APPENDIX 12.0

Wildfire

Town of Apple Valley

LOCAL HAZARD MITIGATION PLAN

2017 PLAN UPDATE

This Hazard Mitigation Plan was created by the Town of Apple Valley's Office of Emergency Preparedness. This document can be viewed at www.ReadyAppleValley.org. For additional information regarding the creation of this document call 760-240-7000.

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Section 1. Introduction

Natural disasters cause death and injuries, as well as significant damage to our communities, businesses, public infrastructure, and environment. The impacts of these damages result in the displacement of people and tremendous costs due to response and recovery dollars, economic loss, and burden. The Town of Apple Valley (Apple Valley) Local Hazard Mitigation Plan (LHMP) is an effort undertaken by the Town to mitigate the effects of natural hazards and return to "the norm" sooner, with fewer impacts to people and infrastructure.

Hazard mitigation planning is the process through which hazards are identified, likely impacts determined, mitigation goals set, and appropriate mitigation strategies determined, prioritized, and implemented. While natural disasters cannot be prevented from occurring, the effects of natural disasters can be reduced or eliminated through a well-organized public education and awareness effort, preparedness activities, and mitigation actions.

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 increased resiliency for Apple Valley residents, business owners and city officials.

1.1 Your Jurisdiction

The Town of Apple Valley is located in the heart of the Victor Valley in the County of San Bernardino. In a region known as the High Desert. Apple Valley is strategically located 35 minutes north of the Inland Empire, along Interstate 15. The Town has 78 square miles in its incorporated boundaries, and a sphere of influence encompassing 200 square miles. 2015 census data list Apple Valley with a population of 71,107 residents.

1.2 Purpose of the Plan

Each year in the United States, natural disasters take the lives of hundreds of people and injure thousands more, as well as destroy or severely damage existing buildings, structures, infrastructure, and other facilities. Nationwide, taxpayers pay billions of dollars annually to help communities, organizations, businesses, and individuals recover from disasters. Many disasters cause extreme burden to city governments and small communities throughout California.

The intent of hazard mitigation is to reduce and/or eliminate loss of life and property. Hazard mitigation is defined by FEMA as "*any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards.*" A hazard is defined by FEMA as "*any event or condition with the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, environmental damage, business interruption, or other loss.*"

The purpose of the Hazard Mitigation Plan (HMP) is to demonstrate the plan for reducing and/or eliminating risk in the Town of Apple Valley. The HMP process encourages communities to develop goals and projects that will reduce risk and build a more disaster resilient community by analyzing potential hazards.

Mitigation is one of the primary phases of emergency management specifically dedicated to breaking the cycle of damage. Hazard mitigation is distinguished from other disaster management functions by measures that make San Bernardino County,

Town of Apple Valley development and the natural environment safer and more disaster resilient. Mitigation generally involves alteration of physical environments, significantly reducing risks and vulnerability to hazards by altering the built environment so that life and property losses can be avoided or reduced.

Mitigation also makes it easier and less expensive to respond to and recover from disasters.

Also with an approved (and adopted) HMP, Apple Valley will become eligible for federal disaster mitigation funds/grants (Hazard Mitigation Grant Program, Pre-Disaster Mitigation, and Flood Management Assistance) aimed to reduce and/or eliminate risk.

1.3 Authority

In 2000, FEMA adopted revisions to the Code of Federal Regulations. This revision is known as the "Disaster Mitigation Act (DMA)." DMA 2000, Section 322 (a-d) requires that local governments, as a condition of receiving federal disaster mitigation funds, have a Hazard Mitigation Plan (HMP) that describes the process for assessing hazards, risks and vulnerabilities, identifying and prioritizing mitigation actions, and engaging/soliciting input from the community (public), key stakeholders, and adjacent jurisdictions/agencies.

Senate Bill No. 379 will, upon the next revision of a local hazard mitigation plan on or after January 1, 2017, or, if the local jurisdiction has not adopted a local hazard mitigation plan, beginning on or before January 1, 2022, require the safety element to be reviewed and updated as necessary to address climate adaptation and resiliency strategies applicable to that city or county.

1.4 Community Profile

This section is to provide a broad perspective, brief history and describes the makeup and development of the community.

1.4.1 Physical Setting

The Town of Apple Valley is located in the Mojave Desert of the County of San Bernardino, at an elevation of 3,000 feet. In a region known as the High Desert, Apple Valley consists of 78 square miles in its incorporated boundaries and a sphere of influence encompassing 200 square miles. The Town borders Interstate 15 to the north, Joshua Road to the east, the foothills of the San Bernardino Mountains to the south, and the Mojave River to the west.

Apple Valley is primarily desert-rural and consists of a typical mountain-and-basin topography with sparse vegetation. The natural geographic vulnerabilities are: Mojave River, San Bernardino Mountains, Dry Lake Bed, and the Desert Knolls area (generally an area with a slope greater than 15%).

Apple Valley experiences an average of 350 days of sunshine per year with summer temperatures ranging from 40 degrees Fahrenheit (F) to 110 degrees F., and winter temperatures dipping down to low 20 degrees F. to a high of 70 degrees F. Prevailing winds range from 5-20 knots/hour from the south/southwest to the northeast.

The Mojave River rises in the San Bernardino Mountains at the Lake Silverwood and Mojave River Forks Reservoirs. The River runs in a northerly direction the entire length of the Town's western boundary. Due to the porous soil and rapid evaporation, the River is primarily dry in the area adjacent to Apple Valley. A flow of water is present during major rains

and upon release of water from Lake Silverwood (contained by the Cedar Springs Dam and Mojave Dam).

The Town of Apple Valley also contains a 1,870 acre dry lake bed area. This area and the area along the Mojave River is part of the 100 Year Flood Area (Flood Zone A).

Figure 1-1: Regional Setting

Source: www.applevalley.org 2015

1.4.2 History

The Town of Apple Valley was incorporated in 1988; however, its history goes back much further. Local historians have found signs of Serrano Indian camps along the Mojave River in Apple Valley. They were already there when Father Francisco Garces arrived in 1776, as he established the Spanish missions throughout California. In the late 1800s, the Paiute Indians also migrated to this area. The Mojave River Trail hosted trappers, gold prospectors, pack mules and Mormon wagon trains—over 13,000 people passed through the area between 1849 and 1859. It was in 1860 that the first cabin was built in Apple Valley by Silas Cox, and the first road was cut the following year.

There are many stories as to how Apple Valley acquired its name. According to the late Mary Hampton, local historian, the name arose from the abundance of apple orchards that existed there in the 1920s. Some say the name "Apple Valley" originated from The Appleton Land Company that was based in this area in the early 1900s. Ursula Poates, one of the first settlers in the area, is credited with saying, "There were some apples being raised along the river in those early days, but

not by the ton, so I just cut it down and called it Apple Valley!" By 1920, apples were being grown by the ton at award-winning orchards. Unfortunately, with the Great Depression and the cost of pumping water for irrigation, the orchards died off in the 1930s.

With a pleasant climate and lots of land, many types of ranches were built in the area. They touted the dry desert air as a cure for ailments of all sorts, including tuberculosis and asthma. Other ranches provided a haven for shell-shock victims of World War I, while still others developed into guest ranches. People would come to Apple Valley to enjoy the western lifestyle where they could ride horses, attend rodeos and just get away from the big city.

The modern founders of Apple Valley were Newton T. Bass and B.J. "Bud" Westlund, who were partners in the oil and gas industry in Long Beach, CA. Westlund and Bass formed the Apple Valley Ranchos Land Co. in 1946 and marketed the area as a destination resort and quality residential community - "The Golden Land of Apple Valley". They built the Apple Valley Inn and Hilltop House, and invited famous celebrities of Hollywood to come visit. Within ten years there were banks, churches and a school, along with a golf course, hospital and 180 businesses.

1.4.3 Climate

The climate of Apple Valley is characterized by hot dry summers, mild winters and little rainfall. In summer, temperatures often reach above 100 degrees Fahrenheit (F). Winter temperatures are usually mildly cold but sometimes fall below 30ºF.

Figure 1-2: Weather.com/2016

Precipitation generally occurs in mid to late winter months (December to February). Average total annual precipitation for the area averages 6.2 inches (in), with most rainfall occurring in November to March (Weather.com 2016).

Figure 1-3: Weather.com/2016

1.4.4 Demographics

San Bernardino County has been designated as a Coastal County within the State of California. The number of Americans residing in a coastal county passed the 159 million mark in 2010, making the coastal population larger than the entire U.S. population in 1950. Today, more than half of the U.S. population lives in a coastal area (as defined by the National Oceanic and Atmospheric Administration - NOAA), even though the 673 coastal counties constitute only about one fourth of the country's landmass.

Figure 1-4: U.S. Census Bureau

As indicated by the map prepared by the U. S. Census Bureau, San Bernardino County is designated as a Coastal County within the State of California. Particular data exists demonstrating the effects of various types of risks within the county. It is important to use this information as a source point for evaluating the various risks that prevail not only in San Bernardino County, but the Town of Apple Valley.

The growth in population of coastal areas illustrates the importance of emergency planning and preparedness for areas that are more susceptible to inclement weather conditions. The U.S. Census Bureau's official population estimates, along with annually updated socioeconomic data from the new American Community Survey, provide a detailed look at the nation's growing coastal population. Emergency planners and community leaders can better assess the needs of coastal populations using census data.

In 2010, the Town of Apple Valley had a population of 69,135 and that population has increased to 71,107 in 2015, with a median age of 37.5 and an average household size of 2.90.

Table 1-1: ESRI 2015; Opportunity High Desert 2015 Brochure

Demographic Overview	
Current population (2015):	71,107
Current regional population (2015) :	443,000
Avg. Household Size (2015) :	2.90
Median Age (2015):	37.5
Home Ownership (2015):	61%
Total Households (2015):	24,332
* Regional population estimate is based on a total of Victorville, Hesperia, Apple Valley, and Adelanto populations; unincorporated areas are not included in this estimate.	

Figure 1-5: Historic and Projected Population Estimates

Source: Demographics Town of Apple Valley 2015

Age Distribution of Population

Figure 1-6: Demographics Town of Apple Valley 2015

Educational Attainment for Population over 25 years of Age

Figure 1-7: Demographics Town of Apple Valley 2015

Household Income Distribution

Figure 1-8: Demographics Town of Apple Valley 2015

Table 1-2: Income Level

Per Capita (2015)	Median Household (2015)	Average Household (2015)
$21,614	$45,554	$62,760

Source: U.S. Census Bureau, Census 2010 Summary File 1; ESRI forecasts for 2015

1.4.5 Existing Land Use

The land use types in Apple Valley are all related to a single, over-arching concept: that Apple Valley's quality of life is tied to its rural character, and that this character is to be preserved and protected for the long term health of the community. In Apple Valley "rural" means space -- unscarred mountains and vistas of desert valleys, neighborhoods of large lots where keeping horses is allowed, an extensive multi-use trail system, and landscaping consistent with the desert environment. The land use designations established in this General Plan are provided below.

Very Low Density Residential (R-VLD; 1 dwelling unit per 5 or more gross acres): This land use designation allows detached single family homes on lots of at least five gross acres. Multi-use trails should be integrated into all new projects in this designation, as appropriate. Also permitted are agricultural and ranching activities, animal keeping (both personal use and commercial) and home occupations. May be appropriate for bed and breakfast and similar uses, and animal-keeping or agricultural-related commercial enterprises, such as feed stores, commercial stables and similar uses with approval of a conditional use permit.

Low Density Residential (R-LD; 1 dwelling unit per 2.5 to 5 gross acres): This land use designation allows detached single family homes on lots of two and a half to five gross acres. This designation provides for the rural and suburban environment. Multi-use trails should be integrated into all new projects in this designation, as appropriate. Also permitted are agricultural and ranching activities, animal keeping (both personal use and commercial) and home occupations. May

be appropriate for bed and breakfast and similar uses, with approval of a conditional use permit.

Estate Residential (R-E; 1 dwelling unit per 1 to 2.5 gross acres): This land use designation allows detached single family homes on lots of one to two and a half gross acres. Access on local roads in new subdivisions within this designation should be paved. Multi-use trails should be integrated into all new projects in this designation, as appropriate. Animal keeping for personal use, ranching activities and home occupations are appropriate land uses in this designation. May be appropriate for bed and breakfast and similar uses, with approval of a conditional use permit.

Estate Residential ¾ (R-E 3/4; 1 dwelling unit per 0.75 to 1.0 net acre): This land use designation is specifically designed for animal keeping. Multi-use trails should be integrated into all new projects in this designation, as appropriate. Animal keeping for personal use, ranching activities and home occupations are appropriate land uses in this designation. Centralized stables, corrals, show rings and similar facilities, available to all residents of a development project are encouraged. May be appropriate for bed and breakfast and similar uses, with approval of a conditional use permit.

Single Family Residential (R-SF; 1 dwelling unit per 0.4 to 0.9 net acre): Lots in this designation must be a minimum of 18,000 square feet net, and may range to 39,200 square feet. This designation is intended to be composed of planned subdivisions with all utilities and public services. Animal keeping is permitted on lots zoned Equestrian Residential in the Development Code. Multi-use trails should be integrated into all new projects in this designation, as appropriate.

Medium Density Residential (R-M; 4 to 20 dwelling units per net acre): This designation is intended to promote a wide range of higher density residential units, including: single family attached; and multi-family units, including condominiums, townhomes and apartments. Projects restricted to senior citizens (age 55 and older) and providing various levels of care are also appropriate in this designation. Single family detached units are only permitted on lots of 18,000 square feet or greater in the Mountain Vista Estates area, as defined in General Plan Program 2.G.1. On all other lands designated Medium Density Residential within Town limits, single family detached units are prohibited. This land use designation should be a buffer between less intense residential designations and commercial or industrial designations, or major roadways. Future projects should be located in close proximity to commercial services, public transit and schools.

Mobile Home Park (MHP; 5-15 units per acre): This designation is applied to mobile home parks that existed upon adoption of this General Plan. New mobile home parks would be required to file a General Plan Amendment and Change of Zone to assign this designation to the project. This designation applies to mobile home parks and mobile home subdivisions. Home occupations and recreational facilities and amenities associated with the mobile home use are also appropriate in this designation.

Mixed Use (M-U): The land use designation has been created to allow for the development of projects that include residential and retail and office commercial development in an integrated, master planned project. Residential development should occur over commercial development, or within a commercial complex (i.e. residential building abutting a commercial building). Residential development must occur at a density of 4 to 30 units per acre. Mixed Use projects are encouraged in The Village, on major roadways, and in close proximity to employment centers, such as the North Apple Valley Industrial Specific Plan area. Projects that propose residential parcels adjacent to commercial parcels, and do not truly integrate the land uses, will not qualify for this designation. The minimum size for a Mixed Use project is 1 acre.

Office Professional (O-P): This designation allows professional offices, and is intended to act as a buffer between General Commercial and residential land uses. This designation encourages high quality professional services with only ancillary retail commercial components. There is no minimum size for project sites in this designation, but assemblage of smaller parcels is encouraged.

General Commercial (C-G): This designation allows a broad range of retail uses, as well as office and service land uses. Typical uses will serve the needs of the Town's residents and businesses, in a shopping center setting. General retail stores, including all types of consumer goods, furniture and appliance sales, auto repair and sales are permitted in this designation. Restaurants, both sit-down and fast food, gasoline service stations and general office (secondary to retail uses) are also permitted in this designation. There is no minimum size for project sites in this designation, but assemblage of smaller parcels is encouraged.

Service Commercial (C-S): This designation is assigned to lands in The Village, and is intended as a transition designation allowing commercial and industrial land uses on a smaller scale. Its location in an established area of Town necessitates flexibility in development standards, due to existing development and infrastructure constraints. Land uses in this designation include vehicle sales and service; lumber, home repair and building supply, general retail, warehousing and manufacturing uses completely contained within an enclosed structure. There is no minimum size for project sites in this designation, but assemblage of smaller parcels is encouraged.

Regional Commercial (C-R): This land use category allows retail uses that serve not only the residents and businesses of Apple Valley, but also of the surrounding region. Permitted uses in this designation include auto malls, regional malls, business parks, factory stores and outlets, entertainment commercial, hotels and motels, restaurants, institutional and public uses. The minimum size for a Regional Commercial project site is 10 acres.

Planned Industrial (I-P): This land use designation allows high quality, non-polluting industrial land uses, either as free-standing uses or as part of master planned industrial parks. Uses permitted include warehousing, light manufacturing, research and development and administrative facilities. The minimum size for a Planned Industrial project site is 5 acres.

Public Facility (PF): This land use designation is assigned to public and quasi-public land uses, including Town Hall and other Town facilities, fire stations, schools, facilities of the County, State and federal government, water and sewer district, and utility substations and facilities. There is no minimum size in this land use designation.

Open Space (OS): This land use designation is applied to natural and active open space areas, including the knolls, Bell and Fairview Mountains, the Mojave River, lands owned by Town, County, State and federal agencies for the purposes of recreation or conservation, and golf courses, parks or other recreational facilities.

Mineral Resources (MR): This land use designation is applied to lands in active mining operations. One such operation exists in Town at the present time, located near Interstate 15. This land use designation allows mining operations permitted by the State for lands with significant deposits of concrete aggregate.

Specific Plan: This designation is applied to lands on which a specific plan has been approved by the Town Council. The Specific Plan must conform to State law, and include maps and text that establish the land use designations; standards and guidelines for development; infrastructure requirements; and phasing for the specific plan area.

Figure 1-9: 2015 Land Use Map, Exhibit II-2

Source: Town of Apple Valley General Plan

1.5 Build Out Statistics

The Town consists of a total of 50,532 acres, of which 46,948.3 acres were within the Town limits prior to the addition of the two annexation areas. 3,583.2 acres were added as part of Annexations 2008-001 and 2008-002. The acreage, by land use designation, is shown in Table 1-3 & 1-4, below.

Table 1-3: Statistical Summary of Land Uses (2008 Town Limits)

Land Use Designation	Developed Acres	Vacant Acres	Total Acres
Residential Land Uses			
Very Low Density Residential (1 du/5 or more gross ac)	212.0	1,749.5	1,961.5
Low Density Residential (1 du/2.5 - 5 gross ac)	450.7	3,071.7	3,522.4
Estate Residential (1du/1 – 2.5 gross ac)	3,308.2	3,308.0	6,616.3
Estate Residential ¾ (1 du/0.75 – 1 ac)	26.1	449.6	475.7
Single family Residential (1 du/0.4-0.9 ac)	8,811.2	3,770.7	12,581.9
Medium Density Residential (4- 20 du/ac)	826.2	1,057.0	1,883.1
Mobile Home Park (5-15 du/ac)	178.5	1.5	180.0
Mixed Use	90.8	229.7	320.5
Specific Plan	1,359.0	5,653.7	7,012.7
Total Residential Uses	**15,262.7**	**19,291.5**	**34,554.2**
Commercial Land Uses			
Mixed Use[1]	90.8	229.7	320.5
General Commercial	480.3	1,066.5	1,546.8
Regional Commercial	99.6	1,203.3	1,303.0
Service Commercial	152.4	179.2	331.6
Office Professional	64.7	546.7	611.3
Specific Plan/Commercial[1]	1,359.0	5,653.7	7,012.7
Specific Plan/Industrial[1]	1,359.0	5,653.7	7,012.7

Land Use Designation	Developed Acres	Vacant Acres	Total Acres
Total Industrial Uses[1]	**21.4**	**623.9**	**645.3**
Other Land Uses			
Public Facility	330.2	132.0	462.2
Open Space	291.2	2,796.4	3,087.5
Mineral Resources	129.4	323.2	452.5
Street Rights-of-Way	2,771.1	1,182.8	3,953.9
Total Other Land Uses	**3,521.8**	**4,434.4**	**7,956.2**
Grand Total	**19,602.8**	**27,345.5**	**46,948.3**

Source: Apple Valley General Plan 2009

Table 1-4: Statistical Summary of Land Uses (Annexation No. 2008-001 and No. 2008-002)

General Plan Land Use Designation	Developed Acres	Vacant Acres	Total Acres
Residential Land Uses			
Estate Residential (1du/1 – 2.5 gross ac)	55.7	722.3	778.0
Medium Density Residential (4- 20 du/ac)	41.5	177.3	218.7
Mixed Use (4-30 du/ac)	0.0	94.8	94.9
Total Residential Uses	**97.2**	**994.4**	**1,091.6**
Commercial Land Uses			
Mixed Use[1]	0.0	94.9	94.9
General Commercial	12.3	50.5	62.8
Regional Commercial	7.2	435.7	442.9
Office Professional	0.0	183.1	183.1
Total Commercial Uses	**19.5**	**669.3**	**688.8**

General Plan Land Use Designation	Developed Acres	Vacant Acres	Total Acres
Industrial Land Uses			
Planned Industrial	64.3	1,538.5	1,602.8
Other Land Uses			
Public Facility	0.0	5.1	5.1
Street Rights-of-Way	43.8	151.1	194.9
Grand Total All Land Uses	**224.8**	**3,358.4**	**3,583.2**

Source: Apple Valley General Plan 2009

The build out potential of these lands is shown categorically in Table 1-5, Residential Land Use Designation Build Out Summary; Table 1-6, Commercial and Industrial Land Use Designation Build Out Summary; and Table 1-7, Other Land Use Designation Build Out Summary.

Table 1-5: Residential Land Use Designation Build Out Summary

Designation	Town Limits						Annexation Areas					
	AC Dev.	AC Vacant	AC Total	Exist. Units	Future Units	Total Units	AC Dev	AC Vacant	AC Total	Exist. Units	Future Units	Total Units
Very Low Density Residential (1 du/5 or more gross ac)	212.0	1,749.5	1,961.5		350	350	--	--	--	--	--	--
Low Density Residential (1 du/2.5 - 5 gross ac)	450.7	3,071.7	3,522.4		1,229	1,229	--	--	--	--	--	--
Estate Residential (1du/1 – 2.5 gross ac)	3,308.2	3,308.0	6,616.3	20,107	3,308	23,415	55.7	722.3	778.0	--	722	722
Estate Residential ¾ (1 du/0.75 – 1 ac)	26.1	449.6	475.7		599	599	--	--	--	--	--	--
Single family Residential (1 du/0.4-0.9 ac)	8,811.2	3,770.7	12,581.9		5,656	5,656	--	--	--	--	--	--
Medium Density Residential (4- 20 du/ac)	826.2	1,057.0	1,883.1	3,775	15,854	19,629	41.4	177.3	218.7	--	2,659	2,659
Mobile Home Park (5-15 du/ac)	178.5	1.5	180.0	1,043	23	1,066	--	--	--	--	--	--
Mixed Use	90.8	229.7	320.5		2,068	2,068	0.00	94.8	94.8	--	854	854
Specific Plan	1,068.6	5,959.0	7,027.6		2,629	2,629	--	--	--	--	--	--
Residential Total	**15,262.7**	**19,291.5**	**34,554.2**	**24,925**	**31,716**	**56,641**	**97.2**	**994.4**	**1,091.6**	**--**	**4,236**	**4,236**

Source: Apple Valley General Plan 2009

Table 1-6: Commercial and Industrial Land Use Designation Build Out Summary

Designation	Town Limits				Annexation Areas			
	Acres Dev.	Acres Vacant	Acres Total	Total Potential SF	Acres Dev.	Acres Vacant	Acres Total	Total Potential SF
Mixed Use[1]	90.8	229.7	320.5	1,541,035	0.0	94.9	94.9	636,612
General Commercial	480.3	1,066.5	1,546.8	14,823,253	12.3	50.5	62.8	601,824
Regional Commercial	99.6	1,203.3	1,303.0	12,486,485	7.2	435.7	442.9	4,244,469
Service Commercial	152.4	179.2	331.6	3,177,665	0.0	183.1	183.1	1,754,639
Office Professional	64.7	546.7	611.3	5,858,606	0.0	94.9	94.9	636,612
Specific Plan[1]	1,359.0	5,653.7	7,012.7	6,663,010	--	--	--	--
Commercial Sub Total	**887.7**	**3,225.4**	**4,113.2**	**44,550,054**	**19.5**	**669.3**	**688.8**	**7,874,156**
Planned Industrial	21.4	623.9	645.3	6,183,941	64.3	1,538.5	1,602.8	15,359,953
Specific Plan[1]	1,359.0	5,653.7	7,012.7	36,938,445	--	--	--	--
Industrial Sub Total	**21.4**	**623.9**	**645.3**	**43,122,386**	**64.3**	**1,538.5**	**1,602.8**	**15,359,953**
Grand Total Com. & Indust.	**909.1**	**3,849.4**	**4,758.5**	**87,672,440**	**83.9**	**2,302.7**	**2,386.5**	**23,234,109**

Source: Apple Valley General Plan 2009

Table 1-7: Other Land Use Designation Build Out Summary

Designation	Town Limits			Annexation Areas		
	Acres Dev.	Acres Vacant	Acres Total	Acres Dev.	Acres Vacant	Acres Total
Public Facility	330.2	132.0	462.2	0.00	5.1	5.1
Open Space	291.2	2,796.4	3,087.5	--	--	--
Mineral Resources	129.4	323.2	452.5	--	--	--
Street Rights-of-Way	2,771.1	1,182.8	3,953.9	43.8	151.1	194.9
Grand Total Other Uses	**3,521.8**	**4,434.4**	**7,956.2**	**43.8**	**156.2**	**200.0**

Source: Apple Valley General Plan 2009

1.6 Build Out Potential and Population

As indicated in above, the Land Use Map creates a potential for up to 60,877 housing units. Based on 2008 average household size, these units could support a build out population of 185,858 people.

The Land Use Map further establishes 4,791.3 acres of commercial land, which has a potential to generate 51,685,423 square feet of commercial space. There is also a potential for 58,629,920 square feet of industrial space, mostly to be located in the North Apple Valley Industrial Specific Plan area. This Land Use Element also provides 3,068.5 acres of Open Space, and 481.2 acres of Public Facilities, which include schools, parks, fire stations and government buildings.

1.7 Development Trends

After a lengthy and competitive site selection process, Apple Valley successfully attracted a major industrial project, a 1.35 million square foot distribution center, to the North Apple Valley Industrial Specific Plan. In June 2015, the Town Council approved an Owner Participation Agreement to invest $1.2 million dollars into the construction of off-site regional street improvements. The distribution center will occupy 106 acres near Navajo Road and La Fayette Street, north of Apple Valley Airport. The $115 million project will bring 400 to 500 permanent jobs to the community and is expected to break ground in 2017 with another 300 construction jobs estimated during the 18-month build.

Apple Valley Choice Energy (AVCE), launched in 2017, is Apple Valley's, locally-operated, locally-controlled electrical power provider. We anticipate rate savings of 1% to 5% for our citizens. We've partnered with SCE to deliver greener, more affordable power to electricity customers. AVCE procures electricity while SCE delivers that energy to doorsteps, maintains and repairs the infrastructure that carries it, and provides convenient customer services including billing. The Town Council has approved an implementation plan for AVCE that has been approved by the California Public Utilities Commission.

The Apple Valley Planning Commission approved Apple Valley Gateway, a 10-acre, 80,480 square foot commercial project at the northeast corner of Interstate 15 and Dale Evans Parkway. Belco Development, of Murrieta, is proposing to construct an 84-room, 43,000 square foot, three-story hotel, a 3,500 square-foot restaurant, a 10,261 square foot retail building, and six separate buildings, totaling 23,719 square feet that includes three drive-through restaurants, two gasoline stations, one with a drive-through, and a retail building with a drive-through. The approved parcel map subdivides 8.7-acres into eight parcels ranging in size from 0.61-acres to 2.6-acres. The project area contains two existing parcels totaling 9.9-acres located at the northeast corner of Interstate 15, Dale Evans Parkway and bisected by Willow Springs Road.

The County Board of Supervisors recently approved a 249-acre project to be rezoned from agricultural to residential within the Town's sphere of influence. The Lewis Operating Company's Deep Creek Project extends from Deep Creek Road and Mockingbird Road, and is divided by Ocotillo Way. This project will require improvements along these three roadways, as well as Rock Springs Road, to help mitigate traffic and the risk of washout. Construction for Rock Springs Road improvements is set to begin in 2018.

The Yucca Loma Bridge was recently completed in May 2017. Major improvements to Yucca Loma Road were also included in the bridge opening such as widening, bike lanes and major storm drain infrastructure from Apple Valley Road to the bridge, as well as traffic signals at the Fire Station and Havasu Road.

The $37-million-dollar Yucca Loma Bridge project alleviates congestion along east/west regional arterials including Bear Valley Road and allows residents to travel to and from Apple Valley, Victorville and Spring Valley Lake with more ease. This phase of the corridor will connect to Ridgecrest Road and includes bikeways and barrier-protected sidewalks across the bridge. The project will also pave the way for The Fountains at Quail Ridge, a 346,500 square foot mixed-use commercial center at the northeast corner of Yucca Loma Road and Apple Valley Road.

The Victor Valley Wastewater Reclamation Authority is constructing a sub-regional water reclamation plant at Brewster Park. More than 20 years in the making, this water reclamation plant will produce a million gallons a day of non-potable, recycled water that can be used to keep Apple Valley's parks and golf course green. The plant is expected to be completed by late 2017.

While all these development trends may not be recognized over the next five years, all future development that will take place is planned to occur in accordance with the General Plan Land Use Zones and will consider all potential hazards identified within this plan. Additionally, all development will be in compliance with all Fire, Flood and Seismic codes of the Town, County and State at the time of development.

Section 2. Plan Adoption

2.1 Adoption by local governing body

 A (draft) Resolution of the Town Council of the Town of Apple Valley, California, adopting the Local Hazard Mitigation Plan as required by the Disaster Mitigation Act of 2000 is included in this Plan (located before the Table of Contents). Upon receipt of an "approvable pending adoption" status from FEMA, the Town will formally adopt the Resolution and forward adopting documentation to FEMA.

2.2 Promulgation Authority

Art Bishop, Mayor
Description of involvement: Mayor Bishop represents the elected body governing the Town of Apple Valley and will sign as the official final approving authority.
Contact Information:
Town of Apple Valley
14955 Dale Evans Parkway,
Apple Valley, CA 92307
760-240-7000
abishop@applevalley.org

Doug Robertson, Town Manager
Description of Involvement: Doug Robertson represents the staff of the Town of Apple Valley and authorized the development and approval process.
Contact Information:
Town of Apple Valley
14955 Dale Evans Parkway,
Apple Valley, CA 92307
760-240-7000
drobertson@applevalley.org

The Apple Valley Town Council will review the Hazard Mitigation Plan prior to its approval.

2.3 Primary Point of Contact

Joseph Ramos, Emergency Services Officer
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, CA   92307
760-240-7000 ext. 7890
jramos@applevalley.org

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Section 3. Planning Process

The planning process for the Town's Hazard Mitigation Plan included the creation of a Planning Team representing various agencies and organizations whose input was vital to the plan. The Planning Team reviewed, analyzed, revised, and updated each Section within this Plan as required. Pursuant to Section 4(F) of the Crosswalk, the process used to review and analyze each Section is included within that Section.

3.1 Preparing for the Plan

Hazard Mitigation Planning is a process State, Tribal, and local governments use to identify risks and vulnerabilities associated with natural disasters, and to develop long-term strategies for protecting people and property from future hazard events. Planning creates a way to solicit and consider input from diverse interests. Involving stakeholders is essential to building community-wide support for the plan. In addition to emergency managers, the planning process involves other government agencies (e.g., zoning, floodplain management, public works, community, and economic development, businesses, civic groups, environmental groups, and schools.

San Bernardino County Fire OES hired a contractor (Dynamic Planning + Science) to offer support to the Cities/Towns, and Special Districts to update the 55 local HMP's. The DPS Team offers experienced, field-tested Hazard Mitigation and planning professionals who have developed similar comprehensive HMPs. This support includes providing technical expertise, resource material and tools to ensure that the updates are in compliance with federal requirements of the program. The tools, resource material, and other project related information are being maintained on a project portal (https:www.mitigatehazards.com) to ensure the consistent information is available to all participants.

Additionally, it was concluded that the Plan will include information and data supplied by supporting local agencies as listed in Section 3.2 "Coordination with Other Jurisdictions, Agencies, and Organizations", and 3.3 "Public Involvement", of this Plan, along with internet surveys published on the Town's website, public comments received during community-wide events, discussions during quarterly Disaster Council meetings and other sources developed through discussions during Planning Team meetings.

Drafting the Hazard Mitigation Plan was accomplished in 8 Phases:

- Phase 1 – Establish the Planning Team

- Phase 2 – Coordination with Other Jurisdictions, Agencies, and Organizations

- Phase 3 – Public Involvement

- Phase 4 – Assess the Hazards

- Phase 5 – Set Goals

- Phase 6 – Review and Propose Possible Mitigation Measures

- Phase 7 – Draft the Hazard Mitigation Plan

- Phase 8 – Adopt the Plan

The Town initiated its Plan Update by meeting the requirements of Title 44, Code of Federal Regulations, Part 201 (44 CFR 201.6) through the initial implementation of the 2011 Local Hazard Mitigation Plan.

The Planning Team agreed to meet as necessary during the ensuing review process so that the culmination of information would be available for review by constituents and partners prior to adoption. The Planning Team agreed that the Apple Valley Hazard Mitigation Plan (2011) was sufficient to meet the requirements set forth by 44 CFR Section 201.6 at that time. Since that time, the community has expanded its awareness of hazards and their specific relativity to protect the needs of the community and it is the intent of the Planning Team to ensure that this is captured in the 2017 Plan update. In addition, the Planning Team agreed that a more specific approach would provide that benefit and promote improved quality of life.

3.1.1 Building the Planning Team

To complete these objectives, the Town compiled a qualified team with various expertise, including public safety, engineering and public works, water infrastructure, and emergency response agencies to participate in, and guide the development of the Town's comprehensive Hazard Mitigation Plan. In addition, Apple Valley solicited public involvement throughout the planning process, including public invitation to all planning meetings, the release of a public survey through the Town's website, allowing the public to comment during the drafting stage, and making the draft Plan available to allow the public to comment on its content. The Planning Team agreed that the updated plan will conform to the requirements of 44 CFR Section 201.6 and will include a description and documentation of:

- Why the update is necessary and how the update will build on the existing approved mitigation plan.

- The process and data deficiencies/limitations that will be addressed.

- The participatory planning process used to develop the plan to include how each section was reviewed and analyzed and how/why the decision was made to modify (or not) specific areas in the plan.

- The opportunities provided for public participation, modified as necessary, based on previous experience.

- The contribution from other stakeholders.

- The new/additional research conducted and data included in the plan.

- The modified risk assessment based on latest best available data.

- The prioritized mitigation action plan.

- The progress made in local mitigation efforts.

- The plan maintenance process to include: an evaluation of what was supposed to happen verses what happened; a discussion of how the community was involved in the plan maintenance process; and a discussion of how the mitigation plan was incorporated into other planning mechanisms, and what worked/did not work.

Leadership, management and oversight for the plan development process were provided through the Town's Planning Team. The Planning Team was led by the Emergency Services Officer. Team members were selected based on current emergency management responsibilities and familiarity with prior mitigation planning and programs. The Planning Team

met regularly to provide guidance, review progress, identify issues, and to coordinate stakeholder meetings. The Planning Team also provided background documents, facilitated data collection, and reviewed all draft documents. The resulting plan, along with the entire planning process, is a living document that will continue to place mitigation as a priority in the Town of Apple Valley.

This HMP was compiled and authored under the direction of the Project Planning Team listed below in Table 3-1.

3.1.2 Planning Team

This Hazard Mitigation Planning team included members of various agencies, and organizations who were familiar with mitigation planning and have some type of emergency management responsibilities within their organizations.

Table 3-1: Planning team

Name	Organization
Patrick Carroll	TOAV Building Official
Pam Cupp	TOAV GIS
Dawn Harrison	CERT Commander
Sid Hultquist	AV Fire Chief
Lori Lamson	TOAV Planning/Comm Dev.
Kathie Martin	TOAV PIO
Brad Miller	TOAV Engineer
Carol Miller	TOAV Planner
Brett Morgan	TOAV Senior Construction Inspector
Joseph Ramos	TOAV Emergency Management
Greg Snyder	TOAV Public Works
Rich Unferdorfer	Captain, Apple Valley Fire Protection District
Ralph Wright	TOAV Parks/Rec Manager

3.1.2 Planning team meetings

Table 3-2: Planning team meetings

Date	Item	Location
06/23/2016	SBC Kickoff Meeting	SBC - OES
08/02/2016	Planning Team Meeting Kick Off	TOAV
10/18/2016	Planning Team Meeting #1	TOAV
2/21/2017	Planning Team Meeting #2	TOAV
3/23/2017	Planning Team Meeting #3	TOAV
4/28/2017	Planning Team Meeting #4	TOAV

3.2 Coordination with other Jurisdictions, Agencies, and Organizations

The Town of Apple Valley Planning Team consulted members from adjacent jurisdictions as well as the County of San Bernardino. Email invites were provided to each neighboring jurisdiction/agency starting with the kick-off meeting in August 2016 (See Appendix B.2).

Table 3-3: Coordination with other Jurisdictions, Agencies, and Organizations

Agency	Representative	Title/Position
Apple Valley Unified School District	Janet Gould	Risk Manager
American Red Cross	Don Gordon	Disaster Program Manager
Cal Office of Emergency Services		HMP Division
City of Hesperia	Rachel Molina	Assistant to City Manager
City of Victorville	Dana Welborn	Emergency Services Officer
County of San Bernardino	Miles Wagner	Emergency Services Officer
Disaster Service Workers	Mark Yosten	ECS
FEMA		Region IX HMP Division
Liberty Utilities (Water)	Kevin Phillips	Manager
National Weather Service	Alex Tardy	Manager-Meteorologist
St. Joseph/St. Mary Medical (Hospital)	Shannon Welsh	Executive Director
Southern California Edison	Bob Stiens	Gov. Affairs Rep.
Southwest Gas Company	Bill Hensley	Executive Officer
Victor Valley Transit Authority	Christine Plasting	Senior Procurement Specialist

In addition, the Town of Apple Valley participated in the San Bernardino County Fire Department Office of Emergency Services (OES) Stakeholder meetings noted in Table 3-4. San Bernardino County Fire OES hired a contractor (Dynamic Planning) to support the County, Cities and Towns, and Special Districts to update the local Hazard Mitigation Plans and the County's HMP. The Dynamic Planning Team, offered experienced, field-tested Hazard Mitigation and planning professionals who have developed similar comprehensive Hazard Mitigation Plans. This support included providing technical expertise, resource material and tools to help ensure that the updates are in compliance with federal requirements of the program.

Table 3-4: Stakeholder meetings

Date	Item	Location
06/23/2016	Stakeholders Kickoff Meeting #1	SBC OES
10/26/2016	Stakeholders Update Meeting #2	SBC OES
12/15/2016	Stakeholders Update Meeting #3	SBC OES
2/14/2017	Stakeholders Update Meeting #4	Virtual Meeting
3/28/2017	Stakeholders Update Meeting #5	SBC OES

3.3 Public Involvement/Outreach

The Town of Apple Valley undertook a number of methods to inform the public of the effort to solicit their input on the Hazard Mitigation Plan and efforts of the town involving mitigation and emergency preparedness. On an ongoing basis, the Town of Apple Valley participates in public events and meetings to inform and solicit feedback regarding emergency preparedness and mitigation from the public.

Public outreach efforts included an invitation to the kick-off meeting via media alerts (See Appendix B.2). Also the creation of a survey for all Apple Valley residents including those who work but do not live in Apple Valley. A total of 123 citizens participated in the survey. Other public outreach efforts included discussion on items on the agenda during CERT bi-monthly meetings, quarterly Disaster Council meetings and at one Town Council meeting.

The following is a list of public meetings and events that have taken place during the drafting stage:

Table 3-5: Public meetings and events

Date	Item	Location
8/2/2016	Planning Kick Off Meeting	TOAV
8/4/2016	CERT meeting	Station #336
9/29/2016 to 2/5/2017	On-line Survey	On line
10/6/2016	CERT meeting	Station #336
10/18/2016	Disaster Council meeting	Conference Center
1/10/2017	Disaster Council meeting	Conference Center
2/2/2017	CERT meeting	Station #336
3/28/2017	Town Council meeting	Council Chambers
4/6/2017	CERT meeting	Station #336
4/11/2017	Disaster Council meeting	Conference Center
6/1/2017	CERT meeting	Station #336
7/11/2017	Disaster Council meeting	Conference Center

3.3.1 Mitigation Survey

The Planning Team developed a web-based hazard mitigation survey to identify and plan for future disasters. The survey was designed to help the Planning Team determine the level of knowledge local citizens already have about potential disasters and assess areas of vulnerability to various types of disasters. The survey was available to the public for two months. Citizens have provided input about their concerns about each hazard, what they are doing to prepare for and to mitigate high-risk hazards and what activities the Town should engage to prepare for, mitigate, and respond to the highest risk hazards. A copy of the survey questions and results summary can be found in the Appendix C.2.

