cities and towns, 30 special districts, and the unincorporated county. The District is a participating special district within the San Bernardino County OES *Multi-Jurisdictional Multi-Hazard Mitigation Plan*.

The District participated in meetings to coordinate and receive support for their HMP with the County's Multi-Jurisdictional Multi-Hazard Mitigation Plan. The support included receiving technical expertise, resource material and tools, not only to expedite the HMP update process, but also to ensure that the updates are in compliance with federal requirements of the program. The tools, resource material, and other project related information were maintained on a project portal (<https://tmsprojects.icfi.com/sbhmpupdate/default.aspx>) to ensure the same information is available to all participants.

The District also interacted with local water districts, cities, and the County of San Bernardino, which proved to be valuable in the development of mitigation projects for the plan. All the water agencies within the County of San Bernardino met to collectively discuss necessary decisions for the HMP and ideas to streamline our resources.

### **3.3 Public Involvement/Outreach**

Efforts were made to solicit public input during the planning process at two public meetings, which were held during the formation of the plan: on October 11, 2010 and on November 08, 2010. A joint Press Release between Chino Basin Water Conservation District, Monte Vista Water District and The City of Montclair was sent out to the local Newspaper on Sept. 2, 2010. The community was also informed of the HMP update at the District's Annual Water Conservation Fair, held on October 23, 2010. CBWCD staff announced that the District is working on the HMP and are seeking public comments/involvement at three of the residential classes offered at the District in September 2010 and October 2010. Citizens could also access the District's website ([www.cbwcd.org](http://www.cbwcd.org)) to get updates or provide input to the HMP Update. An announcement was also posted throughout the process on the bulletin board located in the lobby at the District's headquarters located at 4594 San Bernardino St. Montclair, CA. 91763.

Although the District provided many opportunities throughout the planning process for public input, none was received.

Please see **Appendix A** for the details of the public involvement process such as the meeting dates, purpose, agendas, sign-in sheets, minutes, and more.

### **3.4 Assess the Hazard**

This HMP has been developed through an extensive review of available information on hazards, the District's 2005 Hazard Mitigation Plan, engineering drawings, aerial photographs and

available geotechnical and geologic data both from the District and outside sources (for example, California Geological Survey for detailed fault investigation reports).

The assessment of the various hazards was completed by the planning team for the District because they many years of personal experience working for the District and knew the history of past hazardous events.

### **3.5 Set Goals**

To set goals for the updated HMP, the planning team looked at several cities, counties, and state plans to gain an understanding of what is happening in surrounding areas. The planning team used the Districts Strategic Plan as well as the 2005 Hazard Mitigation Plan to identify goals for the 2010 HMP. The Strategic Plan identified the following as goals for the District:

Goals were set by the planning team while keeping the District's mission in mind:

*The Chino Basin Water Conservation District is a public agency whose goal is the protection of the Chino Groundwater Basin in order to guarantee that current and future water needs will be met. The Basin is protected by the capture and percolation of waters through the District's network of channels, basins and spreading grounds. Water conservation education is provided to the individuals and organizations within the service area to further promote the efficient use of our water resources.*

### **3.6 Review and Propose Mitigation Measures**

Again, the District's planning team proposed and reviewed the mitigation measures because they knew the District's mission.

Meetings (both in-person and virtual) were held with the Planning Team to solicit their input and review sections of the HMP. Each meeting focused on specific sections from the 2005 HMP, including the Introduction, Participation Information, Planning Process and Public Involvement, Risk Assessment, Mitigation Strategy, and Plan Maintenance.

### **3.7 Draft the Hazard Mitigation Plan**

The District planning team drafted the 2010 HMP, reviewed and commented before it was finalized. The public was also given several opportunities to comment on the plan before being adopted.

The updated HMPs will be reviewed against a FEMA-designed Crosswalk. The Crosswalk links the federal requirement, the section in the HMP where the information can be found, and a rating as to the level of compliance with the regulation.

### **3.8 Adopt the Plan**

After the Draft HMP was reviewed and finalized by the District's planning team, and pending the approval of FEMA and Cal EMA the 2010 HMP was presented to the District's Board. On 2011, the Chino Basin Water Conservation District Board members voted to adopt the plan as written.

## **Section 4: Risk Assessment**

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The goal of mitigation is to reduce the future impacts of a hazard including property damage, disruption to local and regional economies, and the amount of public and private funds spent to assist with recovery. However, mitigation should be based on risk assessment.

The purpose of this section is to describe the methodology taken to understand the hazards in the District's service area. There are generally four (4) steps in this process: 1) identify and screen the hazards; 2) profile the hazards; 3) inventory the assets; and, 4) estimate losses.

A risk assessment involves measuring the potential loss from a hazard event by assessing the vulnerability of buildings, infrastructure, and people. It identifies the characteristics and potential consequences of hazards, how much of the District could be affected by a hazard, and the impact on District assets. A risk assessment consists of three components: hazard identification, vulnerability analysis, and risk analysis. Technically, these are three different items, but the terms are sometimes used interchangeably.

### **4.1 Hazard Identification**

#### **4.1.1 Hazard Screening Criteria**

The intent of screening the hazards is to prioritize which hazards create the greatest concern to the District. Because the previous process (in 2005) used to rank hazards (Critical Priority Risk Index (CPRI) software) is not being utilized, the alternative approach was to look at the Districts Strategic Plan, other City and County Plans, and use the STAPLEE as a guide to come up with hazards. The process that was implemented is logical and can be universally applied.

#### 4.1.2 Hazard Assessment Matrix

For this 2010 HMP Update, the District is utilizing a non-numerical ranking system for the hazard screening process. This process consists of generating a non-numerical ranking (similar to high, medium, and low) rating for the probability and impact of each screened hazard. For each of the District’s screened hazards,

- For **Probability**, the rating options are: Highly Likely, Likely, or Somewhat Likely
- For **Impact**, the rating options are: Catastrophic, Critical, or Limited
- The hazards are then placed in the appropriate/corresponding box/cell of the corresponding “Hazard Matrix”. The table below is an example of the screening matrix used. As can be seen from the table, the hazards in the “red shaded” boxes are the top ranked hazards. A subset of this group of hazards has been generated too.

**Table 4.1.2-1: Example Hazard Screening Matrix**

	Impact			
		Catastrophic	Critical	Limited
Probability	Highly Likely	Earthquake		Drought Extreme Heat Severe Thunderstorm Winter Storms
	Likely		Flooding Wild Fires	High Winds/Straight Line Winds
	Somewhat Likely			Flash flooding Lightning

Natural hazards considered by the District's planning team that were considered to be a risk for the District include the following:

- Earthquake:
- Flooding
- Wildfires

The following natural hazards were considered not to be a risk to the District's planning team:

- Dam Inundation
- Drought
- Flash flooding
- Extreme Heat
- High Winds/Straight Line Winds
- Lightning
- Severe Thunderstorm
- Winter Storms

#### **4.1.3 Hazard Prioritization**

The following sections present each hazard being evaluated by the District and a general definition of the hazard and a description of how the hazard has effected/impacted the District in the past.

The team chose to include only highly likely and likely events classified as catastrophic or critical. This was because the team decided these earthquakes, wildfires, and floods were the

hazards most likely to have a major impact on the district. Floods and Wildfires were also reclassified for this 2010 updated HMP to likely and critical because of past events that impacted the district.

The risk factors for each hazard include two variables: (1) Probability and (2) Impact. Using these two variables, the District's planning team screened each of the hazards using the criteria presented in the previous section.

## **4.2 Hazard Profiles**

CBWCD's planning team decided to profile only the High priority hazards. These hazards are discussed in detail in the following sections.

### **4.2.1 Earthquake Hazard**

The following section describes the hazard and then details the historical events associated with this hazard for the Chino Basin Water Conservation District.

**General Definition:** An earthquake is a sudden, rapid shaking of the Earth caused by the breaking and shifting of rock beneath the Earth's surface. For hundreds of millions of years, the forces of plate tectonics have shaped the Earth as the huge plates that form the Earth's surface move slowly over, under, and past each other. Sometimes the movement is gradual. At other times, the plates are locked together, unable to release the accumulating energy. When the accumulated energy grows strong enough, the plates break free causing the ground to shake. Most earthquakes occur at the boundaries where the plates meet; however, some earthquakes occur in the middle of plates.

Ground shaking from earthquakes can collapse buildings and bridges; disrupt gas, electric, water utilities, and phone service; and sometimes trigger landslides, avalanches, flash floods, fires, and huge, destructive ocean waves (tsunamis). Buildings with foundations resting on unconsolidated landfill and other unstable soil, and trailers and homes not tied to their foundations are at risk because they can be shaken off their mountings during an earthquake. When an earthquake occurs in a populated area, it may cause deaths and injuries and extensive property damage.

Earthquakes strike suddenly, without warning. Earthquakes can occur at any time of the year and at any time of the day or night. On a yearly basis, 70 to 75 damaging earthquakes occur throughout the world. Estimates of losses from a future earthquake in the United States approach \$200 billion.

There are 45 states and territories in the United States at moderate to very high risk from earthquakes, and they are located in every region of the country. California experiences the most frequent damaging earthquakes; however, Alaska experiences the greatest number of large earthquakes—most located in uninhabited areas. The largest earthquakes felt in the United States were along the New Madrid Fault in Missouri, where a three-month long series of quakes from 1811 to 1812 included three quakes larger than a magnitude of 8 on the Richter Scale. These earthquakes were felt over the entire Eastern United States, with Missouri, Tennessee, Kentucky, Indiana, Illinois, Ohio, Alabama, Arkansas, and Mississippi experiencing the strongest ground shaking.

**Description:** Within the US Army Corps of Engineers “Feasibility Study” dated August 1998

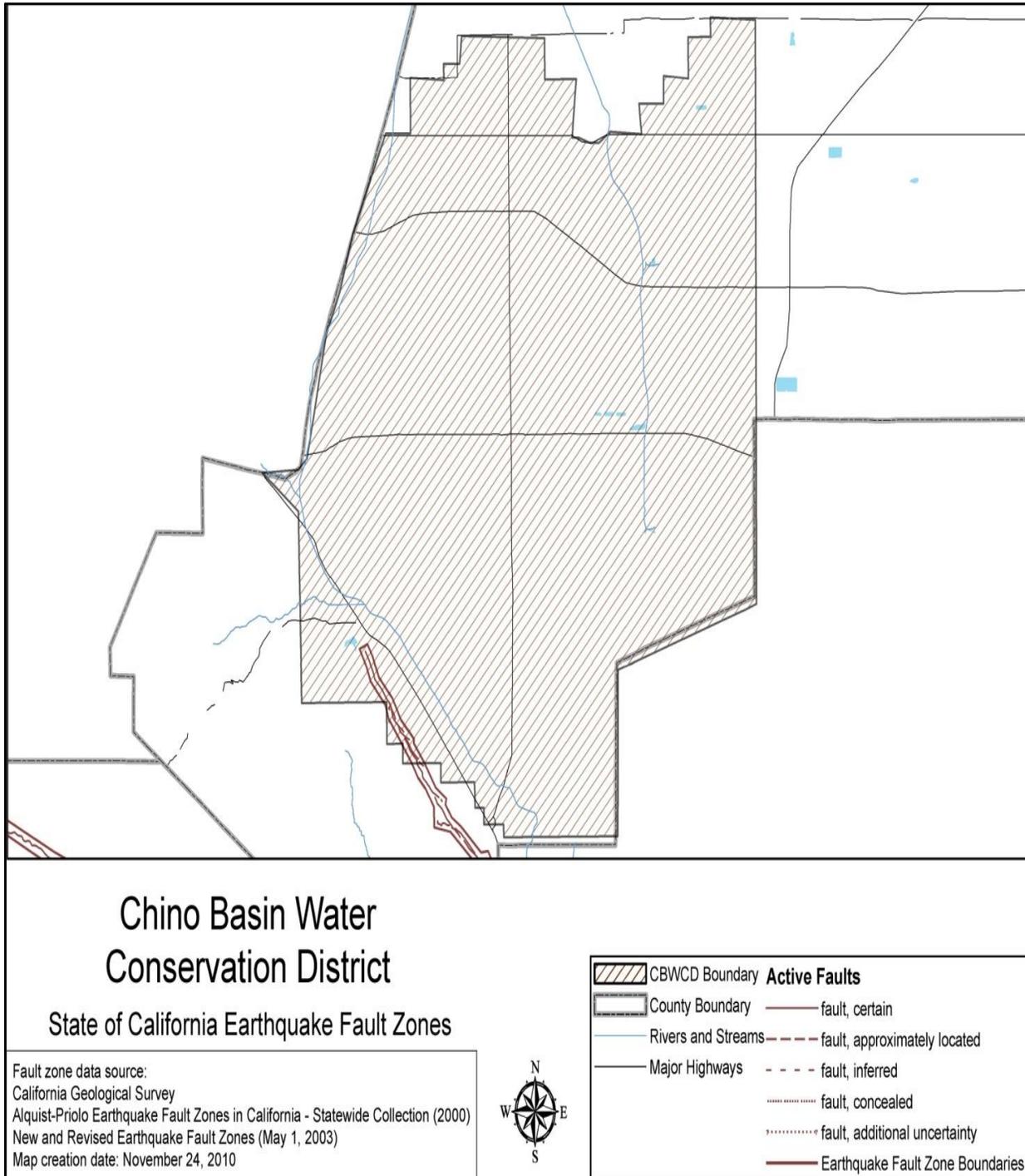
for the San Antonio and Chino Creeks Channel, this area has high seismicity, with 404 earthquakes of 4 or greater magnitude (M) occurring between the period of 1933 and 1996 (within a 50-mile radius of Prado Dam). During this period, four earthquakes were over 6 M, thirty-seven ranged from 5 to 6 M, and three-hundred sixty-three ranged from 4 to 5 M. Two 7+ M earthquakes occurred just outside the 50-mile radius, at Tehachapi and Landers CA, in July 1952 and June 1992. These were 7.7 and 7.3 M, respectively. The most notable historic event was the great 8+ M Fort Tejon earthquake, in 1857.

There is one earthquake fault located within a small portion of the District's service area. While there have been many earthquakes in and around the District's service area, none have caused significant damages to the District's facilities.

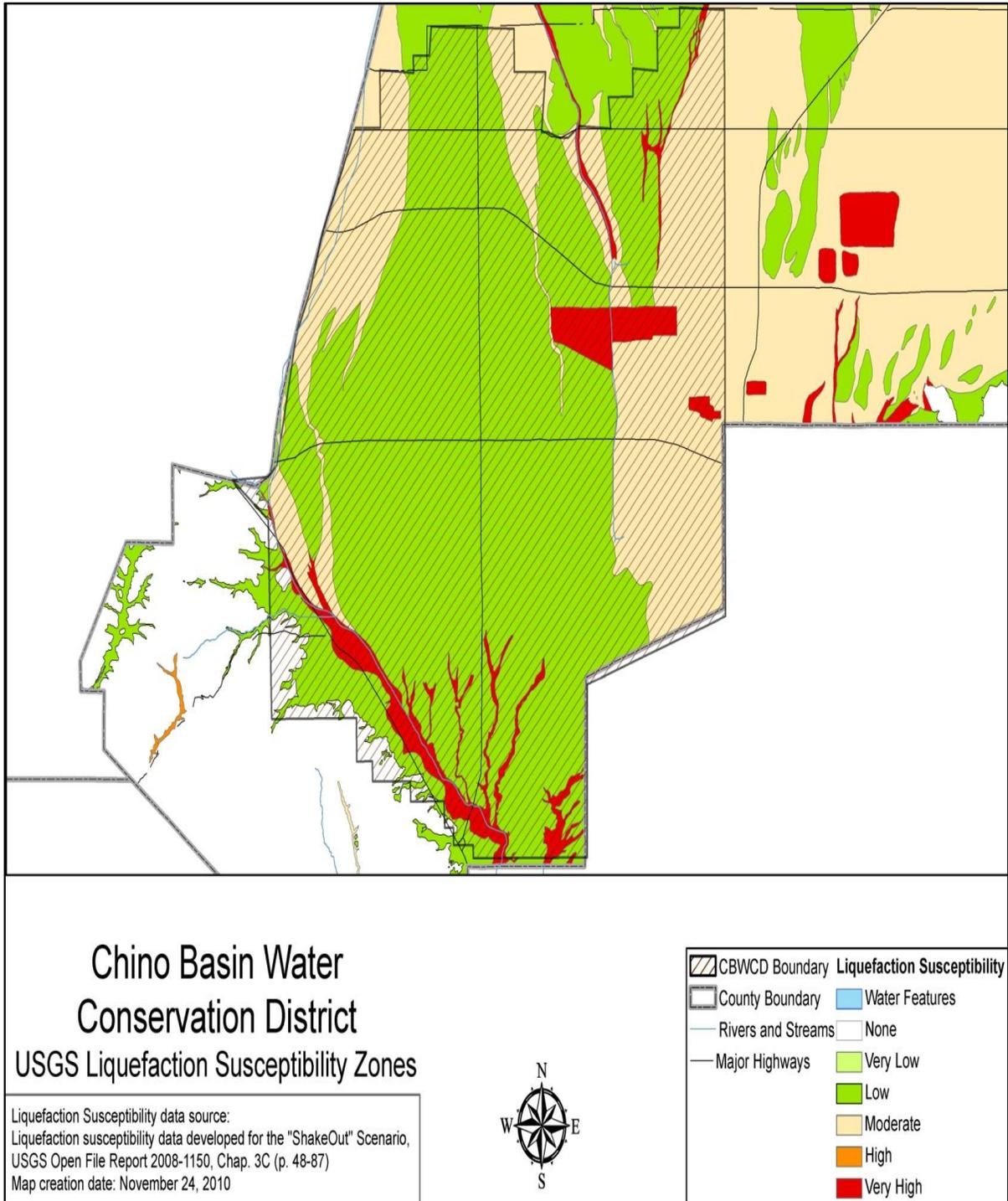
A source for the earthquake profile was a report that describes a new earthquake rupture forecast for California developed by the 2007 Working Group on California Earthquake Probabilities (WGCEP 2007). The Working Group on California Earthquake Probabilities (WGCEP 2007) The Working Group was organized in September, 2005, by the U.S. Geological Survey (USGS), the California Geological Survey (CGS), and the Southern California Earthquake Center (SCEC). The group produced a revised, time independent forecast for California for the national seismic hazard maps.