3.3.2 Web Posting

The survey mentioned above was posted on the Town of Apple Valley's website and Facebook page. The public was invited to submit comments on the Hazard Mitigation Plan Update, attend the stakeholder meetings notated in Table 3-5.

3.3.3   Public Meeting Process

The Town continues to hold many public meetings and provides notice of these meetings through posted Agendas and through the Town's web site (www.applevalley.org). Prior to Council adoption of the final Hazard Mitigation Plan, the item will be placed on the agenda for a public hearing and posted for public review on the Town's web site. The Planning Team will determine how public comments, if offered, would be included in the draft plan prior to final adoption.

3.4 Assess the Hazard

Data collection and document review are important first steps in the identification and screening of hazards. The Planning Team identified new or emerging hazards, obtained updated hazard maps, hazard probability research studies and reports, reviewed data from new or updated local plans (i.e. safety element of the General Plan, threat assessments, disaster planning scenarios, community wildfire protection plans, etc.) and obtained information about emergencies or disasters that have occurred since the 2011 Hazard Mitigation Plan to provide insights into which parts of the risk assessment warrants updates.

The first step in this process was to identify which natural hazards are present in the community, augmenting the 2011 Hazard Mitigation Plan as necessary. The intent of screening of hazards is to help prioritize which hazard creates the greatest concern in the community. This step had the planning team review a total of sixteen hazards via the FEMA Hazard Summary Sheet (See Appendix D.1, D.2). The Hazard Summary Sheet was used to summarize hazard description information and identify which hazards are most significant to the Town. We considered those hazards that ranked medium to high into Step 2. We also included Climate Change since it is a requirement. The summary sheet includes classifications for location and maximum probable extent.

The second step had the planning team review a total of six hazards- *wildfire, flood, earthquake, erosion, flooding and climate change*.   These six hazards were put through Dynamic Planning + Science Risk Factor (RF) Approach. The RF approach combines historical data, local knowledge, and consensus opinions to produce numerical values that allow identified hazards to be ranked against one another. These criteria are used to evaluate hazards and identify the highest risk hazard in the project region. Additional information regarding these steps are discussed in further detail in Section 4.1. The final results agreed upon by the Planning Team can be found in Appendix D.4.

Table 3-6: RF Approach

Rank	Natural Hazards	Probability (1-4)	Factor1 = (Probability Index * .30)	Impact (1-4)	Factor2 = (Impact Index * .30)	Spatial Extent (1-4)	Factor3 = (Spatial Extent Index * .20)	Warning Time (1-4)	Factor4 = (Warning Time Index * .10)	Duration (1-4)	Factor5 = (Probability Index * .10)	RF Factor Total = (Add Factors 1-5)
1	Hazard 1		0		0		0		0		0	0
2	Hazard 2		0		0		0		0		0	0
3	Hazard 3		0		0		0		0		0	0
4	Hazard 4		0		0		0		0		0	0
5	Hazard 5		0		0		0		0		0	0
6	Hazard 6		0		0		0		0		0	0

3.5 Goal Setting

Project and community hazard mitigation goals and objectives for the Town of Apple Valley were set by the Planning Team to guide the development of the Plan using FEMA National Mitigation Strategies and Goals to substantially increase public awareness of natural hazard risks so that the public demands safer communities in which to live and work; and to significantly reduce the risk of loss of life, injuries, economic costs, and destruction of natural and cultural resources that result from natural hazards.

As part of this process, the Planning Team also reviewed the County of San Bernardino's Operational MJHMP, the State of California MJHMP, Floodplain Management Plans, and adjacent local jurisdiction MJHMPs to ensure the Goals and Objectives were comprehensive and compatible.

3.6 Review and Propose Mitigation Measures

A wide variety of mitigation measures that can be identified to help reduce the impact of the hazards or the severity of damage from hazards was examined. The projects were identified to help ensure the implementation of the Planning Team's goals and objectives. The following categories were used in the review of possible mitigation measures:

1. Public Information and Education- Outreach projects and technical assistance.

2. Preventive Activities- Zoning, building codes, storm water ordinances

3. Structural Projects- Detention basins, reservoirs, road and bridge improvements

4. Property Protection- Acquisition, retrofitting

5. Emergency Services- Warning, sandbagging, road signs/closures, evacuation

6. Natural Resource Protection: Wetlands, protection, best management practices.

Once the projects were identified, the Planning Team utilized the STAPLEE methodology to assess and prioritize the projects.

STAPLEE stands for the following:

▪ **Social:** Social criteria are based on the idea that community consensus is a necessary precondition for successful implementation of mitigation measures (i.e., measures should be supported and accepted by the entire community). This also means that measures should not affect adversely a particular segment of the population or a particular neighborhood, or adversely impact local cultural values or resources.

▪ **Technical:** Technical criteria address the technical feasibility of the proposed measures, in terms of effectiveness, secondary impacts, and the technical capabilities of the community to implement and sustain these measures.

▪ **Administrative:** Administrative criteria address the administrative capabilities required to implement each mitigation measure. For example, does the City have the necessary organization, staff, and funding sources to implement and sustain the mitigation process?

- **Political:** Political criteria consider the need for political support for mitigation measures. This means that all stakeholders in the political process, especially political organizations and institutions both inside and outside of the community, should support the measure.

- **Legal:** Legal criteria are used to determine the appropriate legal authority necessary to implement each mitigation measure and whether such an authority can be delegated. The mitigation measure is examined from the standpoint of current statutes, codes, ordinances, and other regulations, as well as the possible legal ramifications of the measure's implementation.

- **Economic:** Economic criteria address the cost-effectiveness of the proposed measure and its economic impact on the community. It is only reasonable to expect that the benefits of implementation will exceed the costs incurred. Economic considerations also consider the economic impact on the community's future development.

- **Environmental:** Environmental criteria have become an important consideration in examining mitigation options. Although most mitigation measures are usually beneficial for the environment, some measures may have adverse effects, which must be considered and addressed.

Next the planning team performed a cost/benefit analysis to help prioritize each of the mitigation projects.

3.7 Draft the Hazard Mitigation Plan

The Hazard Mitigation Plan Update was drafted by the Planning Team. As indicated previously, the Planning Team used the 2011 HMP as a starting point but revised it to reflect updated information. The Planning Team also used the FEMA Guidance and materials provided to aide in the Planning Team's understanding of the level of detail and type of information that is excepted in each section.

The development of actions and projects to meet the goals and objectives identified in the HMP is based on the Town's abilities under state law; zoning, health regulations and financial resources available to reduce losses and vulnerability from potential hazards. The HMP's goals and objectives are long-term and support the Town's mitigation strategy.

Following the identification of goals and objectives, the mitigation planning regulation 44 CFR 201 requires the Town to identify, analyze and prioritize alternative actions by hazard types. Federal guidance for the HMP recommends that the Town develop objectives/actions that can be implemented using local tools, such as, capital improvement projects, special district funds, or executing changes by adopting laws, policies, or procedures. HMP requirements recommend the consideration of mitigation actions that may are not currently feasible, but may be possible following a catastrophe event.

The Town is required, after five years of implementing mitigation strategies, to update goals and actions. In all HMP updates, the goals and objectives may be reaffirmed or updated based on current conditions, including the completion of mitigation proposals, an updated risk assessment. At five-year intervals, the Town is required to review any changes of approved HMP to determine whether goals were met or if they remain consistent with current conditions.

While some Planning Team members were responsible for updating select sections, all members are responsible for reviewing and commenting on the entire HMP. The Planning Team Project Manager was responsible for version control and distribution of the final HMP for review.

Once the HMP update was drafted, the Planning Team provided opportunities for the public to review and comment on the plan. After the public comment period was closed, the Planning Team finalized the plan and forwarded to Cal OES and FEMA for approval.

3.8 Adopt the Plan

After the public review, the draft plan will be submitted to Cal OES/FEMA for review and approval. FEMA will provide the Town with an "Approval Pending Adoption" letter if the Hazard Mitigation Plan update meets all federal requirements. Upon receipt of this letter, the final plan will be submitted to the Apple Valley Town Council for consideration and adoption. Once adopted, the final Resolution will be submitted to FEMA for incorporation into the Hazard Mitigation Plan.

The Town of Apple Valley's adoption of the Hazard Mitigation Plan is only the beginning of this effort. Town offices, other agencies, and private partners will implement the Hazard Mitigation Plan activities. The Planning Team will monitor implementation progress, evaluate the effectiveness of the actions, and periodically recommend action items. Progress of the implementation of the Plan and the recommended action/mitigation strategies will be assessed annually. The Plan will be submitted and updated to FEMA every five years, which is required by FEMA in order to remain eligible for pre and post-disaster mitigation funding.

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Section 4. Risk Assessment

The risk assessment is the process of measuring the potential impact to life, property and economic impact resulting from natural hazards. The intent of the Risk Assessment is to identify, as much as practicable given existing/available data, the qualitative and quantitative vulnerabilities of a community. The results of the risk assessment allow for a better understanding of the impacts of natural hazards to the community and provides a foundation in which to develop and prioritize mitigation actions to reduce damage from natural disasters through increased preparedness and response times and better allocation of resources to areas of greatest vulnerability.

This Risk Assessment Section evaluates the potential loss from a hazard event by assessing the vulnerability of buildings, infrastructure, and population. It identifies the characteristics and potential consequences of hazards, how much of the Town of Apple Valley could be affected by a hazard, and the impact on Town area assets. The Risk Assessment approach consists of three (3) components:

- Hazard Identification – Identification and screening of hazards (Section 4.1)
- Hazard Profiles – Review of historic occurrences and assessment of the potential for future events (Section 4.2)
- Vulnerability Assessment – Determination of potential losses or impacts to buildings, infrastructure and population (Section 4.3)

4.1 Hazard Identification

Per FEMA Guidance, the first step in developing the Risk Assessment is identifying the hazards. The Town's HMP Planning Team reviewed a number of previously prepared hazard mitigation plans and other relevant documents to determine the universe of natural hazards that have the potential to affect the Town and the nearby region.

The planning team used the below Table 4-1 which provides a list of hazards identified in the 2010 San Bernardino County Multijurisdictional Hazard Mitigation Plan Update, the County of San Bernardino 2007 General Plan Safety Element, Apple Valley's 2011 Hazard Mitigation Plan and the 2013 CA State Hazard Mitigation Plan. This table was used to develop a preliminary list of fifteen hazards for the Town's HMP Planning Team to evaluate which hazards were truly relevant to the Town and which ones are not. For example, expansive soils was considered to be of little relevance, while earthquake, flooding, and wildfire were indicated in almost all hazard documentation.

Table 4-1: SBC & TOAV Hazard Identification

Hazards	2010 San Bernardino County Multijurisdictional Hazard Mitigation Plan Update	County of San Bernardino 2007 General Plan Safety Element	Apple Valley 2011 Hazard Mitigation PLan	2013 CA State Hazard Mitigation Plan
Climate Change				▪
Dam Inundation				▪
Drought	▪			▪
Earthquake/ Geologic Hazards	▪	▪	▪	▪
Erosion				▪
Expansive Soils				▪
Extreme Cold				▪
Extreme Heat	▪			▪
Flood	▪	▪	▪	▪
Hazardous Waste		▪		▪
High Winds/ Straight Line Winds	▪	▪		
Lightning	▪			
Terrorism				▪
Wildfire	▪	▪	▪	▪
Winter Storm (Heavy Snowfall)				▪

In addition to a document review, previous hazard occurrences were used to identify hazards for this plan. Previous hazard occurrences provide a historical view of hazards that have affected the Town in the past, and thus provide a window into the potential hazards that can affect our community in the future. Information about federal and state disaster declarations in San Bernardino County (declarations are declared by County) was compiled from FEMA and Cal EMA's databases, as shown in Table 4-2. Though not a complete snapshot of hazard incidences in the County (since not all hazard events are federally or state declared), Table 4-2 provided the Town's HMP Planning Team with solidified accounts of the types and extent of disasters that have affected the County dating back to 1965 when flooding affected entire regions of San Bernardino County.

As indicated in the below table large regional incidents have affected San Bernardino County, including the California Wildfires of 1999. Most recently, disasters for terrorist attacks (2015), flood (2011) and severe storms (2010) were declared in San Bernardino County. The disaster declarations in Table 4-2, provide a baseline for consideration in the hazard prioritization process.

Table 4-2: Federal and State Declared Disasters

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title
Federal Declarations				
Major Disaster Declarations				
1952	1/26/2011	DR	Flood	Severe Winter Storms, Flooding, and Debris and Mud Flows
1884	3/8/2010	DR	Severe Storm(s)	Severe Winter Storms, Flooding, and Debris and Mud Flows
1731	10/24/2007	DR	Fire	Wildfires, Flooding, Mud Flows, and Debris Flows
1689	3/13/2007	DR	Freezing	Severe Freeze
1585	4/14/2005	DR	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mud and Debris Flows
1577	2/4/2005	DR	Severe Storm(s)	Severe Storms, Flooding, Debris Flows, and Mudslides
1498	10/27/2003	DR	Fire	Wildfires, Flooding, Mudflow and Debris Flow Directly Related
1203	2/9/1998	DR	Severe Storm(s)	Severe Winter Storms and Flooding
1046	3/12/1995	DR	Severe Storm(s)	Severe Winter Storms, Flooding Landslides, Mud Flow
1044	1/10/1995	DR	Severe Storm(s)	Severe Winter Storms, Flooding, Landslides, Mud Flows
1005	10/28/1993	DR	Fire	Fires, Mud/Landslides, Flooding, Soil Erosion
979	2/3/1993	DR	Flood	Severe Winter Storm, Mud & Land Slides, & Flooding
947	7/2/1992	DR	Earthquake	Earthquake & Aftershocks
935	2/25/1992	DR	Flood	Rain/Snow/Wind Storms, Flooding, Mudslides
894	2/11/1991	DR	Freezing	Severe Freeze
872	6/30/1990	DR	Fire	Fires
690	9/22/1983	DR	Flood	Flash Flooding
687	7/1/1983	DR	Flood	Flooding
677	2/9/1983	DR	Coastal Storm	Coastal Storms, Floods, Slides & Tornadoes
635	11/27/1980	DR	Fire	Brush & Timber Fires
615	2/21/1980	DR	Flood	Severe Storms, Mudslides & Flooding
547	2/15/1978	DR	Flood	Coastal Storms, Mudslides & Flooding
521	9/21/1976	DR	Flood	Flooding, Tropical Storm Kathleen
295	9/29/1970	DR	Fire	Forest & Brush Fires
253	1/26/1969	DR	Flood	Severe Storms & Flooding
223	1/2/1967	DR	Flood	Severe Storms & Flooding
211	12/7/1965	DR	Flood	Heavy Rains & Flooding
145	2/25/1963	DR	Flood	California Severe Storms, Heavy Rains, & Flooding
47	12/23/1955	DR	Flood	California Flood
15	2/5/1954	DR	Flood	California Flood & Erosion

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title
Fire Management Assistance Declarations				
5147	8/16/2016	FM	Fire	Blue Cut Fire
5144	8/7/2016	FM	Fire	Pilot Fire
5089	7/17/2015	FM	Fire	North Fire/ Pine Fire
2955	9/2/2011	FM	Fire	Hill Fire
2841	10/4/2009	FM	Fire	Sheep Fire
2836	9/1/2009	FM	Fire	Pendleton Fire
2833	8/31/2009	FM	Fire	Oak Glen Fire
2792	11/15/2008	FM	Fire	Freeway Fire Complex
3279	10/23/2007	EM	Fire	Wildfires
2738	10/22/2007	FM	Fire	Grass Valley Fire
2728	9/15/2007	FM	Fire	Butler 2 Fire
2653	7/12/2006	FM	Fire	Sawtooth Fire Complex
3248	9/13/2005	EM	Hurricane	Hurricane Katrina Evacuation
2503	10/25/2003	FM	Fire	Old Fire
2501	10/23/2003	FM	Fire	Ca-Grand Prix Fire-10-23-2003
2497	9/6/2003	FM	Fire	Ca-Bridge Fire-09-05-2003
2491	8/19/2003	FM	Fire	Ca-Locust Wildfire-08-19-2003
2464	9/24/2002	FM	Fire	Williams Canyon Fire (Mt. Baldy)
2433	6/17/2002	FM	Fire	Louisiana Fire (Cajon Pass)
2425	6/17/2002	FM	Fire	California Blue Cut Fire (Cajon Pass/ Oak Hills)
Emergency Declarations				
3279	10/23/2007	EM	Fire	Wildfires
3248	9/13/2005	EM	Hurricane	Hurricane Katrina Evacuation
3140	9/1/1999	EM	Fire	Ca-Wildfires-08/25/1999
CAL OES/ State Emergency And Disaster Proclamations/ Executive Orders				
Other Disasters				
2464	9/24/2002	FS	Fire	Williams Fire
2433	6/27/2002	FS	Fire	Louisiana Fire
State Declarations				
5147	8/16/2016	FM	Fire	Blue Cut Fire
CDAA	12/18/2015	CDAA	Terrorist Attack	Waterman Incident Mass Shooting
None	8/5/2014	None	Severe Storm(s)	August Severe Weather - Dir. Concurrence
None	1/17/2014	None	Drought	California Drought
None	12/1/2011	None	Winds	December High Wind Event – Rancho Cucamonga
1952	1/21/2011	DR	Flood	Severe Winter Storms, Flooding, and Debris and Mud Flows
None	11/20/2010	None	Water	Golden State Water Company (GSWC) Contamination
1884	3/8/2010	DR	Severe Storm(s)	Severe Winter Storms, Flooding, and Debris and Mud Flows

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title
2841	10/4/2009	FM	Fire	Sheep Fire
2836	9/1/2009	FM	Fire	Pendleton Fire
2833	8/31/2009	FM	Fire	Oak Glen Fire
2792	11/17/2008	FM	Fire	Freeway Fire Complex - (Ex. Ord. S-15-08 11/18/08)
None	10/15/2008	None	Fire	October Fire events (Foxborough, San Antonio, San Bernardino)
None	10/15/2008	None	Winds	San Bernardino Wind Event - (Ex. Ord. S-11-08 10/16/08)
1731	10/24/2007	DR	Fire	Wildfires, Flooding, Mud Flows, and Debris Flows
3279	10/23/2007	EM	Fire	Wildfires
2738	10/22/2007	FM	Fire	Grass Valley Fire
2728	9/15/2007	FM	Fire	Butler 2 Fire
None	7/27/2007	None	Severe Storm(s)	Severe Weather/Flooding (City of Needles)- Dir. Concurrence
1689	3/13/2007	DR	Freezing	Severe Freeze
2653	7/12/2006	FM	Fire	Sawtooth Fire Complex
3248	9/13/2005	EM	Hurricane	Hurricane Katrina Evacuation
1585	4/14/2005	DR	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mud/Debris Flows
1577	2/4/2005	DR	Severe Storm(s)	Severe Storms, Flooding, Debris Flows, and Mudslides
2503	10/25/2003	FM	Fire	Old Fire
2501	10/23/2003	FM	Fire	Ca-Grand Prix Fire-10-23-2003
CDAA 2003-02	8/22/2003	CDAA	Flood	Summer Floods (Yucca Valley/Lower Desert)
None	3/7/2003	None	Fire Danger	Bark Beetle Infestation (San Bernardino Mountains)
None	1/17/2001	None	Energy	Statewide Energy Emergency
3140	9/1/1999	EM	Fire	Ca-Wildfires-08/25/1999
1203	2/9/1998	DR	Severe Storm(s)	Severe Winter Storms and Flooding
1044	1/10/1995	DR	Severe Storm(s)	Severe Winter Storms, Flooding, Landslides, Mud Flows
1005	10/28/1993	DR	Fire	Fires, Mud/Landslides, Flooding, Soil Erosion
979	2/3/1993	DR	Flood	Severe Winter Storm, Mud & Land Slides, & Flooding
947	7/2/1992	DR	Earthquake	Earthquake & Aftershocks
935	2/19/1992	DR	Flood	California Snow Storms, Flooding, & Mudslides
894	1/11/1991	DR	Freeze	California Severe Freeze
145	2/14/1963		Severe Storms	California Severe Storms, Heavy Rains, & Flooding
47	12/22/1955		Flood	California Flood
15	2/5/1954		Flood	California Flood & Erosion

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title
County Declarations				
5147	8/16/2016	FM	Fire	Blue Cut Fire
5144	8/9/2016	FM	Fire	Pilot Fire
CDAA	12/15/2015	CDAA	Terrorist Attack	Waterman Incident Mass Shooting
None	6/25/2015	None	Fire	Lake Fire
None	8/5/2014	None	Severe Storm(s)	August Severe Weather - Dir. Concurrence
None	8/5/2014	None	Drought	California Drought
None	4/30/2014	None	Fire	Etiwanda Fire
2955	9/3/2011	FM	Fire	Hill Fire
1952	1/21/2011	DR	Flood	Severe Winter Storms, Flooding, and Debris and Mud Flows
None	11/20/2010	None	Water	Golden State Water Company (GSWC) Contamination
1884	1/21/2010	DR	Severe Storm(s)	Severe Winter Storms, Flooding, and Debris and Mud Flows
2841	10/4/2009	FM	Fire	Sheep Fire
2836	9/1/2009	FM	Fire	Pendleton Fire
2833	9/1//2009	FM	Fire	Oak Glen Fire
2792	11/16/2008	FM	Fire	Freeway Fire Complex - (Ex. Ord. S-15-08 11/18/08)
None	10/14/2008	None	Fire	October Fire events (Foxborough, San Antonio, San Bernardino)
None	10/14/2008	None	Wind	San Bernardino Wind Event
1731	10/24/2007	DR	Fire	Wildfires, Flooding, Mud Flows, and Debris Flows
3279	10/22/2007	EM	Fire	Wildfires
2738	10/22/2007	FM	Fire	Grass Valley Fire
2728	9/14/2007	FM	Fire	Butler 2 Fire
None	8/8/2007	None	Water Shortage	Lucerne Valley Water Crisis
1689	1/17/2007	DR	Freezing	Severe Freeze
2653	7/11/2006	FM	Fire	Sawtooth Fire Complex
None	9/30/2005	None	Fire	Thurman Fire (San Bernardino Mountains)
3248	9/8/2005	EM	Hurricane	Hurricane Katrina Evacuation
1585	10/26/2004	DR	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mud and Debris Flows
1577	10/26/2004	DR	Severe Storm(s)	Severe Storms, Flooding, Debris Flows, and Mudslides
None	10/26/2004	None	Severe Storm(s)	Winter Storms (10/21 & 10/28/04)
None	6/29/2004	None	Water Shortage	Acute Water Shortage (Wrightwood 07, 08, & 09/04)
2503	10/21/2003	FM	Fire	Old Fire
2501	10/21/2003	FM	Fire	Ca-Grand Prix Fire-10-23-2003

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title
CDAA 2003-02	8/22/2003	CDAA	Flood	Summer Floods (Yucca Valley/Lower Desert)
None	9/24/2002	None	Infestation	Bark Beetle Infestation (San Bernardino Mountains)
3140	9/1/1999	EM	Fire	Ca-Wildfires-08/25/1999
None	7/12/1999	None	Flood	County Flood July 99 (Forest Falls, Apple Valley, and Big Bear)
1203	2/24/1998	DR	Severe Storm(s)	Severe Winter Storms and Flooding
None	3/19/1997	None	EQ	Earthquake (Barstow/Calico RP)
None	2/1/1996	None	Hazmat	Cajon Pass Train Derailment/Hazmat Incident
1044	1/6/1995	DR	Severe Storm(s)	Severe Winter Storms, Flooding, Landslides, Mud Flows
None	6/26/1994	None	Heat/Fire Danger	Severe Heat & Wildland Fire Threat
979	1/8/1993	DR	Flood	Severe Winter Storm, Mud & Land Slides, & Flooding
947	6/28/1992	DR	Earthquake	Earthquake & Aftershocks
935	2/18/1992	DR	Flood	Rain/Snow/Wind Storms, Flooding, Mudslides
894	1/14/1991	DR	Freezing	Severe Freeze
872	6/28/1990	DR	Fire	Fires
None	3/13/1990		Earthquake	Upland Earthquake
None	10/31/1988		Fire	Texas Fire (Watershed Damage)
None	9/3/1987		Fire	Wildland Fires
None	7/13/1984		Weather	Unstable Weather Conditions (City of Big Bear Lake, CSD, Co. Flood Control, Victor Valley Waste Water Authority, Juniper Riviera County Water District)
687	7/1/1983	DR	Flood	Flooding
677	3/7/1983	DR	Coastal Storm	Coastal Storms, Floods, Slides & Tornadoes
635	11/5/1980	DR	Fire	Brush & Timber Fires
615	1/15/1980	DR	Flood	Severe Storms, Mudslides & Flooding
None	9/29/1979		Gasoline Shortage	Gasoline Shortage Emergency
None	6/28/1979		Water Shortage	Water Shortage (Lake Gregory)
None	7/21/1960		Fire	Major and Widespread Fires

4.2 Hazard Prioritization

The Town of Apple Valley HMP Planning Team used a two-step process to derive at our final four hazards to profile.

The first step had the planning team review a total of sixteen hazards via the FEMA Hazard Summary Sheet (See Appendix D.1, D.2). The Hazard Summary Sheet was used to summarize hazard description information and identify which hazards are most significant to the Town. We considered those hazards that ranked medium to high into step two. We also included Climate Change since it is a new requirement. The summary sheet includes classifications for location and maximum probable extent.

The second step had the planning team review a total of six hazards- *wildfire, flood, earthquake, erosion, flooding and climate change*.   These six hazards were put through Dynamic Planning + Science Risk Factor (RF) Approach (See Appendix D.3, D.4). The RF approach combines historical data, local knowledge, and consensus opinions to produce numerical values that allow identified hazards to be ranked against one another. These criteria are used to evaluate hazards and identify the highest risk hazard in the project region.

The RF approach produces numerical values that allow identified hazards to be ranked against one another (the higher the RF value, the greater the hazard risk). RF values are obtained by assigning varying degrees of risk to five categories for each hazard: probability, impact, spatial extent, warning time, and duration. Each degree of risk is assigned a value ranging from 1 to 4 and a weighing factor for each category should be agreed upon by the planning committee.

The following values were derived for each hazard from the planning team: Earthquake-3.6, Wildfire-2.3, Flooding-2.25, Extreme Heat-1.9, Climate Change-1.7, and Erosion-1.4. Due to limited resources the planning team agreed to focus on the top three hazards which ranked within moderate to high risk (2.0-4.0). Climate change was included as a requirement per FEMA for 2017. See Figure 4-1 for final results.

LHMP RISK FACTOR EXCEL WORKSHEET
HAZARD PRIORITIZATION /

MITIGATE HAZARDS

Rank	Natural Hazards	Probability (1-4)	Factor1 = (Probability Index * .30)	Impact (1-4)	Factor2 = (Impact Index * .30)	Spatial Extent (1-4)	Factor3 = (Spatial Extent Index * .20)	Warning Time (1-4)	Factor4 = (Warning Time Index * .10)	Duration (1-4)	Factor5 = (Probability Index * .10)	RF Factor Total = (Add Factors 1-5)
1	Climate Change	1	0.3	1	0.3	3	0.6	1	0.1	4	0.4	1.7
2	Earthquake	3	0.9	4	1.2	4	0.8	4	0.4	3	0.3	3.6
3	Erosion	1.5	0.45	1	0.3	1	0.2	3	0.3	1.5	0.15	1.4
4	Extreme Heat	2.5	0.75	1	0.3	2.5	0.5	1	0.1	2.5	0.25	1.9
5	Flooding	2	0.6	2	0.6	2	0.4	4	0.4	2.5	0.25	2.25
6	Wildfire	2	0.6	2	0.6	2	0.4	4	0.4	3	0.3	2.3

The RF approach combines historical data, local knowledge, and consensus opinions to produce numerical values that allow identified hazards to be ranked against one another. These criteria were used to evaluate hazards and identify the highest risk hazard in the Lawndale region.

The RF approach produces numerical values that allow identified hazards to be ranked against one another (the higher the RF value, the greater the hazard risk). RF values are obtained by assigning varying degrees of risk to five categories for each hazard: probability, impact, spatial extent, warning time, and duration. Each degree of risk is assigned a value ranging from 1 to 4 and a weighing factor for each category was agreed upon by the MPC.

🟧 Calculated Field

Figure 4-1: RF Final Worksheet as Agreed Upon by Planning Team

4.3 Hazards Profiles

The planning team initially identified six hazards to be included on the RF Approach Worksheet, some of these hazards were ultimately ranked low risk/low impact or could potentially be secondary to higher ranked hazards. As a result, it was the consensus of the Planning Team to focus on the three hazards that scored High and Moderate Risk in the RF Approach Worksheet (See Figure 4-1): *Earthquake, Flooding*, and *Wildfires*. *Climate Change* is included as a requirement per FEMA for 2017. These four hazards will be identified in detail starting with 4.3 and beyond. The following natural hazards were reviewed and analyzed by the Planning Team but due to their limited risk and inclusion on other hazards they will not be included as one of the hazards identified with mitigation strategies:

1. Dam Failure ranked low by the planning team in the initial Hazard Summary and may be secondary to earthquakes, therefore dam failure was not included as a primary hazard. A dam is defined as a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water. Dams typically are constructed of earth, rock, concrete, or mine tailings. A dam failure is the collapse, breach, or other failure resulting in downstream flooding or a severe natural occurrence, such as an earthquake.

   Dam failure can result from any one or a combination of the following causes:

   - Prolonged periods of rainfall and flooding, which causes most failures;
   - Inadequate spillway capacity, resulting in excess overtopping flows;
   - Internal erosion caused by embankment or foundation leakage or piping;
   - Improper maintenance, including failure to remove trees, repair internal seepage problems, replace lost material from the cross section of the dam and abutments;
   - Improper design, including the use of improper construction materials and construction practices;
   - Negligent operation, including failure to remove or open gates or valves during high flow periods;
   - Failure of upstream dams on the same waterway;
   - Landslides into reservoirs, which cause surges that result in overtopping;
   - High winds, which can cause significant wave action and result in substantial erosion; and Earthquakes, which typically cause longitudinal cracks at the tops of embankments that weaken entire structures.

   Description:

   Two major dams -- Cedar Springs Dam and Mojave Dam -- could have a significant impact on the Town of Apple Valley in the event of dam failure. Both are located in the San Bernardino National Forest in the upper portion of the Mojave River Basin, southwest of Apple Valley. The Cedar Springs Dam and the Mojave Dam are both managed and operated by the State Department of Water Resources. See Table 4-3 for detailed information on both dams.

Table 4-3: Local Dam Data

	Cedar Springs Dam	Mojave Dam
DWR Number	1-063	9000-021
National ID	CA00049	CA10021
Dam Type	Rock	Earth
Crest Length	2,235 ft.	2,200 ft.
Height (measured above the dam crest)	236 ft.	204 ft.
Crest Width	42 ft.	20 ft.
Total Freeboard	23 ft.	21 ft.
Reservoir	Lake Silverwood	Mojave River Forks
Reservoir Storage Capacity	78,000 acre-ft.	89,700 acre-ft.
Reservoir Drainage Area	34.0 sq. miles	70.3 sq. miles

Fortunately, neither the Cedar Springs Dam nor the Mojave Dam have experienced dam failure. For Apple Valley to be affected by flood waters due to dam failure, both of these dams would need to fail simultaneously or the failure of the Cedar Springs Dam would need to occur at a time when rising flood waters were already a problem at the Mojave Dam.

Failure of these dams during a catastrophic event, such as a severe earthquake, is considered to be an unlikely event. Both dams have performed well in past earthquakes due to the type and method of construction.

2. Drought and Water Shortage ranked as a low hazard but provided for discussion based on the recent drought that the state of California is in and the amount of rain that has been produced in the early months of 2017.

    A drought is a period of drier-than-normal conditions that results in water-related problems. Precipitation (rain or snow) falls in uneven patterns across the country. When no rain or only a small amount of rain falls, soils can dry out and plants can die. If dry weather persists and water supply problems develop, the dry period can become a drought. Droughts differ from typical emergency events such as floods or forest fires, in that they occur slowly over a multiyear period.

    California has faced numerous challenges in recent years, including a nearly decade-long drought on the Colorado River, snowpacks that are below normal, and court-mandated reductions in the amount of water available for delivery by the State Water Project. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. Climate change, population growth, and the increasing instability of the water supplies in the delta formed by the confluence of the Sacramento and San Joaquin rivers threaten to exacerbate the crisis. Drought will also be discussed in our required hazard of climate change.

    Extreme Heat initially ranked as a medium hazard by the planning group but once we put it through the Risk Factor Worksheet it scored a 1.9 which would drop it to Low Risk. Temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks are defined as extreme heat. Temperatures in Apple Valley often reach 10 degrees above average however they rarely last more than a few days. Heat will also be discussed in our required hazard of climate change.

3. Erosion initially ranked as a low to medium hazard by the planning team but once we put it through the Risk Factor Worksheet it scored a 1.4 which would drop it to Low Risk. Since the Town of Apple Valley is located in an area of extreme topographic relief between the valley and the surrounding mountains and is therefore subject to erosion, runoff, and sedimentation. Key factors affecting these processes include climate, topography, soil and rock types.

    Natural erosion may be accelerated by human activities such as agricultural or land development, as well as grading that may involve altering natural drainage patterns. Grading and construction activities such as soil compaction, and cut and fill slopes also increase the potential for erosion, and sedimentation. The increase in impermeable surfaces associated with development may impact conditions downstream of development, increasing the potential for flooding and sedimentation.

    The planning team viewed erosion as secondary to flooding and with limited history of erosion occurring in Apple Valley the planning team did not include it as a primary hazard.

4. High Winds initially ranked as a low to medium hazard by the planning team. Although high winds and gusts are common to Apple Valley, the plannning team did not include it on the Risk Factor Worksheet because the disruption of services and spatial extent to our community is extremely minimal. When it has occurred the impacts are isolated with only infrequent reports of personal property damage due to property not being secured properly. If disruption of services occur, services are normally restored within a few hours.

High winds can result from thunderstorm inflow and outflow, or downburst winds when the storm cloud collapses, and can result from strong frontal systems, gradient winds (high or low pressure systems), or foehn winds, such as the Santa Ana's. High winds are speeds reaching 50 miles per hour or greater, either sustaining or gusting.

4.4 Flood Hazard Profile

Floods are the second most common and widespread of all natural disasters faced by the region and cities and towns like Apple Valley. Most communities in the United States have experienced some kind of flooding during or after spring rains, heavy thunderstorms, winter snow thaws, or summer thunderstorms.

A flood, as defined by FEMA's National Flood Insurance Program (NFIP) 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 the policyholder's property) from:

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

Floods can be slow or fast rising but generally develop over a period of hours or days. Mitigation includes any activities that prevent an emergency, reduce the chance of an emergency happening, or lessen the damaging effects of unavoidable emergencies. Investing in mitigation measures now, such as: engaging in floodplain management activities, constructing barriers such as levees, and purchasing flood insurance will help reduce the amount of structural damage and financial loss from other types of property damage should a flood or flash flood occur.

The standard for flooding is the 1% annual chance flood, commonly called the 100-year flood, the benchmark used by the FEMA to establish a standard of flood control in communities throughout the country. The 1% annual chance flood is also referred to as the base flood.

The 1% annual chance flood is the flood that has a 1% chance of being equaled or exceeded in any given year and it could occur more than once in a relatively short period of time. By comparison, the 10% flood (10-year flood) means that there is a 10% chance for a flood of its size to occur in any given year.

While not considered a "high risk area", the Town does have areas that are considered "flood potential". The most crucial areas pertaining to flooding are the dry lake bed (consisting of limited residential) and Desert Knolls. Flooding is expected to occur within the general location of these risk areas, and not expected to threaten or endanger the safety or well being of the entire community. It is noted that flooding in the risk areas can occur rapidly depending on the heaviness and severity of rainfall and run-off. However, since the installation of dry wells in low-lying areas, severe flooding occurrences have become less frequent.

Since incorporation in 1988, the Emergency Operations Center has activated more often due to flooding than any other type disaster. The Town's emergency responders continue to rely on the National Weather Service for weather advisories, storm watch conditions, and storm warnings.

4.4.1   National Flood Insurance Program (NFIP)

The NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. As a participating member of the NFIP, Town of Apple Valley is dedicated to protecting more than 363 homes with policies currently in force. Like most communities participating in NFIP, FEMA has prepared a detailed Flood Insurance Study (FIS) for areas of San Bernardino County, including the Town of Apple Valley. The study presents water surface elevations for floods of various magnitudes, including the 1-percent annual chance of flood (the 100-year flood) and the 0.2-percent annual chance of flood (the 500-year flood). Base flood elevations and the boundaries of the 100 and 500-year floodplains are shown on FIRMs (Flood Insurance Rate Maps). More information on location and geographic extent of the FIRMs see Figure 4-2.

The Town of Apple Valley entered the regular phase of the NFIP on March 3, 1996. As a participant in the NFIP, the Town of Apple Valley is dedicated to regulating development in the FEMA regulated floodplain areas in accordance with NFIP criteria. Before a permit to build in a floodplain area is issued, Apple Valley ensures that two basic criteria are met:

- All new buildings and developments undergoing substantial improvements must, at a minimum, be elevated to protect against damage by the 100-year flood.
- New floodplain developments must not aggravate existing flood problems or increase damage to other properties.

Structures permitted or built in the County/City before the NFIP regulatory requirements were incorporated into the Town of Apple Valley ordinances (before the effective date of the Town of Apple Valley's FIRM) are called "pre-FIRM" structures. For Apple Valley, pre-FIRM structures are those permitted or built before March 3, 1996.

Extensive FEMA NFIP databases are used to track claims for every participating community including Apple Valley. NFIP insurance data provided by FEMA indicates that as of November 30, 2016 there were *363* policies in the Town of Apple Valley, resulting in *$95,511,700* of insurance in force; this amounts to *$229,603* in total premiums. Of the *363* policies, only *115* are for structures located within the 1% annual chance flood zones, while the remaining *248* policies are for structures located outside of the FEMA identified floodplain.

There have been *17* closed paid losses totaling *$437,469*. Of the closed 17 paid losses there has been *1* substantial damage claims. Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to it's before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Based on this analysis of insurance coverage, the Town of Apple Valley has significant assets at risk to the 100-year flood. Currently, Town of Apple Valley contains *3* RL properties under their jurisdictional umbrella. The total dollar amount of claims paid to date by the NFIP is *$437,471*. The Town of Apple Valley also contains *1* Severe Repetitive Loss structure.

The RL property that experienced flooding in the Town of Apple Valley was due to overbank flooding in localized areas. Every loss claim is seasonal in nature as all loss claims have been in December, January or February. Some mitigation on these properties have been conducted and the Town of Apple Valley is currently tracking mitigation actions through standardized forms as required by FEMA. Of the 1 repetitive loss properties, 1 has been mitigated.

4.4.2 Past Flood Occurrences

Historical Events: The following describes the significant historical events associated with this hazard:

1. **January; 1/24/2017**
   A series of three consecutive rainstorms brought snow to local low mountains, swift water rescues, flooded roads and school closures. Close to .75 inches of rain fell between all three storms. A swift water rescue occurred in the Mojave River Bottom on the Victorville side. Public works had to close several streets due to flooding. Sandbags were offered to residents as needed.

   Source: Town of Apple Valley records; Daily Press newspaper

2. **February; 2/28/2014**
   A strong storm cell hit the high desert on February 28, 2014 causing several traffic accidents along highways and roadways. Isolated flooding occurred on roadways. Sandbags were provided to residents in need.

   Source: Town of Apple Valley records; Daily Press newspaper

3. **Series of Rainstorms; 1/22/10 (FEMA-1844-DR)**

   A series of severe rainstorms occurred in southern California on or about January 17, 2010 to February 6, 2010. A local declaration was issued by the Town Manager on January 21, 2010 (Resolution #2010-08). Governor Schwarzenegger proclaimed a State of Emergency for San Bernardino County on January 22, 2010, and President Bush declared a major for public assistance. The local Emergency Operations Center was activated to a level 1.

   The series of rainstorms caused 0.43 inches of rainfall in Apple Valley over one 24-hour period. About 6,000 sandbags were issued throughout the week. A Sewer Lift Station suffered major damage to the facility, sewer pipes, and manhole. Other work throughout the community included:

   - Debris removal
   - Sandbagging and road closures
   - Remove/replace asphalt and curbing
   - Repair severe road edge erosion
   - Base fill, grade, and recompact

   Source: Town of Apple Valley records; Daily Press newspaper

   Hazard: Flooding
   Deaths: 0
   Injuries: 0
   Displaced People: unknown

4. **Series of Rainstorms; 1/8/2005 (FEMA-1577-DR)**

A series of severe rainstorms occurred in southern California on or about December 27, 2004 to January 11, 2005. A local declaration was issued by the Town Manager on January 21, 2005 (Resolution #2005-06), and ratified by the Town Council on January 25, 2005 (Resolution #2005-07). Governor Schwarzenegger proclaimed a State of Emergency for San Bernardino County on January 15, 2005, and President Bush declared a major disaster on February 4, 2005 for public assistance. The local Emergency Operations Center was not activated.

The series of rainstorms caused 0.43 inches of rainfall in Apple Valley over one 24-hour period. About 3,000 sandbags were issued throughout the week. The rainstorms caused the release of up to 5,500 CFS of water from Silverwood Lake reservoir over a 3-4 day period. At one point the water in the Mojave River measured at 6-feet, and caused minor damage to rear yard properties along the west side of Riverside Drive. Sewer Lift Station 3-A suffered major damage (approximately $500,000) to the facility, sewer pipes, and manhole. Other work throughout the community included:

- Debris removal
- Sandbagging and road closures
- Remove/replace asphalt and curbing
- Repair severe road edge erosion
- Base fill, grade, and recompact

Source: Town of Apple Valley records; Daily Press newspaper

Hazard: Flooding
Deaths: 0
Injuries: 0
Displaced People: 0

5. 7/11/1999 (NDAA 99-04; OES #99-04-010)

On or about 4:00 p.m. on July 11, 1999, local flooding due to heavy rains occurred at various locations throughout the community. Resolution #99-27 confirming existence of a local emergency was signed by the Mayor. The Emergency Operations Center was partially activated.

Flooding led to multiple road closures, including the major arterial of Highway 18 and Tao Road. Approximately 29 other areas of road damage were noted. Water and mud damage destroyed three apartment units forcing the evacuation of residents. Apple Valley Fire Protection District conducted numerous rescues from stranded motorists. Apple Valley Chamber of Commerce went door-to-door to businesses in the Desert Knolls area (hardest hit area) to assist as necessary with storm damage. Approximately 14 businesses suffered moderate damage, as well as 34 single family residences.

Activities included:

- Sandbagging and road closures
- Remove/replace asphalt and curbing
- Repair severe road edge erosion
- Base fill, grade, and recompact

Source: Town of Apple Valley records; Daily Press newspaper

Hazard: Flash Flooding
Deaths: 0
Injuries: Unknown
Displaced People: Unknown

6. El Nino Conditions; 2/23/1998 (FEMA-1203-DR; NDAA-OES #98-01-285)

On or about 10:00 p.m. on February 23, 1998, local flooding due to heavy rains occurred at various locations. Resolution #98-13 confirming existence of a local emergency was issued, and the Emergency Operations Center was activated.

A total of 2.87-inches of rain poured on the High Desert in a 24-hour period. It was thought to be the third wettest month in Apple Valley since 1938 as the rain total for the month was 5.03-inches! Major damage occurred to 6 businesses and 21 apartment units and minor damage to another 35 apartment units, for a total of $8.9 million in damages.

Activities included:
• Sandbagging and road closures
• Debris removal; barricade placement
• Road shoulder erosion protection
• Repair to concrete casing for sewer line crossing at the wash
• Clean manholes and repair potholes
• Remove/replace asphalt

Source: Town of Apple Valley records, Daily Press Newspaper, Apple Valley News

Hazard: Flash Flooding
Deaths: 0
Injuries: 0
Displaced People: Unknown

7. 1/12/1993
On or about midnight on January 12, 1993, local flooding due to heavy rains occurred at various locations throughout the community. Resolution #93-05 confirming existence of a local emergency was signed by the Mayor.

The rainstorm dumped nearly 9-inches of rain in two days, with a constant rain lasting 11 days. The conditions worsened when there was a release of water from the Lake Silverwood reservoir.

Activities included:

• Sandbagging and road closures
• Debris removal
• Rescue of two rafters in the Mojave River (AVFPD)

- Construction of embankment to redirect flow of the Mojave River (San Bernardino County Flood Control)

Source: Town of Apple Valley records and Daily Press Newspaper

> Hazard: Flash Flooding
> Deaths: 0
> Injuries: Unknown
> Displaced People: Unknown

8. **12/7/1992**

   On or about 8:00 a.m. on December 7, 1992, local flooding due to heavy rains occurred at various locations throughout the community. Town of Apple Valley Resolution #92-80 confirming existence of a local emergency was signed by the Mayor. In fact, all four cities in the High Desert proclaimed a local emergency. A total of 2.4-inches of rain poured down in the High Desert in an 18-hour period. It was thought to be the most rain to drop in the High Desert in the past ten years.

   Activities included:

   - Evacuation of residents (6 apartment units)
   - Sandbagging and road closures
   - Debris removal

   Source: Town of Apple Valley records; Daily Press Newspaper

   > Hazard: Flash Flooding
   > Deaths: 0
   > Injuries: 0
   > Displaced People: Unknown

9. **El Nino Conditions; 2/12/1992**

   On or about 7:30 p.m. on February 12, 1992, local flooding due to heavy rains occurred at various locations throughout the community. A resolution proclaiming existence of a local emergency was signed by the Assistant Director of Emergency Services and the Deputy Town Manager.

   Activities included:

   - Sandbagging and road closures
   - Debris removal
   - Barricade placement and placement of cold mix asphalt into potholes
   - Remove/replace asphalt, repaint stop bars/legends; replace striping
   - Asphalt overlay and asphalt berms

   Source: Town of Apple Valley records and Daily Press Newspaper

   > Hazard: Flash Flooding

Deaths: 0
Injuries: Unknown
Displaced People: Unknown

Figure 4-2: 100/500 Flood Zone Map

4.4.3   Location/ Geographic Extent

A majority of the flood risk within the Town of Apple Valley is specifically subject to inundation as a result of heavy rainfall and resulting stream and drainage canal overflows. The extent of flooding associated with a 1-percent annual probability of occurrence (the base flood or 100-year flood) is used as the regulatory boundary by many agencies, and helps identify the location and extent of flooding in areas across the Town of Apple Valley. This area is also referred to as the SFHA, and is a convenient tool for assessing vulnerability and risk in flood-prone communities.

Figure 4-2 shows 100-year and 500-year floodplain zones, which are estimated inundation areas based on a flood that has a 1-percent (100-year) and 2-percent (500-year) chance of occurring in any given year. Town of Apple Valley contains over 2,859 acres of identified flood hazard areas. Table 4-4 provides the total area for both the 100-year and 500-yr. flood hazard areas.

Table 4-4: Special Flood Hazard Area for Apple Valley

Flood Hazard Type	Sum of Acres	Sum of Square Miles
100-Year Flood	2,454	3.83
100-Year, Floodway	357	0.56
500-Year Flood	48	.07
500-Year, Protected by Levee	-	-
Total	**2,859**	**4.47**

4.4.4   Magnitude/ Severity

In urban areas like Apple Valley, flood problems are typically intensified as new homes and other structures are built. New streets, driveways, parking lots, and other paved areas decrease the amount of open land available to absorb rainfall and runoff, thus increasing the volume of water that must be carried away by waterways. However, in the absence of flood water conveyance systems, the Town's development code requires flood mitigation in the form of onsite detention, retention, and infiltration.

Unfortunately the Town does not have exact data or resources to obtain data on the strength of the flooding hazard such as flood depth grids, duration and speed of onset. However, what we can show using 2012 population data aggregated by census blocks, an estimate was made of the population exposed to the 100- and 500-year floodplain. To account for census blocks that were partially within the floodplain, a weighted average was employed to calculate the proportion of the population within the floodplain. The results of the population overlay are shown in Figure 4-18. More than 1400 residents live near or within the 100-year floodplain and approximately 1500 residents live within the 500-year floodplain.

4.4.4.1   Flash Flooding (From San Bernardino County Operational Area Plan)

Flash flooding tends to occur in the summer and early fall because of the monsoon rains and is typified by increased humidity and high summer temperatures.

The desert area contains many mountain ranges that are steep and experience summer thunder storms causing flash floods in many dry washes on the desert floor. The water collects in dry lake beds throughout the desert area. Environmental permit processing has delayed or prohibited work in the washes to provide flow lines to many bridges on county highways.

Many highways do not have bridges but convey water across the road with dip crossings. Flash flooding causes road and bridge wash outs and erosion of earthen channels and basins when they occur near these facilities. Cities and towns often experience street closures for several days due to sediment transport and road damage. Because of the sheet flow character of the desert, many private properties experience erosion and sediment deposits.

The urban valley also can experience flash flooding in its narrow canyons and within the many unimproved creeks and interim channels feeding the Santa Ana River. The valley floor in many areas is very flat so even minor rain events can produce flooding of roads and private property. In coordination with local jurisdictions, the County of San Bernardino Flood Control District has prepared Master Drainage plans for many cities and towns to provide a plan for reducing flooding due to minor storms. Maps can be found on the County's Department of Public Works website here:

http://cms.sbcounty.gov/dpw/FloodControl/Planning/MPD.aspx

However, local resources are not sufficient to cover the cost of the construction of the drainage systems. The densely populated (75% of the county population) urban valley region contains the headwaters of the Santa Ana River. The San Gabriel and San Bernardino Mountains border the North side of the valley are steep reaching 5,000 feet with alluvial fans which are developed and densely populated.

4.4.5   Frequency/ Probability of Future Occurrences

The FIRM maps not only identify the flood hazard zones for insurance and floodplain management purposes, but also provide a statement of probability of future occurrence.

A 500-year flood has a 0.2-percent chance of occurring in any given year; a 100-year flood has a 1-percent chance, a 50-year flood has a 2-percent chance, and a 10-year flood has a 10-percent chance of occurrence. Although the recurrence interval represents the long-term average period between floods of specific magnitude, significant floods could occur at shorter intervals or even within the same year. The FIRM maps typically identify components of the 500-year and 100-year floodplains.

4.5 Wildfire Hazard Profile

As defined in the California Fire Protection (CAL FIRE) 2010 Strategic Fire Plan, a wildfire event is an unwanted wildland fire including unauthorized human-caused fires, escaped wildfire use events, escaped prescribed wildfire projects, and all other wildfires.

4.5.1 Regulatory Environment

Wildfire regulatory requirements are mandated by the State of California and the Town of Apple Valley.

4.5.1.1 State

Wildfire State Responsibility Area (SRA) Fire Safe Regulations outline basic wildland fire protection standards for local jurisdictions. SRA Fire Safe Regulations (if policed) can decrease the risk of wildfire events in the wildland interface. SRA Fire Safe Regulations do not supersede local regulations, which equal or exceed minimum state regulations. The State statute for wildfire protection is Public Resources Code, Section 4290. Requirements in the code include information on the following (CA Fire Alliance):

1. Road Standards for Fire Equipment Access
2. Standards for Signs Identifying Streets, Roads and Buildings
3. Minimum Private Water Supply Reserves for Emergency Fire Use
4. Fuel Breaks and Greenbelts

4.5.1.2 Local

The Apple Valley Fire Protection District provides fire protection services to the Town of Apple Valley and the vicinity. It is an independent District whose western boundary is the Mojave River, and extends east as far as the dry lakes toward Lucerne Valley. It serves the Town and unincorporated areas of San Bernardino County, with a total service area of over 206 square miles. District staff includes paid, professional personnel and support staff.

The Fire Protection District maintains a mutual aid agreement with Victorville, San Bernardino County Fire Department, and the Bureau of Land Management. This agreement allows for fire departments within the region to actively support one another regardless of geographic or General Plan V-41jurisdictional boundaries. A joint dispatch center serving the mutual aid agencies is located in Victorville. There are currently a total of 43 paid staff in the Fire Protection District.

4.5.2 Past Occurrences

Wildfire events are of major concern to the Town of Apple Valley. Cal FIRE maintains a database of wildfire perimeters. Table 4-5 gives the dates and fire names of the historical wildfires that have burned within or near Town of Apple Valley limits. In the past five years there have been six significant wildland fires in or near to the Town of Apple Valley. These fires are listed in Table 4-5, and several of the more damaging fires are discussed below.

Table 4-5: Wildfire Occurrences 2011-2016

Year	Fire Name	Acres
6/1/2011	Roundup	144
6/9/2011	Bowen	295
7/3/2011	Deep	119
3/31/2015	River Bottom	185
8/7/2016	Pilot	8,110
8/16/2016	Blue Cut	36,274
Total		45,127

Source: Cal Fire

River Bottom Fire: On March 31, 2015 a fire erupted within Mojave Narrows Regional Park and quickly spread towards homes in Apple Valley off Riverside Drive. A few outbuildings and vehicles were lost but no homes. The fire was contained by the next day. American Red Cross opened a shelter for those evacuated at Sitting Bull Academy.

Pilot Fire: The Pilot Fire started at about 12:10 pm on Sunday August 7, 2016 near the Miller Canyon OHV area off of Highway 138. The Pilot Fire burned 8110 acres and was declared controlled on August 16, 2016 as a result of significant rainfall. AVUSD was closed for a few days due to air quality.

Blue Cut: The Blue Cut Fire started on August 16, 2016 at 10:36 AM in the Cajon Pass along Old Cajon Blvd. north of Kenwood Avenue west of Interstate 15. The fire quickly spotted across Cajon Creek and grew into a large wildland fire. During the course of the fire fight, railroad lines, local roads, highway 138 and Interstate 15 were closed along with a large evacuation area that included Lytle Creek, Wrightwood, Summit Valley, Baldy Mesa, Phelan and Oak Hills.

At the peak of the battle to control this blaze there were 2,684 personnel actively involved in the fight to contain the Blue Cut Fire. These personnel have come from all over the nation to help with this firefight. The Blue Cut Fire burned 36,274 acres, destroying an estimated 105 single family residences and 216 outbuildings. In addition, 3 single family residences and 5 other structures were damaged. Apple Valley took in over 480 small animals due to the Blue Cut fire. The Town had nearly $65,000 in reimbursable expenses related to small animal sheltering.

4.5.3   Location/Geographic Extent

Wildfires present a significant threat in the unincorporated area of Apple Valley, particularly in the summer months when temperatures are high and precipitation is rare. The period between June and September is typically considered "fire season".

The area known as the Marianas in the southern foothill area of Apple Valley is a fire hazard area due to the abundance of brush and mountainous terrain, which makes it difficult to gain access to fight fire. This area is primarily in the unincorporated region of Apple Valley with homes scattered throughout the vegetation.

The Mojave Riverbed is the second significant threat of wildland fire in the Apple Valley area. Because of its significant slope to the bottom of the riverbed and the soft soil, it is difficult to gain access to this area to fight fire. The Mojave River is the Town's western boundary with residential properties along Riverside Drive. Schools are located on the southernmost and northernmost ends of the natural extension of Riverside Drive.

4.5.4 Magnitude/Severity

The magnitude and severity of a wildfire event is measured by calculating the number of acres burned in a specific wildfire event. CAL FIRE adopted Fire Hazard Severity Zone maps for LRA in June 2008. The Fire Severity Zones are identified as Very High, High, and Moderate fire hazard severity throughout the County and are mapped for Apple Valley in Figure 4-3. According to LRA Apple Valley has nothing higher than moderate fire hazard severity.

Fire Severity Zones are used in determining additional protective measures required when building new structures or remodeling older structures within the particular zone. Additional measures must be taken on the property around a structure in the higher ranked fire Severity Zones.

Fire hazard mapping is a way to measure the physical fire behavior to predict the damage a fire is likely to cause. Fire hazard measurement includes vegetative fuels, probability of speed at which a wildfire moves the amount of heat the fire produces, and most importantly, the burning fire brands that the fire sends ahead of the flaming front.

The model used to develop the information in accounts for topography, especially the steepness of the slopes (fires burn faster as they burn up-slope.). Weather (temperature, humidity, and wind) also has a significant influence on fire behavior. The areas depicted as moderate and high in are of particular concern and potential fire risk in these are constantly increasing as human development, and the wildland urban interface areas expand.

4.5.5 Frequency/Probability of Future Occurrences

In San Bernardino County, wildfire season commences in late Spring when temperatures begin to rise, humidity is low, and drier conditions persist. The season continues into the Fall, when the County experiences high velocity, very dry winds coming out of the desert. A statewide drought beginning in 2011 has caused the state to be the driest it's been since record keeping began back in 1895 (California, 2016). This has caused extremely dry conditions in unincorporated areas of the County creating plentiful fuel sources for wildfires.

USGS LANDFIRE (Landscape Fire and Resource Management Planning Tools), is a shared program between the wildland fire management programs of the U.S. Department of Agriculture Forest Service and U.S. Department of the Interior, providing landscape scale geo-spatial products to support cross-boundary planning, management, and operations. Historical fire regimes, intervals, and vegetation conditions are mapped using the Vegetation Dynamics Development Tool (VDDT). This USGS data supports fire and landscape management planning goals in the National Cohesive Wildland Fire Management Strategy, the Federal Wildland Fire Management Policy, and the Healthy Forests Restoration Act.

Figure 4-3: Wildfire Hazard Severity Zones

EXPLANATION

☐ Town of Apple Valley

USGS FIRE REGIME

☐ 11-15 Years	☐ 21-25 Years	☐ 31-35 Years	☐ 41-45 Years	☐ 51-60 Years	☐ 71-80 Years	☐ 91-100 Years	☐ 126-150 Years
☐ 16-20 Years	☐ 26-30 Years	☐ 36-40 Years	☐ 46-50 Years	☐ 61-70 Years	☐ 81-90 Years	☐ 101-125 Years	☐ Urban/Indeterminant Regime

Figure 4-4: Wildfire Return Interval Map

As part of the USGS Landfire data sets, the Mean Fire Return Interval (MFRI) layer quantifies the average period between fires under the presumed historical fire regime. MFRI is intended to describe one component of historical fire regime characteristics in the context of the broader historical time period represented by the Landfire Biophysical Settings (BPS) layer and BPS Model documentation.

MFRI is derived from the vegetation and disturbance dynamics model VDDT (Vegetation Dynamics Development Tool) (LF_1.0.0 CONUS only used the vegetation and disturbance dynamics model LANDSUM). This layer is created by linking the BpS Group attribute in the BpS layer with the Refresh Model Tracker (RMT) data and assigning the MFRI attribute. This geospatial product should display a reasonable approximation of MFRI, as documented in the RMT. See Figure 4-4 for predicted fire return interval for the jurisdictional area.

For more information on the USGS wildfire mapping tools visit: http://www.landfire.gov/fireregime.php

4.6 Earthquake/Geologic Hazard Profile

An earthquake is both the sudden slip on an active fault and the resulting shaking and radiated seismic energy caused by the slip (USGS, 2016). The majority of major active faults in the Apple Valley area are strike-slip faults. For this type of fault, during an earthquake event, one side of a fault line slides past the other. The rupture from this type of fault extends almost vertically into the ground.

Earthquakes are a significant concern to Apple Valley. The area around Apple Valley is seismically active since it is situated on the boundary between two tectonic plates. Describe seismic activity and faults for the region. Earthquakes can cause serious structural damage to buildings, overlying aqueducts, transportation facilities, utilities, and can lead to loss of life. In addition, earthquakes can cause collateral emergencies including dam and levee failures, fires, and landslides.   Seismic shaking is by far the single greatest cause of damage from an earthquake in Apple Valley, followed by liquefaction.

Liquefaction occurs when loosely packed sandy or silty materials saturated with water are shaken hard enough to lose strength and stiffness. Liquefied soils behave like a liquid and are responsible for tremendous damage in an earthquake. For example, it can cause buildings to collapse, pipes to leak, and roads to buckle.

4.6.1 Regulatory Environment

Numerous building and zoning codes exist at a state and local level to decrease the impact of an earthquake event and resulting liquefaction on residents and infrastructure. Building and zoning codes include the Alquist-Priolo Earthquake Fault Zoning Act of 1972, Seismic Hazards Mapping Act of 1990, 2013 California Standards Building Code (CSBC), and Town of Apple Valley's General Plan. To protect lives and infrastructure in the Town of Apple Valley, the following building and zoning codes are used.

4.6.1.1 State

The 1971 San Fernando Earthquake resulted in the destruction of numerous structures built across its path. This led to passage of the Alquist-Priolo Earthquake Fault Zoning Act. This Act prohibits the construction of buildings for human occupancy across active faults in the State of California. Similarly, extensive damage caused by ground failures during the 1989 Loma Prieta Earthquake focused attention on decreasing the impacts of landslides and liquefaction. This led to the creation of the Seismic Hazards Mapping Act. This Act increases construction standards at locations where ground failures are probable during earthquakes. Active faults in San Bernardino County have been included under the Alquist-Priolo Geologic Hazards Zones Act and Seismic Hazards Mapping Act.

4.6.1.2 Local

The 2013 California Building Standards Code (also known as Title 24) became effective for the County on January 1st, 2014. Title 24 includes CBC Section 3417: Earthquake Evaluation and Design for Retrofit of Existing Buildings which can be viewed at http://www.documents.dgs.ca.gov/bsc/2015TriCycle/Pre-Cycle-2015/CBC-CEBC/BSC-0X-15-ET-Pt10-Agenda-4d.pdf.

The 2013 CSBC is based on the International Building Codes (IBC), which is widely used throughout the United States. CSBC was modified for California's conditions to include more detailed and stringent building requirements. The Town of Apple Valley, Building and Safety Department utilizes the 2013 CSBC to regulate the infrastructure in the Town of Apple Valley.

This includes unreinforced masonry (URM) buildings. For new buildings, Town of Apple Valley includes earthquake safety provisions, with enhancements for essential services buildings, hospitals, and public schools.

4.6.1.3   General Plan Geologic Hazard Reduction Policies

The Town of Apple Valley's General Plan includes the following policies for lowering the impacts of earthquakes on infrastructure:

- The Town shall begin and maintain an information database including maps and other information that describe and illustrate seismic and other geotechnical hazards that occur within and in proximity to the Town boundaries.
- In areas identified as being susceptible to slope instability, development shall be avoided unless adequately engineered to eliminate geotechnical hazards.
- The Town shall require that future development avoid disturbing unique rock outcroppings within the Town boundary and Sphere of Influence.
- The Town shall actively support and participate in local and regional efforts at groundwater conservation and recharge, in order to minimize the potential impacts of subsidence due to extraction of groundwater.
- In areas identified as being susceptible to rockfall, landslide, liquefaction and/or other associated hazards as depicted in the General Plan EIR, development shall be required to prepare detailed technical analysis, which shall include mitigation measures intended to reduce potential hazards below levels of significance.
- Development in areas susceptible to collapsible or expansive soils as shown in soils mapping in the General Plan EIR shall be required to conduct soil sampling and laboratory testing and to implement mitigation measures that reduce potential hazards below levels of significance.
- The Town shall coordinate and cooperate with public and quasi-public agencies to ensure that major utility systems and roadways have continued functionality in the event of a major earthquake.
- To minimize the potential for localized collapse of soils, new septic tank leach fields, seepage pits, drainage facilities, and heavily irrigated areas shall be located away from structural foundations and supports.

4.6.2   Past Occurrences

The HMP Planning Team noted the following regional and local events for the seismic activity in Apple Valley. Table 4-6 shows earthquakes greater than Magnitude 4.0 that have been felt within or near Apple Valley area in the last five years.

Table 4-6: Earthquakes: 2011-2016 San Bernardino County

Date	Name
1/15/2014	Fontana 4.4
7/5/2014	Running Springs 4.6
6/11/2014	Barstow 4.0
7/25/2015	Fontana 4.2
9/16/15	Big Bear Lake 4.0
12/30/2015	Muscoy 4.4
1/6/2016	Banning 4.4
2/20/2016	Lucerne Valley 4.3

There are hundreds more small (M<4.0) earthquakes that have occurred within San Bernardino County during this same time frame. Those with a magnitude of below 4.0 are not listed.

4.6.3 Location/Geographic Extent

Historical and geological records show that Southern California has a long history of seismic events. The risk of seismic hazards to residents of Apple Valley is based on the approximate location of earthquake faults within and outside the region. This map includes Alquist-Priolo Geologic Hazards Zones Act created under the Seismic Hazards Mapping Act and the USGS Quaternary Fault and Fold Database of the United States. The USGS database contains information on faults and associated folds in California that are believed to be sources of M>6 earthquakes during the Quaternary (the past 2.6 million years).

Figure 4-5 shows fault zones nearest to Apple Valley. Per the California Department of Conservation's Earthquake Fault Zone Maps, Apple Valley is near the following active fault zones or regulatory fault zones managed by the Department of Conservation. Some of these fault lines along with probability of occurrence are shown in Figure 4-7.

4.6.3.1   North Frontal Fault

The North Frontal fault is closest to and therefore has the potential to generate the strongest seismic shaking in the area. The North Frontal fault is a partially blind reverse fault zone comprised of several fault splays; it trends south along the eastern flank of the San Bernardino Mountains, and has a combined total length of approximately 40 miles. Several of the fault splays interact with other faults that traverse the region. The most significant fault with which the North Frontal relates is the Helendale fault, which offsets and divides the North Frontal into two main segments, referred to as the East and West segments. The West segment is approximately 22 miles long, and is less than 0.5 miles from Apple Valley at the closest point.

The North Frontal fault is considered an active fault, based on its having moved within the last 10,000 years. However, it has not been studied in detail, and while it is has been attributed a slip rate of approximately 0.5 mm per year, the parameters of this fault are not well understood. It is thought that movement on this fault causes an average uplift rate of the San Bernardino Mountains of about 1 mm per year. The West segment of the North Frontal fault zone is considered capable of generating a maximum magnitude 7.2 earthquake, based on its length. Such an earthquake on this fault would generate peak ground accelerations in the planning area of between about 1.1g and 0.4g, which converts to Modified Mercalli intensities as high as XI. Based on rupture of the East segment of the North Frontal fault zone in a 6.7 earthquake, ground shaking of about 0.26g to 0.14g would be felt in the planning area. This converts to Modified Mercalli intensities in the IX to VIII range.

4.6.3.2   Helendale Fault

There are several right-lateral strike-slip faults within what is known as the Eastern California Shear Zone, of which the Helendale fault is the westernmost. Approximately 9 to 23% of the total movement along the North American/Pacific plate boundary motion occurs along this zone. The Helendale fault itself is 56 miles long, but it also seems to form a continuous fault with the South Lockhart fault to the north. The southern end of the Helendale fault apparently offsets the North Frontal fault, as discussed above, forming the East and West segments. The Helendale fault extends to the northeast of the planning area, outside of Apple Valley's northeastern corporate limits and within the Sphere of Influence. The Helendale fault has an annual slip rate calculated at 0.8 mm/year; it has a recurrence interval for large surface-rupturing events of 3,000 to 5,000 years. Based on currently available data, the California Geological Survey estimates that a

maximum earthquake of magnitude 7.3 along the combined Helendale-South Lockhart faults would generate horizontal peak ground accelerations in Apple Valley of between 0.75g and 0.3g, with Modified Mercalli Intensities of between XI and IX.

4.6.3.3   San Andreas Fault

Southern California is probably best known for the San Andreas Fault, a 400-mile long fault running from the Mexican border to a point offshore, west of San Francisco. Geologic studies show that over the past 1,400 to 1,500 years, large earthquakes have occurred at about 130-year intervals on the southern San Andreas fault.

The San Andreas Fault zone is located approximately 23 miles southwest of Apple Valley. The longest fault in the State of California, it extends approximately 750 miles from Cape Mendocino in northern California to the Salton Sea in southern California. The San Andreas, a right-lateral transform fault, is regarded as a "Master Fault" that controls the seismic hazard for central and southern California. The magnitude 8.0 Fort Tejon earthquake, which occurred in 1857, is the last major earthquake to have occurred on the southern San Andreas. As previously discussed, at least one other fault occurs closer to Apple Valley and has the potential to cause stronger ground

shaking, and therefore more damage, than the San Andreas Fault. Nonetheless, the San Andreas Fault is considered to have a high probability of causing an earthquake in the near future and should therefore be considered in all seismic hazard assessment studies in southern California given its.

The Fort Tejon earthquake in 1857 ruptured the Cholame, Carrizo, and Mojave segments of the San Andreas fault, and displacements occurred along of as much as 27 feet of the rupture zone. It is estimated that peak ground accelerations in Apple Valley as a result of the 1857 earthquake may have been as high as 0.38g. Another similar earthquake that ruptured the entire southern San Andreas Fault, with its epicenter along the section of fault closest to Apple Valley, could generate even higher peak ground accelerations in Apple Valley, estimated at between 0.48g and 0.25g.

4.6.3.4   Lenwood – Lockhart – Old Woman Springs Faults

Another of the Eastern California Shear Zone faults is the Lenwood fault, a right-lateral strike slip fault approximately 47 miles long. It has a slip rate of about 0.8 mm/year. Based on trenching studies, this fault has ruptured at least three times and these ruptures have occurred as recently as approximately 200 to 400 years ago. Other ruptures are estimated as occurring between 5,000 and 6,000 years ago, and 8,300 years ago. Therefore a recurrence between major surface ruptures is estimated at between 4,000 to 5,000 years. Prior to the 1992 Landers earthquake the yearly slip rate on this fault had been recorded but not verified.

The Lockhart fault is approximately 44 miles long and is north of the Lenwood fault. The North Lockhart fault, a segment that evidences no activity within the last 11,000 years, is approximately 6 miles. The Lockhart fault is estimated to have an interval of between 3,000 and 5,000 years for major surface-rupture.

The Old Woman Springs segment is about 6 miles long and is the main trace in a complex fault system where the Eastern segment of the North Frontal Fault Zone and the Lenwood fault intersect. It is considered an active fault.

The Lenwood and Lockhart faults essentially form a continuous, 90-miles long system. While there is no evidence that both of these faults have ruptured together in the past, such an event may be possible, as evidenced by rupture of five separate fault segments during the Landers earthquake. The technical background study assumes a scenario wherein the Lenwood

and Lockhart faults, together with the Old Woman Springs fault, rupture together in a magnitude 7.5 maximum earthquake. Such an event would generate peak ground accelerations in Apple Valley of about 0.42g to 0.19g, with Modified Mercalli Intensities in the IX to VIII range. A smaller magnitude event involving rupture along only one of these faults ruptures would cause lesser ground motions in Apple Valley than those reported above.

4.6.3.5   Cleghorn Fault

The Cleghorn fault, also known as the Silverwood Lake fault due to its extension across the lake, is approximately 19-miles long. Studies suggest that the fault zone has had about 650 feet of motion in the last 50,000 to 100,000 years, which results in a slip rate of 2 to 4 mm/year. A magnitude 6.5 earthquake on this fault is considered capable of generating horizontal peak ground accelerations in the Apple Valley area of between about 0.33g and 0.11g, with Modified Mercalli Intensities in the IX to VII range.

4.6.3.6   Cucamonga Fault

The Cucamonga fault zone is approximately 16-miles long. As one element of the Transverse Ranges family of thrust faults, it runs along the southern front of the San Gabriel Mountains from San Antonio Canyon eastward to the Lytle Creek area. It has a slip rate of between approximately 5.0 and 2.0 mm/year with an estimated average recurrence interval of 625 years. The Cucamonga fault is thought capable of generating a maximum magnitude 6.9 earthquake, based on length, and such a scenario would result in peak horizontal ground acceleration in the Apple Valley area of between about 0.28g and 0.15g, with Modified Mercalli intensities in the IX to VIII range.

4.6.3.7   Landers (or Kickapoo) Fault

The group of faults that ruptured during the 1992 Landers earthquake, including the Homestead Valley, Kickapoo, and Johnson Valley faults, and segments of the Burnt Mountain and Eureka Peak faults, are known as the Landers fault. The Landers fault now refers to the Kickapoo fault. These faults are part of the Eastern Mojave Shear Zone and were discovered after they ruptured the surface during the 1992 Landers earthquake. It is estimated that intervals between major ruptures is in the thousands of years, The 1992 earthquake resulted in substantial lateral displacement along some of these faults, for instance nearly 9.5 feet in the case of the Kickapoo fault. Individually, these faults could rupture in smaller earthquakes. Their combined lengths allowed for the magnitude 7.3 earthquake that shook southern California on June 28, 1992.

Ground shaking in the Apple Valley area due to a Landers-type earthquake on these faults would cause horizontal ground accelerations of between 0.27g and 0.14g, with Modified Mercalli intensities in the IX to VIII range.

4.6.3.8   Sierra Madre Fault

The Sierra Madre fault zone or complex is approximately 47 miles long and extends along the base of the San Gabriel Mountains from the San Fernando Valley to San Antonio Canyon; from there it continues southeastward as the Cucamonga fault. The estimated slip rate of the Sierra Madre fault is estimated to be approximately 0.6 mm/year with a recurrence interval of about 8,000 years. Recent studies suggest that the last rupture event on the eastern segments of the fault occurred about 8,000 years ago, therefore, the Sierra Madre fault may be near the end of its cycle, and therefore it has potential generate an earthquake in the not too distant future. The Sierra Madre fault is estimated to be capable of producing a magnitude 7.2 earthquake, resulting in peak horizontal ground accelerations in Apple Valley of between about 0.21g and 0.14g.

4.6.3.9   Gravel Hills – Harper Lake Fault

This fault zone is between 31 and 44 miles long, depending on how many fault segments are included and is considered active. The estimated annual slip rate on this fault zone is 0.9 mm/year; the recurrence interval between earthquakes is about 3,500 years. The combined fault segments are estimated to be capable of generating 7.1 magnitude earthquake, which would generate peak horizontal ground accelerations in the Apple Valley area of between 0.20g and 0.11g, with Modified Mercalli intensities in the VIII to VII range.

Figure 4-5: Active Fault Map

Source: Department of Conservation & USGS

4.6.4   Magnitude/Severity

Classification of seismic events is based on their magnitude and intensity. The intensity of ground shaking is determined by several factors, such as the earthquake's magnitude, the distance from the epicenter, and the geologic composition of local soils and rocks. Seismic intensity is most commonly measured by the Modified Mercalli Intensity (MMI) scale, which includes twelve levels of damage. The MMI is derived from actual observations of damage to structures and human reactions to earthquakes. Based on this scale, an earthquake tremor at Level I earthquake tremor is generally not felt and is considered unlikely to result in damage, whereas a Level XII earthquake results in total destruction. Earthquake intensities may result in damage such as partial or complete collapse of masonry structures, severe damage to complete destruction of underground pipelines, rock and landslides, and massive damage or destruction of bridges, overpasses and other improvements.

Figure 4-6 shows MMI classes for Apple Valley based on the Great Shakeout Scenario of a magnitude 7.8 earthquake along the southern San Andreas Fault.

Earthquake magnitude is measured by the Richter Scale on a continuum of one to nine, with each level-of-magnitude increase representing a tenfold increase in the amplitude of the waves on a seismogram. The most notable historic earthquake in the Apple Valley region was the Landers earthquake of 1992, which had a magnitude of 7.3 on the Richter Scale. The Landers earthquake, so named for its epicenter near the small desert community of Landers, also ruptured five other separate faults.

The largest earthquake likely to occur on a fault or fault segment within a specified period of time is considered the Maximum Probable Earthquake (MPE). The MPE is useful during emergency and engineering planning. It provides a means to assess the potential seismic risk within a region, is referenced to establish safe construction and design parameters, and facilitates the preparation of policies and programs that are responsive to the potential impacts of an earthquake.

Defined as the largest earthquake a fault is estimated to be capable of generating, the Maximum Credible Earthquake (MCE) also provides a useful gauge for emergency and engineering planning efforts. In the Apple Valley area, the North Frontal fault (West) is expected to generate a magnitude 7.2 earthquake with a Peak Ground Acceleration (PGA) ranging from 1.13g to 0.38g, which is equivalent to a Level XI to X on the Modified Mercalli Intensity Scale (MMI). Table 4-7 shows a list of faults that could generate significant impacts within Apple Valley and the surrounding area.

Table 4-7: Seismic Intensities

Table IV-1
Estimated Horizontal Peak Ground Accelerations and
Seismic Intensities in the Apple Valley Area

Fault Name	Distance to Apple Valley (km)	Distance to Apple Valley (mi)	Magnitude of M_{max} *	PGA (g) from M_{max}	MMI from M_{max}
North Frontal Fault (West)	<0.5 – 16.2	0.5 – 26.1	7.2	1.13 – 0.38	XI - X
Helendale – South Lockhart	<0.5 – 13.9	0.5 – 22.4	7.3	0.75 – 0.33	XI - IX
San Andreas (Whole Southern)	14.4 – 31.4	23.1 – 50.6	8.0	0.48 – 0.25	X - IX
Lenwood – Lockhart – Old Woman Springs	12.1 – 28.7	19.4 – 46.2	7.5	0.42 – 0.19	IX - VIII
San Andreas (San Bernardino – Coachella)	14.4 – 31.4	23.1 – 50.6	7.7	0.41 – 0.20	X - VIII
San Andreas (1857 Rupture or Cholame – Mojave)	16.9 – 33.2	27.2 – 53.5	7.8	0.38 – 0.20	IX - VIII
San Andreas (San Bernardino)	14.4 – 31.4	23.1 – 50.6	7.5	0.36 – 0.17	IX – VIII
Cleghorn	8.1 – 24.4	13.1 – 39.2	6.5	0.33 – 0.11	IX - VII
San Andreas (Mojave)	16.9 – 32.2	27.2 – 53.5	7.4	0.30 – 0.15	IX - VIII
Cucamonga	18 – 34.4	29 – 55.3	6.9	0.28 – 0.15	IX - VIII
Landers	17.3 – 34.5	27.9 – 55.6	7.3	0.27 – 0.14	IX - VIII
North Frontal (East)	17.3 – 32.2	27.9 – 51.9	6.7	0.26 – 0.14	IX – VIII
Sierra Madre	29.6 – 45.1	47.7 – 72.6	7.2	0.21 – 0.14	VIII
Gravel Hills – Harper Lake	20.8 – 37.5	33.5 – 60.3	7.1	0.20 – 0.11	VIII - VII
Calico – Hidalgo	29.1 – 43.6	43.1 – 70.2	7.3	0.18 – 0.11	VIII - VII
San Jacinto (San Bernardino)	18.6 – 35.7	29.9 – 57.4	6.7	0.17 – 0.09	VIII - VII
Johnson Valley (Northern)	19.9 – 32.4	32 – 52.1	6.7	0.16 – 0.10	VIII – VII
Puente Hills Blind Thrust	42.7 – 58.9	68.7 – 94.8	7.1	0.14 – 0.10	VIII - VII
Blackwater	30 – 45.2	46.8 – 72.8	7.1	0.14 – 0.09	VIII - VII
San Jacinto (San Jacinto Valley)	26.2 – 42.8	42.2 – 68.8	6.9	0.14 – 0.09	VIII - VII
Pinto Mountain	31.5 – 48.8	50.7 – 78.5	7.2	0.14- 0.09	VIII - VII
Pisgah – Bullion Mtn. – Mesquite Lake	35.5 – 51.4	57.1 – 82.7	7.3	0.13 – 0.09	VIII - VII
Emerson South – Copper Mtn.	29 – 40.6	46.7 – 65.3	7.0	0.13 – 0.09	VIII - VII

Abbreviations: mi – miles; km – kilometer; M_{max} – maximum magnitude earthquake; PGA – peak ground acceleration as a percentage of "g", which is the acceleration of gravity; MMI – Modified Mercalli Intensity.
Source: Technical Background Report to the Safety Element for the Town of Apple Valley, prepared by Earth Consultants International, 2007.

Potential adverse effects from earthquakes may be substantial and range from property damage, to the loss of public services and facilities, to loss of life. Apple Valley and the surrounding area are most susceptible to severe impacts associated with strong ground shaking.

Strong ground shaking can cause other geologic hazards, including landslides, ground lurching, structural damage or destruction, and liquefaction, which can further disrupt affected areas through fire, the interruption of essential services or damage to facilities and infrastructure, such as water, sewer, gas, electric, transportation, communications, drainage, as well as release of hazardous materials. Dam or water tank failure brought about by seismic activity can result in flood inundation.