**Appendix B** presents the earthquake profile findings for the District's service area.

**Figure 4.2.1-1** State of California Earthquake Fault Zones located within Chino Basin Water Conservation District's boundaries.



**Figure 4.2.1-2** USGS Liquefaction Susceptibility Zones located within Chino Basin Water Conservation District's boundaries.



**Table 4.2.1-1 Earthquake History**

<b>Location</b>	<b>Date of Earthquake</b>	<b>Magnitude of Quake</b>	<b>Damage Description</b>
Wrightwood Earthquake	Dec. 8, 1812	7.5	40 deaths.
Cajon Pass	July 22, 1899	5.7	Landslides, heavy damage to buildings in San Bernardino. No deaths.
San Jacinto	Dec. 25 1899	6.5	San Jacinto & Hemet had severe damage. Six deaths. Chimneys thrown down and walls cracked in Riverside.
Elsinore	15-May-10	6	Chimney's toppled.
San Jacinto	21-Apr-18	6.8	Most damage in San Jacinto and Hemet. Several injuries, one death. Landslides, cracks in ground, roads, and canals.
North San Jacinto	22-Jul-23	6.3	Chimney's toppled, broken windows, 2 critical injuries, no deaths, San Bernardino hospital and Hall of Records badly damaged.
San Jacinto Terwilliger	25-Mar-37	6	Few chimneys damaged, some plaster cracked, a few windows broken. Minimal damage mostly due to sparsely populated area.
Fish Creek Mountains	21-Oct-42	6.6	Little damage due to remote location, felt over a large area. Rockslides
Desert Hot Springs	4-Dec-48	6	Widespread damage. In Los Angeles, 5,800 gallon water tank split, water pipes broken in Pasadena, at UCLA, and San Diego. Walls cracked in Escondido and Corona.
1954 San Jacinto	19-Mar-54	6.4	Minor widespread damage. Parts of San Bernardino experienced a temporary blackout.
Borrego Mountain	8-Apr-68	6.5	Largest most damaging earthquake in 16 years. Damage across most of Southern California. Landslides, huge boulders thrown.
Lytle Creek	Sept. 12, 1970	5.2	Landslides, rock falls, 4 injuries, San Bernardino radio station knocked off the air.
White Wash	25-Feb-80	5.5	Landslides. Windows and dishes broken. Fire broke out in Rancho Mirage due to a gas line rupture in an empty home.
1988 Upland and 1990 Upland	June 26, 1988 and Feb 28, 1990	4.7 and 5.4 respectively	Landslides, damage to San Antonio Dam, 38 minor injuries. Public-\$4.87M; business-\$4.7M; private-\$2.4M; total-\$12M; 501 homes and 115 businesses damaged or destroyed.
North Palm Springs	8-Jul-86	5.6	29 injuries. Destruction or damage of 51 homes. Landslides. Damage over \$4M.
Joshua Tree	22-Apr-92	6.1	32 minor injuries.

Big Bear	June 28, 1992	2 separate earthquakes – Big Bear - 6.4, Landers – 7.3.	Landslides in San Bernardino Mountains. Substantial damage in Big Bear. Landers was the largest earthquake in southern California in 40 years. Earthquake ruptured 5 separate faults. Total rupture length was 53 miles. One death, 402 injuries. Private-\$47.5M; business-\$17M; public-\$26.6M; total-\$91M; 77 homes destroyed, 4,369 homes damaged, 139 businesses damaged.
Hector Mine	Oct. 16, 1999	7.1	Very remote location. Ruptured in both directions from the epicenter.

Summarizing Risk

- Probability: **Highly Likely**
- Magnitude/Severity: **Catastrophic**

**4.2.2 Flooding Hazard**

The following section describes the hazard and then details the historical events associated with this hazard for the Chino Basin Water Conservation District.

**General Definition:** A flood, as defined by the National Flood Insurance Program is: "A general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties (at least one of which is your property) from:

- Overflow of inland or tidal waters.
- Unusual and rapid accumulation or runoff of surface waters from any source, or a mudflow.

The collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical

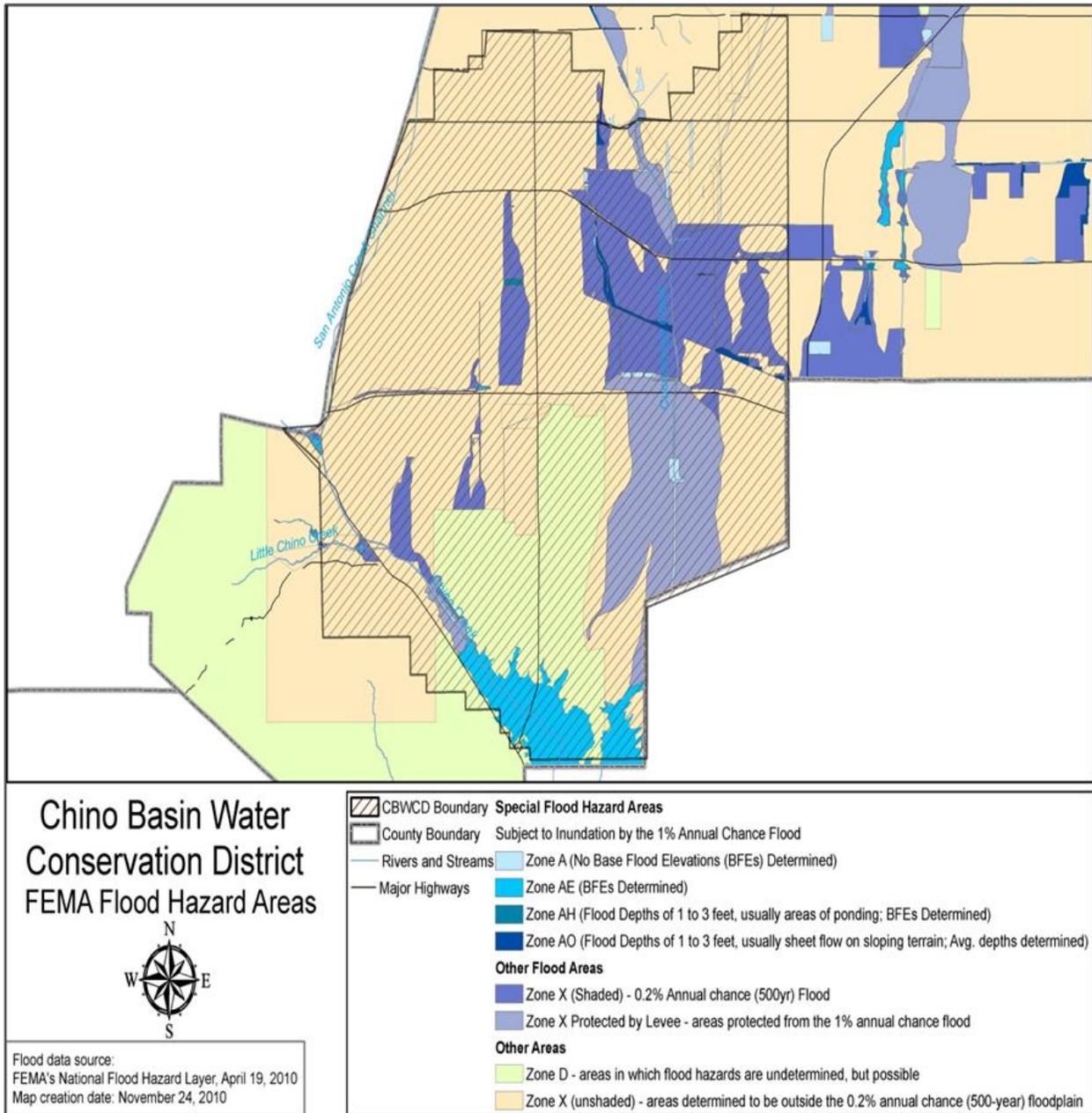
levels that result in a flood."

Floods can be slow or fast rising but generally develop over a period of days. Mitigation includes any activities that prevent an emergency, reduce the chance of an emergency happening, or lessen the damaging effects of unavoidable emergencies. Flooding tends to occur in the summer and early fall because of the monsoon and is typified by increased humidity and high summer temperatures. The standard for flooding is the so-called "100-year flood," a benchmark used by the Federal Emergency Management Agency to establish a standard of flood control in communities throughout the country. Thus, the 100-year flood is also referred to as the "regulatory" or "base" flood. Actually, there is little difference between a 100-year flood and what is known as the 10-year flood. Both terms are really statements of probability that scientists and engineers use to describe how one flood compares to others that are likely to occur. In fact, the 500-year flood and the 10-year flood are only a foot apart on flood elevation-which means that the elevation of the 100-year flood falls somewhere in between. The term 100-year flood is often incorrectly used and can be misleading. It does not mean that only one flood of that size will occur every 100 years. What it actually means is that there is a one percent chance of a flood of that intensity and elevation happening in any given year. In other words, it is the flood elevation that has a one percent chance of being equaled or exceeded each year. And it could occur more than once in a relatively short period of time. (By comparison, the 10-year flood means that there is a ten percent chance for a flood of its intensity and elevation to happen in any given year.)

**Table 4.2.2-1** at the end of this section for details shows the flood hazard within the District's service area prepared using the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) maps. The NFHL is a computer database that contains the flood hazard map information from FEMA's Flood Map Modernization program. These map data are from Digital Flood Insurance Rate Map (DFIRM) databases and Letters of Map Revision (LOMRs). The maps use computed or estimated water surface elevations combined with topographic mapping data to represent the flood hazard. The 100-year flood represents a compromise between minor floods and the greatest flood likely to occur in a given area. In most cases the 100-year flood is less than the flood of record and has been widely adopted as the common design and regulatory standard in the US. It was formally established as a standard for use by Federal agencies in 1977 and later confirmed by FEMA in 1982.

**Description:** In recent history, there have been 17 floods, storms, and flash floods in the District's general service area. Figure 4-3 summarizes the occurrences, impact, and costs of this hazard.

**Figure 4.2.2-1** FEMA Flood Hazard Areas located within Chino Basin Water Conservation District's boundaries.



**Table 4.2.2-1 Flood History**

Date of Event	Type of Damage	Amount of Damage	Statewide or Local
December 1955	74 deaths	\$200 M	State wide
April 1958	13 deaths, several injuries	\$20 M, plus \$4 M agricultural	State wide
Fall 1965	Abnormally heavy and continuous rainfall.	Public- \$5.8 M; private \$16.0 M; Total \$21.8 M	Riverside, San Bernardino, Ventura, San Diego Counties
Winter 1966	Abnormally heavy and continuous rainfall.	Public- \$14.6 M; private \$14 M; Total \$28.7 M	Various
Winter 1969	Storms, flooding, 47 dead, 161 injured. An alluvial flood and debris flow on Deer Creek in San Bernardino County killed 11 people.	Public- \$185 M, Private -\$115 M; Total -\$300 M	Various
September 1976	High winds, heavy rains, and flooding	Public-\$65.7 M; private-\$54.3 M ;TOTAL-\$120 M	Imperial, Riverside, San Bernardino, San Diego Counties
Winter 1978	14 dead, at least 21 injured	Public-\$73 M; private-\$44 M; Total -\$117 M; 2,538 homes destroyed	Various
July 1979		Public-\$3.0 M; private-\$22.9 M; Total -\$25.9 M	Riverside
February 1980	Rain, wind, mud slides, and flooding		Various
Winter 1982-1983	Heavy rains, high winds, flooding, levee breaks	Public-\$151 M; private-\$159 M; agricultural-\$214 M; TOTAL-\$524 M	Various
August 1983	High winds, storms, and flooding; 3 deaths	Public \$10 M, private \$15 M, agricultural \$10 M; TOTAL-\$35 M	Inyo, Riverside, San Bernardino Counties

February 1992	Flooding, rainstorms, mud slides; 5 deaths	Public-\$95 M; private-\$18.5 M; business-\$8.5 M, agricultural-\$1.5 M; TOTAL-\$123 M	Los Angeles, Ventura, Kern, Orange, San Bernardino Counties
December 1992	Snow, rain, and high winds, 20 deaths, 10 injuries	Total - \$600 M	Various
January 1995	11 deaths	Public-\$299.6 M; individual-\$128.4 M; businesses \$58.4 M; highways-\$158 M; ag-\$97 M; TOTAL-\$741.4 M; damage to homes: major-1,883; minor-4,179; destroyed-370.	Various
February 1995	17 deaths	Public property-\$190.6 M; individual-\$122.4 M; business-\$46.9 M; highways-\$79 M; ag-\$651.6 M; TOTAL-approximately \$1.1 billion; damage to homes: major-1,322; minor-2,299; destroyed-267	57 counties (all except Del Norte)
February 1998	17 deaths	\$550 M	Various
February 2010	15 deaths		San Bernardino – Waterman Canyon from Lytle Creek River.

**Summarizing Risk**

- Probability: **Likely**
- Magnitude/Severity: **Limited**

**4.2.3 Wildfires Hazard**

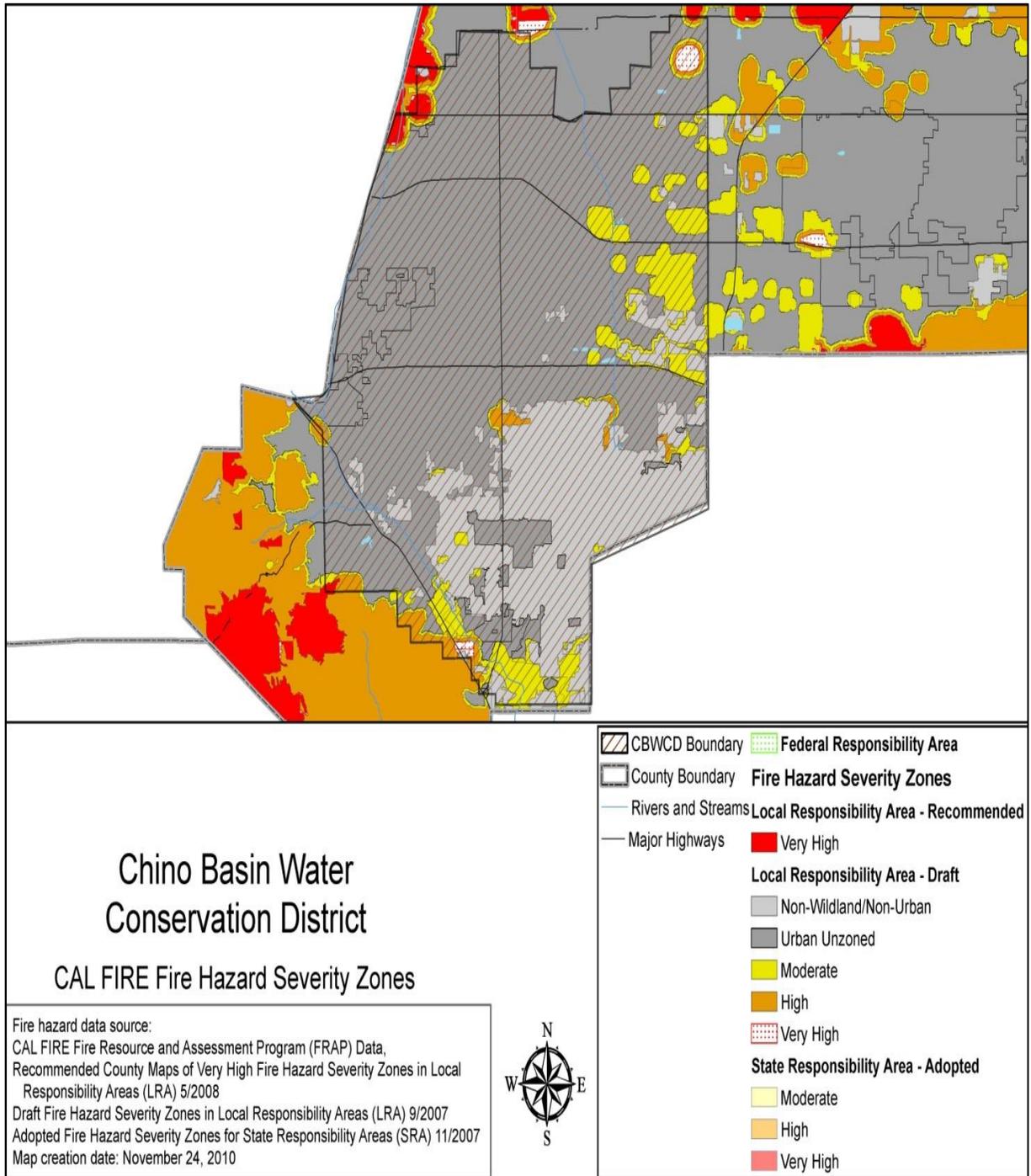
The following section describes the hazard and then details the historical events associated with this hazard for the Chino Basin Water Conservation District.

**General Definition:** There are three different classes of wild land or wildfires. A surface fire is the most common type and burns along the floor of a forest, moving slowly and killing or damaging trees. A ground fire is usually started by lightning and burns on or below the forest floor. Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees. Wildfires are usually signaled by dense smoke that fills the area for miles around. Wildfires present a significant potential for disaster in the southwest, a region of relatively high temperatures, low humidity, and low precipitation during the summer, and during the spring, moderately strong daytime winds. Combine these severe burning conditions with people or lightning and the stage is set for the occurrence of large, destructive wildfires.

**Description:** After the "Grand Prix" wildfire of 2003 , mud-flows which followed the December 2003 storms adversely impacted the District's Montclair Basins #1 and 2. In the future, since the District's College Heights Basins were recently connected to the San Antonio Creek Channel, and are located very close to the foothills, a similar such event may also cause adverse impacts at these Basins. (Refer to San Bernardino County Hazard Mitigation Plan.)