There are no faults mapped by the State of California within the Town's corporate limits or within either of the proposed annexation areas; however two faults occur within portions of the Town's Sphere of Influence (Figure 4-6).
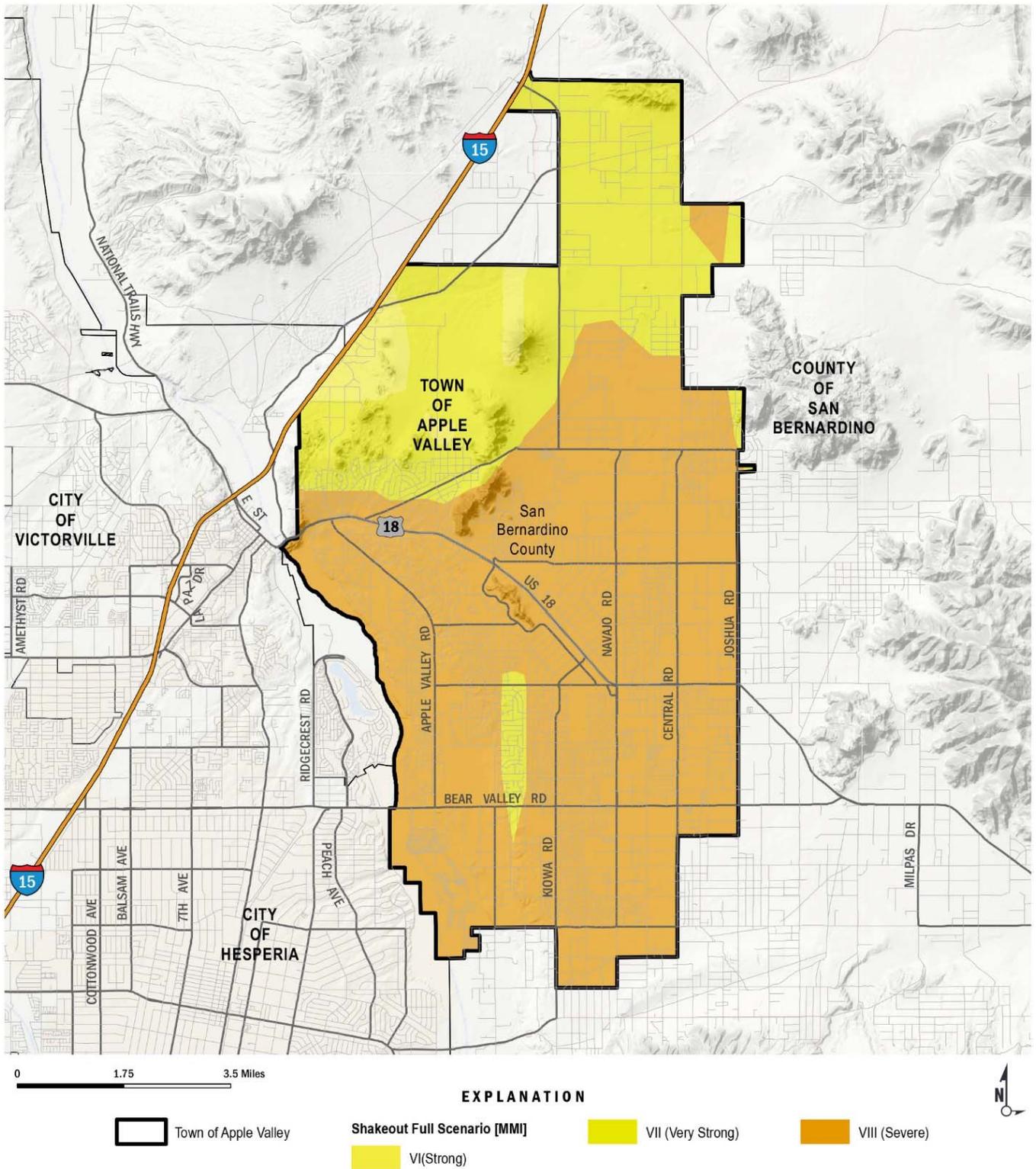
Figure 4-6: Great Shakeout Scenario MMI Classes

4.6.5   Frequency / Probability of Future Occurrences

While earthquakes occur less frequently than other primary natural hazard events, they have accounted for the greatest combined losses (deaths, injuries, and damage costs) in disasters since 1950 in California and have the greatest catastrophic disaster potential (Cal EMA, 2010).

The USGS estimates that the probability of an earthquake occurring over the next 30 Years in the Southern California with a magnitude of 6.7 or greater is 93 percent. Table 4-8 from the USGS lists Average time between earthquakes in the Southern California region together with the likelihood of having one or more such earthquakes in the next 30 years (starting from 2014). "Readiness" indicates the factor by which likelihoods are currently elevated, or lower, because of the length of time since the most recent large earthquakes. The values from the USGS include aftershocks. It is important to note that actual repeat times will exhibit a high degree of variability, and will almost never exactly equal the average listed in the table.

Table 4-8: Southern California Region Earthquake Probability

Magnitude (greater than or equal to)	Average repeat time (years)	30-year likelihood of one or more events	Readiness
5	.7	100%	1.0
6	2.3	100%	1.0
6.7	12	93%	1.0
7	25	75%	1.1
7.5	87	36%	1.2
8	522	7%	1.3

Source: USGS UCERF3: A New Earthquake Forecast for California's Complex Fault System FS 2015-3309

Uniform California Earthquake Forecasts (UCERF) estimated the likelihood that California will experience a magnitude 8 or larger earthquake in the next 30 years has increased from about 4.7% in 2007 (UCERF2 [1]) to about 7.0% for the thirty-year duration starting in 2014 (UCERF3 [2]).   Several of the major Southern California faults have a high probability of experiencing a Magnitude 6.7 or greater earthquake within the next 30 years (Figure 4-7); 59% probability of a M6.7 or greater on the Southern San Andreas Fault, 31% probability on the San Jacinto Fault, and 11% probability on the Elsinore Fault. These probabilities were determined by the USGS and CGS in a 2008 study (2007 Working Group on California

[1] USERF2 = 2008 California Earthquake Probabilities. In April 2008, scientists and engineers released a new earthquake forecast for the State of California called the UCERF. Compiled by USGS, Southern California Earthquake Center (SCEC), and the California Geological Survey (CGS), with support from the California Earthquake Authority, it updates the earthquake forecast made for the greater San Francisco Bay Area by the 2002 Working Group for California Earthquake Probabilities.

[2] UCERF3 = 2014 California Earthquake Probabilities. UCERF3 is the first type of model, representing the latest earthquake-rupture forecast for California. It was developed and reviewed by dozens of leading scientific experts from the fields of seismology, geology, geodesy, paleoseismology, earthquake physics, and earthquake engineering. As such, it represents the best available science with respect to authoritative estimates of the magnitude, location, and likelihood of potentially damaging earthquakes throughout the state (further background on these models, especially with respect to ingredients, can be found in U.S. Geological Survey Fact Sheet 2008–3027, http://pubs.usgs.gov/fs/2008/3027/)

Earthquake Probabilities, 2008, The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2): U.S. Geological Survey Open-File Report 2007-1437 and California Geological Survey Special Report 203 [http://pubs.usgs.gov/of/2007/1437/]).

Figure 4-7 shows the locations of major faults in California, including the four (4) major faults in Southern California in relation to San Bernardino County region. These faults are the Southern San Andreas, the San Jacinto, the Elsinore, and the Garlock Faults. There are also many smaller faults within San Bernardino County capable of producing significant earthquakes. However, these four faults are considered by the United States Geological Survey (USGS) and the California Geological Survey (CGS) to be the most dangerous in the County. (California Geological Survey Special Publication 42, Interim Revision 2007, "Fault-Rupture Hazard Zones in California" - Alquist-Priolo Earthquake Fault Zoning Act).

UCERF3 Fault Probabilities

NOTE: Fault Locations are uncertain by up to several km

www.wgcep.org/UCERF

30 Year M≥6.7 Probability

0.01%   0.1%   1%   10%   100%

Figure 4-7: UCERF 3 Fault Probabilities

4.7 Climate Change

Climate change refers to any distinct change in measures of climate lasting for a long period of time, more specifically major changes in temperature, rainfall, snow, or wind patterns. Climate change may be limited to a specific region, or may occur across the whole Earth. Climate change may result from:

- Natural factors (e.g., changes in the Sun's energy or slow changes in the Earth's orbit around the Sun);
- Natural processes within the climate system (e.g., changes in ocean circulation);
- Human activities that change the atmosphere's make-up (e.g., burning fossil fuels) and the land surface (e.g., cutting down forests, planting trees, building developments in cities and suburbs, etc.).

The effects of climate change are varied: warmer and more varied weather patterns, melting ice caps, and poor air quality, for example. As a result, climate change impacts a number of natural hazards.

The 2013 State of California Multi-Hazard Mitigation Plan stated that climate change is already affecting California. Sea levels have risen by as much as seven inches along the California coast over the last century, increasing erosion and pressure on the state's infrastructure, water supplies, and natural resources. The State has also seen increased average temperatures, more extreme hot days, fewer cold nights, a lengthening of the growing season, shifts in the water cycle with less winter precipitation falling as snow, and both snowmelt and rainwater running off sooner in the year. In addition to changes in average temperatures, sea level, and precipitation patterns, the intensity of extreme weather events is also changing.

4.7.1 Regulatory Environment

4.7.1.1 The Sustainable Communities and Climate Protection Act of 2008

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) looks to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities. Regional targets are established for GHG emissions reductions from passenger vehicle use by the sustainable communities strategy (SCS) established by each metropolitan planning organization (MPO). The SCS is an integral part of the regional transportation plan (RTP) and contains land use, housing, and transportation strategies to meet GHG reductions targets. In San Bernardino County, the South Coast Air Quality Management District facilitates compliance with the federal Clean Air Act and implements the state's air quality program.

The Office of Planning and Research's General Plan Guidelines and SB 375 builds upon Assembly Bill 162 (flood protection) and Senate Bill 1241 (fire protection) and supports Safeguarding California implementation.

SB 375 also supports Assembly Bill 2140 which requires that a City/County General Plan contains a safety element in addition to a Hazard Mitigation Plan. AB 2140 also requires a vulnerability assessment, adaptation goals, policies and objectives, and a set of feasible implementation measures.

4.7.1.2 Town of Apple Valley Climate Action Plan (CAP)

This Climate Action Plan includes general information about greenhouse gases and climate change, assumptions and data used to determine the 2005 inventory and baseline, the 2020 forecast under business as usual conditions, and the proposed reduction measures that will enable the Town to achieve the targeted reduction level, thereby doing its part to limit greenhouse gas emissions statewide that contribute to climate change.

To review the full text document, please click on the following link:

http://www.applevalley.org/services/planning-division/climate-action-plan

4.7.1.3 California Adaptation Planning Guide (APG)

The State of California has been taking action to address climate change for over 20 years, focusing on both greenhouse gas emissions reduction and adaptation. The California Adaptation Planning Guide (APG) continues the state's effort by providing guidance and support for communities addressing the unavoidable consequences of climate change.

Based upon specific factors, 11 Climate impact regions were identified. Some of the regions were based on specific factors particularly relevant to the region. As illustrated in Figure 4-8 San Bernardino County is located in the Desert Region.

4.7.1.4 Apple Valley Choice Energy

Apple Valley is addressing issues relating to Climate Change through the implementation of Apple Valley Choice Energy (AVCE). This program, started April of 2017, allows residents within Apple Valley to receive energy with a higher "renewable" content than what is currently provided by the franchised utility (SCE). The minimum renewable energy content for AVCE customers is 35%. In addition, the program provides an alternate selection of 50% renewable energy content for those who choose to "opt-up" to that plan. AVCE's minimum 35% renewable energy content already exceeds the California state mandate of 33% renewable energy content that will be required in the year 2020.

The renewable energy content is derived from solar, wind, hydro and geothermal sources primarily within California. Apple Valley Choice Energy plans to offer customers of AVCE a 100% renewable energy option in future years that will further reduce the overall impacts of Greenhouse Gases affecting Climate Change as a result of burning fossil fuels.

In addition to supplying renewable energy, AVCE actively promotes Net Energy Metering (NEM) for customers with rooftop solar by offering a premium by-back rate that is nearly double the rate that they would receive from SCE. AVCE will also offer future incentives to Town residents and businesses for improvements that contribute to energy efficiency as well as develop programs to encourage implementation of energy conservation measures. The Town also participates in the High Desert Regional Partnership with the other cities in the High Desert to promote energy efficiency on a regional basis.

Figure 4-8: Climate Impact Regions

The Desert is a heavily urbanized inland region (4.3+ million people) made up of sprawling suburban development in the west near the South Coast region and vast stretches of open, largely federally owned desert land to the east. Prominent cities within the desert portion include Palm Springs (44,500+) and El Centro (42,500+). The region's character is defined largely by the San Gabriel Mountains, San Gorgonio Mountains, San Jacinto Mountains, and smaller inland mountains reaching through the desert to the Colorado River, which borders the region on the east. Communities in the Desert region should consider evaluating the following climate change impacts:

- Reduced water supply
- Increased temperature
- Reduced precipitation
- Diminished snowpack
- Wildfire risk
- Public health and social vulnerability
- Stress on special-status species

4.7.2   Past Occurrences

Climate change has never been directly responsible for any declared disasters. Past flooding, wildfire, levee failure, and drought disasters may have been exacerbated by climate change, but it is impossible to make direct connections to individual disasters. In addition, unlike earthquake and floods that occur over a finite time period, climate change is an on-going hazard, the effects of which some are already experiencing. Other effects may not be seriously experienced for decades, or may be avoided altogether by mitigation actions taken today.

According to the California State Hazard Mitigation Plan (SHMP), the worst single heat wave event in California occurred in Southern California in 1955, when an eight-day heat wave resulted in 946 deaths. The July 2006 heat wave in California caused approximately 140 people deaths over a 13-day period.

4.7.3   Location/Geographic Extent

The effects of climate change are not limited by geographical borders. San Bernardino County, the State of California, the United States, and the rest of the world are all at risk to climate change. As such, the entire County is at risk to the effects of climate change.

Figure 4-9 and Figure 4-10 provide Cal Adapt[3] modeled decadal July high temperature averages for 2010 and 2090. These figures provide current decade-long July temperature averages and possible annual high heating trends for the remaining portion of the century. The data presented in the figures represent a "projection" of potential future climate scenarios, they are not predictions. These figures illustrate how the climate may change based on a variety of different potential social and economic factors. The visualizations are comprised of average values from Coupled Climate model 2.1 (GFDL), Community Climate System Model Version 3 (CCSM3), Coupled Global Climate Model Version 3 (CNRM) and Parallel Climate Model 1 (PCM1).

During the next few decades, scenarios project average temperature to rise between 1° and 2.3°F; however, the projected temperature increases begin to diverge at mid-century so that, by the end of the century, the temperature increases projected in the higher emissions scenario (A2) are approximately twice as high as those projected in the lower emissions scenario (B1). Customizable maps can be viewed at http://cal-adapt.org/temperature/decadal/

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[3] Cal-Adapt has been funded to provide access to data and information that has been produced by the State's scientific and research community. The data available in this site offer a view of how climate change might affect California at the local level.

Figure 4-9: Climate Impact Regions: July Decadal Average High Temperature Map; 2010

Figure 4-10: Climate Impact Regions: July Decadal Average High Temperature Map; 2090

4.7.4 Magnitude/Severity

The California Adaptation Planning Guide has calculated projections for changes in temperature, precipitation, heat waves, snowpack and wildfire risk in the desert area, as shown in Table 4-9. Hotter, drier conditions are expected to exist in the desert area, increasing the risk for other natural hazards.

Table 4-9: Summary of Cal-Adapt Climate Projections for the Desert Region

Effect	Ranges
Temperature Change, 1990-2100	January increase in average temperatures: 2°F to 4°F by 2050 and 5°F to 8°F by 2100 July increase in average temperatures: 3°F to 5°F by 2050 and 6°F to 9°F by 2100 (Modeled high temperatures; high carbon emissions scenario)
Precipitation	Generally, annual rainfall will decrease in the most populous areas. Wetter areas like the western part of Riverside and southwestern San Bernardino counties will experience a 2 to 4 inch decline by 2050 and 3.5 to 6 inch decline by the end of the century. Big Bear is expected to lose around 8 inches per year by 2090. Southern Imperial County will have a small decline of about 0.5 inches. The eastern, desert portion of the region will see little to no change in annual rainfall. (CCSM3 climate model; high carbon emissions scenario)
Heat Wave	Heat waves are defined by five consecutive days over temperatures in the 100s over most of the region. Three to five more heat waves will be experienced by 2050, increasing to 12 to 16 in the western parts of the region to more than 18 to 20 in the eastern parts of the region.
Snowpack	March snowpack in the Big Bear area will diminish from the 2.5- inch level of 2010 to 1.4 inches in 2030 and almost zero by 2090. (CCSM3 climate model; high emissions scenario)
Wildfire Risk	Most areas are projected to have the same or slightly increased likelihood of wildfire risk. The major exceptions are the Mecca San Gorgonio and San Jacinto Mountains, where wildfire will be 1.5 and 2.0 times more likely. (GFDL model, high carbon emissions scenario)

Source: Public Interest Energy Research, 2011. Cal-Adapt. Retrieved from http://cal-adapt.org]

The California Climate Adaptation Strategy (CAS), citing a California Energy Commission study, states that "over the past 15 years, heat waves have claimed more lives in California than all other declared disaster events combined." This study shows that California is getting warmer, leading to an increased frequency, magnitude, and duration of heat waves. These factors may lead to increased mortality from excessive heat, as shown in Figure 4-11.

Figure 4-11: California Historical and Projected Temperature Increases - 1961 to 2099

Source: Dan Cayan; California Climate Adaptation Strategy

4.7.5 Frequency/Probability of Future Occurrences

Climate change is one of the few natural hazards where the probability of occurrence is influenced by human action. In addition, unlike earthquake and floods that occur over a finite time period, climate change is an on-going hazard.

The 2009 Climate Adaptation Strategy (CAS) delineated how climate change may impact and exacerbate natural hazards in the future, including wildfires, extreme heat, floods, drought, and levee failure:

- Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in San Bernardino County and the rest of California, which are likely to increase the risk of mortality and morbidity due to heat-related illness and exacerbation of existing chronic health conditions. Those most at risk and vulnerable to climate-related illness are the elderly, individuals with chronic conditions such as heart and lung disease, diabetes, and mental illnesses, infants, the socially or economically disadvantaged, and those who work outdoors.
- The Desert region relies on water from the Colorado River and the State Water Project. Both of these sources begin with mountain snowpack. Climate change will result in drastically reduced supply from these sources. Declining snowpack in the San Gabriel Mountains, San Gorgonio Mountains, and San Jacinto Mountains will lead to permanently diminished local water supply.
- Higher temperatures will melt the snowpack earlier and drive the snowline higher, resulting in less snowpack to supply water to California users.
- Droughts are likely to become more frequent and persistent in the 21st century.

- Intense rainfall events, periodically ones with larger than historical runoff, will continue to affect California with more frequent and/or more extensive flooding.
- Storms and snowmelt may coincide and produce higher winter runoff. Together, these changes will increase the probability of dam and levee failures in the San Bernardino County Flood Control District.
- Warmer weather, reduced snowpack, and earlier snowmelt can be expected to increase wildfire risk through fuel hazards and ignition risks. These changes can also increase plant moisture stress and insect populations, both of which affect forest health and reduce forest resilience to wildfires. An increase in wildfire intensity and extent will increase public safety risks, property damage, fire suppression and emergency response costs to government, watershed and water quality impacts, vegetation conversions and habitat fragmentation.

4.8 Vulnerability Assessment

The hazard exposure analysis has been developed with best available data and follows methodology described in the FEMA publication Understanding Your Risks—Identifying Hazards and Estimating Losses. There are other intangible losses that could result from a natural hazard event, such as losses of historic or cultural integrity or damage to the environment that are difficult to quantify. Other costs, including response and recovery costs, are often unrecoverable and are not addressed in this document.

4.8.1 Methodology

A vulnerability assessment was conducted for each of the identified priority hazards. Geospatial data is essential in determining population and assets exposed to particular hazards. Geospatial analysis can be conducted if a natural hazard has a particular spatial footprint that can be overlaid against the locations of people and assets. In the Town of Apple Valley, wildfire, flood, and earthquakes have known geographic extents and corresponding spatial information about each hazard.

Several sources of data are necessary to conduct a vulnerability analysis. Figure 4-12 provides an exhibit of the data inputs and outputs used to create the vulnerability analysis results presented in this section. U.S. Census data is the primary source in determining natural hazard exposure to residents. Census data has been used to determine the population at risk, which is generally referred to as population exposure. Population exposure is provided for wildfire, flooding, and earthquakes as potential hazards later in this section.

Together with the U.S. Census data, asset data was used to provide a snapshot of how Town assets are affected by natural hazards. For purposes of this vulnerability analysis, asset data includes parcels and critical infrastructure within the Town of Apple Valley boundaries. Critical infrastructure is described as assets that are essential for people and a community to function. Critical infrastructure includes such as utilities, Apple Valley owned facilities, bridges, schools, and other community facilities that provide essential services to residents.

Critical facilities data was developed from a variety of sources including Apple Valley owned and maintained data, state and federal government datasets, and private industry datasets. A critical infrastructure spatial database was developed

to translate critical facilities information into georeferenced[4] points. Critical facility points are intersected with the spatial hazard layers to develop a list of "at risk" critical facilities. The Town of Apple Valley critical facilities that intersect with natural hazards are referred to as facilities with hazard "exposure". Exposure results are presented later in this section.

Figure 4-12: Data Source and Methodology

Lastly, FEMA's Hazus 3.2 (Hazus) software was implemented to conduct detailed loss estimation for flood and earthquake. Hazus is a nationally applicable standardized methodology that contains models for estimating potential losses from earthquakes, floods, and hurricanes. HAZUS uses Geographic Information Systems (GIS) technology to estimate physical, economic, and social impacts of disasters. For purposes of this planning effort, Hazus was used to graphically illustrate the limits of identified high-risk locations due to possible earthquakes and floods.

The vulnerability and potential impacts from priority hazards that do not have specific mapped areas nor the data to support additional vulnerability analyses are discussed in more general terms following the discussion on wildfire, flooding, dam failure and earthquake hazards.

4.8.2 Population and Assets

To describe vulnerability for each hazard, it is important to understand the "total" population and "total" assets at risk. The exposure for each hazard described in this section will refer to the percent of total population or percent of total assets. This provides the possible significance or vulnerability to people and assets for the natural hazard event and the estimated damage and losses expected during a "worst case scenario" event for each hazard. Sections below provide a description of the total population, critical facilities, and parcel exposure inputs.

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[4] To georeference something means to define its existence in physical space. That is, establishing its location in terms of map projections or coordinate systems. The term is used both when establishing the relation between raster or vector images and coordinates, and when determining the spatial location of other geographical features.

4.8.2.1 Population

To develop hazard-specific vulnerability assessments, population near natural hazard risks should be determined to understand the total "at risk" population. We can understand how geographically defined hazards may affect the Town of Apple Valley by analyzing the extent of the hazard in relation to the location of population. For purposes of the vulnerability assessment approximately 100% of the Town of Apple Valley's population is exposed to one or more hazards within or near Apple Valley boundaries. Each natural hazard scenario affects the Town of Apple Valley residents differently depending on the location of the hazard and the population density of where the hazard could occur. Vulnerability assessment sections presented later in this section summarize the population exposure for each natural hazard.

4.8.2.2 Vulnerable Populations

The severity of a disaster depends on both the physical nature of the extreme event and the socioeconomic nature of the populations affected by the event. Important socioeconomic factors tend to influence disaster severity. A core concept in a vulnerability analysis is that different people, even within the same region, have a different vulnerability to natural hazards.

4.8.2.2.1 Income and Housing Condition

Income or wealth is one of the most important factors in natural hazard vulnerability. This economic factor affects vulnerability of low income populations in several ways. Lower income populations are less able to afford housing and other infrastructure that can withstand extreme events. Low income populations are less able to purchase resources needed for disaster response and are less likely to have insurance policies that can contribute to recovery efforts. Lower income elderly populations are less likely to have access to medical care due to financial hardship. Because of these and other factors, when disaster strikes, low income residences are far more likely to be injured or left without food and shelter during and after natural disasters.

Figure 4-13 shows the median household income distribution for the Town of Apple Valley in 2012. The "median" is the value that divides the distribution of household income into two equal parts (e.g., the middle). The average median household income in the Town of Apple Valley between 2010 and 2014 was $45,554. In the United States during the same period the median house household income was $50,157. The map in Figure 4-13 shows 2012 household income estimates using Census 2010 geographies.

4.8.2.2.2 Age

Children and the elderly tend to be more vulnerable during an extreme natural disaster. They have less physical strength to survive disasters and are often more susceptible to certain diseases. The elderly often also have declining vision and hearing and often miss reports of upcoming natural hazard events. Children, especially young children, have the inability to provide for themselves. In many cases, both children and the elderly depend on others to care for them during day to day life.

Finally, both children and the elderly have fewer financial resources and are frequently dependent on others for survival. In order for these populations to remain resilient before and after a natural hazard event, it may be necessary to augment city residents with resources provided by the City, State and Federal emergency management agencies and organizations. See Figure 4-14 and Figure 4-15 for location of vulnerable population by age within the Town of Apple Valley.

Figure 4-13: Median Household Income Distribution Map

EXPLANATION

Block Groups *2012 % Population < 18 Years Old (Esri/CENSUS)*

- 33.1% or more
- 26.1% to 33%
- 20.1% to 26% (US Avg: 23.6%)
- 13.1% to 20%
- 13% or less
- No population

Town of Apple Valley

Figure 4-14: Population under 18

EXPLANATION

Block Groups *Percent of Population Age 65 or more (Esri/CENSUS)*

- Very High (More than 20.2%)
- High (16.1% - 20.2%)
- Average (11.9% - 16%)
- Low (7.6% - 11.8%)
- Very Low (Less than 7.6%)

Town of Apple Valley

Figure 4-15: Population Over 65

4.8.3   Critical Facilities

Critical facilities are of particular concern when conducting hazard mitigation planning. Critical facilities are defined as essential services, and if damaged, would result in severe consequences to the health, safety, and welfare of the public.

An inventory of critical facilities based on data from the County and other publicly sourced information were used to develop a comprehensive inventory of facility points and lifelines. Critical facility points include fire stations, buildings containing hazardous materials (HAZMAT), schools, transportation, utilities, and government buildings. Lifelines include transportation routes only. A current representation of the critical facilities and lifelines are provided in Table 4-10. Some critical facility information has been omitted from documentation due to national security purposes. The Emergency Preparedness Department manages and maintains a complete list of critical facilities.

Table 4-10: Critical Facility Points

Infrastructure Type	Total Feature Count
Essential Facility	53
EOC	1
Fire Station	6
Government Facility	4
Hospital	1
Police Station	1
School	26
High Potential Loss	137
Hazmat	43
Utility-Communication Facility	8
Utility-Potable Water Facility	2
Utility-Waste Water Facility	8
Vulnerable Pop.-Adult Residential Care	21
Vulnerable Pop.-Child Care	21
Vulnerable Pop.-Foster/Home Care	3
Vulnerable Pop. -Mobile Home Park	12
Vulnerable Pop.-RV Park	2
Vulnerable Population-Senior Care	17
Transportation and Lifeline	4
Highway Bridge	3
Airport Facility	1
Grand Total	**194**

- ■ Essential Facility
- ■ High Potential Loss
- ■ Transportation and Lifeline

4.8.4 HAZUS- MH Inputs

FEMA's loss estimation software, Hazus 3.2, was used to analyze the Town of Apple Valley's building risk to flood and earthquake hazards. Hazus contains a database of economic, demographic, building stock, transportation facilities, local geology, and other information that can be used for several steps in the risk assessment process. Hazus software operates on structure square footage, structure replacement, and content replacement costs aggregated to the census block and tract levels depending on type of hazard analysis. Figure 4-16 and Figure 4-17 provides value data for building categories at the census block and census tract levels. Census block and census tracts are used to provide input information for the Hazus analysis presented in this report.

The project team used these newly updated DFIRM data into HAZUS to assess potential losses in the mapped 100-year (with and without levee protection) and 500-year flood zones. The Town of Apple Valley's results are provided in Table 4-13.

Note: The Hazus software utilizes different census level information inputs to develop loss estimates depending on the hazard module. The flood module uses census block information while the earthquake module uses census track information. It is important to understand the total values of each as estimated damage to the community is presented on a percent of total value basis.

Also building losses are those losses associated with damage to the fixed elements of a structure, such as the foundation, walls, or floors. Content losses are those losses associated with damage to structural elements not permanently fixed within a structure, such as furniture, appliances, and personal possessions.

Table 4-111: Entire Town of Apple Valley Hazus Flood Census Block Input Values

Building Type	Building Replacement Costs ($000)	Building Replacement Cost (%)	Content Replacement Cost ($000)	Content Replacement Cost (%)	Total Value ($000)	Total Value (%)
Agricultural	3,257	50.0%	3,257	50.0%	6,514	0%
Commercial	190,685	48.1%	205,597	51.9%	396,282	7%
Education	30,063	50.0%	30,063	50.0%	60,126	1%
Governmental	1,342	50.0%	1,342	50.0%	2,684	0%
Industrial	38,559	45.6%	45,947	54.4%	84,506	2%
Religion	26,262	50.0%	26,262	50.0%	52,524	1%
Residential	3,313,104	66.7%	1,656,837	33.3%	4,969,941	89%
Total	**$3,603,272**	**65%**	**$1,969,305**	**35%**	**$5,572,577**	

Total Building Input Values by Occupancy

Census Block Level

Total Content Input Values by Occupancy

Census Block Level

Figure 4-16: Census Block Building and Content Exposure Values-Flood

Table 4-122: Entire Town of Apple Valley Hazus Earthquake Census Tract Input Values

Building Type	Building Replacement Costs ($000)	Building Replacement Cost (%)	Content Replacement Cost ($000)	Content Replacement Cost (%)	Total Value ($000)	Total Value (%)
Agricultural	16,945	50.0%	16,945	50.0%	33,890	0%
Commercial	871,378	48.4%	930,061	51.6%	1,801,439	12%
Education	127,653	46.0%	149,768	54.0%	277,421	2%
Governmental	18,719	46.0%	21,941	54.0%	40,660	0%
Industrial	206,910	43.3%	271,175	56.7%	478,085	3%
Religion	116,478	50.0%	116,478	50.0%	232,956	2%
Residential	7,977,134	66.7%	3,989,622	33.3%	11,966,756	81%
Total	**$9,335,217**	**63%**	**$5,495,990**	**37%**	**$14,831,207**	

Total Building Input Values by Occupancy

Census Tract Level

Total Content Input Values by Occupancy

Census Tract Level

Figure 4-17: Figure 4 17: Census Tract Building and Content Exposure Values-EQ

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4.9 Vulnerability Assessment-Flooding

Flooding has shown to be a natural hazard with concerns in the Town of Apple Valley as described in the flood hazard profile. Historically, San Bernardino County has been subject to flooding during periods of heavy rainfall, falling primarily between the months of October through April, which causes streams and drainage canals to become overwhelmed and overflow their banks and/or inundate storm drainage systems. Occasionally, overbank flows in the Town of Apple Valley have resulted in flooding of residential properties, road blockages, and traffic disruptions. In urbanizing areas, the increase in paved areas associated with new development decrease the amount of open land available to absorb rainfall and runoff, thus increasing the volume of water that must be carried away by waterways.

4.9.1   Population living with Flood Risk

Of greatest concern in the event of a flood is the potential for loss of life. Using 2012 population data aggregated by census blocks, an estimate was made of the population exposed to the 100- and 500-year floodplain. To account for census blocks that were partially within the floodplain, a weighted average was employed to calculate the proportion of the population within the floodplain. The results of the population overlay are shown in Figure 4-18. More than 1400 residents live near or within the 100-year floodplain and approximately 1500 residents live within the 500-year floodplain.

Population Exposure

Population Count within Unincorporated San Bernardino County by Flood Hazard Zone

Figure 4-18: Population Exposed to NFIP Flood Zones

4.9.2   Residential Parcel Value with Flood Risk

The County's parcel layer was used as the basis for the inventory of improved residential parcels within the FEMA NFIP flood zones. In some cases, a parcel will be within multiple flood zones. GIS was used to create centroids, or points, to represent the center of each parcel polygon – this is assumed to be the location of the structure for analysis purposes. The centroids were then overlaid with the floodplain layer to determine the flood risk for each structure. The flood zone in which the centroid was located was assigned to the entire parcel. This methodology assumed that every parcel with a square footage value greater than zero was developed in some way. Only improved parcels greater than $20,000 were analyzed. Table 4-13 shows the count of at-risk parcels and their improvement and land exposure values.

Table 4-133: Parcels Exposed to NFIP Flood Zones

Flood Hazard Zone	Improved Parcel Count	Improvement Value Exposure ($000)	Land Value Exposure ($000)	Total Exposure ($000)
100-Year Flood	323	$55,890	$14,092	$69,982
500-Year Flood	22	$5,356	$1,537	$6,892
500-Year, Protected by Levee	-	-	-	-
Grand Total	**345**	**$61,246**	**$15,629**	**$76,875**

Notes:
1-The table above does not display loss estimation results; the table exhibits total value at risk based upon the hazard overlay and San Bernardino County Assessor data.
2- Parcel information is for all county parcels with greater than $20,000 in assessed parcel improvement value only. The San Bernardino County Assessor's roles only provide spatial information on assessed improvement and land values.

While there are several limitations to this methodology, it does allow for potential loss estimation. It should be noted that the analysis may include structures in the floodplain that are elevated at or above the level of the base flood elevation, which will likely decrease potential flood damage to these structures. Also, it is important to remember that the County Assessor's values are well below actual market values; thus, the actual value of assets at risk may be significantly higher than those included herein.

4.9.3 Critical Facilities Exposure

Critical facilities data were overlain with flood hazard data to determine the type and number of facilities within the 100- and 500-year floodplain. Flooding poses numerous risks to critical facilities and infrastructure:

- Roads or railroads that are blocked or damaged can prevent access throughout the area and can isolate residents and emergency service providers needing to reach vulnerable populations or to make repairs.
- Bridges washed out or blocked by floods or debris from floods also can cause isolation.
- Creek or river floodwaters can back up drainage systems causing localized flooding.
- Floodwaters can get into drinking water supplies causing contamination.
- Sewer systems can be backed up causing waste to spill into homes, neighborhoods, rivers, and streams.
- Underground utilities can also be damaged.

Table 4-14 and Table 4-15 provides an inventory of critical facilities in the floodplain for Apple Valley and provides the locations of lifelines relative to the floodplain in the areas of the Apple Valley. With a total of nine essential facilities, high potential losses, and transportation and lifeline structures located in either the 100- or 500-year flood zone, the impact to the community could be devastating if these critical facilities were damaged or destroyed during a flood event.

Table 4-144: Critical Facility Exposed to NFIP Flood Zones

Infrastructure Type	100 Year Flood Zone	500 Year Flood Zone	500 Year Flood Zone, Protected by Levee	Total Feature Count
Essential Facility	1	0	0	1
EOC	0	0	0	0
Fire Station	1	0	0	1
Government Facility	0	0	0	0
Hospital	0	0	0	0
Police Station	0	0	0	0
School	0	0	0	0
High Potential Loss	6	0	0	6
Dam	0	0	0	0
Economic Element-Major Employer	0	0	0	0
Hazmat	3	0	0	3
Historic/Cultural Resource-Historic	0	0	0	0
Utility-Communication Facility	0	0	0	0
Utility-Electric Power Facility	0	0	0	0
Utility-Natural Gas Facility	0	0	0	0
Utility-Potable Water Facility	0	0	0	0
Utility-Waste Water Facility	3	0	0	3
Vulnerable Population-Adult Residential Care	0	0	0	0
Vulnerable Population-Child Care	0	0	0	0
Vulnerable Population-Flood Zone	0	0	0	0
Vulnerable Population-Foster/Home Care	0	0	0	0
Vulnerable Population-Mobile Home Park	0	0	0	0
Vulnerable Population-RV Park	0	0	0	0
Vulnerable Population-Senior Care	0	0	0	0
Transportation and Lifeline	2	0	0	2
Highway/Road Bridge	2	0	0	2
Railway Bridge	0	0	0	0
Bus Facility	0	0	0	0
Rail Facility	0	0	0	0
Airport Facility	0	0	0	0
Grand Total	9	-	-	9

Table 4-155: Lifelines Exposure to NFIP Flood Zones

Facility Type	100 Year	500 Year Flood Zone	500 Year Flood Zone, Protected by Levee	Total Mileage
Transportation and Lifeline	22	1	0	23
Railway	0	0	0	0
Roads	22	1	0	23
Interstate Highway	0	0	0	0
State / County Highway	3	0	0	3
Primary Highway	0	0	0	0
Local Road, Major	2	0	0	2
Local Road	14	0	0	14
Other Minor Road	3	0	0	3
Vehicular Trail	0	0	0	0
Cul-de-Sac / Traffic Circle	0	0	0	0
Ramp	0	0	0	0
Service Road	0	0	0	0
Total	**22**	**1**	**0**	**23**

4.9.4 Loss Estimation Results

The Hazus analysis was used to assess the risk from and vulnerability to flooding within the Town Apple Valley. Hazus buildings data is aggregated to the census block level, known as the general building stock (GBS), which has a level of accuracy acceptable for hazard mitigation planning purposes. The following sections describe risk to and vulnerability of the GBS within Apple Valley's mapped regulatory floodplain. The total value of exposed buildings and content within Apple Valley's planning area was generated using Hazus and is previously summarized in Table 4-11

Hazus calculates losses to structures from flooding by considering the depth of flooding and type of structure. Using historical flood insurance claim data, the software estimates the percentage of damage to structures and their contents by applying established depth-damage curves. Damage estimates are then translated to estimated dollar losses. The results are summarized in Figure 4-19 and Figure 4-20.

An estimated $3.9 million of damage could occur in the Town Apple Valley's regulatory floodplain if all flooding sources experienced a 100-year flood event. If all flooding sources experienced a 500-year flood event in Apple Valley there could be an additional $254,000 in damage, for a total of near $4.15 million in lo, Table 4-16.

Table 4-17 & 4-18 show loses for each building type for both the 100-year and 500-year flood event. The Total Town Value shown at the end of each of these tables represents an estimate of the total value of these building types throughout the entire Town of Apple Valley.

While there are several limitations to the FEMA Hazus model, it does allow for potential loss estimation. It should be noted that the analysis may include structures in the floodplain that are elevated at or above the level of the base flood elevation, which will likely mitigate flood damage. Also, it is important to remember that the replacement costs are well below actual market values, thus, the actual value of assets at risk may be significantly higher than those included herein.

Table 4-166: Flood Loss Estimation (Based on Depth) in NFIP Flood Zones

Flood Hazard Zone	Building Loss ($000)	Building Loss (% of Total Value)	Content Loss ($000)	Content Loss (% of Total Value)	Total Estimated Loss ($000)	Total Estimated Loss (% of Total Value)
100-Year	2,039	0.0%	1,874	0.0%	3,914	0.1%
500-Year	138	0.0%	115	0.0%	254	0.0%

*Note: *from section 4.10.3 'Hazus Floods Census Block Input Values' totals*
1- Building Replacement Costs($000) = $3,603,272
2- Content Replacement Cost($000) = $1,969,305
3- Total Value($000) = $5,572,577

Table 4-177: 100-Year Flood Loss Estimation (Based on Depth) in NFIP Flood Zones by Occupancy Type

Building Type	Building Replacement Costs ($000)	Building Replacement Cost (% of Total Value)	Content Replacement Cost ($000)	Content Replacement Cost (% of Total Value)	Total Estimated Loss ($000)	Total Loss Estimation (% of Total Value)	Total Town Value ($000)
Agricultural	-	0.00%	-	0.00%	-	0.00%	6,514
Commercial	181	0.05%	723	0.18%	904	0.23%	396,282
Educational	14	0.02%	91	0.15%	105	0.17%	60,126
Government	-	0.00%	-	0.00%	-	0.00%	2,684
Industrial	12	0.01%	16	0.02%	28	0.03%	84,506
Religious	5	0.01%	54	0.10%	59	0.11%	52,524
Residential	1,827	0.04%	990	0.02%	2,818	0.06%	4,969,941
Grand Total	**$2,039**	**0.04%**	**$1,874**	**0.03%**	**$3,914**	**0.07%**	**$5,572,577**

*Note: *from section 4.10.3 'Hazus Floods Census Block Input Values' totals*
1- Building Replacement Costs($000) = $3,603,272
2- Content Replacement Cost($000) = $1,969,305
3- Total Value($000) = $5,572,577

100 YR Flood Hazard

Estimated Building Loss by Occupancy Type

100 YR Flood Hazard

Estimated Content Loss by Occupancy Type

Figure 4-19: Total Building and Content Loss by Occupancy Type

Building Type	Building Replacement Costs ($000)	Building Replacement Cost (% of Total Value)	Content Replacement Cost ($000)	Content Replacement Cost (% of Total Value)	Total Estimated Loss ($000)	Total Loss Estimation (% of Total Value)	Total Town Value ($000)
Agricultural	-	0.00%	-	0.00%	-	0.00%	6,514
Commercial	5	0.00%	17	0.00%	22	0.01%	396,282
Educational	3	0.00%	23	0.04%	27	0.04%	60,126
Government	-	0.00%	-	0.00%	-	0.00%	2,684
Industrial	1	0.00%	1	0.00%	2	0.00%	84,506
Religious	-	0.00%	8	0.02%	8	0.02%	52,524
Residential	129	0.00%	66	0.00%	195	0.00%	4,969,941
Grand Total	**$138**	**0.00%**	**$115**	**0.00%**	**$254**	**0.00%**	**$5,572,577**

*Note: *from section 4.10.3 'Hazus Floods Census Block Input Values' totals*
1- Building Replacement Costs($000) = $3,603,272
2- Content Replacement Cost($000) = $1,969,305
3- Total Value($000) = $5,572,577

500 YR Flood Hazard

Estimated Building Loss by Occupancy Type

500 YR Flood Hazard

Estimated Content Loss by Occupancy Type

Figure 4-20: Total Building and Content Loss by Occupancy Type

4.9.5 The Local Data Collection

The Town of Apple Valley Engineering Department collects data regarding flooding and drainage issues from the public on a regular basis. Data is collected by the Engineering Department staff and used to identify areas of concerns throughout the Town. Majority of the data is received after heavy rains but data can also be obtained due to broken water mains or private property issues regarding water. Figure 4-20 below is a copy of the two forms that are used to collect data. The first form is used to gather data from the resident and the second form is used by engineering staff to evaluate the reported concern.

Figure 4-21: Flooding/Drainage Resident Forms

4.10 Vulnerability Assessment-Wildfire

Risk to the Town of Apple Valley from wildfire is of significant concern. High fuel loads in the hills, along with geographical and topographical features, create the potential for both natural and human-caused fires that can result in loss of life and property. These factors, combined with natural weather conditions common to the area, including periods of drought, high temperatures, low relative humidity, and periodic winds, can result in frequent and sometimes catastrophic fires. During the May to October fire season the dry vegetation, hot and sometimes windy weather, combined with continued growth in the WUI areas, results in an increase in the number of ignitions. Any fire, once ignited, has the potential to quickly become large and out-of-control.

Potential losses from wildfire include human life, structures and other improvements, natural and cultural resources, quality and quantity of water supplies, cropland, timber, and recreational opportunities. Short and long-term economic losses could also result due to loss of business and other economic drivers associated with the Town of Apple Valley summer season activities. Smoke and air pollution from wildfires can be a severe health hazard. In addition, catastrophic wildfire can create favorable conditions for other hazards such as flooding, landslides, and erosion during the rainy season.

Generally, there are three major factors that sustain wildfires and predict a given area's potential vulnerability to burn. These factors are fuel, topography, and weather.

- Fuel – Fuel is the material that feeds a fire and is a key factor in wildfire behavior. Fuel is generally classified by type and volume. Fuel sources are diverse and include everything from dead tree leaves, twigs, and branches, to dead standing trees, live trees, brush, and cured grasses. Manmade structures are also considered a fuel source, such as homes and other associated combustibles. The type of prevalent fuel directly influences the behavior of wildfire. Fuel is the only factor that is under human control. Development in the area along the Mojave River currently possess the highest vulnerability to wildfire.
- Topography – An area's terrain and slope affect its susceptibility to wildfire spread. Both fire intensity and rate of spread increase as slope increases due to the tendency of heat from a fire to rise via convection. The arrangement of vegetation throughout a hillside can also contribute to increased fire activity on slopes.
- Weather – Weather components such as temperature, relative humidity, wind, and lightning also affect the potential for wildfire. High temperatures and low relative humidity dry out fuels that feed wildfires, creating a situation where fuel will ignite more readily and burn more intensely. Thus, during periods of drought the threat of wildfire increases. Wind is the most treacherous weather factor. The greater the wind, the faster a fire can spread and the more intense it can be. Wind shifts, in addition to wind speed, can occur suddenly due to temperature changes or the interaction of wind with topographical features such as slopes or steep hillsides. As part of a weather system, lightning also ignites wildfires, often in difficult to reach terrain for firefighters.

Factors contributing to the high, widespread wildfire risk in the Town of Apple Valley include:

- Narrow and often one-lane and/or dead-end roads complicating evacuation and emergency response.
- Nature and frequency of ignitions; and increasing population density leading to more ignitions.
- Slope of the foothills;
- Residential development along the Mojave River

4.10.1 Population at Risk

Wildfire risk is of greatest concern to populations residing in the moderate, high, and very high wildfire hazard zones. According to the LRA Fire Hazard Severity Zone Apple Valley has a moderate risk of wildfire within Town boundaries. Apple Valley census block data was used to estimate populations within the hazard zones. There are a significant number of people living within the WUI described in the wildfire profiles. More than 30,000 residents in the Town limits live within areas considered moderate fire hazard, see Figure 4-21.

Population Exposure

Population Count by Wildfire Hazard Zone

Figure 4-22: Population at risk from Wildfire Hazards

4.10.2 Residential Parcel Value at Risk

The County's parcel layer was used as the basis for the inventory of improved residential parcels. In some cases, a parcel will be within multiple fire threat zones. GIS was used to create centroids, or points, to represent the center of each parcel polygon – this is assumed to be the location of the structure for analysis purposes. The centroids were then overlaid with the fire threat layer to determine the risk for each structure. The fire threat zone in which the centroid was located was assigned to the entire parcel. This methodology assumed that every parcel with a square footage value greater than zero was developed in some way. Only improved parcels were analyzed. Figure 4-19 exhibits portions of the Town of Apple Valley that have significant assets at risk to wildfire in the Moderate fire severity zones.

Table 4-188: Residential Buildings and Content at Risk from Wildfire

Fire Hazard Severity Hazard Zone	Improved Parcel Count	Improvement Value Exposure ($000)	Land Value Exposure ($000)	Total Exposure ($000)
Very High	-	-	-	-
High	-	-	-	-
Moderate	9,664	3,419,489	750,783	4,170,272
Non-Wildland/Non-Urban	39	7,932	1,264	9,196
Urban Unzoned	12,633	3,326,800	1,157,957	4,484,757
Total	**22,336**	**$6,754,220**	**$1,910,004**	**$8,664,225**

Note:
1-The table above does not display loss estimation results; the table exhibits total value at risk based upon the hazard overlay and San Bernardino County Assessor data.
2- Parcel information is for all county parcels with greater than $20,000 in assessed parcel improvement value only. The San Bernardino County Assessor's roles only provide spatial information on assessed improvement and land values

4.10.3 Critical Facilities at Risk

Critical facilities data were overlain with fire hazard severity zone data to determine the type and number of facilities within each risk classification. Lists only included the critical facilities in the High and Very High wildfire hazard zones for Town of Apple Valley. Since Apple Valley only has Medium risk classification within Town boundaries there are no critical facilities at risk.

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4.11 Vulnerability Assessment-Earthquake

Major impacts from earthquakes are primarily the probable number of casualties and damage to infrastructure occurring from ground movement along a particular fault (USGS, 2016). The degree of infrastructure damage depends on the magnitude, focal depth, distance from fault, duration of shaking, type of surface deposits, presence of high groundwater, topography, and the design, type, and quality of infrastructure construction.

To analyze the risk to the Town of Apple Valley residents, the Great Shakeout scenario was chosen modeled by the California Integrated Seismic Network (CISN). The 2008 Great Southern California ShakeOut was based on a potential magnitude 7.8 earthquake on the southern San Andreas Fault— approximately 5,000 times larger than the magnitude 5.4 earthquake that shook southern California on July 29, 2008. Such an earthquake will cause unprecedented damage to Southern California—greatly dwarfing the massive damage that occurred in Northridge's 6.7-magnitude earthquake in 1994. The hazard foot print for this scenario was used to develop exposure results for population, critical facilities, and single family residential parcel values. FEMA Hazus analyses was used to conducted loss estimation for both scenarios and include building and content loss estimation results based on peak ground acceleration, peak ground velocity, and peak spectral acceleration modeled for the 7.8 earthquake on the San Andreas Fault.

Apple Valley follows all existing building codes as required by Section 17992 of the Health and Safety Code of the State of California and Chapter 8 of the Apple Valley Municipal Code.

4.11.1 Population at Risk

According to the 2010 US Census, the population of the Town of Apple Valley is 69,130. Though rural residential construction is not particularly vulnerable to earthquakes, the chosen earthquake scenarios will directly or indirectly expose the entire population of the Town of Apple Valley to ground shaking. Depending on the time of day and exact location of the modeled epicenter, the earthquake scenarios could be experienced differently. Figure 4-23 exhibit the population totals in each modeled earthquake severity zone. Population location is based upon information taken during the 2010 U.S. Census.

Population Exposure

Population Count for Great Shakeout Scenario

Figure 4-23: Population Exposure to The Great Shakeout EQ Shake Severity Zone

4.11.2 Residential Parcel Value at Risk

The County's parcel layer was used as the basis for the inventory of improved residential parcels. GIS was used to create centroids, or points, to represent the center of each parcel polygon – this is assumed to be the location of the structure for analysis purposes. The centroids were then overlaid with the shake severity zones to determine the at-risk structures. Only improved parcels greater than $20,000 were analyzed. The analysis indicates residential parcels the chosen scenario will experience similar, but different shaking patterns. The type and year of construction will greatly influence damage for structures subject to similar shaking. Table 4-21 shows the count of at-risk structures and their associated improvement and land exposure values.

Table 4-19: Residential Parcel Value Exposure from Southern California Great Shakeout

Shake Severity Zone	Improved Parcel Count	Improvement Value Exposure ($000)	Land Value Exposure ($000)	Total Exposure ($000)
IV - Light	-	-	-	-
V - Moderate	-	-	-	-
VI - Strong	16	4,773	1,289	6,062
VII - Very Strong	1,798	428,924	93,924	522,848
VIII - Severe	20,522	6,320,523	1,814,791	8,135,314
IX - Violent	-	-	-	-
Total	**22,336**	**$6,754,220**	**$1,910,004**	**$8,664,225**

Notes:
1-The table above does not display loss estimation results; the table exhibits total value at risk based upon the hazard overlay and San Bernardino County Assessor data.
2- Parcel information is for all county parcels with greater than $20,000 in assessed parcel improvement value only. The San Bernardino County Assessor's roles only provide spatial information on assessed improvement and land values.

4.11.3 Critical Facilities with Damage Potential

Earthquakes pose numerous risks to critical facilities and infrastructure. Seismic risks, or losses, that are likely to result from exposure to seismic hazards include:

- Casualties (fatalities and injuries).
- Utility outages.
- Economic losses for repair and replacement of critical facilities, roads, buildings, etc.
- Indirect economic losses such as income lost during downtime resulting from damage to private property or public infrastructure.

Roads or railroads that are blocked or damaged can prevent access throughout the area and can isolate residents and emergency service providers needing to reach vulnerable populations or to make repairs.

Linear utilities and transportation routes are vulnerable to rupture and damage during and after a significant earthquake event. The cascading impact of a single failure can have affects across multiple systems and utility sectors. Degrading infrastructure systems and future large earthquakes with epicenters near critical regional infrastructure could result in system outages that last weeks for the most reliable systems, and multiple months for others.

Table 4-22 provides an inventory of critical facility locations (points only) with earthquake exposure to the Great Shakeout Scenario. The building codes have been amended to include provisions for seismic safety at various bench marks years. Depending on "year built", each critical facility presented in the tables may have varying damage potential.

Table 4-190: Critical Facilities with EQ Risk Southern California Great Shakeout

Infrastructure Type	Violent Shake Zone (IX)	Severe Shake Zone (VIII)	Very Strong Shake Zone (VII)	Strong Shake Zone (VI)	Total Feature Count
Essential Facility	-	2	37	-	39
EOC	-	-	1	-	1
Fire Station	-	-	6	-	6
Government Facility	-	1	3	-	4
Hospital	-	-	1	-	1
Police Station	-	-	1	-	1
School	-	1	25	-	26
High Potential Loss	-	8	115	-	123
Dam	-	-	-	-	-
Economic Element-Major Employer	-	-	-	-	-
Hazmat	-	4	39	-	43
Historic/Cultural Resource-Historic	-	-	-	-	-
Utility-Communication Facility	-	-	8	-	8
Utility-Electric Power Facility	-	-	-	-	-
Utility-Natural Gas Facility	-	-	-	-	-
Utility-Potable Water Facility	-	-	2	-	2
Utility-Waste Water Facility	-	-	8	-	8
Vulnerable Population-Adult Residential Care	-	-	21	-	21
Vulnerable Population-Child Care	-	1	20	-	21
Vulnerable Population-Flood Zone	-	-	-	-	-
Vulnerable Population-Foster/Home Care	-	-	3	-	3
Vulnerable Population-Mobile Home Park	-	-	-	-	-
Vulnerable Population-RV Park	-	-	-	-	-
Vulnerable Population-Senior Care	-	3	14	-	17
Transportation and Lifeline		2	2	-	4
Highway Bridge		2	1	-	3
Railway Bridge	-	-	-	-	-
Bus Facility	-	-	-	-	-
Rail Facility	-	-	-	-	-
Airport Facility	-	-	1	-	1
Grand Total	-	12	168	-	180

4.11.3.1   HazMat Fixed Facilities

Although earthquakes are low probability events, they produce hazardous materials (HazMat) threats at very high levels when they do occur. Depending on the year built and construction of each facility containing HazMat, earthquake initiated hazardous material releases (EIHR) potential will vary. HazMat contained within masonry or concrete structures built before certain benchmark years reflecting code improvements may be of particular vulnerability.

4.11.3.2   Transportation

Earthquake events can significantly impact bridges which often provide the only access to some neighborhoods. Since soft soil regions generally follow floodplain boundaries, bridges that cross water courses are considered vulnerable. Since Town bridges provide access across water courses, they are vulnerable to earthquakes. Key factors in the degree of vulnerability are the bridge's age and type of construction which indicate the standards to which the bridge was built. Special attention will be paid to the multiple bridges that cross interstates. Interstates would serve as major emergency response and evacuation routes.

4.11.3.3   Utilities

Linear utilities and transportation infrastructure would likely suffer considerable damage in the event of an earthquake. Due to the amount of infrastructure and sensitivity of utility data, linear utilities are difficult to analyze without further investigation of individual system components. Table 4-23 provide best available transportation infrastructure data and it should be assumed that these systems are exposed to breakage and failure.

Table 4-201: Lifelines with EQ Risk; Southern California Great Shakeout Scenario

Facility Type	Strong (VI)	Very Strong (VII)	Severe (VIII)	Violent (IX)	Total Mileage
Transportation and Lifeline	11	104	528	0	642
Railway	0	2	3	0	5
Roads	11	101	525	0	637
Interstate Highway	2	2	0	0	4
State / County Highway	0	9	74	0	84
Primary Highway	0	0	0	0	0
Local Road, Major	0	2	54	0	56
Local Road	7	79	377	0	463
Other Minor Road	0	7	18	0	26
Vehicular Trail	1	2	1	0	3
Ramp	0	1	0	0	1
Service Road	0	0	0	0	0
Total	11	104	528	0	642

4.11.3.4 Loss Estimation Results

The Hazus Level 2 analysis was used to assess the risk from and vulnerability to earthquake shaking within the Town of Apple Valley. Hazus buildings data is aggregated to the census tract level for earthquake models, known as the general building stock (GBS), which has a level of accuracy acceptable for planning purposes. Where possible the GBS was

enhanced using GIS data from the county as described previously. The following sections describe risk to and vulnerability of the GBS within the Town of Apple Valley. Hazus calculates losses to structures from earthquake shaking by considering the amount of ground displacement and type of structure. The software estimates the percentage of damage to structures and their contents by applying established building fragility curves. Damage estimates are then translated to estimated dollar losses.

For each Great Shake Out Scenario ground shaking data (shakemaps) were acquired from CISN and imported into Hazus. The shakemap data consist of peak ground velocity, peak ground acceleration, peak spectral acceleration at 0.3 seconds, and peak spectral acceleration at 1.0 seconds. The earthquake module operates on census tracts that often include population and structures in the incorporated cities and the unincorporated area within a single tract. Due to this fact the results include census tracts that have a substantial portion of land within the incorporated area (loss estimates for some tracts will include structures in incorporated cities).

The results are summarized in Table 4-24 and Figure 4-22 for the Great Shake Out Scenario. It is important to understand that the Hazus earthquake module uses the census tract as its enumeration unit rather than the more detailed census block. The loss estimation values for earthquakes are much higher than those of the flooding and dam failure due to this fact. The portions of incorporated areas included within boundary census tracts elevate the values due to the inclusion of additional GBS. Though the difference between census tracts and census blocks are extremely disparate, the most important summary information is the percent of loss estimation against the total value.

In the Great Shake Out Scenario, residential damage will be the greatest. While there are several limitations to the FEMA Hazus model, it does allow for potential loss estimation. It is important to remember that the replacement costs are well below actual market values, thus, the actual value of assets at risk may be significantly higher than those included herein.

Table 4-212: Estimated Building and Content Loss Great Shake Out Scenario EQ

Building Type	Building Replacement Costs ($000)	Building Replacement Cost (% of Total Value)	Content Replacement Cost ($000)	Content Replacement Cost (% of Total Value)	Total Estimated Loss ($000)	Total Loss Estimation (% of Total Value)	Total Value ($000)
Agricultural	1,071	3.2%	328	1.0%	1,399	4.1%	33,890.00
Commercial	67,058	3.7%	18,665	1.0%	85,724	4.8%	1,801,439.00
Educational	8,089	2.9%	2,725	1.0%	10,814	3.9%	277,421.00
Government	1,532	3.8%	443	1.1%	1,975	4.9%	40,660.00
Industrial	15,727	3.3%	6,510	1.4%	22,238	4.7%	478,085.00
Religious	8,811	3.8%	2,462	1.1%	11,274	4.8%	232,956.00
Residential	244,144	2.0%	58,577	0.5%	302,721	2.5%	11,966,756.00
Grand Total	$346,433	2.3%	$89,711	0.6%	$436,144	2.9%	$14,831,207

Great Shake Out Scenario EQ

Estimated Building Loss by Occupancy Type

Great Shake Out Scenario EQ

Estimated Content Damage by Occupancy Type

Figure 4-24: Estimated Building and Content by Occupancy Type Shake Out Scenario EQ

4.12 Climate Change

4.12.1 The Impact of Climate Change

Climate change can increase hazards associated with wildfires, rising sea levels, and groundwater supply. Public health can suffer due to greater temperature extremes and more frequent extreme weather events, increases in transmission of infectious disease, and increases in air pollution. Agricultural production can be altered by changes in temperature and rainfall patterns.

Rises in temperature have the potential, for example, to cause a shift in the hydrological cycle. While predicted patterns vary with latitude and global location, roughly 75% of analyzed climate change models agree that within the western United States there will be a 10% to 40% decrease in stream flows by 2050. This may be due to a decrease in precipitation levels, which has been evident in the drought conditions suffered by the southwest in recent years, as well as an increase in evaporation, which is temperature dependent and increases as temperatures climb. It has been predicted that a change in the global average surface temperature of 2°C would be at the low end of the possible range. According to the Institute for the Study of Planet Earth at the University of Arizona, it is estimated that a 2°C increase in temperature corresponds to a 9% to 21% decrease in stream flow on the Colorado River.

The coast of California is likely to see a rise in sea level that could threaten shorelines, cause increased erosion, and loss of life and property. Sea level rise and storm surges could lead to flooding of low-lying property, loss of coastal wetlands, erosion of cliffs and beaches, saltwater contamination of drinking water, and damage to roads, causeways, and bridges.

Between the beginning of the industrialized era and 2005, the atmospheric concentration of CO2 in the atmosphere had increased by 35%, methane by 151%, and nitrous oxide by 18%.

It is estimated that in 2004, total GHG emissions were 20,135 teragrams (Tg) of carbon dioxide equivalents (Tg CO2e), excluding emissions/removals from land use, land use change, and forestry. The U. S. Environmental Protection Agency in 2004 estimated that the U.S. contributed 35% of global GHG emissions, with a total of 7074.4 Tg CO2e, an increase of 15.8% over 1990 emissions.

California is the second largest greenhouse gas contributor in the U.S. and the sixteenth largest in the world. From 1990 to 2003, California's GHG emissions increased 12%. In 2004, California produced 492 Tg CO2e, which is approximately 7% of all U.S. emissions. Transportation is responsible for 41 percent of the state's total GHG emissions; while electricity generation represents 22% of the state's GHG emissions. Conversely, emissions from residential and commercial fuel use in California decreased 9.7% from 1990 to 2004. This decrease may be due to increases in the effectiveness of energy conservation in buildings (Title 24 requirements) and more efficient appliances.

4.12.2 Population at Risk

Vulnerable populations should receive special attention when assessing the community's vulnerability to climate change. For example, care and sheltering during extreme heat conditions must be provided for vulnerable populations such as the elderly. According to information provided by FEMA, extreme heat is defined as temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks. Heat kills by taxing the human body beyond its abilities. In a normal year, about 175 Americans succumb to the demands of summer heat. According to the

National Weather Service (NWS), among natural hazards, only the cold of winter—not lightning, hurricanes, tornados, floods, or earthquakes—takes a greater toll. In the 40-year period from 1936 through 1975, nearly 20,000 people were killed in the United States by the effects of heat and solar radiation. In the heat wave of 1980, more than 1,250 people died.

4.12.3 Critical Facilities

The Town's Climate Action Plan updated in 2013 addresses concerns that affect the Town in regards to Climate Change. Currently, the focus is on reducing Greenhouse Gas Emissions (GHG) at existing facilities, homes, businesses and institutions. Reducing GHG for new developments in the same categories are discussed in detail as priority measures. This hazard mitigation plan will defer to the CAP for measures and mitigation strategies related to Climate Change in an effort to provide consistent practices. The CAP can be accessed:

http://www.applevalley.org/services/planning-division/climate-action-plan

4.12.3.1 Apple Valley Choice Energy

Apple Valley is addressing issues relating to Climate Change through the implementation of Apple Valley Choice Energy (AVCE). This program, started April of 2017, allows residents within Apple Valley to receive energy with a higher "renewable" content than what is currently provided by the franchised utility (SCE). The minimum renewable energy content for AVCE customers is 35%. In addition, the program provides an alternate selection of 50% renewable energy content for those who choose to "opt-up" to that plan. AVCE's minimum 35% renewable energy content already exceeds the California state mandate of 33% renewable energy content that will be required in the year 2020.

The renewable energy content is derived from solar, wind, hydro and geothermal sources primarily within California. Apple Valley Choice Energy plans to offer customers of AVCE a 100% renewable energy option in future years that will further reduce the overall impacts of Greenhouse Gases affecting Climate Change as a result of burning fossil fuels.

In addition to supplying renewable energy, AVCE actively promotes Net Energy Metering (NEM) for customers with rooftop solar by offering a premium by-back rate that is nearly double the rate that they would receive from SCE. AVCE will also offer future incentives to Town residents and businesses for improvements that contribute to energy efficiency as well as develop programs to encourage implementation of energy conservation measures. The Town also participates in the High Desert Regional Partnership with the other cities in the High Desert to promote energy efficiency on a regional basis.

Section 5. Community Capability Assessment

The Town of Apple Valley strives to protect and maintain the health, safety and welfare of the community on a day-to-day basis, and takes extra measures to reduce the impacts of natural or technological hazards. The Town can use a variety of different tools, assets, and authorities to effectively prepare for, mitigate toward, respond to and recover from emergencies and disasters. These include voluntary and mandatory measures; individual and community efforts; private and public actions; and preventive as well as responsive approaches. Mitigation activities include educating citizens, enforcing building and development codes, constructing capital improvement projects, adopting plans, establishing incentive programs, and improving emergency preparedness and response.

The capabilities available to the Town of Apple Valley fall into the following broad categories: Agencies and People; Existing Plans; Regulations, Codes, Policies, and Ordinances; Mitigation Programs and Fiscal Resources. Identifying and documenting these capabilities provides the basis for developing future mitigation opportunities and how they can be implemented within existing Town programs.

5.1 Active Mitigation Programs

Town of Apple Valley Capability Assessment

- Storm Water Management: Yes
- Zoning Management: Yes
- Subdivision Management: Yes
- Erosion Management: Yes
- Floodplain Management: Yes
- Floodplain Management Plan Published Date: 10/2008
- Floodplain Management Last Delineation Date: 10/2008
- Elevation Certificates Maintained: Yes
- National Flood Insurance Program Community: Yes
- National Flood Insurance Join Date: 03/03/96
- NFIP Number: TAV 060752
- NFIP Rating: None
- NFIP Rating Date: 10/2008
- Land Use Plan: Yes
- Land Use Plan Last Update: 2009
- Community Zoned: Yes
- Zoned Date: 4/27/10
- Established Building Codes: Yes
- Building Codes Last Updated: 09/27/2016
- Type of Building Codes: California Building Code
- Local Electric Utilities: Southern California Edison
- Local Water Utilities:
- Liberty Utilities

- Apple Valley Foothill County Water District
- Rancheritos Mutual Water Company
- Golden State Water Company
- County Service Area 64
- Navajo Mutual Water Company
- Local Sewage Treatment Utilities: Victor Valley Wastewater Reclamation Authority
- Local Natural Gas Utilities: Southwest Gas Corporation
- Local Telephone Utilities: Frontier
- Fire Insurance Rating: Apple Valley Fire Protection District, a self-governing special district, provides fire-related services to the Town of Apple Valley and its sphere of influence. The District's fire insurance rating within Town limits is 4.
- Fire Insurance Rating Date: 06/01/10
- Previous Mitigation Plans: 2011

5.2 Local Planning and Regulatory Capabilities (Supporting Possible Mitigation Activities)

The State of California recommends that the General Plan is updated every 10-20 years; depending mostly on whether or not the plan is meeting the community's needs. The Apple Valley General Plan was last updated and adopted in 2009. The Land Use Element of the General Plan establishes 17 land use designations that apply only to lands within the Town's incorporated boundaries (see Section 1.3, for a listing of the 17 Land Use districts in the Land Use Element). The Land Use Element also describes land use compatibility for the primary three (3) hazards: Geologic; Flood; and, Wildfire.

On an annual basis staff revisits all of these planning and regulatory capabilities to ensure that local hazards and their mitigation strategies are being brought to the discussion table when it is time to update department policy and procedures as well as annual departmental budgets. Funding opportunities through such measures as grants, general funds and taxing authorities are consistently being researched and discussed based on feasibility and accessibility based on current Town staffing and fiscal resources.

In addition to the general plan, the information in Table 5-1 *is used to construct mitigation actions aligned with existing planning and regulatory capabilities of the* Town of Apple Valley. *Planning and regulatory tools typically used by local jurisdictions to implement hazard mitigation activities are building codes, zoning regulations, floodplain management policies, and other County programs or planning documents.*

Table 5-1: Planning and Regulatory Capabilities

Hazard	Plan/Program/ Regulation	Responsible Agency	Comments
Multi-Hazard	California Building Codes	Building & Safety Dept.	California Residential Code California Code of Regulations, Title 24, Part 2.5.

Hazard	Plan/Program/ Regulation	Responsible Agency	Comments
			California Building Code California Code of Regulations, Title 24, Part 2, Volumes 1 and 2.
Multi-Hazard	Municipal Codes	Building & Safety Dept.	Section 17992 of the Health & Safety Code of the State of CA and Chapter 8 of the Apple Valley Municipal Code.
Drought	Urban Water Management Plan (UWMP)	Each water agency is responsible for own plan.	Visit each water agency for plan or visit www.mojavewater.org for their plan.
Drought	Town of Apple Valley Landscape Ordinance	Planning Division	In accordance with Governor Brown's Drought Executive Order, on July 15, 2015 the California Water Commission approved revisions to its MWELO. The Governor's Order mandates that all local agencies have until December 1, 2015 to adopt the Ordinance or adopt their own ordinance which must be at least as effective in conserving water as the State's Ordinance
Drought	2010 California Drought Contingency Plan	California Dept. of Water Resources	Section VI provides an overview of drought preparedness strategies from the California Water Plan Update. Section VII provides a brief description of local, utility, and State agency drought response roles.

Situation and assessment reports will be distributed to appropriate agencies and will be posted on the DWR Drought website (www.water.ca.gov/drought). |
Flood	Flood Resistant Construction	Building & Safety	Appendix G of the 2013 California Building Codes stipulates existing Flood Resistant Construction standards.
Flood	NFIP Administration	Engineering Dept.	NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. As a participating member of the NFIP, the City is dedicated to protecting homes of more than 60 policies currently in force.
Climate Change	Town of Apple Valley Climate Action Plan	Planning	Outline a course of action for the community of Apple Valley to reduce per capita greenhouse gas emissions 15% below business as usual by 2020. In 2020 the Climate Action will be reevaluated and updated based on current population and California emissions standards. This new plan will be included in the HMP updates.

5.3 Administrative and Technical Mitigation Capabilities

This section contains a summary of administrative and technical capabilities organized by the Town of Apple Valley staff. The department(s) responsible for the capability is also listed. Each department can provide greater detail of the resources available under each capability.

Table 5-2: Administrative and Technical Capabilities

Staff/Personnel Resources	Dept. / Agency	Comments
Planners (with land use / land development knowledge)	Planning Division	
Planners or engineers (with natural and/or human caused hazards knowledge)	Public Works, Local Utilities, Planning, & Engineering Dept.	Fire Prevention can assist as well.
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)	Engineering, Planning & Public Works Dept.	
Floodplain Management	Engineering Dept.	NFIP is managed by Town Engineer.
Land/Building surveyors	Engineering Dept.	Services are available through contract with CAA.
Personnel skilled in Geographic Information Systems (GIS)	Planning Division	Not a full time position.
Grant writers or fiscal staff to handle large/complex grants	Special Projects Manager & each Dept. manages own smaller grants	Numerous types of federal, state, local, and private grants have been administered for mitigation at the local level in California. .
Construction Equipment	Public Works Dept.	Public Works departments owns and maintains large pieces of equipment available for construction and moving and removal of earthen material.
Emergency Management Personnel	Police Department, Fire Departments and Office of Emergency Preparedness (OEP)	OEP is housed within the Town of Apple Valley and reports directly to the Town Manager.

Staff/Personnel Resources	Dept. / Agency	Comments
Care and Sheltering	Regional Red Cross Personal 17199 Yuma St. Suite #2, Victorville, CA, 92395	Care and sheltering during extreme disaster related events when evacuations orders are mandatory.

5.4 Local Fiscal Capabilities

This section provides a summary of local fiscal capabilities. The department(s) responsible for the revenue raising activity is also listed. The local Fiscal Resources are updated every fiscal year. Each year allocation of funds for hazard mitigation will be adjusted based on the current years' population growth, location, and future hazard risks.

Table 5-3: Local Fiscal Capabilities

Financial Resources	Dept. / Agency	Comments
Permitting Fees	Building & Safety, Engineering, Planning & Finance Dept.	Development fees
General Fund Revenue	Town Council or Finance Dept.	There is no dedicated budget line items for hazard mitigation.
Sewer and Trash Funds	Finance Dept.	
Capital Improvements Program	Engineering Dept.	
State and Federal Community Development Dept. Block Grants (CDBG)	CA Dept. of Housing and Community Development Dept., Dept. of Housing & Urban Dev. (HUD) Town of Apple Valley Housing Division	Programs Include: Community Development Neighborhood Stabilization Program Residential Rehabilitation Program
Home Investments Partnership Program	CA Dept. of Housing and Community Development Dept. of Housing & Urban Dev. (HUD)	Must apply competitively for grant funds.

5.5 Local & San Bernardino County Capabilities

This section contains a summary of Town of Apple Valley and San Bernardino County programs and capabilities organized by hazard type. The example tables below provide details on possible Town and County Capabilities that the Apple Valley community can coordinate with or use as an implementation mechanism for local mitigation activities. While the following programs can be used by the Apple Valley to develop and perform mitigation actions, they are the County of San

Bernardino's programs and the Fire Districts, so the Town is unable to determine how that entity will expand and improve it at this time.

5.5.1 Apple Valley Fire Protection District & County Wildfire Mitigation Programs

Table 5-4: Wildfire Mitigation Programs

Hazard	Program	Responsible Agency	Comments
Wildfire	*Community Based Fuels Reduction program*	*Fire District*	*This program is designed to create community based fuel modification programs across the Town communities. For more information visit www.applevalleyfd.com.*
Wildfire	*Fire Hazard Abatement*	*Fire District*	*Fire Hazard Abatement works to reduce the potential for an individual's property to be the source of fire and structural ignitability. For more information visit www.applevalleyfd.com.*
Wildfire	*Southern California Edison (SCE)*	*Southern California Edison (SCE)*	*SCE removes dead trees near power lines to reduce fire hazards. For more information see County OES website or hazard mitigation plan.*
Wildfire	*Inland Empire Fire Safe Alliance*	*Inland Empire Fire Safe Alliance*	*The Alliance was created to act as a forum for all Fire Safe Councils in San Bernardino County. For more information see County OES website or hazard mitigation plan.*
Wildfire	*Community Wildfire Protection Plans (CWPP)*	*Fire District*	*CWPPs are designed to provide a means for a community to have input into and actively participate in the planning, strategy, goals, and objectives of creating a fire safe community. For more information see County OES website.*
Wildfire	*Organized Group Volunteer Activities*	*Fire District*	*There are several volunteer citizen groups throughout the Town that are capable of providing significant resources that are not provided by traditional governmental agency services. For more information visit ww.readyapplevalley.org.*

5.5.2 County Flood Mitigation Programs

Table 5-5: Count Flood Mitigation Programs

Hazard	Program	Responsible Agency	Comments

Flood	Flood Area Safety Taskforce (FAST)	Flood Control District	The FAST Organization stresses liaison with the communities, provides for community education and information, and places emphases on Community and city partnerships. For more information see County OES website or hazard mitigation plan.
Flood	Alluvial Fan Task Force	Alluvial Fan Task Force	The Task Force reviews the state of knowledge regarding alluvial fan floodplains, determine future research needs, and, if appropriate, develop recommendations relating to alluvial fan floodplain management, with an emphasis on alluvial fan floodplains that are being considered for development. For more information see County OES website or hazard mitigation plan.

5.5.3 Town of Apple Valley & SB County Public Education and Alert Programs

Table 5-6: Public Education and Alert Programs

Hazard	Program	Responsible Agency	Comments
Multi-Hazard	CERT	Town of Apple Valley	The Community Emergency Response Team (CERT) Program educates people about disaster preparedness and trains them in basic response skills. For more information on the CERT program visit www.readyapplevalley.org
Multi-Hazard	California Disaster Corps	SB County Fire District	The Disaster Corps is a first-in-the-nation effort to professionalize, standardize and coordinate highly trained disaster volunteers statewide. This program initiative was built collaboratively in partnership with California Volunteers from the ground up through public-private partnerships and with a wide range of subject matter experts. Visit www.sbcfire.org.
Multi-Hazard	TENS	SB County Fire District	Telephone Emergency Notification Systems (TENS) During an emergency, public safety can be a direct function of the speed and accuracy of the dissemination of information. This is particularly important during emergencies that require evacuations. The program is an automated phone dialing system that calls telephones in specific geographic areas of concern. All areas of San Bernardino County have all been preprogrammed so that during an emergency, the specific target group can be notified as quickly as possible. For more information visit www.sbcfire.org.
Multi-Hazard	ECS	Town of Apple Valley	The Emergency Communications Service (ECS) is a volunteer group providing front-line communications, technical and logistical support to the Apple Valley Fire Protection District and Office of Emergency Preparedness. For more information visit www.readyapplevalley.org.
Multi-Hazard	IPAWS	SB County Fire District	During an emergency, alert and warning officials need to provide the public with life-saving information quickly. The Integrated Public Alert and Warning System (IPAWS) is a modernization and integration of the

Hazard	Program	Responsible Agency	Comments
			nation's alert and warning infrastructure and will save time when time matters most, protecting life and property. Federal, State, Territorial, Tribal, and local alerting authorities can use IPAWS and integrate local systems that use Common Alerting Protocol (CAP) standards with the IPAWS infrastructure. IPAWS provides public safety officials with an effective way to alert and warn the public about serious emergencies using the Emergency Alert System (EAS), Wireless Emergency Alerts (WEA), the National Oceanic and Atmospheric Administration (NOAA) Weather Radio, and other public alerting systems from a single interface.

5.6 State and Federal Fiscal Resources

To augment local resources, the table in this section provides a list of potential funding programs and resources provided by state and federal agencies and programs which can be used for local hazard mitigation activities. While the following programs can be used by the Town of Apple Valley to develop and perform mitigation actions, they are the State of California/federal programs, so the Town is unable to determine how that entity will expand and improve it at this time.

Table 5-7: Potential Funding Programs/Grants from State & Federal Agencies

Agency / Grant Name	Potential Programs/Grants
California DWR Proposition 50/84:	*DWR has a number of IRWM grant program funding opportunities. Current IRWM grant programs include planning, implementation, and stormwater flood management.* http://www.water.ca.gov/irwm/grants/index.cfm
Integrated Regional Water Management (IRWM) Program.	Proposition 84, the Safe Drinking Water, Water Quality, and Supply, Flood Control, River and Coastal Protection Bond Act, which provides $1,000,000,000 (P.R.C. §75001-75130) for IRWM Planning and Implementation. CA Dept. of Water Resources' Flood Emergency Response Projects are posted on the webpage at: http://www.water.ca.gov/floodmgmt/hafoo/fob/floodER/
California Housing and Community Development (HCD) Emergency Solutions Grant (ESG) Program	*To fund projects that serve homeless individuals and families with supportive services, emergency shelter/transitional housing, assisting persons at risk of becoming homeless with homelessness prevention assistance, and providing permanent housing to the homeless population. The Homeless Emergency Assistance and Rapid Transition to Housing (HEARTH) Act of 2009 places new emphasis on assisting people to quickly regain stability in permanent housing after experiencing a housing crisis and/or homelessness.* http://www.hcd.ca.gov/fa/esg/index.html

Agency / Grant Name	Potential Programs/Grants
CalTrans Division of Local Assistance / Safe Routes to School Program	California Dept. of Transportation. Federal funding administered via Caltrans. Local 10% match is the minimum requirement. http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm
CA State Office of Historic Preservation (OHP) / Statewide Historic Preservation Plan	Local Government; OHP's Local Government Unit (LGU) offers guidance and assistance to city and county governments to preserve historic properties including damage from natural hazards.
U.S. Dept. of Energy / Energy Efficiency and Conservation Block Grant Program	*Provides funding for weatherization of structures and development of building codes/ordinances to ensure energy efficiency and restoration of older homes.* http://www1.eere.energy.gov/wip/eecbg.html
Dept. of Homeland Security (DHS) / FEMA Grants	For more information on current grants visit: http://www.fema.gov/grants
Office for Victims of Crime: **Antiterrorism and Emergency Assistance Program (AEAP)**	*The Office for Victims of Crime supports communities responding to terrorist attacks and cases of mass violence. The AEAP Assistance Programs include crisis response, consequence management, criminal justice support, crime victim compensation and training and technical assistance.* *More information can be obtained at:* https://www.ovc.gov/AEAP/
U.S. Department of State Office of Antiterrorism Assistance (ATA): **Antiterrorism Assistance Program**	Antiterrorism Assistance Program The ATA program trains civilian security and law enforcement personnel from friendly governments in police procedures that deal with terrorism. Since its inception in 1983, the program has trained and assisted over 84,000 foreign security and law enforcement officials from 154 countries. Learn more by visiting: http://www.state.gov/m/ds/terrorism/c8583.htm
California Emergency Management Agency (Cal EMA) / Proposition 1B Grants Programs	The Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, approved by the voters as Proposition 1B at the November 7, 2006 general election, authorizes the issuance of nineteen billion nine hundred twenty-five million dollars ($19,925,000,000) in general obligation bonds for specified purposes, including grants for transit system safety, security, and disaster response projects. http://www.calema.ca.gov/EMS-HS-HazMat/Pages/Emergency-Management-Homeland-Security-and-Hazard-Mitigation-Grant-Programs.aspx
California Proposition 1: **The Water Bond (AB 1471)**	Authorize $7.545 billion in general obligation bonds for state water supply infrastructure projects, such as public water system improvements, surface and groundwater storage, drinking water protection, water recycling and advanced water treatment technology,

Agency / Grant Name	Potential Programs/Grants
	water supply management and conveyance, wastewater treatment, drought relief, emergency water supplies, and ecosystem and watershed protection and restoration. The State Water Resources Control Board (State Water Board) will administer Proposition 1 funds for five programs. The estimated implementation schedule for each is outlined in Five Categories: ▪ Small Community Wastewater ▪ Water Recycling ▪ Drinking Water ▪ Stormwater ▪ Groundwater Sustainability http://www.waterboards.ca.gov/water_issues/programs/grants_loans/proposition1.shtml
Assistance to Firefighters Grant Program (AFG); Fire Prevention and Safety (FP&S)	The primary goal of the FP&S Grants is to enhance the safety of the public and firefighters with respect to fire and fire-related hazards. The Grant Programs Directorate administers the FP&S Grants as part of the AFG Program. FP&S Grants are offered to support projects in two activity areas: 1). Fire Prevention and Safety (FP&S) Activities designed to reach high-risk target groups and mitigate the incidence of death and injuries caused by fire and fire-related hazards. 2). Research and Development (R&D) Activity To learn more about how to prepare to apply for a project under this activity, please see the FP&S Research and Development Grant Application Get Ready Guide. https://www.fema.gov/fire-prevention-safety-grants

5.7 The Budget in Brief

The Town of Apple Valley has a total adopted general fund budget for all funds in the amount of $80.6 million for Fiscal Year 2016-17. Adopted Budget reflects the operating and capital spending plans for the General Fund, Special Revenue Funds, Capital Project Funds, Debt Service and Enterprise Funds.