In previous years, there have been nine wildfires that caused damage to San Bernardino County. Table 4.2.3-1 summarizes the occurrences, impact, and costs of this hazard.

**Figure 4.2.3-1 CAL FIRE Fire Hazard Severity Zones located within Chino Basin Water**



**Figure: 4.2.3-1 Wildfire History**

<b>Date of Event</b>	<b>Type of Damage</b>	<b>Amount of Damage</b>	<b>Statewide or Local</b>
June 1960	No deaths, 12 injuries	\$10 M, 74,000 Acres, 33 homes destroyed.	Los Angeles, San Bernardino Counties
July 1960	No deaths, 12 injuries	\$10 M, 74,000 Acres, 33 homes destroyed.	Los Angeles, San Bernardino Counties
Fall 1970	19 deaths	Public- \$52.8 M; watershed - \$24.8 M; private - \$145.9 M; Total - \$223.6 M; 576,508 acres, 722 buildings,	various
December 1970		San Bernardino County – 53,100 acres, 54 buildings. \$3.2 M	Riverside
November 1980		Public-\$14 M; private-\$50.8 M; TOTAL-\$64.8M. San Bernardino County - 65 buildings, 5482 acres destroyed. Additionally, 355 buildings, 41,472 acres destroyed.	various
August 1987	3 deaths, 76 injuries	\$18 M (estimated); 1,070 fires. 534,661 acres burned, 835 square miles, 38 homes destroyed.	various
June 1990	3 deaths, 89 injuries	\$300 M+; 22,500 blackened acres, 492 homes destroyed,	Los Angeles, Santa Barbara, Riverside, San Bernardino Counties
October 1993	4 deaths, 162 injuries	Total property estimate-\$1 B; 1078 destroyed structures, 193,814 acres destroyed.	Los Angeles, Ventura, Riverside, San Bernardino, Orange, San Diego Counties
Oct/Nov 2003	22 deaths	\$218 M ++, 750,043 acres burned	Los Angeles, Ventura, Riverside, San Bernardino, San Diego Counties

Summarizing Risk

- Probability: **Somewhat Likely**
- Magnitude/Severity: **Limited**

#### 4.2.4 Hazard Summary

Using the hazard screening criteria and assessment matrix discussed in the previous two sections, along with the District planning teams considerable experience, the following two hazards were determined to be the most likely to affect the District:

1. Earthquake: There are nine active fault lines within miles of the District’s service area. These faults could potentially damage 100% of the Districts critical facilities.
2. Flooding Hazard: Approximately 50% of the District’s non-critical facilities are vulnerable. Flooding has a limited but likely impact on the District.

Figure 4-5 presents the summary results of prioritizing each hazard based on the level of risk. As can be seen from the table, the hazards in the “red shaded” boxes are the District’s priority hazards, while the hazards in the “white” boxes are the less critical/important hazards for the District.

**Table 4.2.4-1 Chino Basin Water Conservation District Hazard Assessment Matrix**

		<i>Impact</i>		
		<b>Catastrophic</b>	<b>Critical</b>	<b>Limited</b>
<i>Probability</i>	<b>Highly Likely</b>	Earthquake		
	<b>Likely</b>			Flooding
	<b>Somewhat Likely</b>			Wild Fires

### **4.3 Inventory Assets**

This section provides an overview of the assets in the Chino Basin Water Conservation District and the hazards to which these facilities are susceptible.

#### **4.3.1 Population**

The total population within the Chino Basin Water Conservation District's boundaries is approximately 396,114.

#### **4.3.2 Buildings**

As of August 2010, the District maintains and operates the following facilities:

- Office – Park – Garden Complex
- Brooks Basin
- College Hts. East & West Basin
- Ely Basin #3
- Fourth Street-SBCFCD Turner Bs#1
- Montclair Basin #1
- Montclair Basin #2
- Montclair Basin #3
- Montclair Basin #4

### 4.3.3 Critical Facility List

This section provides a listing of all the critical facilities in the Chino Basin Water Conservation District. Because the District’s exact location of facilities is extremely sensitive, due to increased concerns for national security, only general locations have been included in this section.

**Critical Facilities:** To minimize any hazard mitigation potential from the District’s newly constructed facilities; all future buildings will be constructed adequately to meet current seismic building codes.

**Table 4.3.3-1 Critical District Facilities**

Name	Facility Type	Description
Brooks Basin	Water Recharge Basin	21.38 Acres
College Hts. East & West Basin	Water Recharge Basin	30.98 Acres of combined Basin area
Ely Basin #3	Water Recharge Basin	19.7 Acres
Montclair Basin #3	Water Recharge Basin	9.84 + Acres
Fourth Street-SBCFCD Turner Bs#1	Water Recharge Basin	4.75 Acres connected to Turner Basin #1
Montclair Basin #1	Water Recharge Basin	14.93 Acres
Montclair Basin #2	Water Recharge Basin	22 + Acres
Montclair Basin #4	Water Recharge Basin	11.7 + Acres

**Figure 4.3.3-2 Non-Critical District Facilities**

Name	Facility Type	Description
District Headquarters	Office/Park/Garden Complex	2400 square foot office building 17,500; square foot main parking lot; 84,000 square foot park;

#### **4.4 Vulnerability Assessment**

This section will address the vulnerability of the District's assets were a natural disaster to occur.

Damage estimates to Basins and to the District Headquarters are detailed in **Table 4.4.5-1**.

##### **4.4.1 Methodology**

The facility replacement costs were calculated using the District's accounting and insurance replacement values and /or engineering estimates for construction of new facilities.

##### **4.4.2 Earthquake Vulnerability Analysis**

###### **Critical Facilities:**

The critical facilities that would be affected for the Chino Basin Water Conservation District are:

All Basins

The District's Non-Critical facilities are that are vulnerable to this hazard include: Office Headquarters-Garden-Park Complex.

**Estimated Losses:** See **Table 4.4.5-1** summarizing the economic impacts on the critical and non-critical District facilities.

##### **4.4.3 Flood Vulnerability Analysis**

###### **Critical facilities:**

The specific critical facilities vulnerable in Chino Basin Water Conservation District are: All

The specific Non-Critical Facilities that are vulnerable in Chino Basin Water Conservation District are: Office-Garden-Park Complex.

**Estimated Losses:** See **Table 4.4.5-1** summarizing the economic impacts on the critical and non-critical District facilities.

#### 4.4.4 Wildfires Vulnerability Analysis

**Critical Facilities:** The specific critical facilities vulnerable in Chino Basin Water Conservation District are: All

The specific Non-Critical Facilities that are vulnerable in Chino Basin Water Conservation District are: Office-Garden-Park Complex.

**Estimated Losses:** See **Table 4.4.5-1** summarizing the economic impacts on the critical and non-critical District facilities.

#### 4.4.5 Potential Loss Estimation

**Table 4.4.5-1** summarizes the economic impacts on the critical facilities of the District.

Name	Economic Impact (\$)	Replacement Cost (\$)	Description of Economic Impact
Montclair Basin # 1	\$1,064,000	\$5,187,000	Cost to remove debris, repair/ replace structures, costs to stabilize embankment slopes, and to correct damage to adjoining property caused by slope failure.
Montclair Basin # 2	\$798,000	\$1,602,650	Cost to remove debris, repair/ replace structures, costs to stabilize embankment slopes, and to correct damage to adjoining property caused by slope failure.

<b>Montclair Basin #3</b>	\$665,000	\$931,000	Cost to remove debris, repair / replace structures, costs to stabilize embankment slopes, and to correct damage to adjoining property caused by slope failure.
<b>Montclair Basin #4</b>	\$798,000	\$787,360	Cost to remove debris, repair / replace structures, costs to stabilize embankment.
<b>College Heights East &amp; West Basin</b>	\$399,000	\$133,000	Cost to remove debris and stabilize embankment slopes
<b>Brooks Basin</b>	\$1,064,000	\$34,181,000	Cost to remove debris and stabilize embankment slopes
<b>Ely Basin #3</b>	\$532,000	\$2,167,900	Cost to remove debris and stabilize embankment slopes
<b>Fourth Street/ Turner Basin</b>	\$133,000	\$133,050	Cost to remove debris and stabilize embankment slopes

## **Section 5: Community Capability Assessment**

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This section describes the resources (staffing, agencies, departments, equipment) and tools (existing plans, policies, regulations, and ordinances), the District has in place that can assist, promote, and implement mitigation actions in the service area. These capabilities generally fall into the following broad categories:

- Agencies and People
- Existing Plans
- Regulations, Codes, Policies, and Ordinances
- Mitigation Programs and Projects
- Fiscal Resources

### **5.1 Agencies and People**

The District is located in Northwestern San Bernardino County. The service area includes portions of the cities of Montclair, Chino, Chino Hills, Upland, Ontario, Rancho Cucamonga, and some unincorporated areas of San Bernardino County.

Chino Basin Water Conservation District employs 12 people working in four departments. The District covers approximately 116,000 square miles spanning portions of six cities. CBWCD owns and operates eight groundwater replenishment basins within three cities. As a Conservation District our goal is to protect the Chino Basin groundwater and provide water conservation education and outreach to the community.

The District operates on a budget of \$2.2 million a year with a gross income of \$1.4 million a year and a general fund of \$19.4 million for Capital Improvement Projects.

In addition to reviewing the District's own Strategic Plan and Safety Plan, the Planning Team reviewed the following general plans during the HMP process since the District has facilities in and works closely with the following agencies/cities. This helped give the Team an idea of what other agencies plans included. The agencies/cities general plans reviewed include:

- San Bernardino County General Plan, which can be found at [www.co.san-bernardino.ca.us/landservices](http://www.co.san-bernardino.ca.us/landservices)
- City of Montclair
- City of Ontario
- City of Upland
- San Bernardino County Flood Control District

## **5.2 Existing Plans**

This section describes the existing plans, policies, and ordinances for Chino Basin Water Conservation District.

### *Existing Plans/Documents:*

Chino Basin Water Conservation District Strategic Plan, Safety Plan

### **5.3 Regulations, Codes, Policies, and Ordinances**

This section describes the regulations, codes, policies, and ordinances for Chino Basin Water Conservation District.

*Existing Regulations, Codes, Policies, and Ordinances:*

Strategic Plan, Safety Plan, Standard Operating Procedures

### **5.4 Mitigation Programs**

This section serves to identify the Previous Mitigation Plans, Projects and Actions:

For the status of the District's 2005 HMP Mitigation projects, please see section 6.2.

The District stores an Emergency Preparedness Kit for 20 people in the Courtyard for employees in case of a disaster. This supply bin is equipped with food, water, lighting, radio, first-aid sanitation, flashlight, siren, mobile phone charger, and shelter supplies.

### **5.5 Fiscal Resources**

Fiscal resources for the District include the following:

- A percentage of local property taxes
- Interest earned on LAIF & CAL Trust Accounts

Through the California Department of Water Resources, Bureau of Reclamation, and other Federal State, and local agency grants and/or loans are available for water conservation, groundwater management, and studies and activities to enhance local water supply reliability. Project eligibility depends on the type of organization(s) applying and participating in the project

and the specific type of study or project. More than one grant or loan may be appropriate for a proposed activity. The following website lists the index of potential grants the District could participate in: [www.grantsloans.water.ca.gov/index.cfm](http://www.grantsloans.water.ca.gov/index.cfm).

## Section 6: Mitigation Strategies

### 6.1 Overview

The purpose of this analysis is to identify projects (actions) that will help meet the Goals and Objectives for each priority hazard. By going through this process, the District will identify hazards in the community, assess which hazards pose the most significant risk, and identify projects to help reduce and or eliminate the risk.

### 6.2 Mitigation 5-Year Progress Report

This updated 2010 HMP identifies the completed, deleted, or deferred actions or activities from the 2005 approved plan as shown in Figure 6-1 as a benchmark for progress. The plan update provides an opportunity for the District to reconsider the range of specific actions.

**Table 6.2-1** Status of the 2005 HMP Mitigation Actions

Mitigation Action	Completed	Completed	Comments
Stabilized Slopes at College Heights	Yes	Completed 05/19/2004	Stabilized slopes at College Heights East Basin. The embankment slopes of this Basin were "flattened" and were further stabilized with the addition of 15' wide "benches" of native material at 25' intervals.
Stabilized Slopes at 4th St. Basin	Yes	Completed 05/19/2004	Stabilized slopes at 4th St Basin. The embankment slopes of this Basin were "flattened" and were further stabilized with the addition of 15' wide "benches" of native material at 25' intervals.
Monitoring Wells at College Heights	Yes	Completed 05/19/2004	Monitoring Wells were installed College Heights East and West Basins to monitor the underground movement and "mounding" of water being recharged in the Basins.
Monitoring Wells at Brooks Basin	Yes	Completed 05/19/2004	Monitoring Wells were installed around the perimeter of this Basin to monitor the underground movement and "mounding" of water being recharged in the Basin.

By-Pass Inlet Structure at Montclair Basin #1	Yes	Completed 08/16/1970	In 1969-1970 a "by-pass" radical gate and structure was installed to redirect local stormwater flows into Montclair Basin #1. The gated-structure also provided protection for the Basin in the event the San Antonio Channel was flowing at near its capacity and is about to overtop. Additionally, given adequate advance notice, this gate can be closed to redirect stormwater runoff containing soil from mudflows (that often follow wildfires) in the foothills, away from the Recharge Basin to the San Antonio Channel.
Documentation of Conditions	No	Ongoing	This applies to all District Recharge Basins. Presently staff is working on accurately documenting the existing condition of the District's structures and other improvements. Beginning in January 2005, and on a "recurring" five-year basis, staff will, when changed conditions are noted, perform field surveys and take or secure photographs to establish updated "pre-event conditions." Staff will keep good records of all maintenance and repair operations that are completed at the District's real properties and Recharge Basins as they occur.
Monitoring Wells at All Basins	Yes	Completed	Install monitoring wells to measure and track the underground progression of recharged water. If unacceptable sub-surface water conditions are noticed discontinue water-spreading activities and do not restart until acceptable groundwater conditions are present. Alternatives: Flatten the slopes of the embankments where basin capacity is not an issue; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basins; Rebuild the embankment slopes of the Recharge Basins by excavation and re-compaction; Buttress the embankments with imported pervious materials and the creation of perimeter "benches" at various vertical increments.

### 6.3 Mitigation Goals, Objectives, and Projects

The process of identifying goals began with a review and validation of the Goals and Objectives in the 2005 local HMP and the 2005 Operational Area HMP. Using the 2005 HMP as a basis, the District's planning team assessed whether each of those goals were still valid. This assessment also identified the new Goals and Objectives.

### 6.3.1 All Hazards

**Goals:** The goal is to save lives and reduce injuries. Many local laws have public safety of citizens as their primary concern. Protecting lives is also the basis for emergency planning, response, and mitigation activities.

**Objectives:**

- Continually improve the understanding of the location and potential impacts of natural hazards, the vulnerability of building types, and community development patterns and the measures needed to protect life and safety.
- Continually provide state and local agencies with updated information about hazards, vulnerabilities, and mitigation measures.
- Ensure that all local codes and standards are met to ensure the protection of life.
- Ensure that all structures in the District meet minimum standards for life safety.
- Ensure that all development in high-risk areas is protected by mitigation measures that provide for life safety.
- Identify and mitigate all imminent threats to life safety.

**Table 6.3.1-1 Mitigation projects:**

Mitigation Action	Comments	Estimated Cost	Funding
New By-Pass Inlet Structures for all Basins	Install new by-pass inlet structure at all Basins to re-direct stormwater, containing soil from mudflows originating in the foothills as a result of Wildfires therein, away from the Recharge Basin to the San Antonio Channel.	\$250,000.00	From grants/ Possibly from Capital Improvement Funding
New and Replacement Construction (applies to all District recharge Basins)	Applies to all District Recharge Basins. All new, replaced, and reconstructed structures and conduits shall be designated to withstand the effects of "design earthquakes."	\$2.5 Million	From grants/ Possibly from Capital Improvement Funding

Seismic at Montclair Basin #1	Buttress embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten slopes of embankments where basin capacity is not an issue; Perform water recharge operations while maintaining a water depth in the Recharge Basins of 5 feet or less; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin by excavation and re-compaction; Buttress embankments with pervious materials and create perimeter "benches" at various vertical increments.	\$250,000.00	From grants/ Possibly from Capital Improvement Funding
Seismic at Montclair Basin #4	Buttress embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten slopes of embankments where basin capacity is not an issue; Perform water recharge operations while maintaining a water depth in the Recharge Basins of 5 feet or less; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin by excavation and re-compaction; Buttress embankments with pervious materials and create perimeter "benches" at various vertical increments.	\$250,000.00	From grants/ Possibly from Capital Improvement Funding
Document Condition with Engineering Reports (applies to all structures at the District recharge Basins)	Applies to all structures at the District Recharge Basins. To establish the pre-existing conditions of and at all flood water conveyance structures and impoundments.	\$100,000.00	From grants/ Possibly from Capital Improvement Funding
Repair and Replacement (applies to all District recharge basins)	This applies to repairs and replacements of water conveyance structures at the District Recharge Basins. To ensure that all water conveyance structures are capable of safety conveying present-day design flows.	\$2.5 million	From grants/ Possibly from Capital Improvement Funding
New By-Pass Inlet Structure at Montclair Basin #2	This applies to Montclair Basin # 2. Install a new by-pass structure to re-direct stormwater, containing soil from mud-flows in the foothills, away from the Recharge Basin to the San Antonio Channel.	\$250,000.00	From grants/ Possibly from Capital Improvement Funding
Seismic at Montclair Basin #2	Buttress embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten slopes of embankments where basin capacity is not an issue; Perform water recharge operations while maintaining a water depth in the Recharge Basins of 5 feet or less; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin by excavation and re-compaction; Buttress embankments with pervious materials and create perimeter "benches" at various vertical increments.	\$250,000.00	From grants/ Possibly from Capital Improvement Funding

Seismic at Montclair Basin #3	Buttress embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten slopes of embankments where basin capacity is not an issue; Perform water recharge operations while maintaining a water depth in the Recharge Basins of 5 feet or less; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin by excavation and re-compaction; Buttress embankments with pervious materials and create perimeter "benches" at various vertical increments.	\$150,000.00	From grants/ Possibly from Capital Improvement Funding
Seismic at Ely Basin #3	Buttress embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten slopes of embankments where basin capacity is not an issue; Perform water recharge operations while maintaining a water depth in the Recharge Basins of 5 feet or less; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin by excavation and re-compaction; Buttress embankments with pervious materials and create perimeter "benches" at various vertical increments.	\$100,000.00	From grants/ Possibly from Capital Improvement Funding
Seismic at Brooks Basin	Buttress embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten slopes of embankments where basin capacity is not an issue; Perform water recharge operations while maintaining a water depth in the Recharge Basins of 5 feet or less; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin by excavation and re-compaction; Buttress embankments with pervious materials and create perimeter "benches" at various vertical increments.	\$350,000.00	From grants/ Possibly from Capital Improvement Funding
Inspection of Structures with Engineering Report	Inspect the District's building-type structures for compliance with the State of California's most recent earthquake standards for commercial businesses and where necessary implement corrective measures.	\$100,000.00	From grants/ Possibly from Capital Improvement Funding
New Stormwater Inlet Structure	Applies to new stormwater inlet structures at the District Recharge Basins. To ensure that all new and existing water conveyance structures are capable of safely conveying present-day design flows.	2.5 Million	From grants/ Possibly from Capital Improvement Funding
Documentation of Existing Conditions with Engineering Report	Document the existing condition of the District's structures, improvements, and Recharge Basins.	\$100,000.00	From grants/ Possibly from Capital Improvement Funding

Mitigate Seismic Hazards at College Heights West Basin	Buttress embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten slopes of embankments where basin capacity is not an issue; Perform water recharge operations while maintaining a water depth in the Recharge Basins of 5 feet or less; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin by excavation and re-compaction; Buttress embankments with pervious materials and create perimeter "benches" at various vertical increments.	\$250,000.00	From grants/ Possibly from Capital Improvement Funding
Stabilize and/or compact roads at all basins	Sediment and erosion control structures protect the integrity of runoff drainage systems, roadways, and embankments by reducing degradation and aggradation which can lead to roadway or bank failure, flooding, and/or recurring maintenance. Also, these structures and measures increase infiltration, reduce sedimentary pollutants which damage stream, lake, and pond ecosystems, and, reduce transport of debris which may accumulate and block channels and culverts.	\$40,000.00	From grants/ Possibly from Capital Improvement Funding
Stabilize banks and slopes at all basins	Sediment and erosion control tools are structures or measures, located in runoff drainage channels or near culvert outlets, which prevent or reduce sedimentation and erosion of earth materials caused by direct rainfall, runoff, wind, freezing, gravity, or a combination. These tools may be mechanical (structural), vegetative, or a combination. Some measures are aimed at resisting erosive forces while others reduce erosive forces. Reducers of erosive forces include structures or measures to control runoff velocity, reduce the flow grade, or dissipate energy. Structures involve the use of pipe, rock rip rap, rock gabions, wood materials, concrete, prefabricated blocks, geotextiles, mesh, earth, vegetation, and many other innovative resources, ideas, and processes.	\$185,000.00	From grants/ Possibly from Capital Improvement Funding
Basin floor restoration, cleaning out basins, inspect and clean silt from basin floors	If catch basins are not cleaned, they fill with the materials that settle or float. When they are too full, contaminants can escape into the stormwater system, or the catch basin can overflow, which may cause flooding. If left, the contaminants can concentrate to hazardous waste levels which are expensive to dispose of.	\$295,000.00	From grants/ Possibly from Capital Improvement Funding
Upgrade inlet gates from manual to motorized gates	For safety reasons all basins shall have motorized gates instead of manual gates.	\$250,000.00	From grants/ Possibly from Capital Improvement Funding
Repair/ rebuild spillways for earthquake safety	Modification of culverts, installation or modification of flood gates, repair/ rebuilding of spillways for all basins to reduce or eliminate long-term risk from flood hazards.	\$350,000.00	From grants/ Possibly from Capital Improvement Funding

Fencing repair / replacement at all basins	For safety reasons all basins shall have protective fencing.	\$1,000,000.00	From grants/ Possibly from Capital Improvement Funding
Repair/ rebuild culverts	Modification of culverts, installation or modification of flood gates for all basins to reduce or eliminate long-term risk from flood hazards.	\$120,000.00	From grants/ Possibly from Capital Improvement Funding
Install grates at all basins	Install grates at all basins to reduce the amount of trash and debris flow into the basins.	\$160,000.00	From grants/ Possibly from Capital Improvement Funding
Build de-silting brumes for Montclair Basins 1,2,3 and Ely Basin 3	Sediment basins shall be designed in accordance with Section A of the State of California NPDES General Permit for Storm Water Discharges Associated with Construction Activities (General Permit). If there is insufficient area to construct a sediment basin in accordance with the General Permit requirements, then alternate desilting design standards may be used.	\$750,000.00	From grants/ Possibly from Capital Improvement Funding
Removal of brush and vegetation from basins, cleaning of channels and culverts	Sediment and erosion control protects the integrity of runoff drainage systems, roadways, and embankments by reducing degradation and aggradation which can lead to roadway or bank failure, flooding, and/or recurring maintenance. By removing brush and vegetation from basins and cleaning culverts, these measures will help to increase infiltration, reduce sedimentary pollutants which damage stream, lake, and pond ecosystems, and, reduce transport of debris which may accumulate and block channels and culverts.	\$40,000.00	From grants/ Possibly from Capital Improvement Funding

#### 6.4 Mitigation Priorities

The District’s implementation strategy includes first identifying a set of first tier objectives. These objectives are considered the highest priority and once implemented will result in substantial improvement in the overall reliability of the District’s operations. The remaining objectives, not included in the first tier objectives are considered desirable and will further enhance the District’s operations once the first tier objectives are achieved.

The District's objectives have been prioritized based on the following:

- Impact to the District's facilities from the identified vulnerability. This was the planning team's decision. Cost was included in the decision.
- Overall cost/benefit of the mitigation strategy.

## **6.5 Implementation Strategy**

For the successful mitigation of hazards identified in this plan and to meet the District's goals within a reasonable time frame, an implementation strategy has been developed. The strategy includes an identification of the objectives in Section 6.3, development of planning level cost estimates and a time frame for implementation.

The District developed a matrix for the mitigation implementation as a useful tool that consolidated and tracked mitigation actions. The implementation strategy focuses on the high priority mitigation projects that can be implemented during the five year plan cycle.

For each project, the benefits and costs were identified by the local planning team and then each project was prioritized. The benefits included the estimated risk reduction, District goals, available funding and ease of implementation. Costs included construction costs, operation and maintenance costs, environmental considerations, and time for implementation.

## Section 7: Plan Maintenance

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### 7.1 Monitoring, Evaluating and Updating the Plan

**Plan Last Updated on:** February 28, 2005

Projects that have been completed since the HMP was adopted on February 28, 2005 include:

*See Figure 6.2-1*

**Description of Plan Maintenance and Procedures:** Because the Plan is a living document that reflects the districts ongoing mitigation activities, the process of monitoring, evaluating, and updating it will be critical to the effectiveness of hazard mitigation in the District's area.

Beginning in January 2005 the District began a "recurring five-year" review of its hazard mitigation plan. Subsequent to each review where new deficiencies are discovered or existing deficiencies are determined to have not yet been addressed to the satisfaction of the District, and upon the direction of the District's Board of Directors, the District shall bring such issues and needs to the attention members of the Chino Basin Groundwater Recharge Coordinating Committee and shall seek additional funding for implementation of those corrective and other mitigation measures that are determined to be economically feasible.

The District is dedicated to involving the public directly in review and updates of the Hazardous Mitigation Plan. Beginning in 2011 the Committee members will be responsible for the annual review and update of the plan.

The District's planning team has the responsibility for maintaining, evaluating, and updating the Plan. The planning team will meet on an annual basis to review each goal and objective to determine their relevance to changing situations within the District, as well as changes in the County, State of Federal policy, and ensure that current and expected conditions are addressed. The team will also preview the risk assessment portion of the plan to determine if this information should be updated or modified. The planning team will also review any current, ongoing or completed mitigation projects and implementation processes to evaluate what worked well, any difficulties encountered, coordination efforts with other water districts, and any strategies that should be revised.

The San Bernardino County OES will play a pivotal role in providing input, direction, and guidance. The District's Board of Director's will review and recommend for approval any plan updates proposed by the planning team. The Plan will be updated at least every five years.

## **7.2 Implementation through Existing Programs**

The Hazardous Mitigation Plan provides a series of recommendations - many of which are closely related to the goals and objectives of existing planning programs. The District will implement recommended mitigation action items through existing programs and procedures such as the Strategic Plan and Safety Plans.

Within six months of formal adoption of the Mitigation Plan, the recommendations listed above will be incorporated into the process of existing planning mechanisms at the District. The meetings of the Committee will provide an opportunity for members to report back on the

progress made on the integration of mitigation planning elements into the District's planning documents and procedures.

### **7.3 Continued Public Involvement**

The public will also have the opportunity to provide feedback about the Plan. Copies of the Plan will be catalogued and made available to the public. The existence and location of these copies will be publicized on the District's website.

In addition, copies of the Plan and any proposed changes will be posted on the District's Website. This site will also contain an email address and phone number to which people can direct their comments and concerns. A public meeting will also be held after each annual evaluation or as deemed necessary by the Committee. The meetings will provide the public a forum for which they can express its concerns, opinions, or ideas about the Plan. The District's Outreach Coordinator will be responsible for using District resources to publicize the annual public meetings and maintain public involvement through the Website, press releases, and local newspapers.

## Appendix A: Public Involvement/Outreach

Figure A-1 Planning Process and Public Involvement

Date	Activity	Location
10 June 2010	Mitigation Plan Kick off Meeting with County of San Bernardino OES to discuss how multi-jurisdictional, multi-functional HMP Update 2010 Process to work. See list of attendees	City of Ontario Police Department, 2500 S. Archibald Avenue, Ontario, CA 91761
12 August 2010	Mitigation Plan Meeting - Planning team held meeting at District offices to review mitigation goals and objectives and potential mitigation projects. See list of attendees.	City of Ontario Police Department, Community Room #1, 2500 S. Archibald Avenue, Ontario, CA 91762
08 August 2010	San Bernardino County Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan 2010 Update Stakeholders Meeting. Description: Conference call to discuss repetitive loss and severe repetitive loss properties.	Chino Basin Water Conservation District 4594 San Bernardino St. Montclair, CA 91763
01 September 2010	Hazard Mitigation Plan 2010 Update Planning Team Meeting. MVWD Planning Team Meeting to discuss public involvement/outreach, risk assessment, and milestone dates. Key representatives from City of Montclair and Chino Basin Water Conservation District also attended.	Monte Vista Water District, 10575 Central Ave. Montclair, CA 91763
15 September 2010	Members of the District's planning team met at the District office to review facilities and assessed values.	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91763
16 September 2010	Members of the District's planning team met at the District office to Update the team on HMP progress. Went over milestone dates.	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91763
23 September 2010	San Bernardino County Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan 2010 Update Stakeholders Meeting. Description: Conference call to discuss "courtesy review" by Cal-EMA	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91763
28 September 2010	Members of the District's planning team met at the District office to review the first draft of the HMP, HMP Board Agenda Item for October 2010 Board Meeting and discuss milestone dates.	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91763
10 November 2010	Members of the District's planning team met at the District office to review the first draft of the HMP, obtain information, finalize HMP report for submittal, and discuss milestone dates.	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91763
02 December 2010	San Bernardino County Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan 2010 Update Stakeholders Meeting. Description: Conference call to discuss updated guidance, hazard maps, upcoming completed HMP's to the portal for ICF review.	Chino Basin Water Conservation District, 4594 San Bernardino St. Montclair, CA 91764

Attached is the documentation for the above mentioned meetings such as meeting invitations from Microsoft Outlook, list of meeting attendees, and meeting minutes.

**San Bernardino County Operational Area  
Multi-Jurisdictional Multi-Hazard Mitigation Plan  
2010 Update  
Stakeholders Kick-off Meeting**

Ontario Police Department  
Community Room

Thursday, June 10, 2010  
10:00 a.m. – 12:00 p.m.

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**AGENDA**

- |             |  |
|-------------|--|
| 10:00-10:20 | I. Welcome, Introductions and Meeting Overview <ul style="list-style-type: none"><li>• <i>Denise L. Benson, Division Manager</i><br/><i>San Bernardino County Fire Department, Office of Emergency Services</i></li></ul>  |
| 10:20-10:30 | II. Hazard Mitigation Planning <ul style="list-style-type: none"><li>• <i>Andy Petrow, Senior Project Manager, ICF International</i></li></ul>   |
| 10:30-10:40 | III. 2005 Multi-Jurisdictional Hazard Mitigation Planning Effort <ul style="list-style-type: none"><li>• <i>Andy Petrow</i></li></ul>  |
| 10:40-11:20 | IV. Project Overview <ul style="list-style-type: none"><li>• <i>Hope Seligson, Associate, MMI Engineering</i></li><li>• <i>Andy Petrow</i><ul style="list-style-type: none"><li>A. Organizational Structure</li><li>B. Roles and Responsibilities</li><li>C. Tools</li></ul></li></ul> |
| 11:20-11:35 | V. 2010 Hazard Mitigation Plan Requirements <ul style="list-style-type: none"><li>• <i>Andy Petrow</i></li></ul>   |
| 11:35-11:40 | VI. Timeline/Milestones <ul style="list-style-type: none"><li>• <i>Andy Petrow</i></li></ul>   |
| 11:40-11:45 | VII. Stakeholder Next Steps <ul style="list-style-type: none"><li>• <i>Andy Petrow</i></li></ul>   |
| 11:45-11:55 | VIII. Questions  |
| 11:55-12:00 | IX. Next Meeting/Conference Calls and Closing Remarks  |

**San Bernardino County Operational Area  
Multi-Jurisdictional Multi-Hazard Mitigation Plan 2010 Update  
Agency Attendance List**

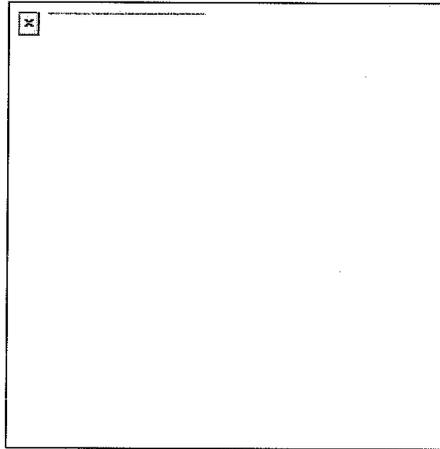
CITIES/TOWNS	encl. #	Roll Out Meeting 6/10/10	Webinar Portal Meeting 7/1/10						
1 City of Adelanto	1	X	X						
2 City of Barstow	2	X	X						
3 City of Big Bear Lake	1	X	X						
4 City of Chino	2	X	X						
5 City of Chino Hills	2	X	X						
6 City of Colton	2	X	X						
7 City of Fontana	2	X	X						
8 City of Grand Terrace	1	X	X						
9 City of Healdsburg	2	X	X						
10 City of Highland	1	X	X						
11 City of Loma Linda	1	X	X						
12 City of Montclair	2	X	X						
13 City of Needles	2	X	X						
14 City of Orange	2	X	X						
15 City of Rancho Cucamonga	1	X	X						
16 City of Redlands	2	X	X						
17 City of Rialto	2	X	X						
18 City of San Bernardino	1	X	X						
19 City of Twenty-Nine Palms	2	X	X						
20 City of Upland	2	X	X						
21 City of Victorville	1	X	X						
22 City of Yucaipa	1	X	X						
23 Town of Apple Valley	2	X	X						
24 Town of Yuca Valley	2	X	X						
<b>DISTRICTS</b>									
25 Apple Valley Fire Protection District	1	X	X						
26 Arrow Bear Park County Water District	2	X	X						
27 Big Bear Airport District	2	X	X						
28 Big Bear City Community Services District	1	X	X						
29 Big Bear Lake Fire Protection District	1	X	X						
30 Chino Basin Water Conservation District	2	X	X						
31 Chino Valley Independent Fire District	1	X	X						
32 Chino Valley Unified School District	2	X	X						
33 City of San Bernardino Municipal Water District	2	X	X						
34 Crest Forest Fire Protection District	1	X	X						
35 Crestline - Lake Arrowhead Water Agency	1	X	X						
36 Crestline Village Water District	1	X	X						
37 Cucamonga Valley Water District	1	X	X						
38 East Valley Water District	2	X	X						
39 Fontana Unified School District	1	X	X						
40 Inland Empire Utilities Agency District Headquarters	2	X	X						
41 Monte Vista Water District	2	X	X						
42 Norwaga Valley Community Services District	2	X	X						
43 Newberry Community Services District	2	X	X						
44 Newfles Unified School District	2	X	X						
45 Omnitrans	2	X	X						
46 Patton State Hospital	2	X	X						
47 Rialto Unified School District	2	X	X						
48 Rind of the World Unified School District	2	X	X						
49 Running Springs Water Dist.	2	X	X						
50 San Bernardino Community College District	2	X	X						
51 San Bernardino Mountain Community Hospital	1	X	X						
52 San Bernardino Valley Municipal Water District	2	X	X						
53 West Valley Water District	1	X	X						
54 West Valley Water District	1	X	X						
55 San Bernardino County Operational Area Lead	1	X	X						
		30	28						
		53	38						
		96.39%	69.09%						

https://www.sbcwa.net/Assets/Uploads/Project/ram/Operational Area Meeting/SA/holden07 01 2010 Petal Rollout/Attendance 07 01 2010.xls

**Cheryl Vermette**

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**Subject:** (JZ) Copy: Hazard Mitigation Plan 2010 Update Planning Team Meeting  
**Location:** 10575 Central Avenue, Montclair, CA - Monte Vista Water District (Upstairs Board Room)  
**Start:** Wed 9/1/2010 1:30 PM  
**End:** Wed 9/1/2010 2:30 PM  
**Recurrence:** (none)  
**Meeting Status:** Not yet responded  
**Organizer:** Jonathan Dizon  
**Categories:** Blue Category



**Hazard Mitigation Plan 2010 Update  
Planning Team Meeting**  
Wednesday, September 1st, 2010  
1:30 p.m. – 2:30 p.m.

**AGENDA**

- I. Introductions – revisit 2010 HMP Planning Team
  - A. Angelic Bird – City of Montclair
    - B. Juan Zamora – CBWCD
  - II. Public Involvement / Outreach
  - III. Risk Assessment
  - A. Hazard Identification
    - B. Critical & Non-Critical Facility List
  - IV. Milestone Dates
    - A. **10/18 -10/22** Upload Draft of HMP to Portal
    - B. **11/1 -11/15** Submit to SB County OES for transmission to Cal EMA
    - C. **11/8 -11/26** Submit to Cal EMA for Approval
    - D. **11/22 -12/31** Submit to FEMA for Approval
    - E. **01/3 – 1/28** Adoption by the Local Governing Body (MVWD)

Questions, please feel free to contact me at:

Jonathan R. Dizon  
10575 Central Ave. Montclair, CA, 91763 | Phone: 909.267.2177 | Fax: 909.624.4725



ole0.bmp



**MONTCLAIR AGENCIES REQUESTING COMMENT ON  
HAZARD MITIGATION PLANS**

**FOR IMMEDIATE RELEASE**

**SEPTEMBER 2, 2010**

**MONTCLAIR, CA** .....The city of Montclair, Monte Vista Water District and the Chino Basin Water Conservation District are requesting comments from the public as they update their Local Hazard Mitigation Plans. The plans, first developed in 2005 to comply with federal laws, identify natural hazards that affect local agencies, assess the vulnerability of agency assets and provide mitigation strategies to reduce or eliminate long-term risks to life and property from hazardous events.