In comparison to the total adopted FY16-17 budget, on an all funds basis the operating budget comprises 67.48% of the total budget. The following discussion will focus primarily on the operating budget. The adopted operating budget is $54.2 million, an increase of $381,388 or .71% compared to the amended budget in FY 15-16.

5.7.1 Salaries & Benefits

Personnel costs decreased by $120,212 or 1.09% in total. This decrease is mainly due to three long-term employees retiring during the 2015-16 fiscal year. In addition, there is no Cost of Living Allowance (COLA) included in the adopted budget.

5.7.2   Revenues

As a result of the slow but steady rebound in the economy, most revenue sources are projected to increase slightly. The Town has been experiencing slight increases in Sales Tax, Property Tax, and Franchise Taxes and the expectation is that those increases will continue into FY 16-17. A portion of the increased property tax revenues is resulting from an increase in property tax collections due to the elimination of the Redevelopment Agency and subsequent redistribution of previously captured tax increments. In the near term, the local economy is not generally expected to grow at a comparable rate when compared to the economic growth rates realized prior to FY 07-08. However, most economic indicators appear optimistic and most economic projections are generally calling for a long period of sustained 'slow growth'.

5.7.3   Property Tax

Property tax is the single largest source of revenue for the Town. The FY 16-17 estimated revenue from property tax is $9,418,358 or 32.33% of the total General Fund revenues. This amount is $423,200 more than the amended FY 15-16 estimated property tax revenues. This increase of approximately 4.71% in revenue is attributed to the continued slow growth in property values which are anticipated to continue for the foreseeable future. In previous years, the declining market values of property in the Town depressed property tax revenues by as much as 40% in some areas. However, over the last year, property values have begun to rise steadily on a month-over-month basis.

While market values of property in the Town are still at reduced levels when compared to assessed values prior to the beginning of the recession in 2007, a large portion of the property tax base is still assessed at market values less than the maximum taxable value per Proposition 13 limits. These properties may experience Prop. 8 recoveries or increases in assessed values at a rate above 2% up to the Prop. 13 limit over the next year. As such, there is an expectation that the assessed values of those properties will increase at a rate greater than 2% over the next year thereby increasing property tax revenue collections by the Town.

5.7.4   Sales & Use Tax

Sales tax represents the Town's second largest revenue source estimated at $6,015,500 or 20.65% of the total General Fund estimated revenues for FY 16-17. This amount represents an increase of $475,600 compared to the amended revenue estimate for FY 15-16. The majority of the increase is due to the expiration of the sales tax backfill payment ("triple flip") that was received from the State in the form of property taxes (accounted for as Sales Tax In-Lieu). The backfill payment from the State was the result of the "triple flip" that was approved by the voters in November 2004 under Proposition 57 to finance the State's Economic Recovery Bonds. Under this Proposition, the State took one fourth of the local agencies' sales tax and backfilled it with a like amount in property taxes from the Educational Revenue Augmentation Fund (ERAF).

Apple Valley's sales tax base has consistently trended upward over the last several years. This predictability of the sales tax revenue source is due to the diversity of the types of businesses and retailers located within the Town. While the sales tax revenue category had been most directly affected by the recession, sales tax revenues have begun to move upward at a slow gradual pace. Staff is estimating that sales tax revenues will increase (8.19%) when compared to the FY 15-16 revised revenue estimates.

5.7.5   The VLF (Vehicle License Fee)

The VLF swap is the result of the State's action in 2003 to permanently reduce the Vehicle License Fee from 2% to 0.65%. In the past, local government received its full share of the revenues from the 2% rate. When the State reduced the rate,

the State also promised to make local governments whole by backfilling the lost revenue with a like amount in property tax revenues. This backfill payment is linked directly to the growth in property tax revenues. Apple Valley has experienced some revenue losses from the swap as most property values have fallen since the recession began in May, 2007. Although the recession ended in June, 2009, property values in the Town have yet to fully recover to property values existent in 2007.

5.7.6 Franchise Fees

Franchise fees represent the Town's third largest source of revenue. Currently, the Town collects electric franchise fees from Southern California Edison, gas franchise fees from Southwest Gas Company, cable franchise fees from Cable providers and Solid Waste Hauler's franchise fees from the Town's waste hauler. For FY 16-17, estimated revenue from all sources of Franchise Fees is $2,118,500, which represents 7.30% of the total General Fund revenue. The estimated revenue reflects a net increase of $45,500 or 2.19% over the FY 15-16 amended revenue estimate.

5.7.7 Animal Service Contract

Contract payments for animal sheltering services with the County of San Bernardino represent the Town's fourth largest source of revenue. The FY 16-17 revenue estimate from this source is $483,500, which represents 1.66% of the total General Fund revenues. This revenue is a new revenue source to the Town since the County began contracting with the Town for animal sheltering services beginning in January, 2013.

5.7.8 Capital Improvement Program

The Town's Seven-Year Capital Improvement Program (CIP) is listed within the "Capital Improvement Program" section of the adopted budget. This section provides comprehensive, detailed information on each of the capital projects that the Town plans to undertake in the coming fiscal year and beyond. Twenty-four capital improvement projects totaling $10.9 million are adopted for funding in FY 16-17, a decrease of $18.7 million or 63.15% over the adopted CIP in FY 15-16.

5.7.9 Use of Fund Balances

During times of emergency or due to other needs, the Town may utilize its general operating reserve, which is part of the "committed" and "unassigned" portions of General Fund fund balance, if circumstances warrant. The General Fund fund balance should be distinguished from other fund balances. Special Revenue Funds and Capital Projects Funds fund balances are earmarked for specific uses based upon the criteria for which these funds were established. These types of funds may accumulate monies for future appropriations. For example, when the Town is ready and able to embark upon a capital improvement project or special program that meets the specific requirements for the use of the funds, appropriations from fund balances may be used.

5.7.10 Property and Business Improvement District (PBID)

Information on the Apple Valley Village PBID may be found within the "PBID" section of the general budget document. The Town acts as trustee and custodian of PBID funds although the Town does not exercise direct control over PBID activities or expenditures.

Information on all of these programs can be found within the Town's current FY16-17 approved general budget.

Section 6. Mitigation Strategy

6.1 Mitigation Overview

The Town of Apple Valley's mitigation strategy is derived from the in-depth review of the existing vulnerabilities and capabilities outlined in previous sections of this plan, combined with a vision for creating a disaster resistant and sustainable community for the future. This vision is based on informed assumptions, recognizes both mitigation challenges and opportunities, and is demonstrated by the goals and objectives outlined below. The mitigation measures identified under each objective include an implementation plan for each measure. The measures were individually evaluated during discussions of mitigation alternatives and the conclusions used as input when priorities were decided. All priorities are based on consensus of the Planning Team.

Mitigation measures are categorized generally for all hazards and specifically for the four risk hazards facing the Town that were extensively examined in the risk assessment section: climate change, earthquakes, floods, and wildfires.

The intent of the mitigation strategy is to provide the Town of Apple Valley with a guidebook to future hazard mitigation administration. This will help the staff to achieve compatibility with existing planning mechanisms, and ensure that mitigation activities provide specific roles and resources for implementation success.

6.1.1 Mitigation 5 Year Progress Report

The following, Table 6-1, identifies the completed, deleted, or ongoing actions or activities from the previously approved 2011 plan. Due to changes in funding availability and management's change of priorities, some 2011 mitigations actions have been removed from the 2017 mitigation actions. Mitigation efforts are being focused on the community as a whole as opposed to the actions that may only benefit a small percentage of the community.

Table 6-1: Mitigation 5 Year Progress Report

Mitigation Action	Completed	No longer priority	Ongoing	Comments
Develop projects and programs to install automatic gas shut-off valves in residential, commercial, and public buildings		X		No longer an action the Town wants to pursue.
Develop and construct seismic retrofit of critical facilities	X			Adoption of Ord. No. 453 & No. 489
Develop residential and commercial seismic retrofit programs	X			Adoption of Ord. No. 453 & No. 489
Develop earthquake mitigation public outreach education programs			X	
Develop and construct seismic retrofit of city-owned transportation and utilities infrastructure	X			Completion of Yucca Loma Bridge May 2017

Mitigation Action	Completed	No longer priority	Ongoing	Comments
Develop and sponsor projects and programs to brace new or relocated mobile homes to resist earthquakes		X		No longer a priority.
Install detention basin: Navajo and Ottawa			X	In process of acquiring property to connect pipe to ret. Basin. **Fl Action 1.1**
Install detention basin: Huasna Road and Chippewa Rd		X		Vacant property. Will be completed when property developed by landowner.
Install detention basin: Bear Valley and Mohawk Road	X			Installed Dry well – Completed in 2015
Install Dry Well: Quapaw Rd / Eyota Rd	X			Completed in 2011
Install Dry Well: Seneca Rd / Rancherias Road	X			Completed in 2015
Install Dry Well: Pocomoke Rd / Minnetonka Rd	X			Completed in 2011 Minnetonka Rd/Tamiani Rd
Install Dry Well: Algonquin Rd / Lone Eagle Rd		X		No longer priority
Install Dry Well: Mohawk Rd / Laguna Rd.		X		2015 installed dry well on Bear Valley/Mohawk instead
Install Dry Well: Little Beaver / Mesquite Rd		X		No longer priority
Install Dry Well: Dale Evans/Otoe/Thunderbird/ Rancherias neighborhood area	X			Completed in 2015 Rancherias Rd & Thunderbird Rd

6.2 Identifying the Problem

As part of the mitigation actions identification process, the HMP Planning Committee identified issues and/or weaknesses as a result of the risk assessment and vulnerability analysis. By combining common issues and weaknesses developed by the Planning Committee, the realm of resources needed for mitigating each can be understood. Community issues and weaknesses are presented by individual hazard in Table 6-2 to Table 6-6.

Table 6-2: All Hazard Problem Statements Table

Problem Description	Problem Type	Action No.
1. Lack of public notification system in the Town	Public Notification	AH 1.1
2. No backup power for EOC	Infrastructure	AH 2.1

Table 6-3: Earthquake Problem Statements Table

Problem Description	Problem Type	Action No.
1. Potential damage to essential facilities and major bridges.	Infrastructure	EQ 1.1, 1.2, 1.3
2. Public awareness and preparedness of earthquake risks at businesses and homes	Public Education and Notification	EQ 2.1
3. Majority of residents live in the severe shaking zone in the Great Shakeout Scenario	Vulnerable Populations	EQ 2.1

Table 6-4: Wildfire Problem Statements Table

Problem Description	Problem Type	Action No.
1. Vegetative fuels in open spaces and backing up to resident's property/homes.	Maintenance Policy	WF 1.1
2. Inadequate water supply for firefighting	Infrastructure	WF 2.1
3. Public education on brush clearance and defensible space.	Public Education and Notification	WF 3.1

Table 6-5: Flood Problem Statements Table

Problem Description	Problem Type	Action No.
1. Drainage issues along major transportation roads throughout Town.	Lifeline/Infrastructure	FL 1.1, 1.2, 1.3
2. Debris/sediment buildup in storm culverts and basins after major storms	Maintenance	FL 2.1

Table 6-6: Climate Change Problem Statements Table

Problem Description	Problem Type	Action No.
1. Greenhouse gas emissions with residential and commercial properties.	Utilities	1.1
2. Greenhouse gas emissions with residential and commercial vehicles	Transportation	1.1

6.3 Mitigation Goals, Objectives, and Projects

The Mitigation Goals included overall goals established by the Town (contained within the Town's General Plan) to guide the establishment and priorities of specific goals, objectives and mitigation measures for each high risk hazard. In reviewing and updating the mitigation goals and actions, it was the Planning Team's consensus that the following goals remain in this HMP update. Our mitigation projects for each hazard are stated within the mitigation actions for each respective hazard. The Town's 2009 General Plan is on file at Town Hall, 14955 Dale Evans Parkway, Apple Valley, CA 92307 and is available for review during normal business hours. The General Plan is also available online at www.applevalley.org.

6.3.1 All Hazard (AH)

Goal: Improve emergency services management capability

Objective 1: Develop warning and evacuation notification system for residents and businesses.

> *AH Action 1.1:* Implement a public notification system to increase ability to alert the public to potential emergency situations and hazards.

Objective 2: Identify the need for, and acquire, any special emergency services and equipment to enhance response capabilities for hazards.

> *AH Action 2.1:* To ensure continual power supply, purchase and install backup generator at EOC.

6.3.2 Earthquake/Geologic Hazards (EQ)

Goal: The protection and safety of human life, land, and property from the effects of seismic and geotechnical hazards shall be increased. (General Plan, Geotechnical Element)

Earthquake Objective 1: The Town shall coordinate and cooperate with public and quasi-public agencies to ensure that major infrastructure, utility systems and roadways have continued functionality in the event of a major earthquake.

> *EQ Action 1.1*: Seismic retrofit of the Bear Valley Bridge over Mojave River.
> *EQ Action 1.2:* Seismic analysis of the James Woody Community Center.
> *EQ Action 1.3:* Seismic analysis of the Town Hall Development Services Building.
> *Responsible Agency:* Planning Division, Public Works Division, Town Engineer, Public and Quasi-Public Utilities.
> *Schedule:* Ongoing.

Earthquake Objective 2: The Town shall actively support and participate in local and regional efforts to educate the public on reducing earthquake risks.

EQ Action 2.1: Increase number of residents who complete public education programs such as CERT for earthquake risks and response.
Responsible Agency: Emergency Preparedness
Schedule: Ongoing.

6.3.3 Wildfire (WF)

Goal: Continue to reduce fire hazards in the Town of Apple Valley.

Wildfire Objective 1*:* Reduce fire risk in open spaces through vegetation management policies.

WF Action 1.1: Continue and enhance the hazard abatement program to reduce wildfire hazards.
Responsible Agency: Fire District
Schedule: ongoing.

Wildfire Objective 2*:* Improve understanding of locations, potential impacts, and linkage between hazards, vulnerability, and measures needed to protect life and property.

WF Action 2.1: Continue to identify areas vulnerable to wildfire due to inadequate water supply for firefighting and implement improvements such as expansion of water supply and storage hydrants.
Responsible Agency: Fire District
Schedule: ongoing.

Wildfire Objective 3*:* Increase Public education on brush clearance and defensible space.

WF Action 3.1: Continue and enhance community risk reduction programs such as Ready Set Go!, burn permits, and educational programs through the schools.
Responsible Agency: Fire District
Schedule: ongoing.

6.3.4 Flood (FL)

Goal: Protect lives and property from flooding hazards through a comprehensive system of flood control facilities throughout the Town. (General Plan, Flooding and Hydrology Element)

Flood Objective 1: Upgrade the Town's local and regional drainage system through proactive planning and coordination with other responsible agencies.

FL Action 1.1: Drainage system upgrade on Navajo Road near James Woody Community Center.
FL Action 1.2: Install drywell Seneca/Cronese Road
FL Action 1.3: Install drywell Gayhead/Seminole Road
Responsible Agencies: Engineering Division, Public Works Division
Schedule: 5-10 years

Flood Objective 2: Assure that adequate access to roadways is maintained during major storm events, and that safe all-weather crossings over drainage facilities and flood control channels are provided where necessary.

FL Action 2.1: Purchase resources such as a skid steer loader and automatic sandbag machine needed to perform routine and annual maintenance for roadways and drainage facilities.
Responsible Agency: Public Works Division, Engineering Division
Schedule: Ongoing

6.3.5 Climate Change (CC)

Goal: Reduce the impacts of climate change on the Town and limit human activities that change the atmosphere's makeup.

Climate Change Objective 1: Meet greenhouse gas (GHG) reduction targets set forth by the Town of Apple Valley's Climate Action Plan (CAP).

CC Action 1.1: Continue implementing measures to reduce GHG and energy usage as identified in the Town of Apple Valley's Climate Action Plan.
Responsible Agency: Planning Division
Schedule: 5-10 years

6.4 Considering Mitigation Alternatives

The HMP Planning Team participated in the development and review of mitigation actions with a wide range of alternatives. To narrow mitigation alternatives for inclusion, FEMA's six broad categories of mitigation alternatives were used. Each FEMA category is described below. The HMP Planning Team developed several mitigation alternatives for implementation under each mitigation category.

Prevention (PRV):

Preventative activities are intended to keep hazard problems from getting worse, and are typically administered through government programs or regulatory actions that influence the way land is developed and buildings are built. They are particularly effective in reducing a community's future vulnerability, especially in areas where development has not occurred or capital improvements have not been substantial. Examples of preventative activities include:

- Planning and zoning ordinances
- Building codes
- Open space preservation
- Floodplain regulations
- Stormwater management regulations
- Drainage system maintenance
- Capital improvements programming
- Riverine/fault zone setbacks

PRV Alternatives:

Evaluate the City's regulations that manage flood risk and consider additional standards to help prevent flood problems from increasing. These include:

- Changes in zoning ordinance to designate special land uses for flood-prone areas
- Enhanced subdivision regulations
- Enhanced stormwater regulations to reduce stormwater runoff, especially for new development Other additional higher standards in the flood management code

Consider additional policies and regulations to enhance the preservation of open space in flood-prone and wild land fire high risk areas.

Property Protection (PPRO):

Property protection measures involve the modification of existing buildings and structures to help them better withstand the forces of a hazard, or removal of the structures from hazardous locations. Examples include:

- Building elevation
- Critical facilities protection
- Retrofitting (e.g., wind proofing, flood proofing, seismic design techniques, etc.)
- Insurance

PPRO Alternatives:

Establish a program to evaluate RL and flood-prone properties for implementation of property protection measures.

Consider promoting and supporting voluntary property protection measures through several activities, ranging from financial incentives to full funding.

Promote flood insurance for flood-prone properties with a focus on the SFHA and properties with historical flooding areas.

Evaluate publically owned facilities and critical facilities for property protection measures, including flood insurance.

Public Education and Awareness (PE&A):

Public education and awareness activities are used to advise residents, elected officials, business owners, potential property buyers, and visitors about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property. Examples of measures to educate and inform the public include:

- Outreach projects including neighborhood and community outreach
- Speaker series / demonstration events
- Hazard mapping
- Real estate disclosures
- Materials library
- School children educational programs
- Hazard expositions

PE&A Alternatives:

Enhance the Town's Public Information Program to include both the public and private sectors. An education and outreach measure to ensure the community understands their role in protecting themselves in a disaster event.

- Safety precautions for all types of hazards, but especially floods, earthquakes, wildfires, and drought
- Knowing where emergency evacuation routes and shelters are located
- Family and emergency preparedness measures
- Mitigation measures for residents at the home

Enhance public outreach program to include all hazards. Appropriate ways to spread information are:

- Websites and social media
- Mailings to residents, in water bill
- Newsletter (Our Town)
- Displays, particularly at special events
- Handouts, flyers and other materials, which can be distributed at special events and at presentations

Natural Resource Protection (NRP):

Natural resource protection activities reduce the impact of natural hazards by preserving or restoring natural areas and their protective functions. Such areas include floodplains, steep slopes, and open land. Parks, recreation, or conservation agencies and organizations often implement these protective measures. Examples include:

- Floodplain protection
- Watershed management
- Vegetation Management (e.g., fire resistant landscaping, fuel brakes, etc.)
- Erosion and sediment control
- Habitat preservation and restoration

NRP Alternatives:

Enhance public education and outreach efforts to inform the public about our community recycling programs, community clean-up day, and energy saving tips and upgrades.

Inform the public and local businesses how important it is to use drought tolerant landscaping.

Keep promoting water conservation policy's in effect to keep water usage low.

Emergency Services (ES):

Although not typically considered a "mitigation" technique, emergency service measures do minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event. Examples include:

- Warning Systems
- Construction of evacuation routes
- Sandbag staging for flood protection
- Obtain StormReady certification
- Provide alert and notification to residents through social media for flood risk
- Evacuate and shelter populations displaced due to flooding
- Training

Staff Structural Projects (SP):

Structural mitigation projects are intended to lessen the impact of a hazard by modifying the environmental natural progression of the hazard event through construction. They are usually designed by engineers and managed or maintained by public works staff. Examples include:

- Stormwater diversions / detention / retention infrastructure/drywells
- Utility upgrades
- Seismic Retrofits
- New construction standards

SP Alternatives:

The Town has previously constructed flood control and drainage facilities that move storm and flood waters more efficiently and reduced potential for flooding. The Town should identify and prioritize additional projects in Apple Valley.

The Town should continue to implement regional drainage improvement projects to reduce stormwater runoff and the potential for flooding along local drainages.

6.5 Mitigation Priorities

During the development of the risk assessment for the Town of Apple Valley, the Planning Team proposed and discussed alternative mitigation goals, objectives, and specific mitigation measures that the Town should undertake to reduce the risk from the three high risk hazards facing the Town.

6.5.1 Prioritization Process

Multiple factors were considered to establish the mitigation priorities included in this plan. The Planning Team utilized the 2011 rankings and the last five-year disaster related occurrences to develop the Hazard Summary Worksheet and Risk Factor Final Worksheet identified in Section 4.1 and in Appendix D.1-D.4) to help assess mitigation priorities and determined that the highest priority rankings would be assigned to those mitigation measures that met three primary criteria:

1. Greatest potential for protecting life and property.
2. Greatest potential for maintaining critical City functions and operability following a disaster.
3. Achievability in terms of community support and cost effectiveness.

All rankings were determined by the consensus of the Planning Team. As described in the previous section on hazard and risk assessment, clearly earthquakes have the potential to affect the largest number of people, critical facilities and buildings and to cause the greatest economic losses. This fact, combined with the relatively high probability of an earthquake occurrence in the next several decades, makes increasing disaster resistance and readiness to earthquakes a high priority.

Given the extreme importance of maintaining critical government functions in times of disaster and the large number of the population who depend and rely on government services and infrastructure, those mitigation measures that improve government disaster resistance, readiness, or recovery capacity are generally given higher priority than mitigation of privately owned buildings in which the loss or damage affects relatively few.

Earthquake, flooding, wildfire, and climate change mitigation actions are identified and assigned a priority according to their importance, cost, funding availability, to what degree project planning has been completed and the anticipated time to implement the measures.

The Planning Team discussed alternative mitigation strategies and mitigation measures during workshops, provided their preferences and also suggested additional mitigation measures that the Town should consider. The Planning Team reviewed the list of possible objectives and mitigation measures, made a final selection and then prioritized the individual mitigation measures considered most appropriate for Apple Valley.

6.5.1.1 Public Input for Mitigation Prioritization:

Public input is an essential step in validating the prioritization of mitigation actions. Valuable information was gathered regarding the perception of hazard threats to residents through a community survey. The summary of results can be found in Appendix C.2.

The community survey found that 75.5% of respondents had experienced an earthquake within the past 15 years within the Town of Apple Valley, 46.8% experienced wildfire, and 46.8% had experienced flooding. When asked which hazards

would be very likely to cause damage to buildings or harm residents in the Town, respondents believed drought, wildfire and earthquake were the most likely to cause damage.

As seen in figure 6-1 below the top incentives that would encourage the survey participants to protect their home against natural hazards were insurance premium discounts, property tax breaks or financial assistance programs. This community feedback was taken into consideration when prioritizing mitigation actions.

What mitigation measures or strategies have been completed in the last 5 years to protect your home or business from a natural hazard? Check all that apply

Answered: 123   Skipped: 0

Answer Choices		Responses	
▼	flood proofing	16.26%	20
▼	seismic upgrades	13.82%	17
▼	dry weed abatement	73.98%	91
▼	defensible space	52.85%	65
▼	earthquake insurance	11.38%	14
▼	flood insurance	9.76%	12
▼	None	14.63%	18
▼	Other (please specify) Responses	3.25%	4

Figure 6-1: Example survey question

6.5.2   Cost Benefit:

The action plan was prioritized according to a benefit/cost analysis of the proposed projects and their associated costs (44 CFR, Section 201.6(c)(3)(iii)). The benefits of proposed projects were weighed against estimated costs as part of the project prioritization process. The benefit/cost analysis was not of the detailed variety required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) grant program.

A less formal approach was used because some projects may not be implemented for up to 10 years, and associated costs and benefits could change dramatically in that time. Therefore, a review of the apparent benefits versus the apparent cost of each project was performed. Parameters were established for assigning subjective ratings (high, medium, and low) to the costs and benefits of these projects and the planning team arrived at such ratings notated in Table 6-7.

Cost ratings were defined as:

> **High**—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
> **Medium**—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
> **Low**—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.

Benefit ratings were defined as follows:

> **High—**Project will provide an immediate reduction of risk exposure for life and property.
> **Medium—**Project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for property.
> **Low—**Long-term benefits of the project are difficult to quantify in the short term.

Using this approach, projects with positive benefit versus cost ratios (such as high over high, high over medium, medium over low, etc.) are considered cost-beneficial and are prioritized accordingly.

6.5.3   Goal, Objective, and Mitigation Action Matrix

Based upon the risk assessment, the City's capabilities and public input, Table 6-7 shows primary objectives and corresponding mitigation actions selected for further implementation and development during the next planning cycle. Table 6-x provides details for each mitigation action with mitigation action descriptions, FEMA mitigation category, responsible party, and timeframe. Implementation Action Plans for each action number highlighted in Table 6-x are shown in further detail in Section 7 (Implementation).

Table 6-7: Goal, Objective, and Mitigation Action Prioritization Matrix

RF Factor	Action No.	Priority Rating	Action Description
EARTHQUAKE			
3.6	EQ 1.1	1	Seismic retrofit of the Bear Valley Bridge over Mojave River.

RF Factor	Action No.	Priority Rating	Action Description
EARTHQUAKE			
3.6	EQ 1.1	3	Seismic analysis of the James Woody Community Center.
3.6	EQ 2.1	2	Seismic analysis of the Town Hall Development Services Building.
3.6	EQ 3.1	4	Increase number of residents who complete public education programs such as CERT for earthquake risks and response.
FIRE			
2.3	WF 1.1	2	Continue and enhance the hazard abatement program to reduce wildfire hazards.
2.3	WF 2.1	1	Continue to identify areas vulnerable to wildfire due to inadequate water supply for firefighting and implement improvements such as expansion of water supply and storage hydrants.
2.3	WF 3.1	3	Continue and enhance community risk reduction programs such as Ready Set Go, burn permits, and educational programs through the schools.
FLOOD			
2.25	FL 1.1	2	Drainage system upgrade on Navajo Road near James Woody Community Center.
2.25	FL 1.2	3	Install drywell Seneca/Cronese Road
2.25	FL 1.3	4	Install drywell Gayhead/Seminole Road
2.25	FL 2.1	1	Purchase resources such as skid steer loader, dump truck and automatic sandbag machine needed to perform routine and annual maintenance for roadways and drainage facilities.
CLIMATE CHANGE			
1.7	CC 1.1	1	Implement measures to reduce GHG and energy usage as identified in the Town's CAP.

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Action No.	Mitigation Action	Description / Background	Mitigation Category	Funding	Cost/Benefit	Lead Dept.	Timeline
AH 1.1	Implement a public notification system to increase ability to alert the public to potential emergency situations and	The Town currently does not have a Town wide notification system for residents, business owners and visitors.	Emergency Services	General Fund Grants	High/High	Emergency Preparedness/PIO	5-10 years
AH 2.1	To ensure continual power supply, purchase and install backup generator at EOC.	The Town would like to move the current location of the EOC to a Town owned facility, however, we do not have a backup generator at any facility.	Public Education & Awareness	General Fund Grants	High/High	Emergency Preparedness & Facilities	3-5 years
EQ 1.1	Seismic retrofit of Bear Valley Bridge over Mojave River.	Town Engineering Department is in the planning stages for seismic retrofit of Bear Valley bridge.	Structural Projects	General Fund Grants	High/High	Engineering	5-10 years
EQ 1.2	Seismic analysis of the James Woody Community Center.	Seismic analysis of the James Woody Community Center would provide information on needed improvements to the building to respond to seismic activity.	Property Protection Alternatives	Grants	High/High	Building & Safety	3-5 years
EQ 1.3	Seismic analysis of the Town Hall Development Services Building.	Seismic analysis of the Town Hall Development Services Building would provide information on needed improvements to the building to respond to seismic activity.	Property Protection Alternatives	Grants	High/High	Building & Safety	3-5 years
EQ 2.1	Increase number of residents who complete public education programs such as CERT for earthquake risks and response.	Apple Valley has one of the most successful CERT programs in the High Desert. To increase public education and preparedness, expansion of CERT and the DSW program is necessary.	Public Education & Awareness	General Fund Grants	Low/High	Emergency Preparedness	On going
WF 1.1	Continue and enhance fire hazard abatement program.	The Fire Hazard/Weed Abatement Program goal is to have combustible vegetation and debris removed to reduce available fuel for fires. Continuation and enhancement of the program is necessary to decrease wildfires throughout Town.	Natural Resource Protection	AVFPD General Fund, Grants	Medium/High	AVFPD	On going
WF 1.2	Continue to identify areas vulnerable to wildfire due to inadequate water supply for firefighting and implement improvements such as expansion of water supply and storage hydrants.	There are some areas of Apple Valley that have sparse development and limited water supply for firefighting capabilities. The Fire District will continue to identify these areas and develop improvements to increase water supply.	Structural Projects	AVFPD General Fund, Grants	Medium/High	AVFPD	On going
WF 2.1	Continue and enhance community risk reduction programs such as Ready Set Go, burn permits, and educational programs through the schools.	The Community Risk Reduction program is dedicated to maintaining a proactive approach to reducing the risk to lives and property within the Apple Valley. The programs aim at preventing an emergency before it happens through education, preparedness, permits, and fire codes.	Public Education & Awareness	AVFPD General Fund, Grants	Medium/High	AVFPD	On going
FL 1.1	Drainage system upgrade on Navajo Road near James Woody Community Center.	During and after a major storm, flooding occurs on Navajo Road near the James Woody Community Center. Town Engineering department has identified the private property adjacent and to the south of the Community Center as a vital acquisition in order to build a basin for flowing water on Navajo Road.	Structural Projects	General Fund Grants	Low/Medium	Engineering	5-10 years
FL 1.2	Install drywell Seneca/Cronese Road	This intersection has been identified by our Engineering Department as an area in need of a drywell to combat flooding after a storm.	Structural Projects	General Fund Grants	Low/Medium	Engineering	3-5 years

Action No.	Mitigation Action	Description / Background	Mitigation Category	Funding	Cost/Benefit	Lead Dept.	Timeline
FL 1.3	Install drywell Gayhead/Seminole Road	This intersection has been identified by our Engineering Department as an area in need of a drywell to combat flooding after a storm.	Structural Projects	General Fund Grants	Low/Medium	Engineering	3-5 years
FL 2.1	Purchase resources such as a skid steer loader and automatic sandbag machine needed to perform routine and annual maintenance for roadways and drainage facilities.	The Town's Public Works department has limited resources to clear drainage facilities and roadways before and after major storms. Purchase of these two resources will aid in increasing staff's efficiency when conducting routine maintenance.	Prevention	General Fund Grants	High/High	Public Works	3-5 years
CC 1.1	Implement measures to reduce GHG and energy usage as identified in the Town's CAP.	The Town of Apple Valley's Climate Action Plan addresses the environmental effects of climate change and GHG reduction for the Town.	Prevention	General Fund Grants	Low/Low	Planning	On Going

Section 7. Plan Maintenance

7.1 Monitoring, Evaluating and Updating the HMP

As a living document it is important that this plan becomes a tool in the Town of Apple Valley's resources to ensure reductions in possible damage from a natural hazard event. This section discusses plan adoption, implementation, monitoring, evaluating, and updating the HMP. Plan implementation and maintenance procedures will ensure that the HMP remains relevant and continues to address the changing environment in the Town of Apple Valley's. This section describes the incorporation of the HMP into existing Apple Valley's planning mechanisms, and how the Apple Valley's staff will continue to engage the public.

7.2 Plan Adoption

To comply with DMA 2000, the Town Council has officially adopted the 2017 Town of Apple Valley HMP. The adoption of the 2017 HMP recognizes Apple Valley's commitment to reducing the impacts of natural hazards within Town limits. A copy of the 2017 HMP adoption resolution is included in the front of the approved HMP document.

7.3 Implementation

Over time, Implementation Strategies will become more detailed and the Town's mitigation planners will work to provide greater detail for priority mitigation actions. In conjunction with the Mitigation Implementation Plan Worksheet and Mitigation Action Reporting Form outlined at the end of Section 7 these will be extremely useful as a plan of record tool for updates. Each implementation strategy worksheet provides individual steps and resources needed to complete each mitigation action. The following provides several options to consider when developing implementation strategies in the future:

- **Use processes that already exist-** initial strategy is to take advantage of tools and procedures identified in the capability assessment in Section 6. By using planning mechanisms already in use and familiar to Town departments and organizations, it will give the planning implementation phase a strong initial boost, especially if a mitigation strategy calls for expanding existing programs, or creating new programs or processes at a later date. Section 6 provides more information on existing planning mechanisms.
- **Updated work plans-** policies, or procedures; hazard mitigation concepts and activities can help integrate the 2017 HMP into daily operations. These changes can include how major development projects and subdivision reviews are addressed in hazard prone areas or ensure that hazard mitigation concerns are considered in the approval of major capital improvement projects.
- **Job descriptions-** working with department or agency heads to revise job descriptions of government staff to include mitigation-related duties could further institutionalize hazard mitigation. This change would not necessarily result in great financial expenditures or programmatic changes.

7.4 Future Participation

The Town of Apple Valley's HMP Planning Committee, established for this update, will become a permanent advisory body to administer and coordinate the implementation and maintenance of the 2017 HMP. The Office of Emergency Preparedness will lead the 2017 HMP plan development and updates and all associated HMP

maintenance requirements. Other duties include reviewing and promoting mitigation opportunities, informing and soliciting input from the public and developing grant applications for hazard mitigation assistance.

7.5 Schedule

The HMP will be updated every five years, as required by DMA 2000. The formal update process will begin at least one year prior to the expiration of the Town Council adoption date of the HMP notated at the beginning of this plan. However, should a significant disaster occur within Apple Valley, the HMP Planning Committee will reconvene within 30 days of the disaster to review and update the HMP as needed. The Town Council will adopt written updates to the HMP as a DMA 2000 requirement.

7.6 Process

The HMP Planning Committee will coordinate with responsible agencies/departments identified for each mitigation action. These responsible agencies/departments will monitor and evaluate the progress made on the implementation of mitigation actions and report to the HMP Planning Committee on an annual basis. Working with the HMP Planning Committee, these responsible agencies/organizations will be asked to assess the effectiveness of the mitigation actions and modify the mitigation actions as appropriate. A HMP Mitigation Action Progress Report worksheet, provided at the end of this section was developed as part of this HMP to assist mitigation project managers in reporting on the status and assessing the effectiveness of the mitigation actions.

Information culled from the mitigation leads or "champions" will be used to monitor mitigation actions and annual evaluation of the HMP. The following questions will be considered as criteria for evaluating the effectiveness of the HMP:

- Has the nature or magnitude of hazards affecting the Town changed?
- Are there new hazards that have the potential to impact the Town?
- Do the identified goals and actions address current and expected conditions?
- Have mitigation actions been implemented or completed?
- Has the implementation of identified mitigation actions resulted in expected outcomes?
- Are current resources adequate to implement the HMP?
- Should additional local resources be committed to address identified hazards?

An Annual HMP Review Questionnaire worksheet, provided in the Appendix D.7, has been developed as part of this HMP to provide guidance to the HMP Planning Committee on what should be included in the evaluation. Future updates to the HMP will account for any new hazard vulnerabilities, special circumstances, or new information that becomes available. Issues that arise during monitoring and evaluating the HMP, which require changes to the risk assessment, mitigation strategy and other components of the HMP, will be incorporated into the next update of the 2017 HMP in 2022. The questions identified above would remain valid during the preparation of the 2022 update.

7.7 Incorporation into Existing Planning Mechanisms

An important implementation mechanism is to incorporate the recommendation and underlying principles of the HMP into community planning and development such as capital improvement budgeting, building and zoning codes, general plans and regional plans.

The 2017 Hazard Mitigation Plan update process was followed by inclusion of mitigation measures in the Town of Apple Valley's General Plan. The Town of Apple Valley addresses statewide planning goals and legislative requirements through its General Plan, Capital Improvement Projects, Climate Action Plan and City Building and Safety Codes. The Hazard Mitigation Plan will implement a series of recommendations, many of which are closely related to the goals and objectives of existing planning programs just mentioned. The Town of Apple Valley will have the opportunity to implement recommended mitigation action items through existing programs and procedures.

The Hazard Mitigation Plan goals and actions will be incorporated into various general operations of government. For example, much of the information from the Hazard Mitigation Plan will be included in the Town of Apple Valley's Emergency Operations Plan (EOP). As any future Town plans are developed, the Hazard Mitigation Plan will be a great asset in any plan development efforts. As noted earlier, much of the information contained in this Hazard Mitigation Plan is from the Town's General Plan and is already part of the planning process.

7.8 Continued Public Involvement

A critical part of maintaining an effective and relevant Hazards Mitigation Plan is ongoing public review and comment. Consequently, the Town is dedicated to the direct involvement of its citizens in providing feedback and comments on the plan on a continued basis. The public will continue to be apprised of Local Hazard Mitigation Plan actions through the Town's website and through the local media.

The Town of Apple Valley will continue to promote and secure hazard mitigation, preparedness, response, and recovery actions via:

- Regular quarterly meetings of the Apple Valley Disaster Council
- Continued participation in the Operational Area Coordinating Council meeting.
- Regular revision of the Emergency Operations Plan and the Hazard Mitigation Plan as outlined respectively
- Annual drills and training with Emergency Operations Center staff
- Support of the full-time Emergency Preparedness Program
- Promotion at community events whenever possible

All proposed changes to the plan will be subject to citizen review prior to Town Council action. The Town will follow its standard public input process, consistent with the process used in the initial plan development, which is described in Section 3 of this Plan.

7.9 2017 HMP Mitigation Action Implementation Plans

Mitigation Action Implementation Plan	
Action:	
Implementing Agencies	
Lead Agency (ies):	Town of Apple Valley
Roles and Responsibilities:	
Support Agency (ies):	
Roles and Responsibilities:	
Preliminary Identified Tasks:	
1.	
2.	
3.	
Implementation Costs	
Estimated Capital Costs:	
Estimated Maintenance Costs:	
Implementation Resources	
Financial Resources (Funding):	
Technical Assistance Resources:	
Required Equipment, Vehicles, and Supplies	
Office Supplies	
Vehicles	
Implementation Timeframe	
Estimated Mitigation Action Start Date:	
Estimated Mitigation Action Completion Date:	

7.10 Blank Mitigation Action Reporting Forms

Your jurisdictional may wish to use these mitigation actions reporting forms on an annual, semiannual, or quarterly basis.

Progress Report Period:_____ to _____

                               (date)   (date)

Project Title:_____

Project ID#_____

Responsible Agency:_____

Address:_____

Town: _____

Contact Person:_____

Phone#: _____ Email _____

List Supporting Agencies and Contacts:_____

Total Project Cost:_____

Funding Source:_____

Anticipated Cost Overrun/Underrun:_____

Date of Project Approval:_____ Start date of the project:_____

Anticipated completion date: _____

Description of the Project (include a description of each phase, if applicable, and the time frame for completing each phase):_____

Milestones	Completed (✓)	Projected Date of Completion

HMP Goal Addressed: _____

Indicator of Success:_____

Project Status:

□ Project on schedule   □ Cost unchanged   □ Project completed

□ Cost overrun*   □ Project delayed*

*explain_____

Summary of progress on project for this report:

A. What was accomplished during this reporting period?

B. What successes have you encountered, if any?

C. What obstacles, problems, or delays have you encountered, if any?

D. How was each problem resolved?

E. Based on the past experiences (successes and obstacles), what changes, if any, need to be made to ensure completion?

Next Steps: What are the next step(s) to be accomplished over the next reporting period?