The local agencies are collaborating with the County of San Bernardino in the development of a county-wide plan that will eventually be submitted to the California Emergency Management Agency for approval prior to sending the plan to the Federal Emergency Management Agency (FEMA).

To view the 2005 plans and provide comments, contact:

- ◆ **City of Montclair:** Angelic Bird at (909) 447-3542 by September 16, 2010 or access the city website at [www.ci.montclair.ca.us](http://www.ci.montclair.ca.us) under the Fire Department section.
- ◆ **Monte Vista Water District:** Jonathan Dizon at (909) 624-0035, Ext. 177 by October 1, 2010 or access the District website at [www.mvwd.org](http://www.mvwd.org)
- ◆ **Chino Basin Water Conservation District:** Juan Zamora at (909) 267-3224 by October 1, 2010.

**Juan Zamora**

---

**From:** San Bernardino County Operational Area [SBCOA@oes.sbcounty.gov]  
**Sent:** Tuesday, September 07, 2010 2:53 PM  
**To:** Bachman, Tom; Benson, Denise; Brown, Sonia; Caldwell, Michelle; Carlson, Sandra (WVWD); Cox, Jim; Curtis, Mitch; Daniely, David; Feser, Don; Fuller, Sam; Garcia, Danielle; Madrigal, Tom; Mosley, Phil; Petersen, Keith; Petrow, Andy; Rissmiller, Jim; Seligson, Hope; Serrano, Cindy; Shankland, Jennifer; Vaughan, Tammy; Wagner, Myles; Yegge, David; Adams, Betsy; Ammari, Rossana; Baron, Bruce; Bekker, Frank (City of Rialto); Bell, Mike; Bennington, Brigit; Berch, Chris; Bird, Angelic; Bishop, Art; Borell, Dan; Borja, Mike; Brownlee, Dave; Brunelle, Renee; Bussard, Keith; Contreras, Cecilia; Corrao, Sal; Cousino, JoAnne (NCSD); Crosby, Mark; Darkens, Mike (City of Rialto); Davis, Larrie; Diggs, Ed; Dixon, Valeria; Dizon, Jonathan; Donley, Mike; Downey, Debra; Drew, Karl; Foley, Meg and Hooper, Curtis (MVCSD); Frazier, Jack; Frazier, Jeff; Gray, Jamie; Gray, Russell; Green, Warren; Gregory, Michael; Gwaltney, Pete; Holmes, Roxanne (LAWA); Hoover, Tom; Hull, John; Jahn, Rachael; Jauss, Darrell; Jenkins, Kent; Johnstone, James; Jones, Carl; Jones, Nancy; Kerrigan, Rick; Knoll, Brian (LAWA); Kreske, Debra; Lassetter, Dani; MacDonald, Scott; Malizia, Cathy; Massey, Sam; McCurry, Pat; McHargue, Tim (City of Colton); Medina, Breanna; Miller, Pat; Miller, Stephen (NCSD); Montgomery, Benjamin; Musgraves, Mike (City of Colton); Nelson, Jack; Newbury, Krysten; Okamura, Steve; Palma, George; Peavy, Ronald; Peck, Ron; Ralph, Bill; Ramsey, Bob; Ratcliffe, Bob; Ray, Brenda; Recio, Arnel; Rosas, Brenda; Salazar, Frank; Sanchez, Steve; Schooler, Jim; Scullin, Michael and Dvorak, Mary (APCWD); Semione, Cindy; Smith, Kevin; Sturdivan, Gary; Summers, Kim; Summers, Kirk; Tincher, Bob; Tree, Michael; Turner, Greg; Eunice Ulloa; Valencia, Nancy; Waters, Debra and McKee, Mitch; Whitehead, Laura; Wilkie, Larry; Willis, Jeff; Wirz, Matt; Wolbert, Laura; Wolff, Chris; Zamora, Don; Juan Zamora  
**Subject:** Hot Topics for September 7, 2010  
**Attachments:** HMP Hot Topics 100907.doc

Please see the attached and below Hot Topics for September 7, 2010

San Bernardino County Operational Area  
San Bernardino County Fire Department/Office of Emergency Services

Phone: (909) 356-3998  
Fax: (909) 356-3965

Note new email address: [sbcoa@oes.sbcounty.gov](mailto:sbcoa@oes.sbcounty.gov)

----- Start of Message -----

# HOT TOPICS

## HAZARD MITIGATION PLAN

### September 7, 2010

- **REMINDER: Stakeholders Conference Call**
- Thursday, September 9<sup>th</sup>
  - 10:00 a.m.

- ICF Conference Call Line:

(877) 423-6338

Access Code: 680954#

→ **GROUP 1 PARTICIPANTS:**

- 1) City of Big Bear Lake
- 2) City of Highland
- 3) City of San Bernardino
- 4) City of Victorville
- 5) **City of Yucaipa - *under review by ICF***
- 6) Big Bear Lake Fire Protection District
- 7) **San Bernardino County Unincorporated - *under review by ICF***
- 8) San Bernardino Mountain Community Hospital
- 9) **West Valley Water District - *under review by ICF***
  - To report changes or corrections, please contact Cindy Serrano, OES Assistant Division Manager, at (909) 356-3998 or at [cindy.Serrano@oes.sbcounty.gov](mailto:cindy.Serrano@oes.sbcounty.gov).

HMP Water Agency Meeting  
September 9, 2010  
9:00 – 11:00 am

Location: East Valley Water District  
3654 E. Highland Ave, Suite 12  
Highland, Ca 92346

ATTENDEES:

1. Cecilia Contreras, East Valley Water District
2. Gary Sturdivan, East Valley Water District
3. Dan Borell, San Bernardino Valley Municipal Water District
4. John Hull, Yucaipa Valley Water District
5. Linda Kilday, Yucaipa Valley Water District
6. Carl D. Jones, City of San Bernardino Municipal Water Department
7. Juan Zamora, Chino Basin Water Conservation District
8. Kathy Standridge, Monte Vista Water District
9. Jonathon Dizon, Monte Vista Water District

DISCUSSED:

- San Bernardino Valley Municipal Water District volunteered to help with GIS mapping
  - Submit boundaries to Dan Borell
- Maps to include facilities for ranking without specific locations
- Ranking most critical to least critical
  - List rankings in spreadsheet
- Public participation
  - Post on website for comments
  - Board Meetings
- Set up internal working groups
- Planning teams – describe each person's roll and participation
- Submit in Word Doc on disk to the County
- Submit to upload onto the portal is October 22<sup>nd</sup>
  - Max 30 MB

**Juan Zamora**

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**From:** Debby Figoni  
**Sent:** Thursday, September 09, 2010 6:05 PM  
**To:** Ann Macy  
**Cc:** Juan Zamora; Eunice Ulloa  
**Subject:** Hazard Mitigation Plan for Montclair 2010  
**Attachments:** Hazard Mitigation Plan for Montclair 2010 - Press Release.pdf; Hazard Mitigation Plan for Montclair 2010 - Press Release.doc

Annie:

Could you please put the following on our website?:

**Local Hazard Mitigation Plans**

The City of Montclair, Monte Vista Water District and the Chino Basin Water Conservation District are requesting comments from the public as they update their Local Hazard Mitigation Plans. The plans, first developed in 2005 to comply with federal laws, identify natural hazards that affect local agencies, assess the vulnerability of agency assets and provide mitigation strategies to reduce or eliminate long-term risks to life and property from hazardous events. For more information, [click here](#).

(link the attached pdf at the "click here" spot)

Thank you!!!

Debby

cc: Juan  
Eunice

# HOT TOPICS

## HAZARD MITIGATION PLAN

September 13, 2010

→ **REMINDER: Stakeholder Conference Call**

- Thursday, September 23, 2010
- 10:00 a.m.
- ICF Conference Line: (877) 423-6338 / Access Code: 680954#

→ **CONTRACTING WITH CONSULTING FIRMS**

- Some of the stakeholders have contracted with a consulting firm for completion of their HMP. If you have done so, it is imperative that you comply/understand the following:
  1. Before the consultant contacts ICF or County OES, please provide a written notice to the HMP Management Team (below) indicating that you are authorizing the consultant to participate in meetings, gain access to the web portal, etc.:
    - Andy Petrow, ICF: [APetrow@icfi.com](mailto:APetrow@icfi.com)
    - Cindy Serrano, County OES: [Cindy.Serrano@oes.sbcounty.gov](mailto:Cindy.Serrano@oes.sbcounty.gov)
  2. As the stakeholder, please provide your consultant with a thorough briefing of the planning process to date.
  3. As the stakeholder, remember that you should maintain direct oversight of your HMP as the primary responsible party for its completion.

→ **GROUP 1 PARTICIPANTS:**

- On Monday, September 13, the following HMPs were shipped overnight to Cal EMA for a courtesy review:
  1. City of Big Bear Lake
  2. City of Yucaipa
  3. Big Bear Lake Fire Protection District
  4. West Valley Water District
  5. San Bernardino County Unincorporated Area

**CONGRATULATIONS!**



HAZARD MITIGATION PLANNING MEETING

PLANNING TEAM

WEDNESDAY SEPTEMBER 15, 2010

4:00PM – 4:30 PM

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PRINT

1. Ann Macy
2. David Schroeder

SIGNATURE

Ann Macy

[Signature]



## Hazard Mitigation Plan 2010 Update

### Planning Team

Thursday, September 16, 2010

2:30 pm – 3:30 pm

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### Agenda

- I. Welcome
- II. Additions to HMP Team
- III. Public Involvement/Outreach
- IV. Obtaining Information
- V. Milestone Dates
  - A. **10/18-10/22** Upload Draft of HMP to Portal
  - B. **11/1-11/15** Submit to SB County OES for transmission to Cal EMA
  - C. **11/8-11/26** Submit to Cal EMA for Approval
  - D. **11/22-12/31** Submit to FEMA for Approval
  - E. **1/3-1/28** Adoption by the Local Governing Body (CBWCD Board)



HAZARD MITIGATION PLAN 2010 UPDATE

PLANNING TEAM

THURSDAY SEPTEMBER 16<sup>TH</sup>, 2010

2:30 PM – 3:30 PM

SIGN IN SHEET

PRINT

SIGNATURE

1. Cheryl Vermette	Cheryl Vermette
2. Debby Figoni	Debby Figoni
3. <del>David S. Henderson</del>	
4. Eunice Ulloa	Eunice M. Ulloa
5. SHANE Kemp	Shane Kemp
6. Ann Macy	Ann Macy
7. Juan Zamora	Juan Zamora

# HOT TOPICS

## HAZARD MITIGATION PLAN

September 20, 2010

→ **REMINDER: Stakeholder Conference Call Tomorrow**

- Thursday, September 23, 2010
- 10:00 a.m.
- ICF Conference Line: (877) 423-6338 / Access Code: 680954#

→ **GROUP 1 PLANS**

- Currently undergoing a "courtesy review" by Cal-EMA
- Cal-EMA comments expected any day!

→ **GROUP 2 PARTICIPANTS**

- Andy Petrow, ICF consultant, is contacting all Group 2 participants to determine the status of your planning project.

**REMINDER:**

***See the Timeline on the Portal to Determine Where You  
Should Be in the Planning Process!***



## Hazard Mitigation Plan 2010 Update

### Planning Team

Tuesday, September 28, 2010

10:00 am – 11:00 am

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### Agenda

- I. Welcome
- II. Review of 1<sup>st</sup> Draft
- III. Obtaining Information
- IV. Board Agenda Item for October Meeting
- V. Discuss Deadline extension
- VI. Milestone Dates
  - A. **10/18-10/22** Upload Draft of HMP to Portal
  - B. **11/1-11/15** Submit to SB County OES for transmission to Cal EMA
  - C. **11/8-11/26** Submit to Cal EMA for Approval
  - D. **11/22-12/31** Submit to FEMA for Approval
  - E. **1/3-1/28** Adoption by the Local Governing Body (CBWCD Board)



HAZARD MITIGATION PLANNING MEETING

PLANNING TEAM

TUESDAY SEPTEMBER 28, 2010

10:00AM - 11:00 AM

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PRINT	SIGNATURE
1. <u>Juan Zamora</u>	<u>[Signature]</u>
2. <u>Cheryl Vermette</u>	<u>Cheryl Vermette</u>
3. <u>Ann Macy</u>	<u>Ann Macy</u>
4. <u>SHANE KEMP</u>	<u>Shane Kemp</u>
5. <u>DAVE SCHOEDER</u>	<u>[Signature]</u>
6. <u>Debby Figoni</u>	<u>Debby Figoni</u>
7. _____	_____

Ⓞ

# **HOT TOPICS**

## **HAZARD MITIGATION PLAN**

**August 31, 2010**

### **ATTENTION: GROUP 1 PLAN SUBMITTAL INFORMATION**

- Provide one (1) print copy of your Plan with cover sheet identifying your organization
  - Remember to include the completed FEMA Crosswalk
  - Copy should be bound (binder, clip, or rubber band, etc.)
- Also provide your Plan on two (2) CD's with identifying labels
- Mail or deliver the three products to:

**Cindy Serrano, Assistant Division Manager  
County Fire/Office of Emergency Services  
1743 Miro Way  
Rialto, CA 92376**

- In order to make the overnight shipping process to Cal EMA, Plans must be at OES by:

**Monday, September 13, 2010 at 9:00 a.m.**

- ICF Conference Call Line:

(877) 423-6338

Access Code: 680954#

→ **GROUP 1 PARTICIPANTS:**

- 1) City of Big Bear Lake
- 2) City of Highland
- 3) City of San Bernardino
- 4) City of Victorville
- 5) City of Yucaipa - under review by ICF**
- 6) Big Bear Lake Fire Protection District
- 7) San Bernardino County Unincorporated - under review by ICF**
- 8) San Bernardino Mountain Community Hospital
- 9) West Valley Water District - under review by ICF**
  - To report changes or corrections, please contact Cindy Serrano, OES Assistant Division Manager, at (909) 356-3998 or at [cindy.Serrano@oes.sbcounty.gov](mailto:cindy.Serrano@oes.sbcounty.gov).



## **Hazard Mitigation Plan 2010 Update Planning Team**

**Wednesday, November 10, 2010**

**2:00 pm – 3:00 pm**

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### **Agenda**

- I. Welcome
- II. Review of 2<sup>nd</sup> Draft
- III. Obtaining Information
- IV. Finalize HMP Report for submittal
- V. Submit Report to SB County OES by Dec. 1, 2010
- VI. Milestone Dates
  - A. **12/1-12/10** Upload Draft of HMP to Portal



**Hazard Mitigation Plan 2010 Update  
Planning Team**

**Wednesday, November 10, 2010**

**2:00 pm – 3:00 pm**

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**Sign- In**

Name	Signature
Ann Macey	Ann Macey
Cheryl Kermette	Cheryl Kermette
SHANE KEMP	Shane Kemp
DAVID SCHROEDER	[Signature]
DEBBY FIGONI	Debby Fioni
_____	_____
_____	_____

**Juan Zamora**

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**From:** San Bernardino County Operational Area [SBCOA@oes.sbcounty.gov]  
**Sent:** Tuesday, November 30, 2010 4:56 PM  
**Subject:** HMP Hot Topics November 30, 2010  
**Attachments:** HMP Hot Topics 101130.doc; Group 2 Status.xls

Please see the attached/below HMP Hot Topics for November 30, 2010.

San Bernardino County Operational Area  
San Bernardino County Fire Department/Office of Emergency Services

Phone: (909) 356-3998  
Fax: (909) 356-3965

Note new email address: [sbcoa@oes.sbcounty.gov](mailto:sbcoa@oes.sbcounty.gov)

----- Start of Hot Topics -----

## HOT TOPICS

### HAZARD MITIGATION PLAN

November 30, 2010

→ **Next Stakeholder Conference Call:**

- Thursday, December 2, 2010
- 10:00 a.m. - 11:00 a.m.
- ICF Conference Line: (877) 423-6338 / Access Code: 680954#
- ☒ Updated Guidance (Now available on the portal).
- ☒ City/Town Hazard Maps (Now posted on the portal).
- ☒ Special District Hazard Maps (Now posted on the portal).
- ☒ Uploading completed HMP's to the Portal for ICF review.

→ **WEB PORTAL**

- Please update the project Status Worksheet sent out on 11/18/2010 and email to Andy Petrow ([apetrow@icfi.com](mailto:apetrow@icfi.com)) if you have not done so. A copy of the file is attached to this email. (Group 2 Status.xls)
- Stakeholders with portal username and password issues, please call the ICF HelpDesk directly at (877) 423 4578.
- New users still need to contact Andy Petrow at (818) 294-5472 or at [apetrow@icfi.com](mailto:apetrow@icfi.com).

----- End of Hot Topics -----

**Juan Zamora**

**Subject:** FW: Multi-Jurisdictional Multi-Hazard Mitigation Plan 2010 Update Conf. Call  
**Location:** Conference Line: (877) 423-6338, Access Code: 680954#

**Start:** Thu 9/9/2010 10:00 AM  
**End:** Thu 9/9/2010 11:30 AM  
**Show Time As:** Tentative

**Recurrence:** (none)

**Meeting Status:** Not yet responded

**Organizer:** Cox, Kalina

FYI

-----Original Appointment-----

**From:** Cox, Kalina  
**Sent:** Tuesday, August 31, 2010 9:48 AM  
**To:** Cox, Kalina; 'Adams, Betsy'; 'Bachman, Tom'; Benson, Denise; 'Borja, Mike'; 'Brown, Sonia'; 'Caldwell, Michelle'; 'Carlson, Sandra (WVWD)'; 'Cox, Jim'; 'Curtis, Mitch'; 'Daniely, David'; 'Davis, Larrie'; 'Drew, Karl'; 'Feser, Don'; 'Frazier, Jeff'; 'Fuller, Sam'; 'Garcia, Danielle'; 'Gregory, Michael'; 'Jahn, Rachael'; 'Johnstone, James'; 'MacDonald, Scott'; 'Madrigal, Tom'; 'Mosley, Phil'; Petersen, Keith; 'Petrow, Andy'; 'Rissmiller, Jim'; 'Seligson, Hope'; Serrano, Cindy; 'Shankland, Jennifer'; 'Valencia, Nancy'; 'Vaughan, Tammy'; Wagner, Miles; Willis, Jeff; 'Wirz, Matt'; 'Yegge, David'; 'Ammari, Rossana'; 'Baron, Bruce'; 'Bekker, Frank (City of Rialto)'; 'Bell, Mike'; 'Bennington, Brigit'; 'Berch, Chris'; 'Bird, Angelic'; 'Bishop, Art'; 'Borell, Dan'; Brownlee, Dave; 'Brunelle, Renee'; 'Bussard, Keith'; 'Contreras, Cecilia'; 'Corrao, Sal'; 'Cousino, JoAnne (NCS D)'; 'Crosby, Mark'; 'Darkens, Mike (City of Rialto)'; 'Diggs, Ed'; 'Dixon, Valeria'; 'Dizon, Jonathan'; 'Donley, Mike'; 'Downey, Debra'; 'Foley, Meg and Hooper, Curtis (MVCSD)'; 'Frazier, Jack'; 'Fuller, Sam'; 'Gray, Jamie'; 'Gray, Russell'; 'Green, Warren'; 'Gwaltney, Pete'; 'Holmes, Roxanne (LAWA)'; 'Hoover, Tom'; 'Hull, John'; 'Jauss, Darrell'; 'Jenkins, Kent'; 'Jones, Carl'; 'Jones, Nancy'; 'Kerrigan, Rick'; 'Knoll, Brian (LAWA)'; 'Kreske, Debra'; 'Lassetter, Dani'; 'Malizia, Cathy'; 'Massey, Sam'; 'McCurry, Pat'; 'McHargue, Tim (City of Colton)'; 'Medina, Breanna'; 'Miller, Pat'; 'Miller, Stephen (NCS D)'; 'Montgomery, Benjamin'; 'Musgraves, Mike (City of Colton)'; 'Nelson, Jack'; 'Newbury, Krysten'; 'Okamura, Steve'; 'Palma, George'; 'Peavy, Ronald'; 'Peck, Ron'; 'Petrow, Andy'; 'Ralph, Bill'; 'Ramsey, Bob'; 'Ratcliffe, Bob'; 'Ray, Brenda'; 'Recio, Arnel'; 'Rosas, Brenda'; 'Salazar, Frank'; 'Sanchez, Steve'; 'Schooler, Jim'; 'Scullin, Michael and Dvorak, Mary (APCWD)'; 'Seligson, Hope'; 'Semione, Cindy'; 'Smith, Kevin'; 'Sturdivan, Gary'; 'Summers, Kim'; 'Summers, Kirk'; 'Tincher, Bob'; 'Tree, Michael'; 'Turner, Greg'; Eunice Ulloa; 'Waters, Debra and McKee, Mitch'; 'Whitehead, Laura'; 'Wilkie, Larry'; 'Wolbert, Laura'; 'Wolff, Chris'; 'Zamora, Don'; Juan Zamora  
**Subject:** Multi-Jurisdictional Multi-Hazard Mitigation Plan 2010 Update Conf. Call  
**When:** Thursday, September 09, 2010 10:00 AM-11:30 AM (UTC-08:00) Pacific Time (US & Canada).  
**Where:** Conference Line: (877) 423-6338, Access Code: 680954#

Please be advised, a Multi-Jurisdictional Multi-Hazard Mitigation Plan 2010 Update conference call has been scheduled as follows:

**DATE:** Thursday, September 9, 2010  
**TIME:** 10:00 a.m. - 11:30 a.m.  
**CONF. LINE:** (877) 423-6338  
**ACCESS #:** 680954#

The purpose of this Stakeholder Conference Call is to discuss current HMP issues, submission guidelines for Group 1, and to hold a question and answer session for HMP Group 1 and Group 2 participants.

Please RSVP by accepting this invitation or by contacting Kalina Cox at (909) 356-3836 or [kalina.cox@oes.sbcounty.gov](mailto:kalina.cox@oes.sbcounty.gov), by Friday, September 3, 2010. Should you have any questions, please contact our office at (909) 356-3998. Thank you.

Kalina Cox, Administrative Secretary II  
San Bernardino County Fire Department  
Office of Emergency Services  
Office: (909) 356-3836  
Fax: (909) 356-3965  
[kalina.cox@oes.sbcounty.gov](mailto:kalina.cox@oes.sbcounty.gov)

Effective immediately my new email address is:  
[kalina.cox@oes.sbcounty.gov](mailto:kalina.cox@oes.sbcounty.gov)

**Juan Zamora**

---

**From:** San Bernardino County Operational Area [SBCOA@oes.sbcounty.gov]  
**Sent:** Monday, September 13, 2010 4:16 PM  
**Subject:** HMP Hot Topics!  
**Attachments:** HMP Hot Topics 100913.doc

Attached is the "Hot Topics" for September 13, 2010 pertaining to the Hazard Mitigation Planning process. FYI

San Bernardino County Operational Area  
San Bernardino County Fire Department/Office of Emergency Services

Phone: (909) 356-3998  
Fax: (909) 356-3965

Note new email address: [sbcoa@oes.sbcounty.gov](mailto:sbcoa@oes.sbcounty.gov)

**Juan Zamora**

---

**From:** Dan Borell [danb@sbumwd.com]  
**Sent:** Thursday, September 16, 2010 10:17 AM  
**To:** Juan Zamora  
**Subject:** RE: HMP Report  
**Attachments:** image001.jpg

Hi Juan  
Got your maps. I'll get back to next week with a progress report.  
Dan

Dan Borell, GISP  
GIS Coordinator



380 East Vanderbilt Way  
San Bernardino, CA 92408  
909-387-9225

---

**From:** Juan Zamora [mailto:JZamora@cbwcd.org]  
**Sent:** Wednesday, September 15, 2010 7:46 AM  
**To:** Dan Borell  
**Subject:** HMP Report

Good morning Daniel,

It was a pleasure meeting you at the last HMP meeting in Highland. As we discussed, here are the maps that I have of our District.  
Since we are all trying to be uniform as far as what the maps look like, feel free to do whatever needs to be done to our maps.  
If you have any questions, please call me.

Thanks,

Juan Zamora  
Water Conservation Specialist III  
LEAP Program Manager  
Chino Basin Water Conservation District  
4594 San Bernardino St.  
Montclair, CA 91763  
(909)267-3224  
(909)626-5974-Fax

**Juan Zamora**

---

**From:** San Bernardino County Operational Area [SBCOA@oes.sbcounty.gov]  
**Sent:** Wednesday, September 22, 2010 11:05 AM  
**Subject:** HMP Hot Topics: 9/22/10  
**Attachments:** HMP Hot Topics 100920.doc

See attached Hot Topics for the latest information regarding the Hazard Mitigation Planning process.

San Bernardino County Operational Area  
San Bernardino County Fire Department/Office of Emergency Services

Phone: (909) 356-3998  
Fax: (909) 356-3965

**Note new email address: [sbcoa@oes.sbcounty.gov](mailto:sbcoa@oes.sbcounty.gov)**

**Cheryl Vermette**

---

**Subject:** Copy: Multi-Jurisdictional Multi-Hazard Mitigation Plan 2010 Update Conf. Call  
**Location:** Conf. #: 877-423-6338, Access Code: 680 954#

**Start:** Thu 9/23/2010 10:00 AM  
**End:** Thu 9/23/2010 11:30 AM

**Recurrence:** (none)

**Meeting Status:** Not yet responded

**Organizer:** Cox, Kalina

Please be advised, a Multi-Jurisdictional Multi-Hazard Mitigation Plan 2010 Update conference call has been scheduled as follows:

**DATE:** Thursday, September 23, 2010  
**TIME:** 10:00 a.m. - 11:30 a.m.  
**CONF. LINE:** (877) 423-6338  
**ACCESS #:** 680 954#

Please RSVP by accepting this invitation or by contacting Kalina Cox at (909) 356-3836 or [kalina.cox@oes.sbcounty.gov](mailto:kalina.cox@oes.sbcounty.gov), by Tuesday, September 21, 2010. Should you have any questions, please contact our office at (909) 356-3998. Thank you.

Kalina Cox, Administrative Secretary II  
San Bernardino County Fire Department  
Office of Emergency Services  
Office: (909) 356-3836  
Fax: (909) 356-3965  
[kalina.cox@oes.sbcounty.gov](mailto:kalina.cox@oes.sbcounty.gov)

Effective immediately my new email address is:  
[kalina.cox@oes.sbcounty.gov](mailto:kalina.cox@oes.sbcounty.gov)

**Juan Zamora**

---

**From:** Andy Campbell [acampbell@ieua.org]  
**Sent:** Wednesday, August 18, 2010 10:03 AM  
**To:** David Schroeder  
**Cc:** Juan Zamora  
**Subject:** RE: basin capacities  
**Attachments:** ieualogo.jpg

Dave

Here is what I have records for. Note that these are based on the original CBFIP storage curves with some modifications where the original curves were insufficient (Montclair) or nonexistent (Grove). None of the basins have had new curves developed from aerial surveys since that time.

CBWCD Basin	Water Depth (feet)	Volume (AF)	Notes
College Heights East	23.0	104.3	Dam Fully inflated and holding water in basins
College Heights West	23.0	106.1	Dam Fully inflated and holding water in basins
Montclair 1	31.7	146.8	Spilling at pour over
Montclair 2	29.2	212.7	Spilling at pour over
Montclair 3	21.4	56.5	Spilling at pour over
Montclair 4	27.0	111.0	Spilling at pour over
Brooks	53.0	474.0	2 feet below highest berm, State St. and San Antonio Chan
Turner 1	37.5	307.5	Spilling at pour over
Ely 1-3	15.5	332.6	2 feet below spillway crest
Grove	5.0	52.0	5 foot SBCFCD limitation

**Andy Campbell**

Groundwater Recharge Coordinator



"Water Smart – Thinking in Terms of Tomorrow"  
6075 Kimball Ave / Chino, California 91708  
Tel: 9099931907  
Mobile: 9512957523  
Fax: 909-993-1950  
Email: [acampbel@ieua.org](mailto:acampbel@ieua.org) Website: <http://www.ieua.org>

---

**From:** David Schroeder [mailto:DSchroeder@cbwcd.org]  
**Sent:** Tuesday, August 17, 2010 4:40 PM  
**To:** Andy Campbell  
**Cc:** Juan Zamora  
**Subject:** basin capacities

Andy- could you please send me the most current storage capacities of the following basins:

Brooks  
Montclair 1,2,3,4  
College heights east and west  
Ely 3

Thanks

David Schroeder  
Conservation Specialist  
Chino Basin Water Conservation District  
4594 San Bernardino St.  
Montclair, CA 91763  
Ph. 909-267-3223  
Fax. 909-626-5974

**Juan Zamora**

---

**From:** Eunice Ulloa  
**Sent:** Tuesday, August 31, 2010 10:52 AM  
**To:** Juan Zamora  
**Subject:** FW: HMP Hot Topics  
**Attachments:** HMP Hot Topics 100831.doc

What group are we in??

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**From:** San Bernardino County Operational Area [mailto:SBCOA@oes.sbcounty.gov]  
**Sent:** Tuesday, August 31, 2010 8:55 AM  
**To:** Ammari, Rossana; Baron, Bruce; Bekker, Frank (City of Rialto); Bell, Mike; Bennington, Brigit; Berch, Chris; Bird, Angelic; Bishop, Art; Borell, Dan; Brownlee, Dave; Brunelle, Renee; Bussard, Keith; Contreras, Cecilia; Corrao, Sal; Cousino, JoAnne (NCSD); Crosby, Mark; Darkens, Mike (City of Rialto); Davis, Larrie; Diggs, Ed; Dixon, Valeria; Dizon, Jonathan; Donley, Mike; Downey, Debra; Drew, Karl; Foley, Meg and Hooper, Curtis (MVCSD); Frazier, Jack; Fuller, Sam; Gray, Jamie; Gray, Russell; Green, Warren; Gwaltney, Pete; Holmes, Roxanne (LAWA); Hoover, Tom; Hull, John; Jahn, Rachael; Jaus, Darrell; Jenkins, Kent; Jones, Carl; Jones, Nancy; Kerrigan, Rick; Knoll, Brian (LAWA); Kreske, Debra; Lassetter, Dani; Malizia, Cathy; Massey, Sam; McCurry, Pat; McHargue, Tim (City of Colton); Medina, Breanna; Miller, Pat; Miller, Stephen (NCSD); Montgomery, Benjamin; Musgraves, Mike (City of Colton); Nelson, Jack; Newbury, Krysten; Okamura, Steve; Palma, George; Peavy, Ronald; Peck, Ron; Petrow, Andy; Ralph, Bill; Ramsey, Bob; Ratcliffe, Bob; Ray, Brenda; Recio, Arnel; Rosas, Brenda; Salazar, Frank; Sanchez, Steve; Schooler, Jim; Scullin, Michael and Dvorak, Mary (APCWD); Seligson, Hope; Semione, Cindy; Smith, Kevin; Sturdivan, Gary; Summers, Kim; Summers, Kirk; Tincher, Bob; Tree, Michael; Turner, Greg; Eunice Ulloa; Waters, Debra and McKee, Mitch; Whitehead, Laura; Wilkie, Larry; Willis, Jeff; Wolbert, Laura; Wolff, Chris; Zamora, Don; Juan Zamora  
**Subject:** HMP Hot Topics

Attached are this week's Hot Topics for the Hazard Mitigation Planning project.

San Bernardino County Operational Area  
San Bernardino County Fire Department/Office of Emergency Services

Phone: (909) 356-3998  
Fax: (909) 356-3965

Note new email address: [sbcoa@oes.sbcounty.gov](mailto:sbcoa@oes.sbcounty.gov)

**CHINO BASIN WATER CONSERVATION DISTRICT  
REGULAR MEETING**

**District Office**

**4594 San Bernardino Street**

**Montclair, CA 91763**

**MONDAY; November 8, 2010**

**MINUTES**

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**INVOCATION** – President Parker gave the invocation.

**FLAG SALUTE** – President Parker led the audience in the flag salute.

**CALL TO ORDER** – The meeting was called to order at 11:10 a.m. by President Parker.

**ROLL CALL**

Board Members Present: De Haan Jr., Hofer, King, Parker, Reddick, Vanden Heuvel

Board Members Absent: Aldaco **NOTE: Director De Haan, Jr. arrived at 11:12 a.m. and Director Vanden Heuvel arrived at 11:18 a.m.)**

Staff and Visitors Present: General Manager (GM) Ulloa; Conservation Specialist III Zamora; Conservation Specialist II Schroeder; Conservation Specialist II Figoni; Administrative Assistant Macy; Legal Counsel McElhaney

with Brunick, McElhaney & Beckett; Lisa Morgan-Perales with Inland Empire Utilities Agency (IEUA); Jeff Veenema with Claremont Environmental Design Group (CEDG); and Tony Traverso, and Rohit Prashar with AMG and Associates, Inc. (AMG).

## CONSENT CALENDAR

1. Minutes – October 11, 2010 – Regular Meeting  
Minutes – October 11, 2010 – Recycle Water Committee Meeting
2. Financial Reports – October 2010. Receive and file.
3. AB1234 - Director and Staff Travel, Training and Meeting Report. Receive and file CBWCD's Director and Staff Travel Training and Meeting Report reflecting business-related expenses incurred by the District.

Moved by Vice President Hofer, seconded by Director King, and carried on a 4-0-3 vote to approve Consent Calendar items 1 through 3.