Other Comments:

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Section 8. Work Cited

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Appendix A

A.1   Copy of Town Resolution adopting HMP

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Appendix B

B.1   **Planning Committee Team**

B.2   **Planning Committee Invite Letters**

B.3   **Committee Meeting Documents (PPT's, sign in sheets and agendas)**

B.4   **Other Meeting Agendas (CERT, Disaster Council, Town Council)**

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B.1   Planning Committee Team

Apple Valley HMP Team

Suggested Planning Team Members
Emergency Management
Building Code Enforcement
Fire District
GIS
Parks & Recreation
Planning/Com. Development
PIO
Public Works
Stormwater Management
Transportation

Proposed 2016 HMP Core Planning Team

Title	Person
Emer. Management	Joseph Ramos
Building Official	Patrick Carroll
AVFPD	Sid Hultquist
GIS	Pam Cupp
Parks & Rec	Ralph Wright
Planning/Comm Dev.	Lori Lamson
PIO	Kathie Martin
Public Works	Greg Synder
Engineer	Brad Miller

Key Stakeholders

DSW	Dawn Harrison
City of Hesperia	Rachel Molina
City of Victorville	Dana Welborn
AVUSD	Janet Gould
American Red Cross	Don Gordon
County of SB	Cindy Serrano
SW Gas	Bill Hensley
Edison	Bob Stiens
Liberty Utilities	Kevin Phillips
Nat. Weather Service	Alex Tardy
St. Josephs- St. Mary's	Shannon Welsh
Cal OES	HMP division
FEMA	HMP division

2010

Title	Person
DSW	Shelley Alfieri
Fire Chief	Art Bishop
United Way	Chris Briggs
AV Ranchos Water	Mike Cook
ATM- TOAV	Dennis Cron
CERT Commander	Dawn Harrison
DSW	Pat Hayes
TOAV- Engineer	Brad Miller
PW manager- TOAV	Lance Miller
Risk Manager- AVUSD	David Pinnecker
Building Official- TOAV	Claude Stewart
St. Mary's	Robert Suchomel
ESO- TOAV & AVFPD	Laura Whitehead
P & R Manager	Ralph Wright

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B.2   Planning Committee Invite Letters

Town of Apple Valley
Office of Emergency Preparedness

A Better Way of Life

July 20, 2016

You are invited to make a difference!

Town of Apple Valley is required to maintain a current Local Hazard Mitigation Plan (HMP) approved by CalOES and FEMA that identifies hazards and mitigation potential within the Town of Apple Valley. In addition to preparedness, this plan is necessary to insure that Apple Valley is eligible to receive federal grants and/or aid related to natural disaster. This is a 5-year plan. Apple Valley has begun the process to prepare the 2016 update to the Local Hazard Mitigation Plan (HMP) and we invite you to participate. The HMP will serve as a blueprint for reducing property damage and saving lives from the effects of future natural disasters in Apple Valley.

To guide this process, Apple Valley has established two groups: The Core Planning Committee who will work closely to shape the plan; and the Stakeholder Group to give a broad perspective during plan development. You are receiving this because our _**Town Manager**_ has identified you as a key participant at the Core Planning level. We welcome your participation as part of the HMP Core Planning Team to update our natural hazard mitigation documents for Apple Valley.

To provide solidarity in the process, we would like to kick-off the planning efforts with a meeting for team members. The strategy of this meeting is to have members meet, organize and provide input on the hazards, mitigation strategies, and other components of the HMP planning process. Later in the planning process, we will start engaging a larger group of stakeholders, and develop a plan together with the help of a consultant team hired by the County.

The kick-off meeting will be on _**Tuesday, August 2, 2016 at 8:30 a.m.**_ at the Town Hall Development Services Building meeting room 1 located at 14975 Dale Evans Parkway.

For more information about the HMP process and history behind the program visit:

www.readyapplevalley.org.

Cal OES Local Hazard Mitigation Planning Program (LHMP):
http://hazardmitigation.calema.ca.gov/plan/local_hazard_mitigation_plan_lhmp

FEMA's Website on Hazard Mitigation Planning Resources:
http://www.fema.gov/hazard-mitigation-planning-resources

www.AppleValley.org   14955 Dale Evans Parkway • Apple Valley, **California** 92307 • 760.240.7000

FEMA's Guide on Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards:
http://www.fema.gov/library/viewRecord.do?id=6938

FEMA's Guide on Integrating Hazard Mitigation Intro Local Planning: Case Studies and Tools for Community Officials:
http://www.fema.gov/library/viewRecord.do?id=7130

Please advise if you will or will not be able to attend this kick off meeting. If you are unable to attend this meeting, additional information regarding future meetings, draft documents for review, and other project milestones will be provided soon!

If you have any additional questions, please do not hesitate to contact me by phone or email. Thank you for your time and consideration,

Joseph Ramos
Town of Apple Valley
Emergency Services Officer
jramos@applevalley.org
760-240-7000 ext. 7890

Town of Apple Valley
Office of Emergency Preparedness

A Better Way of Life

July 28, 2016

You are invited to make a difference!

Town of Apple Valley has begun the process to prepare the 2016 update to the Hazard Mitigation Plan (HMP) and we invite you to participate. The HMP will serve as a blueprint for reducing property damage and saving lives from the effects of future natural disasters in the Town of Apple Valley. To guide this process, the Town has established two groups: The Planning Committee who will work most closely to shape the plan; and the Stakeholder Group to give a broad perspective during plan development. You are receiving this because you or your agency has been identified as a key participant at the "Stakeholder Group" level. The Town welcomes you (or other interested parties) to assist the HMP Project Management Team to update our natural hazard mitigation documents for the Town of Apple Valley. _**This will involve periodic review of documentation and feedback during certain points of the planning process**_.

To provide solidarity in the planning process, we would like to inform you that our project will be starting soon with a kick-off meeting. You are more than welcome to join this meeting but attendance at this meeting is not a requirement to be involved in the entire process. The strategy of this meeting is to have members meet, organize and discuss next steps and other components of the HMP planning process. Later in the planning process, we will start engaging a larger group of stakeholders through various means of engagement. We anticipate the HMP development process to last about 8 to 12 months.

The kick-off meeting will be on _**Tuesday, August 2, 2016 at 8:30 a.m.**_ at the Town Hall Development Services Building meeting room 1 located at 14975 Dale Evans Parkway.

For more information about the HMP process and history behind the program visit:

www.readyapplevalley.org.

Cal OES Local Hazard Mitigation Planning Program (LHMP):
http://hazardmitigation.calema.ca.gov/plan/local_hazard_mitigation_plan_lhmp

FEMA's Website on Hazard Mitigation Planning Resources:
http://www.fema.gov/hazard-mitigation-planning-resources

FEMA's Guide on Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards:
http://www.fema.gov/library/viewRecord.do?id=6938

www.AppleValley.org   14955 Dale Evans Parkway • Apple Valley, **California** 92307 • 760.240.7000

FEMA's Guide on Integrating Hazard Mitigation Intro Local Planning: Case Studies and Tools for Community Officials:
http://www.fema.gov/library/viewRecord.do?id=7130

Please respond to this e-mail and advise if you will be participating in this process, and who will be assigned to represent your agency. If you are unable to attend this meeting but still wish to participate in the planning process, additional information regarding future meetings, draft documents for review, and other project milestones will be provided through e-mails.

If you have any additional questions, please do not hesitate to contact me by phone or email. Thank you for your time and consideration,

Joseph Ramos
Town of Apple Valley
Emergency Services Officer
jramos@applevalley.org
760-240-7000 ext. 7890

Town of Apple Valley
Office of Emergency Preparedness

A Better Way of Life

Media Alert

July 28, 2016
For immediate release

You are invited to make a difference!

Town of Apple Valley has begun the process to prepare the 2016 update to the Hazard Mitigation Plan (HMP) and we invite you to participate. The HMP will serve as a blueprint for reducing property damage and saving lives from the effects of future natural disasters in the Town of Apple Valley. The Town welcomes you (or other interested parties) to assist the HMP Project Management Team to update our natural hazard mitigation documents for the Town of Apple Valley. This will involve periodic review of documentation and feedback during certain points of the planning process.

To provide solidarity in the planning process, we would like to inform you that our project will be starting soon with a kick-off meeting. You are more than welcome to join this meeting but attendance in this meeting is not a requirement to be involved in the entire process. We anticipate the HMP development process to last about 8 to 12 months.

The kick-off meeting will be on *Tuesday, August 2, 2016 at 8:30 a.m.* at the Town Hall Development Services Building meeting room 1 located at 14975 Dale Evans Parkway.

We will have additional discussions of the HMP during all upcoming Disaster Council Meetings and CERT meetings.

For more information about the HMP process and history behind the program visit: www.readyapplevalley.org.

If you have any additional questions, please do not hesitate to contact me by phone or email. Thank you for your time and consideration.

Joseph Ramos
Town of Apple Valley
Emergency Services Officer
jramos@applevalley.org
760-240-7000 ext. 7890

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B.3   Committee Meeting Documents (PPT's, sign in sheets and agendas)

6/15/2017

1

6/15/2017

6/15/2017

3

6/15/2017

4

6/15/2017

5

6/15/2017

Kick Off Meeting-Monday August 2, 2016

Planning Committee Dept. / Members	E-Mail	Initial
Town Engineering/Building & Safety Department		
Brad Miller	bmiller@applevalley.org	
Patrick Carroll	pcarroll@applevalley.org	
Brett Morgan	bmorgan@applevalley.org	
Town Community Development		
Lori Lamson	llamson@applevalley.org	
Pam Cupp	pcupp@applevalley.org	
Ralph Wright	rwright@applevalley.org	
AV Fire Protection District		
Sid Hultquist	shultquist@applevalleyfd.com	
Rich Unferdorfer	runferdorfer@applevalleyfd.com	
Town Public Works		
Greg Snyder	gsnyder@applevalley.org	
Mike Cady	mcady@applevalley.org	
Town PIO		
Kathy Martin	kmartin@applevalley.org	
Office of Emergency Preparedness		
Joseph Ramos	jramos@applevalley.org	
Dawn Harrison	dharrison@applevalley.org	

Carol Miller   cmiller@applevalley.org

6/15/2017

1

6/15/2017

2

6/15/2017

3

6/15/2017

4

6/15/2017

6/15/2017

6

6/15/2017

6/15/2017

8

6/15/2017

Meeting-Tuesday October 18, 2016

Planning Committee Dept. / Members	E-Mail	Initial
Town Engineering/Building & Safety Department		
Brad Miller	bmiller@applevalley.org	
Patrick Carroll	pcarroll@applevalley.org	
Brett Morgan	bmorgan@applevalley.org	[signature]
Town Community Development		
Lori Lamson	llamson@applevalley.org	
Carol Miller	cmiller@applevalley.org	[signature]
Pam Cupp	pcupp@applevalley.org	[signature]
Ralph Wright	rwright@applevalley.org	[signature]
AV Fire Protection District		
Sid Hultquist	shultquist@applevalleyfd.com	
Rich Unferdorfer	runferdorfer@applevalleyfd.com	[signature]
Town Public Works		
Greg Snyder	gsnyder@applevalley.org	[signature]
Mike Cady	mcady@applevalley.org	
Town PIO		
Kathy Martin	kmartin@applevalley.org	
Office of Emergency Preparedness		
Joseph Ramos	jramos@applevalley.org	[signature]
Dawn Harrison	dharrison@applevalley.org	[signature]

6/15/2017

**Town of Apple Valley
2016-17
Hazard Mitigation Plan Update Process**

**HMP Meeting #3
February 21, 2017**

1

Town of Apple Valley Hazard MitigationAgenda:

1. Review- HMP Citizen Survey Results

2. Hazard Summary Worksheet

3. Risk Factor Worksheet

4. Agree on hazards to identify

5. Discuss next steps

6. Next meeting in March- this timeframe work?

2

1

6/15/2017

**Town of Apple Valley
Local Hazard Mitigation Plan
Survey**

Thursday, February 16, 2017

Powered by SurveyMonkey

123

Total Responses

Date Created: Thursday, September 29, 2016

Complete Responses: 123

2

6/15/2017

Q1: Do you.. (Check all that apply).
Answered: 123   Skipped: 0

Answer Choices	Responses	
Live in the Town of Apple Valley	84.55%	104
Work in the Town of Apple Valley	58.54%	72
Visit the Town of Apple Valley, but live and work elsewhere	1.63%	2
Total Respondents: 123		

***Q2: Which of the following types of natural disasters have you or someone in your household experienced in the past 15 years within the Town of Apple Valley? (Check all that apply)
Answered: 123   Skipped: 0

3

6/15/2017

***Q2: Which of the following types of natural disasters have you or someone in your household experienced in the past 15 years within the Town of Apple Valley? (Check all that apply)

Answered: 123   Skipped: 0

Answer Choices	Responses	
Earthquake	72.36%	89
Wildfire	43.90%	54
Flooding	32.52%	40
Severe weather	47.15%	58
Landslides/ Debris flow	7.32%	9
Drought liquefaction	8.94%	11
Wind Storm	71.54%	88
Dust storm	66.67%	82
Total Respondents: 123		

***Q3: How concerned are you about the following natural hazards affecting your home and/or business in Apple Valley? Please check ONE response for each hazard.

Answered: 123   Skipped: 0

4

6/15/2017

***Q3: How concerned are you about the following natural hazards affecting your home and/or business in Apple Valley? Please check ONE response for each hazard.

Answered: 123   Skipped: 0

	Very concerned	Somewhat concerned	Neutral	Not very concerned	Not concerned	Total	Weighted Average
Earthquake	50.41% 62	35.77% 44	8.13% 10	4.88% 6	0.81% 1	123	1.70
Wildfire	24.39% 30	36.59% 45	17.07% 21	15.45% 19	6.50% 8	123	2.43
Flooding	17.07% 21	32.52% 40	26.83% 33	15.45% 19	8.13% 10	123	2.65
Severe weather	18.33% 22	48.33% 58	20.00% 24	10.00% 12	3.33% 4	120	2.32
Landslides/Debris Flow	4.13% 5	16.53% 20	30.58% 37	28.93% 35	19.83% 24	121	3.44
Drought and water shortage	61.79% 76	24.39% 30	7.32% 9	1.63% 2	4.88% 6	123	1.63
Liquefaction	8.55% 10	15.38% 18	35.90% 42	19.66% 23	20.51% 24	117	3.28
Wind storm	21.31% 26	45.08% 55	19.67% 24	9.84% 12	4.10% 5	122	2.30
Dust storm	18.18% 22	43.80% 53	23.14% 28	9.92% 12	4.96% 6	121	2.40
Dam Failure	5.83% 7	11.67% 14	24.17% 29	27.50% 33	30.83% 37	120	3.66
Extreme Heat	21.49% 26	41.32% 50	16.53% 20	8.26% 10	12.40% 15	121	2.49

Q4: Information about the risks from natural hazards is readily available and easy to locate.

Answered: 123   Skipped: 0

Answer Choices	Responses	
Strongly Agree	28.46%	35
Somewhat Agree	38.21%	47
Neither Agree or Disagree	19.51%	24
Somewhat Disagree	12.20%	15
Strongly Disagree	1.63%	2
Total		123

5

6/15/2017

Q5: It is my responsibility to educate myself and take actions that will reduce my exposure to the risks from natural hazards.

Answered: 123   Skipped: 0

Answer Choices	Responses	
Strongly Agree	73.98%	91
Somewhat Agree	22.76%	28
Neither Agree or Disagree	1.63%	2
Somewhat Disagree	1.63%	2
Strongly Disagree	0.00%	0
Total		123

Q6: It is the responsibility of government (local, state and federal) to provide education and programs that promote citizen actions that will reduce exposure to the risks from natural hazards.

Answered: 123   Skipped: 0

Answer Choices	Responses	
Strongly Agree	34.96%	43
Somewhat Agree	47.97%	59
Neither Agree or Disagree	12.20%	15
Somewhat Disagree	0.00%	0
Strongly Disagree	4.88%	6
Total		123

6

25

6/15/2017

Q7: What mitigation measures or strategies have been completed in the last 5 years to protect your home or business from a natural hazard? Check all that apply

Answered: 123   Skipped: 0

Q7: What mitigation measures or strategies have been completed in the last 5 years to protect your home or business from a natural hazard? Check all that apply

Answered: 123   Skipped: 0

Answer Choices	Responses	
flood proofing	16.26%	20
seismic upgrades	13.82%	17
dry weed abatement	73.98%	91
defensible space	52.85%	65
earthquake insurance	11.38%	14
flood insurance	9.76%	12
None	14.63%	18
Other (please specify)	3.25%	4
Total Respondents: 123		

7

6/15/2017

Q8: How much money do you spend annually on mitigation measures to protect your home or business from natural hazards?

Answered: 123   Skipped: 0

Q8: How much money do you spend annually on mitigation measures to protect your home or business from natural hazards?

Answered: 123   Skipped: 0

Answer Choices	Responses	
None	22.76%	28
Less than $250	45.53%	56
$250-$499	20.33%	25
$500-$1000	9.76%	12
More than $1000	1.63%	2
Total		123

8

6/15/2017

Q9: Which of the following incentives would encourage you to protect your home against natural hazards? (Check all that apply)

Answered: 123   Skipped: 0

Q9: Which of the following incentives would encourage you to protect your home against natural hazards? (Check all that apply)

Answered: 123   Skipped: 0

Answer Choices	Responses	
Insurance premium discount	75.61%	93
Mortgage discount or low interest loan	39.02%	48
Financial assistance for property upgrades or equipment	46.34%	57
Rebate program	47.97%	59
Technical assistance	29.27%	36
Labor assistance	38.21%	47
Grant funding that requires cost share from property owner	25.20%	31
Building permit fee reduction or waiver	34.96%	43
Property tax break or incentive	67.48%	83
Financial assistance for equipment	26.83%	33
Total Respondents: 123		

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6/15/2017

Q10: What protection methods do you believe the Town, County, State or Federal agencies should be using in order to reduce damage and disruption from hazard events within the Town of Apple Valley?

Answered: 123   Skipped: 0

Q10: What protection methods do you believe the Town, County, State or Federal agencies should be using in order to reduce damage and disruption from hazard events within the Town of Apple Valley?

Answered: 123   Skipped: 0

	High Priority	Medium Priority	Low Priority	Total
Retrofit and strengthen essential facilities such as police, fire, schools and hospitals	76.42% 94	18.70% 23	4.88% 6	123
Retrofit infrastructure such as roads, bridges, drainage facilities, water supply, and waster water.	85.37% 105	13.82% 17	0.81% 1	123
Fund projects related to drainage control measures and improvements.	39.84% 49	55.28% 68	4.88% 6	123
Strengthen codes and regulations to include higher standards in hazard areas.	26.02% 32	47.97% 59	26.02% 32	123
Assist vulnerable property owners with securing funding for mitigation/property protection.	32.52% 40	46.34% 57	21.14% 26	123
Increase public information about risks and the exposure to hazards within the Town of Apple Valley.	55.28% 68	30.89% 38	13.82% 17	123
Carry out projects to restore the natural environment's capacity to absorb the impacts from natural hazards.	51.22% 63	35.77% 44	13.01% 16	123
Acquire emergency generators for essential government facilities and buildings identified as care and shelter.	60.16% 74	29.27% 36	10.57% 13	123

10

6/15/2017

Q11: Thinking back in the last three years, from whom have you received information about how to make members of your household and your home safer from natural disasters? Check all that apply.

Answered: 123   Skipped: 0

Answer Choices	Responses	
News media	56.10%	69
Government agency	38.21%	47
Insurance agent or company	25.20%	31
Utility company	51.22%	63
Neighbor/friend/relative	21.95%	27
elected official	4.07%	5
American Red Cross	17.89%	22
Other non-profit	13.82%	17
Social Media	24.39%	30
Not sure	2.44%	3
Have not received information	5.69%	7
Other (please specify)	23.58%	29
Total Respondents: 123		

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6/15/2017

***Q12: Whom would you most trust to provide you with information about how to make your household and home safer from natural disasters? Choose at least 3 responses.

Answered: 123   Skipped: 0

***Q12: Whom would you most trust to provide you with information about how to make your household and home safer from natural disasters? Choose at least 3 responses.

Answered: 123   Skipped: 0

Answer Choices	Responses	
New media	26.83%	33
Governments agency	63.41%	78
Insurance agent or company	33.33%	41
Utility company	59.35%	73
Neighbor/friend/relative	25.20%	31
Elected official	9.76%	12
American Red Cross	47.15%	58
Other non-profit organization	32.52%	40
Social media	7.32%	9
Other (please specify)	17.89%	22
Total Respondents: 123		

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6/15/2017

Q13: Do you rent or own your home or business?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Own	90.24%	111
Rent	9.76%	12
Total		123

Q14: Is your home or business in or near a FEMA designated floodplain?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	9.76%	12
No	56.91%	70
Not Sure	33.33%	41
Total		123

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6/15/2017

Q15: Do you have flood insurance?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	9.76%	12
No	80.49%	99
Not Sure	9.76%	12
Other (please specify)	0.00%	0
Total		123

Q16: Is your home or business located near an earthquake fault?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	56.10%	69
No	11.38%	14
Not Sure	32.52%	40
Total		123

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6/15/2017

Q17: Do you have earthquake insurance?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	10.57%	13
No	82.11%	101
Not sure	6.50%	8
Other (please specify)	0.81%	1
Total		123

Q18: To the best of your knowledge, does your homeowner's, renter's, or general insurance policy provide coverage for damage from natural hazards?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	39.02%	48
No	17.07%	21
Not Sure	41.46%	51
Do not have property insurance	2.44%	3
Total		123

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6/15/2017

Q19: Have you ever had problems obtaining homeowner's or renter's insurance due to risks from natural hazards?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	6.50%	8
No	84.55%	104
Not Sure	3.25%	4
Never tried obtaining hazard insurance	5.69%	7
Total		123

***Q20: When you moved into your home, did you consider the impact a natural hazard event could have on your home?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	57.72%	71
No	38.21%	47
Not Sure	4.07%	5
Total		123

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6/15/2017

Q21: Was the presence of a natural hazard risk zone (for example, wild fire area or flood zone) disclosed to you by a real estate agent, seller or landlord before you purchased or moved into your home?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	34.15%	42
No	53.66%	66
Not Sure	12.20%	15
Total		123

Q22: Would natural hazard real estate disclosures or risk information influence your decision on where to buy or rent a home?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	83.74%	103
No	7.32%	9
Not Sure	8.94%	11
Total		123

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6/15/2017

LHMP Hazard Summary Worksheet

Planning Team Meeting- Feb. 21, 2017

Use this worksheet to summarize hazard description information and identify which hazards are most significant to the planning area. The definitions provided on the following page can be modified to meet local needs and methods.

Hazard	Location (Geographic Area Affected)	Maximum Probable Extent (Magnitude/Strength)	Probability of Future Events	Overall Significance Ranking
Climate Change				
Dam Failure				
Drought				
Earthquake				
Erosion				
Expansive Soils				
Extreme Cold				
Extreme Heat				
Flood				
Landslide				
Lightning				
Severe Wind				
Severe Winter Weather				
Subsidence				
Terrorism				
Wildfire				

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Definitions for Classifications

Location (Geographic Area Affected)
- **Negligible:** Less than 10 percent of planning area or isolated single-point occurrences
- **Limited:** 10 to 25 percent of the planning area or limited single-point occurrences
- **Significant:** 25 to 75 percent of planning area or frequent single-point occurrences
- **Extensive:** 75 to 100 percent of planning area or consistent single-point occurrences

Maximum Probable Extent (Magnitude/Strength based on historic events or future probability)
- **Weak:** Limited classification on scientific scale, slow speed of onset or short duration of event, resulting in little to no damage
- **Moderate:** Moderate classification on scientific scale, moderate speed of onset or moderate duration of event, resulting in some damage and loss of services for days
- **Severe:** Severe classification on scientific scale, fast speed of onset or long duration of event, resulting in devastating damage and loss of services for weeks or months
- **Extreme:** Extreme classification on scientific scale, immediate onset or extended duration of event, resulting in catastrophic damage and uninhabitable conditions

Hazard	Scale / Index	Weak	Moderate	Severe	Extreme
Drought	Palmer Drought Severity Index	+1.99 to +1.99	-2.00 to -2.99	-3.00 to -3.99	4.00 & below
Earthquake	Modified Mercalli Scale	I to IV	V to VII	VIII	IX to XII
	Richter Magnitude	2, 3	4, 5	6	7, 8

Probability of Future Events
- **Unlikely:** Less than 1 percent probability of occurrence in the next year or a recurrence interval of greater than every 100 years.
- **Occasional:** 1 to 10 percent probability of occurrence in the next year or a recurrence interval of 11 to 100 years.
- **Likely:** 10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10 years
- **Highly Likely:** 90 to 100 percent probability of occurrence in the next year or a recurrence interval of less than 1 year.

Overall Significance
- **Low:** Two or more criteria fall in lower classifications or the event has a minimal impact on the planning area. This rating is sometimes used for hazards with a minimal or unknown record of occurrences or for hazards with minimal mitigation potential.
- **Medium:** The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating.
- **High:** The criteria consistently fall in the high classifications and the event is likely/highly likely to occur with severe strength over a significant to extensive portion of the planning area.

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6/15/2017

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6/15/2017

Risk Factor Index Criteria Table

Risk Assessment Category	Level	Degree of Risk Criteria	Index	Weight Value
PROBABILITY What is the likelihood of a hazard event occurring in a given year?	UNLIKELY	LESS THAN 1% ANNUAL PROBABILITY	1	30%
	POSSIBLE	BETWEEN 1 & 10% ANNUAL PROBABILITY	2	
	LIKELY	BETWEEN 10 &100% ANNUAL PROBABILITY	3	
	HIGHLY LIKELY	100% ANNUAL PROBABILITY	4	
IMPACT In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs?	MINOR	VERY FEW INJURIES, IF ANY. ONLY MINOR PROPERTY DAMAGE & MINIMAL DISRUPTION ON QUALITY OF LIFE. TEMPORARY SHUTDOWN OF CRITICAL FACILITIES.	1	30%
	LIMITED	MINOR INJURIES ONLY. MORE THAN 10% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE DAY.	2	
	CRITICAL	MULTIPLE DEATHS/INJURIES POSSIBLE. MORE THAN 25% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE WEEK.	3	
	CATASTROPHIC	HIGH NUMBER OF DEATHS/INJURIES POSSIBLE. MORE THAN 50% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR 30 DAYS OR MORE.	4	
SPATIAL EXTENT How large of an area could be impacted by a hazard event? Are impacts localized or regional?	NEGLIGIBLE	LESS THAN 1% OF AREA AFFECTED	1	20%
	SMALL	BETWEEN 1 & 10% OF AREA AFFECTED	2	
	MODERATE	BETWEEN 10 & 50% OF AREA AFFECTED	3	
	LARGE	BETWEEN 50 & 100% OF AREA AFFECTED	4	
WARNING TIME Is there usually some lead time associated with the hazard event? Have warning measures been implemented?	MORE THAN 24 HRS	SELF DEFINED	1	10%
	12 TO 24 HRS	SELF DEFINED	2	
	6 TO 12 HRS	SELF DEFINED	3	
	LESS THAN 6 HRS	SELF DEFINED	4	
DURATION How long does the hazard event usually last?	LESS THAN 6 HRS	SELF DEFINED	1	10%
	LESS THAN 24 HRS	SELF DEFINED	2	
	LESS THAN 1 WEEK	SELF DEFINED	3	
	MORE THAN 1 WEEK	SELF DEFINED	4	

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Due to the inherent errors possible in any disaster, the results of the risk factor analysis should only be used for planning purposes and in developing hazard priorities and concentrating jurisdictional resources. Before assigning risk factors and prioritization to hazards it is recommended to complete a draft of the hazard profiles and risk assessment information to aid in determining potential impacts. Before the hazard prioritization process you may want to consider the following risk assessment criteria:

- ✓ Inventory and summarize vulnerable assets
- ✓ Characterize repetitive flood loss properties
- ✓ Estimated harm to residents and estimated damages to buildings
- ✓ Describe vulnerability to future development

[Example Risk Factor Results from Plumas County Hazard Mitigation Project]

PLUMAS COUNTY HAZARD MITIGATION PLAN
Department of Health /Office of Emergency Services

Risk Factor Worksheet

Ranking	Natural Hazards	Probability	Calc.1	Impact	Calc.2	Spatial Extent	Calc.3	Warning Time	Calc.4	Duration	Calc.5	RF Factor
1	Wildfire	4	1.2	3	0.9	4	0.8	4	0.4	4	0.4	3.6
2	Severe Weather	4	1.2	2	0.9	4	0.8	1	0.1	2	0.2	2.9
3	Geologic Hazards	4	1.2	2	0.9	1	0.2	4	0.4	2	0.2	2.6
4	Flooding	2	0.6	3	0.9	2	0.4	1	0.1	4	0.4	2.4
5	Drought	2	0.6	3	0.1	3	0.6	4	0.1	4	0.4	2
6	Climate Change	2	0.6	1	0.3	4	0.8	1	0.1	1	0.1	1.9
7	Dam Failure	1	0.3	2	0.6	1	0.2	2	0.2	1	0.1	1.4

Risk Factor Conclusions

HIGH RISK (3.0 – 4.0)	Wildfire
MODERATE RISK (2.0 – 2.9)	Severe Weather, Geologic Hazards, Flooding
LOW RISK (0.1 – 1.9)	Drought, Climate Change, Dam Failure

The conclusions from the example risk factor results above, were translated into three categories for a final summary of hazard risk based on *High, Moderate, or Low* risk designations. The designations values are arbitrary and can be adjusted as deemed necessary. It should be noted that although some hazards are classified as posing Low risk, their occurrence of varying or unprecedented magnitudes is still possible and will continue to be reevaluated during future updates of this plan.

Use the Risk Factor Excel Worksheet to determine RF values for each hazard. The Excel worksheet is available for download under Phase 2, Planning Process Worksheets:

http://mitigatehazards.com/bds/sb-docs

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6/15/2017

LHMP RISK FACTOR EXCEL WORKSHEET

HAZARD PRIORITIZATION /

MITIGATE HAZARDS

Rank	Natural Hazards	Probability (1-4)	Factor1 = (Probability Index * .30)	Impact (1-4)	Factor2 = (Impact Index * .30)	Spatial Extent (1-4)	Factor3 = (Spatial Extent Index * .20)	Warning Time (1-4)	Factor4 = (Warning Time Index * .10)	Duration (1-4)	Factor5 = (Probability Index * .10)	RF Factor Total = (Add Factors 1-5)
1	Hazard 1		0		0		0		0		0	0
2	Hazard 2		0		0		0		0		0	0
3	Hazard 3		0		0		0		0		0	0
4	Hazard 4		0		0		0		0		0	0
5	Hazard 5		0		0		0		0		0	0
6	Hazard 6		0		0		0		0		0	0

The RF approach combines historical data, local knowledge, and consensus opinions to produce numerical values that allow identified hazards to be ranked against one another. These criteria were used to evaluate hazards and identify the highest risk hazard in the Lawndale region.

The RF approach produces numerical values that allow identified hazards to be ranked against one another (the higher the RF value, the greater the hazard risk). RF values are obtained by assigning varying degrees of risk to five categories for each hazard: probability, impact, spatial extent, warning time, and duration. Each degree of risk is assigned a value ranging from 1 to 4 and a weighing factor for each category was agreed upon by the MPC.

▇ Calculated Field

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- Discussion on identified hazards

- Due to limited resources will only focus on High Risk Identified Hazards

- Next meeting will discuss vulnerability assessment as it relates to these hazards. Will also begin the discussion on mitigation strategies for the identified hazards

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HMP Meeting - Tuesday February 21, 2017

Planning Committee Dept. / Members	E-Mail	Initial
Town Engineering/Building & Safety Department		
Brad Miller	bmiller@applevalley.org	
Patrick Carroll	pcarroll@applevalley.org	
Brett Morgan	bmorgan@applevalley.org	
Town Community Development		
Lori Lamson	llamson@applevalley.org	
Pam Cupp	pcupp@applevalley.org	
Ralph Wright	rwright@applevalley.org	
AV Fire Protection District		
Sid Hultquist	shultquist@applevalleyfd.com	SH
Rich Unferdorfer	runferdorfer@applevalleyfd.com	
Town Public Works		
Greg Snyder	gsnyder@applevalley.org	
Mike Cady	mcady@applevalley.org	
Town PIO		
Kathy Martin	kmartin@applevalley.org	
Office of Emergency Preparedness		
Joseph Ramos	jramos@applevalley.org	
Dawn Harrison	dharrison@applevalley.org	

Carol Miller   cmiller@applevalley.org

Planning Committee / Stakeholder Members	Name	E-Mail
County		
Regional Utilities		
Partner Agencies		
City of Hesperia	April Antonio	aantonio@city of Hesperia us
Cal OES (Hazard Mitigation Pre-Disaster & Flood Mitigation)		

Town of Apple Valley
HMP Meeting #4

April 28, 2017

Agenda:

1. Review Section 6 Mitigation Goals, Objectives, Actions
2. Review Cost/Benefit
3. Discuss Cost/Benefit for each action
4. Rate each Cost/Benefit for each action
5. Discuss priority for each action
6. Rate priority for each action
7. Discuss crosswalk

HMP Meeting - April 28, 2017

Planning Committee Dept. / Members	E-Mail	Initial
Town Engineering/Building & Safety Department		
Brad Miller	bmiller@applevalley.org	
Patrick Carroll	pcarroll@applevalley.org	
Brett Morgan	bmorgan@applevalley.org	*(initialed)*
Town Community Development		
Lori Lamson	llamson@applevalley.org	*(initialed)*
Carol Miller	cmiller@applevalley.org	*(initialed)*
Pam Cupp	pcupp@applevalley.org	*(initialed)*
Ralph Wright	rwright@applevalley.org	*(initialed)*
AV Fire Protection District		
Sid Hultquist	shultquist@applevalleyfd.com	
Rich Unferdorfer	runferdorfer@applevalleyfd.com	
Town Public Works		
Greg Snyder	gsnyder@applevalley.org	GS.
Mike Cady	mcady@applevalley.org	
Town PIO		
Kathy Martin	kmartin@applevalley.org	*(initialed)*
Office of Emergency Preparedness		
Joseph Ramos	jramos@applevalley.org	JR
Dawn Harrison	dharrison@applevalley.org	*(initialed)*

B.4 Other Meeting Agendas (CERT, Disaster Council, Town Council)

CERT MEETING

AGENDA

Welcome & Announcements

Pledge
Introductions
        Guest Speaker

Announcements:
        Shirts/Hats –C-ME – Order directly with ID Card – C-ME – 760-241-3577
        Names on Vests - $5

        Disaster Volunteer Network – Please complete information form
        Remind – To receive CERT text messages (Emergencies)
        Update from ECS – Mark Yosten
        Update from FF Rehab – Kathy Love
        Update from Sandbag – Cathy Westmoreland
        Hazard Mitigation Plan – What is it?
Station Leaders – Need Leader & Asst. for 335, Asst. for 334, Leader for 336
Please let me know if you are interested or have questions. Thank you.

Useful Links

www.Readyapplevalley.org
www.applevalleyfd.com
www.FEMA.gov
www.ready.gov

Upcoming Event

August 6, 27 and Sept 3 – CERT Class – Help with assisting/refreshments
September 8- 10 - 30 year National CERT Conference, Universal Studios
September 24 – Terrorism Training – Ontario - Eventbrite
September 24 – Command Bus - Reverse Triathlon
October 1 – Annual DSW Drill – VVC Regional Training Facility
October 6 – Meeting/Training – Volunteer Reception Center/Shake Out
Oct 7-8-9 – SAR City – Barstow
October 15 – Health Fair – St 337 – Help needed
October 20 – Great Shake Out – Drill at Town Hall – Sign Up

Today's Training

GET READY FOR ANNUAL DRILL
DO YOU REMEMBER THE BASICS FROM YOUR
CERT CLASS?
DAWN HARRISON

August 4, 2016

Thursday

6:00-8:00pm

LOCATION:

FIRE STATION 336

19235 Yucca Loma Rd.

CERT MEETING

A G E N D A

Welcome & Announcements

Pledge
Oath/Introductions – New DSW Members

Announcements:
Shirts/Hats –C-ME – Order directly with ID Card – C-ME – 760-241-3577
Names on Vests - $5
Disaster Volunteer Network – Please complete information form
Remind – To receive CERT text messages (Emergencies)
Update from ECS – Mark Yosten
Update from FF Rehab – Kathy Love
Update from Asst. CERT Commanders- Bonnie Ebright/Cathy Westmoreland
Hazard Mitigation Plan – Link for Survey will be shared
Suggestions for 2017 Trainings

Station Leaders – Need Leader & Asst. for 335, Asst. for 334, Leader for 336
Please let me know if you are interested or have questions. Thank you. We
would like to give more responsibility & training to station leaders in 2017.

Useful Links

www.Readyapplevalley.org
www.applevalleyfd.com
www.FEMA.gov
www.ready.gov

Upcoming Event (Final 3 of the year)

October 15 – Health Fair – St 337 – Help needed – Sign Up
October 20 – Great Shake Out – Drill at Town Hall – Sign Up
November 3 – Potluck – End of 2016!

Today's Training

BRIEFING – CERT CONFERENCE
BONNIE & KELLY
BRIEFING – TERRORIST SYMPOSIUM
CATHY & KELLY
SHARE YOUR EXPERIENCE WITH THE BLUE CUT
FIRE & ANNUAL DRILL
VOLUNTEER RECEPTION CENTER
DAWN HARRISON
JASON NAILON – GUEST SPEAKER – VOLUNTEERS HELPING WITH
MEASURE A

October 6, 2016

Thursday

6:00-8:00pm

LOCATION:

FIRE STATION 336

19235 Yucca Loma Rd.

CERT MEETING

AGENDA

February 2, 2017

Thursday

6:00-8:00pm

LOCATION:

FIRE STATION 336

19235 Yucca Loma Rd.

Welcome & Announcements

Pledge
Introductions – New DSW Members

Announcements:
   Shirts/Hats –C-ME – Order directly with ID Card – C-ME – 760-241-3577
   Names on Vests - $5
   Remind – To receive CERT text messages (Emergencies)
   Update from ECS – Mark Yosten
   Update from FF Rehab – Kathy Love
   Update from Asst. CERT Commanders- Bonnie Ebright/Cathy Westmoreland
   Hazard Mitigation Plan – Link for Survey will be shared/Update
   Red Cross Training – Update – Only if you took the training at the Town Jan. 2017
are you registered with the Red Cross, even if you took the 8 hour training previously!
   Apple Valley CERT Coin – Input needed
   Update on opening of fire stations

Station Leaders – Need Leader & Asst. for 335, Asst. for 334, Leader for 336
Please let me know if you are interested or have questions. Thank you. We
would like to give more responsibility & training to station leaders in 2017.