**AYES:** Hofer, King, Parker, Reddick

**NOES:** None

**ABSENT:** Aldaco, De Haan Jr., Vanden Heuvel

ADDITIONS TO THE AGENDA - None

PUBLIC HEARINGS - None

PUBLIC COMMUNICATIONS - None

UNFINISHED BUSINESS – None

### NEW BUSINESS

4. Hazardous Mitigation Plan Report (HMP)

Conservation Specialist/HMP Coordinator Zamora gave the staff report.

Moved by Director King, seconded by President Parker, and carried on a 4-0-3 vote to submit the District's 2010 Draft HMP Report to San Bernardino Office of Emergency Services for final review.

**AYES:** Hofer, King, Parker, Reddick

**NOES:** None

**ABSENT:** Aldaco, De Haan Jr., Vanden Heuvel

*NOTE: Director De Haan, Jr. arrived at 11:12 a.m.*

5. Public Sector Recycled Water Connection Program Applications from the City of Ontario. Applications submitted for James Galanis and Veteran's Parks.

Conservation Specialist Zamora gave the staff report.

**Moved by Director King, seconded by Director Reddick, and carried on a 5-0-2 vote to approve Public Sector Recycled Water Connection Program Application from the City of Ontario covering Galanis and Veteran's Parks providing incentives to help offset site conversion costs to irrigate with recycled water totaling \$20,155 and 2) authorize the General Manager to execute all necessary documents.**

**AYES:** De Haan Jr., Hofer, King, Parker, Reddick

**NOES:** None

**ABSENT:** Aldaco, Vanden Heuvel

6. An Agreement Between the District and GRB Equipment Rental, Inc. to Process Soils and Rocks and to Store Materials and Equipment at the College Heights East Basin.

Conservation Specialist Schroeder gave the staff report. Approval would continue an existing agreement.

**Moved by Director De Haan, Jr., seconded by Vice President Hofer, and carried on a 5-0-2 vote to approve the proposed agreement and the 'Hold Harmless and Permit to Enter' with GRB Equipment Rental, Inc and 2) authorize General Manager to execute all necessary documents.**

**AYES:** De Haan Jr., Hofer, King, Parker, Reddick

**NOES:** None

**ABSENT:** Aldaco, Vanden Heuvel

7. **2010 Water Resources Institute 10 Year Celebration and Award event.** Sponsorship participation opportunity in honor of John Anderson and/or authorization for interested Board members and staff to attend the event on November 13, 2010 in San Bernardino, CA.

General Manager Ulloa gave the staff report. The Board discussed sponsorship opportunities and decided to pass on the request. Directors who wish to attend this event will notify staff.

**NOTE: Director Vanden Heuvel arrived at 11:18 a.m. during the above discussion.**

8. **Association of California Water Agencies Health Benefits Authority (ACWA HBA) 2010 Board of Director Elections.** The 2010 ACWA HBA elections will fill six of the eleven Board of Director positions for four-year rotating terms.

Administrative Assistant Macy gave the staff report.

Moved by Director Vanden Heuvel, seconded by Vice President Hofer, and carried on a 6-0-1 to vote for Randal Reed for the southern region (twenty or more participating employees) general position on the ACWA HBA Board of Directors and 2) direct the General Manager to fill out the appropriate paperwork and submit to ACWA HBA by 5:00 p.m. November 23, 2010.

**AYES: De Haan Jr., Hofer, King, Parker, Reddick, Vanden Heuvel**

**NOES: None**

**ABSENT: Aldaco**

#### **GENERAL INFORMATION – ORAL REPORTS**

IEUA Water Resources Analyst Lisa Perales updated the Directors on recent activities of IEUA. IEUA will be hosting a workshop on water rate structuring and rate stability on December 15, 2010 at their facilities from 11 a.m. to 2 p.m. All Directors and staff are welcome and lunch will be provided at no charge.

Anthony Traverso of AMG & Associates, Inc. gave an update of the progress of the Mixed-Use Building project regarding schedule and budget. Mr. Traverso noted that Sea West Enterprises, Inc. (Sea West) has an excellent project superintendent (Rick Byrne) who is 100% dedicated to quality work and the projected completion date. GM Ulloa stated that staff is very pleased with the team of AMG, CEDG, and Sea West and appreciates how well they work together and with District Staff.

#### **DIRECTOR ORAL REPORTS**

**Director Aldaco – Absent**

- Director Aldaco was not able to attend the Association of San Bernardino County Special District's (ASBCSD) monthly meeting and dinner that was cosponsored by CBWCD and Cucamonga Valley Water District (CVWD) on October 18, 2010, as planned.

#### Director Vanden Heuvel

- Director Vanden Heuvel understands that Chino Basin Desalter Authority (CDA) put out a negative mitigation declaration on their desalter expansion that the District's engineer Robert Wagner has been reviewing. He notes that the period of time for public comment is relatively short in case the Board would like to make a statement. He looks forward to Mr. Wagner's report on this matter.
- Director Vanden Heuvel asked staff to make sure that the Board is kept up to speed on Mr. Wagner's ongoing evaluation of Mr. Wildermuth's work on safe yield.

#### President Parker

- President Parker was not able to attend the ASBCSD monthly meeting and dinner that was cosponsored by CBWCD and CVWD on October 18, 2010, as planned.
- President Parker attended John Anderson's retirement dinner (Director on IEUA Board) on October 14, 2010 along with Director De Haan Jr. President Parker presented Mr. Anderson with a commendation from the District on years of exemplary service to IEUA and the local community.

#### Treasurer De Haan, Jr. – None

#### Vice President Hofer - None

#### Director King – None

#### Director Reddick

- Director Reddick was not able to attend the ASBCSD monthly meeting and dinner that was cosponsored by CBWCD and CVWD on October 18, 2010, as planned.

## **STAFF ORAL REPORTS**

#### General Manager/Secretary Ulloa

- GM Ulloa and numerous staff members attended the ASBCSD monthly meeting and dinner that was cosponsored by CBWCD and CVWD on October 18, 2010.

#### Conservation Specialist III Zamora

- New Landscape Evaluation Audit Program (LEAP) activities:
  - Twenty nine audits have been completed.
  - Four of these audits were completed within the District's service area and fifteen are outside the District's Boundaries.
  - Staff is invoicing IEUA for the fifteen audits outside the District's boundaries of which fourteen are single family residences and one is a large church.
- Professional Landscape Classes:
  - Staff is still in the process of locating and purchasing the necessary equipment to teach the Professional Landscape classes since Metropolitan Water District will no longer be providing these materials.

- Conservation Specialist Zamora will be teaching the Professional Landscape classes and is looking for alternative locations to hold the classes while the District's facilities are under renovation.

### Conservation Specialist II Schroeder

- Basin Activities:
  - The San Antonio channel gates are open and ready to capture storm water.
  - Brooks Basin has recently been cleared of weeds.
  - Ely Basin 3 landscape is in the process of being pruned and cleared of weeds.
- Demonstration garden tours are slow which is normal for this time of year.
- Special Projects:
  - The fencing project at Montclair Basins 1, 2, and 3 is complete.

### Conservation Specialist II Figoni

- Press Releases update:
  - The Plants and Planting Water Wise Workshop was promoted in the Daily Bulletin.
  - Several ads were placed in the Daily Bulletin promoting the Landscape and Water Conservation Fair.
- Other Outreach:
  - Ms. Figoni gave a presentation about the benefits of water wise landscaping and composting to 60 students at the 2010 Environmental Youth Leadership Conference on October 2, 2010 at the Frontier Project.
  - CBWCD co-sponsored the ASBCSD meeting and dinner along with CVWD. The event was held at the Upland Carnegie Library on October 18, 2010.
- Landscape Workshops update:
  - The Plants and Planting Water Wise Workshop was held on October 1, 2010 and taught by Conservation Specialist Schroeder.
  - Ms. Figoni gave a presentation for the City of Upland on the benefits of water wise landscaping and composting on October 30, 2010. Forty-five residents attended.
- Construction Update:
  - Construction on the Mixed-Use Building is moving along smoothly. AMG is continuing to do an excellent job overseeing the project.
  - CEDG and Perry and Associates Collaborative (PAC) are working on the design development for Phase 4 – Garden.
- Water Fair - October 23, 2010:
  - Twenty-one agencies participated including Inland Empire Utilities Agency and Three Valleys Municipal Water District.
  - Approximately 1,200 people attended the event.
  - A total of 34 exhibitors participated.
  - Special features included: pumpkin patch, petting zoo, giant slide, snow cones, face painting, a taco vendor, and a pancake breakfast.

- The pancake breakfast served approximately 100 people and raised almost \$200 for the Firefighter's Association.
- Other:
  - IEUA sent out an RFP for agencies looking to teach water wise workshops. CBWCD applied. Debby Figoni, Dave Schroeder and Juan Zamora would be the workshop instructors.

Administrative Assistant Macy

- Annual Poster/Art Contest entries are due on November 23, 2010. The Education Committee will be contacted to set up a meeting for finalist selection to be presented at the December 13, 2010 Board meeting when the winners will be chosen.

Attorney Lee McElhaney - None

CLOSED SESSION - None

ADJOURN

**President Parker adjourned the meeting at 12:41 p.m. to the next regular meeting of the Chino Basin Water Conservation District scheduled for Monday, December 13, 2010, 11:00 a.m. at the District Headquarters.**

APPROVED AND ADOPTED THIS 13<sup>th</sup> DAY OF DECEMBER, 2010.

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Eunice M. Ulloa, General Manager/Secretary

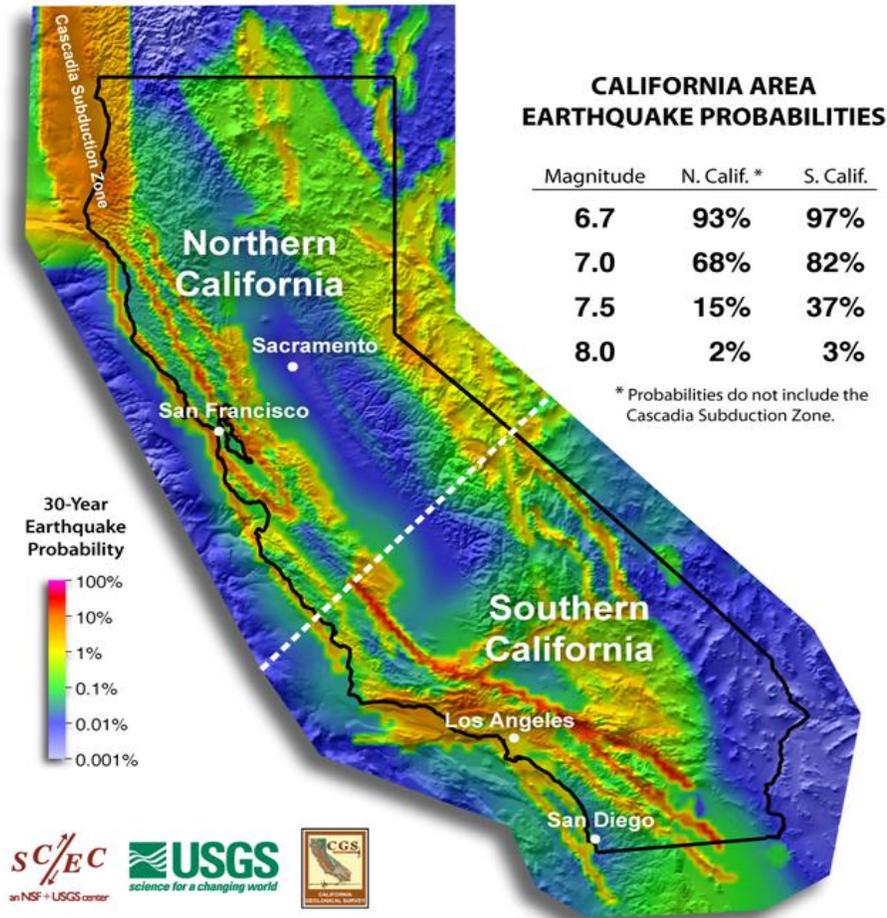
ATTEST:

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Ann Macy, Administrative Assistant

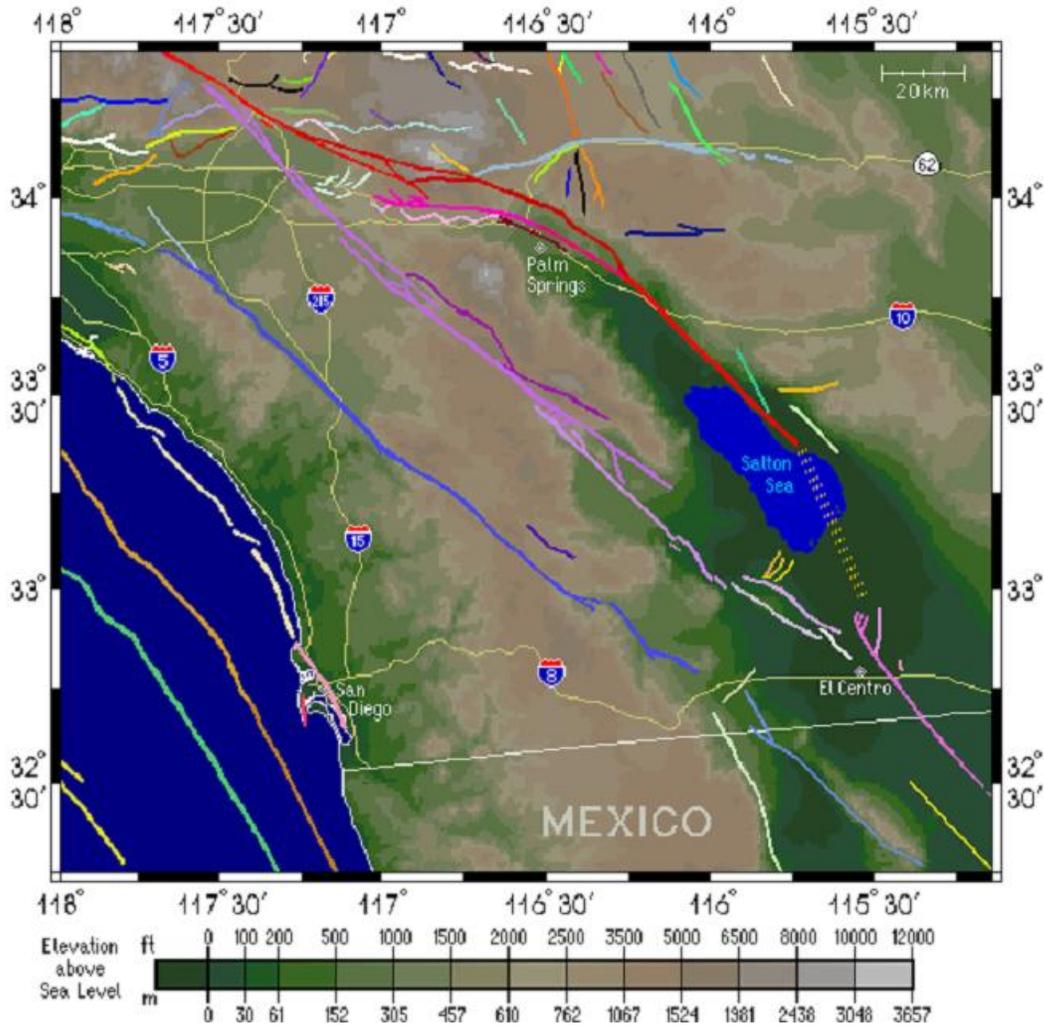
# Appendix B: Earthquake Profile

## B.1 Probability of Earthquakes

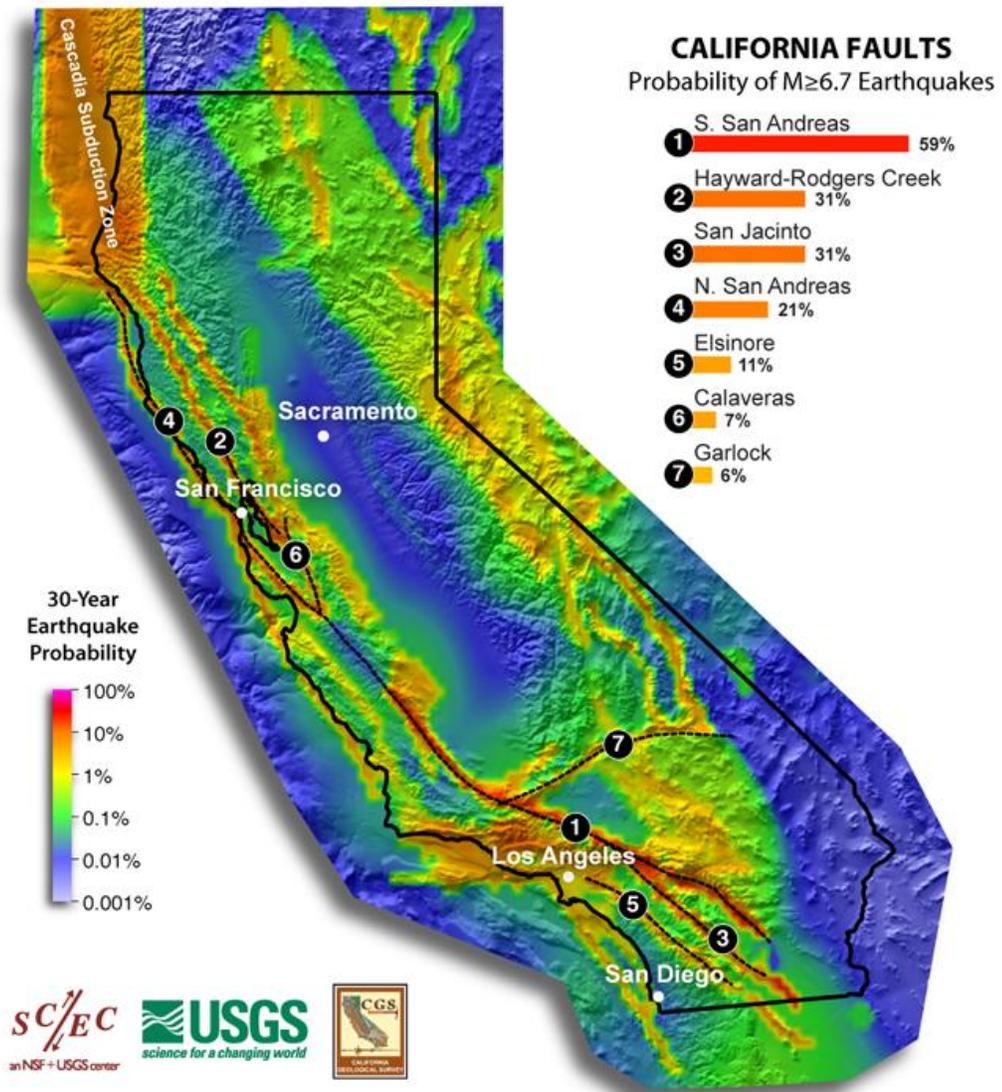


## B.2 Map of Southern California Faults

The following information was obtained from the Southern California Earthquake Data Center. Website at [www.data.scec.org/faults/sofault.html](http://www.data.scec.org/faults/sofault.html). On the website, each fault can be clicked on and a description of the fault is then shown.



### B.3 Map of California Faults

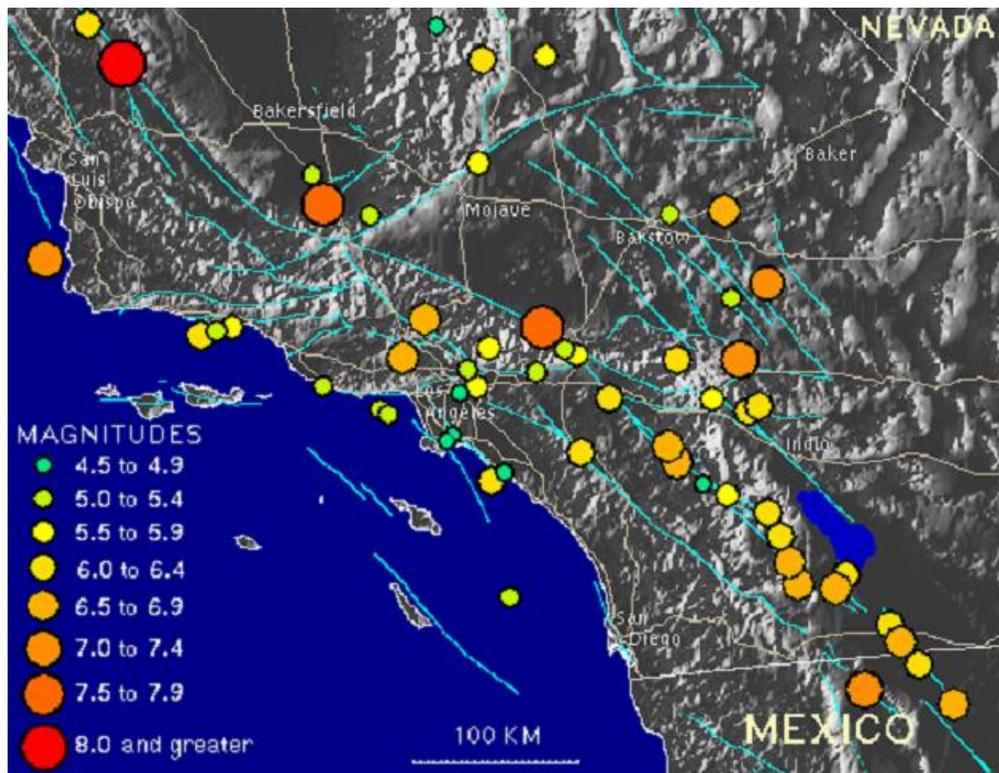


## B.4 Map of Previous Earthquakes in Southern California

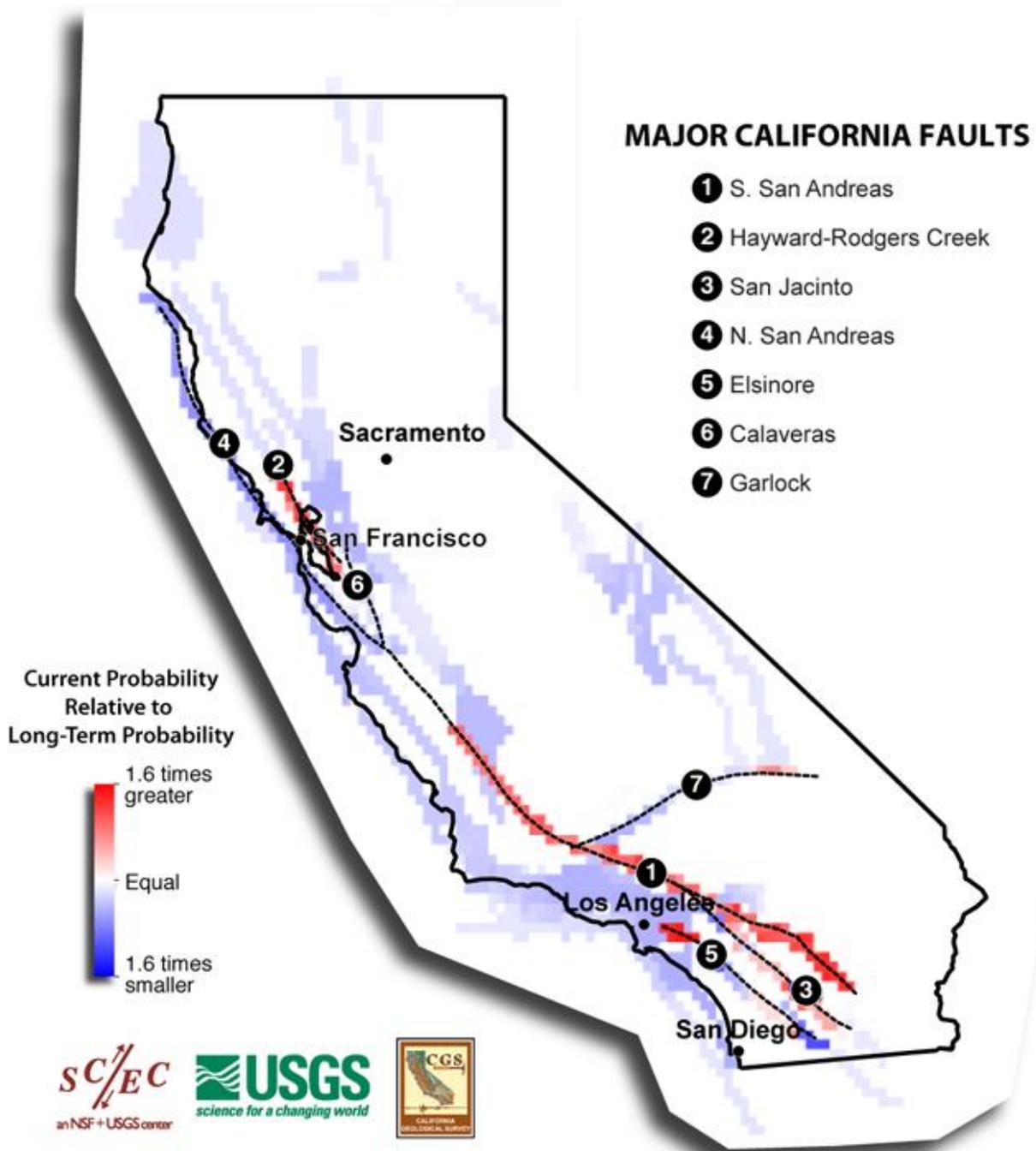
The following information was obtained from the Southern California Earthquake Data Center.

*Below is a map of Southern California, with epicenters of historic earthquakes, dating as far back as 1812. Major highways (in tan) and the surface traces of major faults (in greenish-blue).*

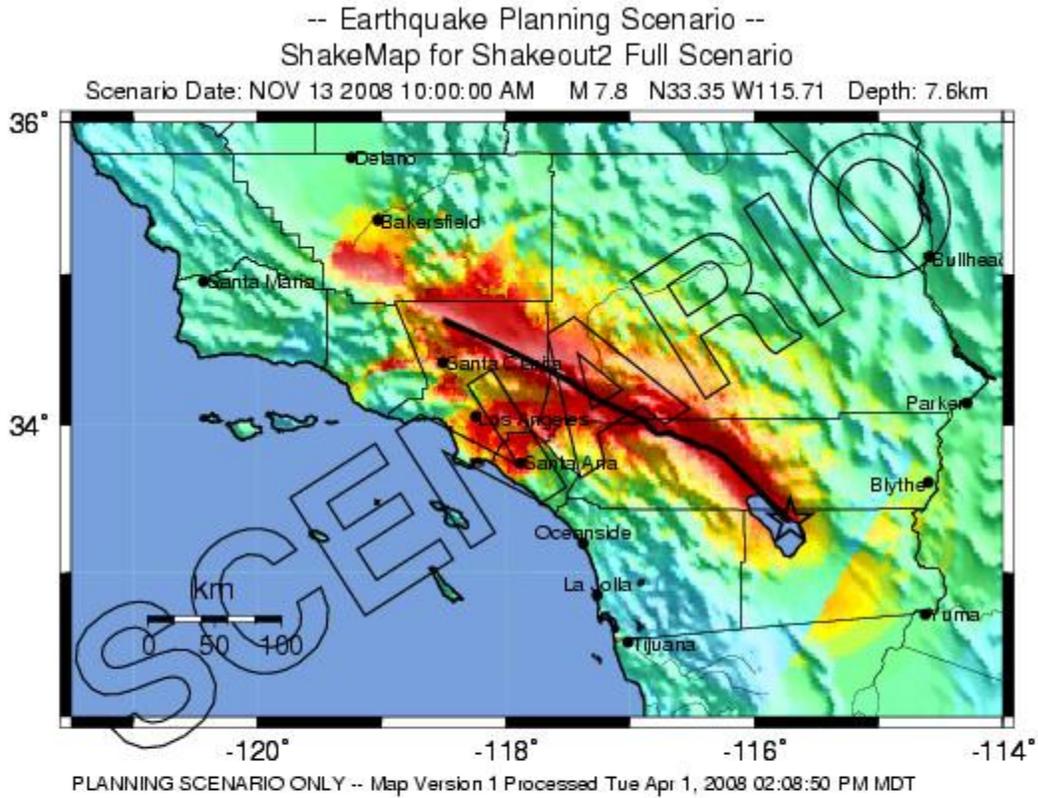
This map does not show the epicenters of all earthquakes greater than magnitude 4.5 recorded in the southern California area since the 19th century. It is meant as an overview of large and destructive, fairly recent, or unusual earthquakes. The magnitudes given by the scale are generally moment magnitudes (denoted  $M_w$ ), for earthquakes above magnitude 6, and local magnitudes (denoted  $M_L$ ), for most earthquakes below magnitude 6 and for earthquakes which occurred before accurate instrumental measurements of magnitude were possible (i.e. before 1933).



**B.5 Map of Current Probability Relative to Long Term Probability**



**B.6 Earthquake Planning Scenario – Shake Map for Shakeout 2**



PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
PEAK ACC. (%g)	<.17	.17-1.4	1.4-3.9	3.9-9.2	9.2-18	18-34	34-65	65-124	>124
PEAK VEL. (cm/s)	<0.1	0.1-1.1	1.1-3.4	3.4-8.1	8.1-16	16-31	31-60	60-116	>116
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+



## Appendix C: Mitigation Projects

Mitigation Action	Priority	Status	Strategy	Comments
New By-Pass Inlet Structure at Montclair basin #2	Low	Proposed	Prior to implementing this recommendation it will be necessary to secure additional funding from others having an interest in the Recharge Basin.	Install new by-pass inlet structure at Montclair Basin #2. Install a new by-pass structure to re-direct stormwater, containing soil from mudflows originating in the foothills as a result of Wildfires therein, away from the Recharge Basin to the San Antonio Channel.
New and Replacement Construction (applies to all District recharge Basins)	High	Proposed	Secure copies of current Building Codes and other relevant documents to ensure that all proposed and replacement structures are designed and constructed to the most current earthquake standards.	Applies to all District Recharge Basins. All new, replaced, and reconstructed structures and conduits shall be designated to withstand the effects of "design earthquakes."
Seismic at Montclair Basin #1	Low	Proposed	Perform the buttressing operation if the "steep" embankments settle due to liquefaction.	Buttressing the embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten the slopes of the embankments where basin capacity is not an issue; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin. Rebuild the embankment slopes of the Recharge Basin by excavation and re-compaction. Buttress the embankments with imported pervious materials and the creation of perimeter "benches" at various vertical increments.
Seismic at Montclair Basin #4	Low	Under review to have erosion control construction at the North end at the bottom of the Basin floor.	Perform the buttressing operation if the "steep" embankments settle due to liquefaction.	Buttressing the embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten the slopes of the embankments where basin capacity is not an issue; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin. Rebuild the embankment slopes of the Recharge Basin by excavation and re-compaction. Buttress the embankments with imported pervious materials and the creation of perimeter "benches" at various vertical increments.

Document Condition (applies to all structures at the District recharge Basins)	High	Proposed	Beginning in January 2005 and on a “recurring five-year” basis accurately document the existing condition of the District's structures, improvements, and Recharge Basins with up-to-date plans, water level data, field surveys when charged conditions are noted, and photographs to establish "pre-event condition," keep good records of all percolation restoration and/or enhancement activities that are performed at the Recharge Basins, and keep similar records relating to any maintenance or improvement work performed on the buildings, structures, and improvements of the District.	Applies to all structures at the District Recharge Basins. To establish the pre-existing conditions of and at all flood water conveyance structures and impoundments.
Repair and Replacement (applies to all District recharge basins)	Medium	Proposed	Prior to making substantial repairs to or replacement of existing structures and conduits, their "design-flow capacity" shall be determined and confirmed with local flood control agencies to ensure that they are appropriately sized.	This applies to repairs and replacements of water conveyance structures at the District Recharge Basins. To ensure that all water conveyance structures are capable of safely conveying present-day design flows.
New By-Pass Inlet Structure at Montclair Basin #2	Low	Proposed	Prior to implementing this recommendation it will be necessary to secure additional funding from others having an interest in the Recharge Basin.	This applies to Montclair Basin # 2. Install a new by-pass structure to re-direct stormwater, containing soil from mud-flows in the foothills, away from the Recharge Basin to the San Antonio Channel.
Seismic at Montclair Basin #2	Low	Proposed	Perform the buttressing operation if the “steep” embankments settle due to liquefaction.	Buttressing the embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten the slopes of the embankments where basin capacity is not an issue; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin; Rebuild the embankment slopes of the Recharge Basin by excavation and re-compaction; Buttress the embankments with imported pervious materials and the creation of perimeter “benches” at various vertical increments.

Seismic at Montclair Basin #3	Low	Proposed	Perform the buttressing operation if the “steep” embankments settle due to liquefaction.	Buttressing the embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten the slopes of the embankments where basin capacity is not an issue; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin; Rebuild the embankment slopes of the Recharge Basin by excavation and re-compaction; Buttress the embankments with imported pervious materials and the creation of perimeter “benches” at various vertical increments.
Seismic at Ely Basin #3	Low	Proposed	Perform the buttressing operation if the “steep” embankments settle due to liquefaction.	Buttressing the embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten the slopes of the embankments where basin capacity is not an issue; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin; Rebuild the embankment slopes of the Recharge Basin by excavation and re-compaction; Buttress the embankments with imported pervious materials and the creation of perimeter “benches” at various vertical increments.
Seismic at Brooks Basin	Low	Proposed	Perform the buttressing operation if the “steep” embankments settle due to liquefaction.	Buttressing the embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten the slopes of the embankments where basin capacity is not an issue; Perform water recharge operations while maintaining a water depth in the Recharge Basin of 5 feet or less; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin; Rebuild the embankment slopes of the Recharge Basins by excavation and re-compaction; Buttress the embankments with imported pervious materials and the creation of perimeter “benches” at various vertical increments.
Inspection of Structures	High	Proposed	Secure copies of Building Codes and other relevant documentation so that inspections may begin in January 2005.	Beginning in January 2005 and on a “recurring five-year” basis inspect the District’s building-type structures for compliance with the State of California’s most recent earthquake standards for commercial businesses and where necessary implement corrective measures.

New Stormwater Inlet Structure	Medium	Proposed	Prior to approving the connection of new or the enlargement of existing stormwater conduits at the District's Recharge Basins the owner of the new structure shall submit a hydraulic analysis of the flow capacity of the new and of all existing outlet works to ensure that all flood flows are safely conveyed to terminal drainage.	Applies to new stormwater inlet structures at the District Recharge Basins. To ensure that all new and existing water conveyance structures are capable of safely conveying present-day design flows.
Documentation of Existing Conditions	High	Proposed	Beginning in January 2005 and on a "recurring five-year" basis document the existing condition of the District's structures, improvements, and Recharge Basins with water level data, field surveys when changed conditions are noted, and photographs to establish "pre-event conditions," keep good records of all percolation restoration and/or enhancement activities that are performed at the Recharge Basins, and keep similar records relating to any maintenance or improvement work performed on the buildings, structures, and improvements of the District.	Beginning in January 2005 and on a "recurring five-year" basis document the existing condition of the District's structures, improvements, and Recharge Basins.
Seismic at College Heights West Basin	Low	Proposed	Perform the buttressing operation if the "steep" embankments settle due to liquefaction.	Buttressing the embankment slopes with permeable materials or by installing geogrid reinforcement in the buttressing material. Alternatives: Flatten the slopes of the embankments where basin capacity is not an issue; Perform water recharge operations while maintaining a water depth in the Recharge Basins of 5 feet or less; Perform intermittent water spreading activities to prevent water mounding under the Recharge Basin by excavation and re-compaction; Buttress the embankments with imported pervious materials and the creation of perimeter "benches" at various vertical increments.