Useful Links

www.Readyapplevalley.org
www.applevalleyfd.com
www.FEMA.gov
www.ready.gov

Upcoming Events

February 4 – Simulation – Help Needed
March 25 – CPR/First Aid – Sign Up
April 6 – Meeting - ICS/Forms Training
April 7-8-9 CERT Train the Trainer - Hesperia
April 15, 22, and 29 – CERT Class
May 6 – Family Safety/Emergency Prep Fair – Town Hall

Today's Training

CUSTOMER SERVICE FOR CERT

CAPT. UNFERDORFER

CERT MEETING

AGENDA

April 6, 2017

Thursday

6:00-8:00pm

LOCATION:

FIRE STATION 336

19235 Yucca Loma Rd.

Welcome & Announcements

Pledge
Oath of Office
Introductions – New DSW Members

Announcements:
- Shirts/Hats –C-ME – Order directly with ID Card – C-ME – 760-241-3577
- Names on Vests - $5
- Remind – To receive CERT text messages (Emergencies)
- Update from ECS – Mark Yosten
- Update from FF Rehab – Kathy Love
- Update from Asst. CERT Commanders- Bonnie Ebright/Cathy Westmoreland
- Hazard Mitigation Plan – Update

Useful Links

www.Readyapplevalley.org
www.applevalleyfd.com
www.FEMA.gov
www.ready.gov

Upcoming Events

April 7-8-9 CERT Train the Trainer – Rancho Cucamonga
April 11 – Disaster Council – 1:30pm – 14975 Dale Evans Pkwy
April 15, 22, and 29 – CERT Class (Help Needed)
May 6 – ECS Meeting
May 6 – Family Preparedness Fair – 10am-1pm Town Hall
        (Help Needed – Sign Up)
June 1 – Meeting/Training – START Triage/Treatment
        Review/Games

Today's Training

Fire Season/Grass Fires – Capt. Unferdorfer

ICS SYSTEM
WHO'S IN CHARGE & WHAT DO I DO?
DAWN HARRISON

CERT MEETING

A G E N D A

Welcome & Announcements

Pledge

Introductions – New DSW Members

Announcements:
    Shirts/Hats –C-ME – Order directly with ID Card – C-ME – 760-241-3577
    Names on Vests - $5
    Remind – To receive CERT text messages (Emergencies)
**Thank you to everyone for helping with Family Preparedness Fair!
**Thank you to ECS for participating in Opening of Yucca Loma Bridge!
    Update from ECS – Mark Yosten
    Update from FF Rehab – Kathy Love
    Update from Asst. CERT Commanders- Bonnie Ebright/Cathy Westmoreland
    Hazard Mitigation Plan – Update

Useful Links
**NEW – Twitter Account – Twitter.com/ReadyAV
www.Readyapplevalley.org
www.applevalleyfd.com
www.FEMA.gov
www.ready.gov

Upcoming Events
August 1 – National Night Out (Super Target, 1700-2000)
May 3 – ECS Meeting
August 3 – Meeting/Training CERT Olympics
Sept 16, 23, 30 – CERT Basic Training

Today's Training – Review

START
Triage/Treatment Review/Games

DAWN HARRISON

June 1, 2017

Thursday

6:00-8:00pm

LOCATION:

FIRE STATION 336

19235 Yucca Loma Rd.

**TOWN OF APPLE VALLEY
DISASTER COUNCIL
Citizen Corps Council**

Tuesday, October 18, 2016   **Conference Center, Development Services Building,**
1:30 p.m.   **Apple Valley Town Hall, 14975 Dale Evans Parkway**

AGENDA

1. Call to Order   *Mayor Stanton*

2. Flag Salute   _____

3. Self-Introductions   *Group*

4. Approval of July 12, 2016 minutes   *Mayor Stanton*

5. Approval of CERT/ECS 2017 calendar   *Mayor Stanton*

6. Citizen Corps Activities

   - CERT *(Community Emergency Response Team)*   *CERT : Dawn Harrison*
   - ECS *(Emergency Communications Services)*   *ECS: Rich Unferdorfer*
   - COP's, Neighborhood Watch   *Trish Hill*

7. Update on Emergency Preparedness   *Joseph Ramos*

   - Blue Cut Activation
   - Local Hazard Mitigation Plan

8. **Spotlight Program: Southwest Gas**

   - Gas properties- William Hensley-Intro

9. Roundtable Discussion   *Group*

10. Next Meeting: Tuesday, January 10, 2017, 1:30 p.m. @ Conference Center, Development Services Building, Apple Valley Town Hall, 14975 Dale Evans Parkway

11. Adjournment: _____PM   *Mayor Stanton*

TOWN OF APPLE VALLEY
DISASTER COUNCIL
Citizen Corps Council

Tuesday, January 10, 2017   Conference Center, Development Services Building,
1:30 p.m.   Apple Valley Town Hall, 14975 Dale Evans Parkway

AGENDA

1. Call to Order   *Mayor Nassif*

2. Flag Salute   _____

3. Self-Introductions   *Group*

4. Approval of October 18, 2016 minutes   *Mayor Nassif*

5. Citizen Corps Activities

   - CERT *(Community Emergency Response Team)*   *CERT: Dawn Harrison*
   - ECS *(Emergency Communications Services)*   *ECS: Mark Yosten*
   - COP's, Neighborhood Watch   *Trish Hill*

6. Update on Emergency Preparedness   *Joseph Ramos*

   - Blue Cut Reimbursements
   - Local Hazard Mitigation Plan

7. Update on Measure A   *Chief Hultquist*

8. **Spotlight Program: COAD (Community Organizations Active in Disasters)**

   - Dan Coleman- Co-Chair East End COAD

9. Roundtable Discussion   *Group*

10. Next Meeting: Tuesday, April 11, 2017, 1:30 p.m. @ Conference Center, Development
    Services Building, Apple Valley Town Hall, 14975 Dale Evans Parkway

11. Adjournment: _____PM   *Mayor Nassif*

**TOWN OF APPLE VALLEY
DISASTER COUNCIL
Citizen Corps Council**

**Tuesday, April 11, 2017
1:30 p.m.**   **Conference Center, Development Services Building,
Apple Valley Town Hall, 14975 Dale Evans Parkway**

AGENDA

1. Call to Order   *Mayor Nassif*

2. Flag Salute   _____

3. Self-Introductions   *Group*

4. Approval of January 10, 2017 minutes   *Mayor Nassif*

5. Citizen Corps Activities

    - CERT *(Community Emergency Response Team)*   *CERT: Dawn Harrison*
    - ECS *(Emergency Communications Services)*   *ECS: Mark Yosten*
    - COP's, Neighborhood Watch   *Trish Hill*

6. Update on Emergency Preparedness   *Joseph Ramos*

    - Local Hazard Mitigation Plan

7. **Spotlight Program: Ounce of Prevention**

    - Dr. Gloria Peak- Director of Community Health Services- St. Mary Medical Center
      Presentation on Preventative Health Services

8. Roundtable Discussion   *Group*

9. Next Meeting: Tuesday, July 11, 2017, 1:30 p.m. @ Conference Center, Development
    Services Building, Apple Valley Town Hall, 14975 Dale Evans Parkway

10. Adjournment: _____PM   *Mayor Nassif*

**TOWN OF APPLE VALLEY
DISASTER COUNCIL
Citizen Corps Council**

**Tuesday, July 11, 2017
1:30 p.m.**

**Conference Center, Development Services Building,
Apple Valley Town Hall, 14975 Dale Evans Parkway**

AGENDA

1. Call to Order   *Mayor Nassif*

2. Flag Salute   _____

3. Self-Introductions   *Group*

4. Approval of April 11, 2017 minutes   *Mayor Nassif*

5. Citizen Corps Activities

   - CERT *(Community Emergency Response Team)*   *CERT: Dawn Harrison*
   - ECS *(Emergency Communications Services)*   *ECS: Mark Yosten*
   - COP's, Neighborhood Watch   *Trish Hill*

6. Update on Emergency Preparedness   *Joseph Ramos*

   - Hazard Mitigation Plan Update

7. **Spotlight Program: San Bernardino County 211**

   - Cari Thomas- Inland Empire United Way Regional Director

8. Roundtable Discussion   *Group*

9. Next Meeting: Tuesday, October 17, 2017, 1:30 p.m. @ Conference Center, Development Services Building, Apple Valley Town Hall, 14975 Dale Evans Parkway

10. Adjournment: _____PM   *Mayor Nassif*

TOWN OF APPLE VALLEY
TOWN COUNCIL/SUCCESSOR AGENCY

REGULAR MEETING

MINUTES – March 28, 2017

CALL TO ORDER:

Mayor Nassif called to order the regular session of the Apple Valley Town Council and the Successor Agency at 6:30 p.m.

Roll call was taken with the following members present:

Roll Call
Present: Council Members Cusack; Emick; Stanton; Mayor Pro Tem Bishop; Mayor Nassif
Absent: None.

OPENING CEREMONIES

INVOCATION: Pastor Joseph Valery, Victory in Jesus Bible Faith Center

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was led by Mayor Pro Tem Bishop

PRESENTATIONS: Deputy Derrick Griego, Apple Valley SHOCK Program

PUBLIC COMMENTS

Matthew Fairchild, Apple Valley commented on providing the San Bernardino County Sheriff's Division with all the resources they need to enforce Town speed limits, as well as provide sidewalks for pedestrian safety.

Laloni Flusher, Apple Valley commented on the continued deterioration of east Stoddard Wells Road and the dangerous conditions that exist.

Brad Miller, Town Engineer commented on the location of the section of Stoddard Wells Road east of Dale Evans Parkway is in the unincorporated area of the Town.

Bryen Wright, Apple Valley commented on the Town's Impartial Analysis and that he believes information has been left out of the document.

Patricia Perry, Apple Valley commented that the troubles she has had with her property have gotten better and wanted to thank the Town for their assistance.

COUNCILMEMBER COMMITTEE/COMMISSION PARTICIPATION

Council Member Emick commented on committee meetings and events that he attended.

Council Member Cusack commented on committee meetings and events that he attended.

1A-1

TOWN COUNCIL MINUTES
REGULAR MEETING OF 03/28/2017

Council Member Stanton commented on committee meetings and events that she attended.

Mayor Pro Tem Bishop commented on committee meetings and events that he attended.

Mayor Nassif commented on committee meetings and events that he attended.

TOWN COUNCIL ANNOUNCEMENTS

Suggested items for future agenda:

Mayor Pro Tem Bishop asked staff to bring back a report on AB 1194 regarding bond issues and property taxes.

Mayor Nassif asked staff to bring back a report to discuss standards that would help elevate the quality of apartments but make them affordable.

> **Time, Date & Place for Next Town Council Regular or Special Meeting:**
> A. **Regular Meeting – Tuesday, April 11, 2017 – Council Chamber**
>   **Regular Session at 6:30 p.m.**

TOWN COUNCIL CONSENT AGENDA

Motion by Council Member Emick, seconded by Mayor Pro Tem Bishop, to approve the Consent Calendar items numbered 1-4.

Vote: Motion carried 5-0-0-0
Yes: Council Members Cusack; Emick; Stanton; Mayor Pro Tem Bishop; Mayor Nassif.
Absent: None.

1.   **Approval of Minutes of the Town Council**
      A.   **Special Meeting – March 7, 2017**
      B.   **Special Meeting – March 9, 2017**
      C.   **Regular Meeting – March 14, 2017**
      <u>Recommendation</u>:
      Approve the subject minutes as part of the consent agenda.

2.   **Mojave Riverwalk South – Project No. 2015-08**
      <u>Recommendation</u>:
      That the Town Council:
      1. Accept the work completed as part of the Mojave Riverwalk South Project No. 2015-08, for a total contract cost of $947,868.51.
      2. contractor.

3.   **Release of Securities for Tract Map No. 16134**
      <u>Recommendation</u>:
      Find that the construction of various improvements required for Tract 16134 is complete, and approve the fifty-percent (50%) reduction of the performance securities.

1A-2

4.   **Fee Waiver Request for St. Mary's High Desert Fit for Life Challenge 5K/10K Event for the Use of the Civic Center Park/Amphitheater**
      <u>Recommendation</u>:
      For good cause shown and finding a waiver will serve a public purpose, approve the waiver of the Facility Rental Fee of $728.00.

PUBLIC HEARINGS

None.

REPORTS, REQUESTS AND COMMUNICATIONS

None.

TOWN MANAGER'S COMMENTS & LEGISLATIVE UPDATE

Frank Robinson, Town Manager, reported that the State Legislature has come to an agreement about transportation funding and an announcement will be made soon.

Joseph Ramos, Emergency Operations Officer shared information on the Hazard Mitigation Plan and the need for update.

CLOSED SESSION

5.   <u>Closed Session</u>

      Mayor Nassif stated that if needed, Council Member Cusack will be abstaining from one (1) or more of the Closed Session items as it pertains to Liberty Utilities Company due to a potential conflict of interest, as his company does business with the above company.

      Mayor Nassif adjourned to Closed Session at 7:23 p.m. to discuss items 5A-5G

      A. Conference with Legal Counsel – Anticipated Litigation – Significant exposure to litigation pursuant to Paragraph (2) of subdivision (d) of Section 54956.9: one or more potential cases.

      B. Conference with Legal Counsel – Anticipated Litigation – Initiation of litigation pursuant to Paragraph (4) of subdivision (d) of Section 54956.9: one or more potential cases.

      C. Conference with Real Property Negotiators – Pursuant to Government Code Section 54956.8. Property: Apple Valley Ranchos Water Company (now Liberty Utilities (Apple Valley Ranchos Water) Corp.); Authority Negotiator: Town Manager; Negotiating Parties: Liberty Utilities Co., Liberty WWH, Inc., Algonquin Power & Utilities Corp., Park Water Company, Western Water Holdings LLC, Tony Penna, General Manager, Apple Valley Ranchos Water Company; Under Negotiation: Price and Terms of Payment.

1A-3

D. Conference with Legal Counsel – Existing Litigation – Pursuant to Paragraph (1) of subdivision (d) of Government Code Section 54956.9, Case No.: CIVDS1517935 - Apple Valley Ranchos Water Company vs. Town of Apple Valley Et Al.

E. Conference with Legal Counsel – Existing Litigation – Pursuant to Paragraph (1) of subdivision (d) of Government Code Section 54956.9, Case No.: CIVDS1600180 – Town of Apple Valley vs. Apple Valley Ranchos Water Company Et Al.

F. Personnel Matters – Government Code Section 54957/Public Employee Performance Evaluation. Title: Town Manager.

G. Conference with Legal Counsel – Existing Litigation – Pursuant to Paragraph (1) of subdivision (d) of Government Code Section 54956.9, Case No.: CIVDS1601999 – Town of Apple Valley vs. Jess Ranch Development, Et Al.

Upon returning from Closed Session at 8:27p.m., Mayor Nassif stated there was no reportable action taken.

John Brown, Town Attorney requested that a settlement agreement be read into the record, verbatim. The settlement resolved a recent lawsuit against the Town.

Debra Thomas, Deputy Town Clerk read into the record, verbatim, the Settlement Agreement and General Release of Claims in the matter of *Lopez-Burton et al. v. Town of Apple Valley*, Case No. CIVDS1604968.

Discussion ensued describing what this agreement's result ultimately means and described the difference between a Nexus Study and Cost Allocation Study and the ultimate cost to ratepayers.

ADJOURNMENT

Motion by Council Member Emick, seconded by Council Member Cusack, and unanimously carried, to adjourn the meeting of the Apple Valley Town Council at 8:46 p.m.

_____
Scott Nassif, Mayor

_____
Debra Thomas, Deputy Town Clerk

1A-4

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Appendix C

C.1   Survey Media Alert

C.2   Survey Results

C.3   Website/Survey Link

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C.1   Survey Media Alert

Town of Apple Valley
Office of Emergency Preparedness

A Better Way of Life

Media Alert

July 28, 2016
For immediate release

You are invited to make a difference!

Town of Apple Valley has begun the process to prepare the 2016 update to the Hazard Mitigation Plan (HMP) and we invite you to participate. The HMP will serve as a blueprint for reducing property damage and saving lives from the effects of future natural disasters in the Town of Apple Valley. The Town welcomes you (or other interested parties) to assist the HMP Project Management Team to update our natural hazard mitigation documents for the Town of Apple Valley. This will involve periodic review of documentation and feedback during certain points of the planning process.

To provide solidarity in the planning process, we would like to inform you that our project will be starting soon with a kick-off meeting. You are more than welcome to join this meeting but attendance in this meeting is not a requirement to be involved in the entire process. We anticipate the HMP development process to last about 8 to 12 months.

The kick-off meeting will be on _**Tuesday, August 2, 2016 at 8:30 a.m.**_ at the Town Hall Development Services Building meeting room 1 located at 14975 Dale Evans Parkway.

We will have additional discussions of the HMP during all upcoming Disaster Council Meetings and CERT meetings.

For more information about the HMP process and history behind the program visit: www.readyapplevalley.org.

If you have any additional questions, please do not hesitate to contact me by phone or email. Thank you for your time and consideration.

Joseph Ramos
Town of Apple Valley
Emergency Services Officer
jramos@applevalley.org
760-240-7000 ext. 7890

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C.2   Survey Results

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q1 Do you.. (Check all that apply).

Answered: 123   Skipped: 0

Answer Choices	Responses	
Live in the Town of Apple Valley	84.55%	104
Work in the Town of Apple Valley	58.54%	72
Visit the Town of Apple Valley, but live and work elsewhere	1.63%	2
Total Respondents: 123		

1 / 24

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q2 Which of the following types of natural disasters have you or someone in your household experienced in the past 15 years within the Town of Apple Valley? (Check all that apply)

Answered: 123   Skipped: 0

Answer Choices	Responses	
Earthquake	72.36%	89
Wildfire	43.90%	54
Flooding	32.52%	40
Severe weather	47.15%	58
Landslides/ Debris flow	7.32%	9
Drought liquefaction	8.94%	11
Wind Storm	71.54%	88
Dust storm	66.67%	82
Total Respondents: 123		

C-6

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q3 How concerned are you about the following natural hazards affecting your home and/or business in Apple Valley? Please check ONE response for each hazard.

Answered: 123   Skipped: 0

	Very concerned	Somewhat concerned	Neutral	Not very concerned	Not concerned	Total	Weighted Average
Earthquake	50.41% 62	35.77% 44	8.13% 10	4.88% 6	0.81% 1	123	1.70
Wildfire	24.39% 30	36.59% 45	17.07% 21	15.45% 19	6.50% 8	123	2.43
Flooding	17.07% 21	32.52% 40	26.83% 33	15.45% 19	8.13% 10	123	2.65
Severe weather	18.33% 22	48.33% 58	20.00% 24	10.00% 12	3.33% 4	120	2.32
Landslides/Debris Flow	4.13% 5	16.53% 20	30.58% 37	28.93% 35	19.83% 24	121	3.44
Drought and water shortage	61.79% 76	24.39% 30	7.32% 9	1.63% 2	4.88% 6	123	1.63
Liquefaction	8.55% 10	15.38% 18	35.90% 42	19.66% 23	20.51% 24	117	3.28
Wind storm	21.31% 26	45.08% 55	19.67% 24	9.84% 12	4.10% 5	122	2.30
Dust storm	18.18% 22	43.80% 53	23.14% 28	9.92% 12	4.96% 6	121	2.40
Dam Failure	5.83% 7	11.67% 14	24.17% 29	27.50% 33	30.83% 37	120	3.66

3 / 24

Town of Apple Valley Local Hazard Mitigation Plan Survey

Extreme Heat	21.49% 26	41.32% 50	16.53% 20	8.26% 10	12.40% 15	121	2.49

C-8

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q4 Information about the risks from natural hazards is readily available and easy to locate.

Answered: 123   Skipped: 0

Answer Choices	Responses	
Strongly Agree	28.46%	35
Somewhat Agree	38.21%	47
Neither Agree or Disagree	19.51%	24
Somewhat Disagree	12.20%	15
Strongly Disagree	1.63%	2
Total		123

5 / 24

C-9

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q5 It is my responsibility to educate myself and take actions that will reduce my exposure to the risks from natural hazards.

Answered: 123   Skipped: 0

Answer Choices	Responses	
Strongly Agree	73.98%	91
Somewhat Agree	22.76%	28
Neither Agree or Disagree	1.63%	2
Somewhat Disagree	1.63%	2
Strongly Disagree	0.00%	0
Total		123

C-10

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q6 It is the responsibility of government (local, state and federal) to provide education and programs that promote citizen actions that will reduce exposure to the risks from natural hazards.

Answered: 123   Skipped: 0

Answer Choices	Responses	
Strongly Agree	34.96%	43
Somewhat Agree	47.97%	59
Neither Agree or Disagree	12.20%	15
Somewhat Disagree	0.00%	0
Strongly Disagree	4.88%	6
Total		123

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Town of Apple Valley Local Hazard Mitigation Plan Survey

Q7 What mitigation measures or strategies have been completed in the last 5 years to protect your home or business from a natural hazard? Check all that apply

Answered: 123   Skipped: 0

Answer Choices	Responses	
flood proofing	16.26%	20
seismic upgrades	13.82%	17
dry weed abatement	73.98%	91
defensible space	52.85%	65
earthquake insurance	11.38%	14
flood insurance	9.76%	12
None	14.63%	18
Other (please specify)	3.25%	4
Total Respondents: 123		

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q8 How much money do you spend annually on mitigation measures to protect your home or business from natural hazards?

Answered: 123   Skipped: 0

Answer Choices	Responses	
None	22.76%	28
Less than $250	45.53%	56
$250-$499	20.33%	25
$500-$1000	9.76%	12
More than $1000	1.63%	2
Total		123

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q9 Which of the following incentives would encourage you to protect your home against natural hazards? (Check all that apply)

Answered: 123   Skipped: 0

Answer Choices	Responses	
Insurance premium discount	75.61%	93
Mortgage discount or low interest loan	39.02%	48
Financial assistance for property upgrades or equipment	46.34%	57
Rebate program	47.97%	59
Technical assistance	29.27%	36
Labor assistance	38.21%	47
Grant funding that requires cost share from property owner	25.20%	31
Building permit fee reduction or waiver	34.96%	43
Property tax break or incentive	67.48%	83
Financial assistance for equipment	26.83%	33
Total Respondents: 123		

C-14

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q10 What protection methods do you believe the Town, County, State or Federal agencies should be using in order to reduce damage and disruption from hazard events within the Town of Apple Valley?

Answered: 123   Skipped: 0

	High Priority	Medium Priority	Low Priority	Total
Retrofit and strengthen essential facilities such as police, fire, schools and hospitals	76.42% 94	18.70% 23	4.88% 6	123
Retrofit infrastructure such as roads, bridges, drainage facilities, water supply, and waster water.	85.37% 105	13.82% 17	0.81% 1	123
Fund projects related to drainage control measures and improvements.	39.84% 49	55.28% 68	4.88% 6	123
Strengthen codes and regulations to include higher standards in hazard areas.	26.02% 32	47.97% 59	26.02% 32	123
Assist vulnerable property owners with securing funding for mitigation/property protection.	32.52% 40	46.34% 57	21.14% 26	123
Increase public information about risks and the exposure to hazards within the Town of Apple Valley.	55.28% 68	30.89% 38	13.82% 17	123
Carry out projects to restore the natural environment's capacity to absorb the impacts from natural hazards.	51.22% 63	35.77% 44	13.01% 16	123
Acquire emergency generators for essential government facilities and buildings identified as care and shelter.	60.16% 74	29.27% 36	10.57% 13	123

11 / 24

C-15

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q11 Thinking back in the last three years, from whom have you received information about how to make members of your household and your home safer from natural disasters? Check all that apply.

Answered: 123   Skipped: 0

Answer Choices	Responses	
News media	56.10%	69
Government agency	38.21%	47
Insurance agent or company	25.20%	31
Utility company	51.22%	63
Neighbor/friend/relative	21.95%	27
elected official	4.07%	5
American Red Cross	17.89%	22
Other non-profit	13.82%	17
Social Media	24.39%	30
Not sure	2.44%	3
Have not received information	5.69%	7
Other (please specify)	23.58%	29
Total Respondents: 123		

C-16

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q12 Whom would you most trust to provide you with information about how to make your household and home safer from natural disasters? Choose at least 3 responses.

Answered: 123   Skipped: 0

Answer Choices	Responses	
New media	26.83%	33
Governments agency	63.41%	78
Insurance agent or company	33.33%	41
Utility company	59.35%	73
Neighbor/friend/relative	25.20%	31
Elected official	9.76%	12
American Red Cross	47.15%	58
Other non-profit organization	32.52%	40
Social media	7.32%	9
Other (please specify)	17.89%	22
Total Respondents: 123		

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q13 Do you rent or own your home or business?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Own	90.24%	111
Rent	9.76%	12
Total		123

C-18

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q14 Is your home or business in or near a FEMA designated floodplain?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	9.76%	12
No	56.91%	70
Not Sure	33.33%	41
Total		123

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q15 Do you have flood insurance?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	9.76%	12
No	80.49%	99
Not Sure	9.76%	12
Other (please specify)	0.00%	0
Total		123

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q16 Is your home or business located near an earthquake fault?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	56.10%	69
No	11.38%	14
Not Sure	32.52%	40
Total		123

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q17 Do you have earthquake insurance?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	10.57%	13
No	82.11%	101
Not sure	6.50%	8
Other (please specify)	0.81%	1
Total		123

C-22

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q18 To the best of your knowledge, does your homeowner's, renter's, or general insurance policy provide coverage for damage from natural hazards?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	39.02%	48
No	17.07%	21
Not Sure	41.46%	51
Do not have property insurance	2.44%	3
Total		123

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Town of Apple Valley Local Hazard Mitigation Plan Survey

Q19 Have you ever had problems obtaining homeowner's or renter's insurance due to risks from natural hazards?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	6.50%	8
No	84.55%	104
Not Sure	3.25%	4
Never tried obtaining hazard insurance	5.69%	7
Total		123

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q20 When you moved into your home, did you consider the impact a natural hazard event could have on your home?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	57.72%	71
No	38.21%	47
Not Sure	4.07%	5
Total		123

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C-25

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q21 Was the presence of a natural hazard risk zone (for example, wild fire area or flood zone) disclosed to you by a real estate agent, seller or landlord before you purchased or moved into your home?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	34.15%	42
No	53.66%	66
Not Sure	12.20%	15
Total		123

Town of Apple Valley Local Hazard Mitigation Plan Survey

Q22 Would natural hazard real estate disclosures or risk information influence your decision on where to buy or rent a home?

Answered: 123   Skipped: 0

Answer Choices	Responses	
Yes	83.74%	103
No	7.32%	9
Not Sure	8.94%	11
Total		123

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Town of Apple Valley Local Hazard Mitigation Plan Survey

Q23 Thank you again for completing the survey!!!! Please provide any additional comments that you may have regarding hazard mitigation and community protection against natural disasters.

Answered: 15   Skipped: 108

C.3   Website/Survey Link

Apple Valley, CA : Local Hazard Mitigation Plan   http://www.applevalley.org/services/emergency-preparedness/hazard-mit...

Local Hazard Mitigation Plan

Welcome to the Town of Apple Valley's Local Hazard Mitigation Plan (HMP) webpage!

This webpage contains information and documents for Apple Valley's Local Hazard Mitigation Plan (HMP). The HMP must be updated every five years to stay current with natural hazard events and maintain eligibility for State and Federal grant funding. This webpage will remain active to document past, current and future hazard mitigation planning efforts for the public and Town officials alike.

Please explore the links on this page to learn more about the HMP.

As always, we are seeking the public's help and input during the local HMP Update process. If you have disaster-related stories and/or photographs that you would like to share, or you have comments or other information pertaining to natural hazard mitigation and the planning process, please send them to:

JRamos@applevalley.org.

Any information or feedback that you can provide is both helpful and appreciated!

Help our community by completing an important survey that will be used for the HMP 2017 update at the link below.

CLICK HERE

Apple Valley Local Hazard Mitigation Plan 2011

United States Geological Survey - Link to the United States Geological Survey's Earthquakes Hazards Program

Federal Emergency Management Agency - Link to FEMA's website dealing with flooding

San Bernardino County Hazard Maps - SBC's Hazard Maps

California My Hazard Maps- CalOES Hazard Maps

Earthquakes in California - Link to a list of major earthquakes throughout California's history.

Chronology of San Bernardino County Proclaimed Disasters - Link to a list of many of the proclaimed disasters that took place in San Bernardino County from 1954 to 2016. Includes earthquakes, floods and fires.

History of San Bernardino County - Link to a County website with major historical milestones of San Bernardino County, from 1853 to 2003.

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Appendix D

D.1   Hazard Summary Worksheet Instructions

D.2   Hazard Summary Worksheet agreed upon by Planning Committee

D.3   Risk Factor Approach Instruction Sheet

D.4   Risk Factor Final Worksheet agreed upon Planning Committee

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D.1 Hazard Summary Worksheet Instructions

Hazard Summary Worksheet Instructions

Definitions for Classifications

Location (Geographic Area Affected)
- **Negligible:** Less than 10 percent of planning area or isolated single-point occurrences
- **Limited:** 10 to 25 percent of the planning area or limited single-point occurrences
- **Significant:** 25 to 75 percent of planning area or frequent single-point occurrences
- **Extensive:** 75 to 100 percent of planning area or consistent single-point occurrences

Maximum Probable Extent (Magnitude/Strength based on historic events or future probability)
- **Weak:** Limited classification on scientific scale, slow speed of onset or short duration of event, resulting in little to no damage
- **Moderate:** Moderate classification on scientific scale, moderate speed of onset or moderate duration of event, resulting in some damage and loss of services for days
- **Severe:** Severe classification on scientific scale, fast speed of onset or long duration of event, resulting in devastating damage and loss of services for weeks or months
- **Extreme:** Extreme classification on scientific scale, immediate onset or extended duration of event, resulting in catastrophic damage and uninhabitable conditions

Hazard	Scale / Index	Weak	Moderate	Severe	Extreme
Drought	Palmer Drought Severity Index	-1.99 to +1.99	-2.00 to -2.99	-3.00 to -3.99	4.00 & below
Earthquake	Modified Mercalli Scale	I to IV	V to VII	VII	IX to XII
	Richter Magnitude	2, 3	4, 5	6	7, 8

Probability of Future Events
- **Unlikely:** Less than 1 percent probability of occurrence in the next year or a recurrence interval of greater than every 100 years.
- **Occasional:** 1 to 10 percent probability of occurrence in the next year or a recurrence interval of 11 to 100 years.
- **Likely:** 10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10 years
- **Highly Likely:** 90 to 100 percent probability of occurrence in the next year or a recurrence interval of less than 1 year.

Overall Significance
- **Low:** Two or more criteria fall in lower classifications or the event has a minimal impact on the planning area. This rating is sometimes used for hazards with a minimal or unknown record of occurrences or for hazards with minimal mitigation potential.
- **Medium:** The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating.
- **High:** The criteria consistently fall in the high classifications and the event is likely/highly likely to occur with severe strength over a significant to extensive portion of the planning area.

3- Cumulative meteorological drought and wet conditions: http://ncdc.noaa.gov/

4 Earthquake intensity and effect on population and structures http://earthquake.usgs.gov/

5 Earthquake magnitude as a logarithmic scale, measured by a seismograph http://earthquake.usgs.gov/

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D.2 Hazard Summary Worksheet agreed upon by Planning Committee

LHMP Hazard Summary Worksheet

Planning Team Meeting- Feb. 21, 2017

Use this worksheet to summarize hazard description information and identify which hazards are most significant to the planning area. The definitions provided on the following page can be modified to meet local needs and methods.

Hazard	Location (Geographic Area Affected)	Maximum Probable Extent (Magnitude/Strength)	Probability of Future Events	Overall Significance Ranking
Climate Change	Neg.	W	O	Low
Dam Failure	L	W	U	Low
Drought	E	M	O	Low
Earthquake	E	S	L	High
Erosion	N	W	U	Low
Expansive Soils	N	W	U	Low
Extreme Cold	N	W	U	Low
Extreme Heat	E	M	L	Med
Flood	L	M	L	Med
Landslide	N	W	U	Low
Lightning	Z N	W	O	Low
Severe Wind	E	M	L	Med
Severe Winter Weather	E	M	L	Med
Subsidence	N	W	U	Low
Terrorism	N	W	U	Low
Wildfire	L	M-S	L	M-H

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D.3 Risk Factor Approach Instruction Sheet

Risk Factor (RF) Approach

MITIGATE HAZARDS

For use in multi-hazard mitigation planning hazard prioritization exercises.

The RF approach combines historical data, local knowledge, and consensus opinions to produce numerical values that allow identified hazards to be ranked against one another. These criteria were used to evaluate hazards and identify the highest risk hazard in the project region.

The RF approach produces numerical values that allow identified hazards to be ranked against one another (the higher the RF value, the greater the hazard risk). RF values are obtained by assigning varying degrees of risk to five categories for each hazard: *probability, impact, spatial extent, warning time*, and *duration*. Each degree of risk is assigned a value ranging from 1 to 4 and a weighing factor for each category should be agreed upon by the planning committee. Based upon any unique concerns for the planning area, the planning committee may also adjust the RF weighting scheme. To calculate the RF value for a given hazard, the assigned risk value for each category is multiplied by the weighting factor. The sum of all five categories equals the final RF value, as demonstrated in the example equation below:

RF Value = [(Probability x .30) + (Impact x .30) +

(Spatial Extent x .20) + (Warning Time x .10) + (Duration x .10)]

According to the default weighting scheme applied, the highest possible RF value is 4.0.

Please see the Risk Factor Criteria table on the following page for information on the risk factor weighting index and other definitions.

Risk Factor Index Criteria Table

Risk Assessment Category	Level	Degree of Risk Criteria	Index	Weight Value
PROBABILITY What is the likelihood of a hazard event occurring in a given year?	UNLIKELY	LESS THAN 1% ANNUAL PROBABILITY	1	30%
	POSSIBLE	BETWEEN 1 & 10% ANNUAL PROBABILITY	2	
	LIKELY	BETWEEN 10 &100% ANNUAL PROBABILITY	3	
	HIGHLY LIKELY	100% ANNUAL PROBABILTY	4	
IMPACT *In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs?*	MINOR	VERY FEW INJURIES, IF ANY. ONLY MINOR PROPERTY DAMAGE & MINIMAL DISRUPTION ON QUALITY OF LIFE. TEMPORARY SHUTDOWN OF CRITICAL FACILITIES.	1	30%
	LIMITED	MINOR INJURIES ONLY. MORE THAN 10% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE DAY.	2	
	CRITICAL	MULTIPLE DEATHS/INJURIES POSSIBLE. MORE THAN 25% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE WEEK.	3	
	CATASTROPHIC	HIGH NUMBER OF DEATHS/INJURIES POSSIBLE. MORE THAN 50% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR 30 DAYS OR MORE.	4	
SPATIAL EXTENT *How large of an area could be impacted by a hazard event? Are impacts localized or regional?*	NEGLIGIBLE	LESS THAN 1% OF AREA AFFECTED	1	20%
	SMALL	BETWEEN 1 & 10% OF AREA AFFECTED	2	
	MODERATE	BETWEEN 10 & 50% OF AREA AFFECTED	3	
	LARGE	BETWEEN 50 & 100% OF AREA AFFECTED	4	
WARNING TIME *Is there usually some lead time associated with the hazard event? Have warning measures been implemented?*	MORE THAN 24 HRS	SELF DEFINED	1	10%
	12 TO 24 HRS	SELF DEFINED	2	
	6 TO 12 HRS	SELF DEFINED	3	
	LESS THAN 6 HRS	SELF DEFINED	4	

	LESS THAN 6 HRS	SELF DEFINED	1
DURATION	LESS THAN 24 HRS	SELF DEFINED	2
How long does the hazard event usually last?	LESS THAN 1 WEEK	SELF DEFINED	3
	MORE THAN 1 WEEK	SELF DEFINED	4

(10% appears in the Duration block)

Due to the inherent errors possible in any disaster, the results of the risk factor analysis should only be used for planning purposes and in developing hazard priorities and concentrating jurisdictional resources. Before assigning risk factors and prioritization to hazards it is recommended to complete a draft of the hazard profiles and risk assessment information to aid in determining potential impacts. Before the hazard prioritization process you may want to consider the following risk assessment criteria:

- ✓ Inventory and summarize vulnerable assets
- ✓ Characterize repetitive flood loss properties
- ✓ Estimated harm to residents and estimated damages to buildings
- ✓ Describe vulnerability to future development

[Example Risk Factor Results from Plumas County Hazard Mitigation Project]

PLUMAS COUNTY HAZARD MITIGATION PLAN
Department of Health / Office of Emergency Services

Risk Factor Worksheet

Ranking	Natural Hazards	Probability	Calc.1	Impact	Calc.2	Spatial Extent	Calc.3	Warning Time	Calc.4	Duration	Calc.5	RF Factor
1	Wildfire	4	1.2	3	0.9	4	0.8	3	0.3	4	0.4	3.6
2	Severe Weather	4	1.2	2	0.6	4	0.8	1	0.1	2	0.2	2.9
3	Geologic Hazards	4	1.2	2	0.6	1	0.2	4	0.4	2	0.2	2.6
4	Flooding	2	0.6	3	0.9	2	0.4	1	0.1	4	0.4	2.4
5	Drought	2	0.6	1	0.3	3	0.6	1	0.1	4	0.4	2
6	Climate Change	2	0.6	1	0.3	4	0.8	1	0.1	1	0.1	1.9
7	Dam Failure	1	0.3	2	0.6	1	0.2	2	0.2	1	0.1	1.4

Risk Factor Conculsion	
HIGH RISK (3.0 – 4.0)	*Wildfire*
MODERATE RISK (2.0 – 2.9)	*Severe Weather, Geologic Hazards, Flooding*
LOW RISK (0.1 – 1.9)	*Drought, Climate Change, Dam Failure*

The conclusions from the example risk factor results above, were translated into three categories for a final summary of hazard risk based on *High*, *Moderate*, or *Low* risk designations. The designations values are arbitrary and can be adjusted as deemed necessary. It should be noted that although some hazards are classified as posing Low risk, their occurrence of

varying or unprecedented magnitudes is still possible and will continue to be reevaluated during future updates of this plan.

D.4   Risk Factor Final Worksheet agreed upon Planning Committee

LHMP RISK FACTOR EXCEL WORKSHEET

HAZARD PRIORITIZATION /

MITIGATE HAZARDS

Rank	Natural Hazards	Probability (1-4)	Factor1 = (Probability Index * .30)	Impact (1-4)	Factor2 = (Impact Index * .30)	Spatial Extent (1-4)	Factor3 = (Spatial Extent Index * .20)	Warning Time (1-4)	Factor4 = (Warning Time Index * .10)	Duration (1-4)	Factor5 = (Probability Index * .10)	RF Factor Total = (Add Factors 1-5)
1	Climate Change	1	0.3	1	0.3	3	0.6	1	0.1	4	0.4	1.7
2	Earthquake	3	0.9	4	1.2	4	0.8	4	0.4	3	0.3	3.6
3	Erosion	1.5	0.45	1	0.3	1	0.2	3	0.3	1.5	0.15	1.4
4	Extreme Heat	2.5	0.75	1	0.3	2.5	0.5	1	0.1	2.5	0.25	1.9
5	Flooding	2	0.6	2	0.6	2	0.4	4	0.4	2.5	0.25	2.25
6	Wildfire	2	0.6	2	0.6	2	0.4	4	0.4	3	0.3	2.3

The RF approach combines historical data, local knowledge, and consensus opinions to produce numerical values that allow identified hazards to be ranked against one another. These criteria were used to evaluate hazards and identify the highest risk hazard in the Lawndale region.

The RF approach produces numerical values that allow identified hazards to be ranked against one another (the higher the RF value, the greater the hazard risk). RF values are obtained by assigning varying degrees of risk to five categories for each hazard: probability, impact, spatial extent, warning time, and duration. Each degree of risk is assigned a value ranging from 1 to 4 and a weighing factor for each category was agreed upon by the MPC.

▮ Calculated Field

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D.5   Mitigation Action Implementation Plan Form

Mitigation Action Implementation Plan	
Action:	
Implementing Agencies	
Lead Agency (ies):	Town of Apple Valley
Roles and Responsibilities:	
Support Agency (ies):	
Roles and Responsibilities:	
Preliminary Identified Tasks:	
1.	
2.	
3.	
Implementation Costs	
Estimated Capital Costs:	
Estimated Maintenance Costs:	
Implementation Resources	
Financial Resources (Funding):	
Technical Assistance Resources:	
Required Equipment, Vehicles, and Supplies	
Office Supplies	
Vehicles	
Implementation Timeframe	
Estimated Mitigation Action Start Date:	
Estimated Mitigation Action Completion Date:	

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D.6 Mitigation Action Reporting Form

Mitigation Action Reporting Forms

Your jurisdictional may wish to use these mitigation actions reporting forms on an annual, semiannual, or quarterly basis.

Progress Report Period:_____ to _____
(date) (date)

Project Title:_____

Project ID#_____

Responsible Agency:_____

Address:_____

Town: _____

Contact Person:_____

Phone#: _____ Email _____

List Supporting Agencies and Contacts:_____

Total Project Cost:_____

Funding Source:_____

Anticipated Cost Overrun/Underrun:_____

Date of Project Approval:_____ Start date of the project:_____

Anticipated completion date: _____

Description of the Project (include a description of each phase, if applicable, and the time frame for completing each phase):_____

Milestones	Completed (✓)	Projected Date of Completion

HMP Goal Addressed: _____

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D.7 Annual HMP Review Questionnaire

Annual HMP Review Questionnaire

Plan Section	Questions	Yes	No	Comments
Planning Process	Have there been staffing changes that would warrant inviting different members to the planning team?			
	Are there procedures that can be done more efficiently?			
	Are there representatives of essential organizations who have not fully participated in the planning and implementation of actions? If so, can someone else from this organization commit to the team?			
	Has the committee undertaken any public outreach activities regarding the HMP or implementation of mitigation actions?			
	How can public participation be improved?			
Hazard Profiles	Has a natural and/or human caused disaster occurred in this reporting period?			
	Are there natural and/or human caused hazards that have not been addressed in this HMP and should be?			
	Are additional maps/data or new hazards studies available? If so, what have they revealed?			
Vulnerability Analysis	Do any new critical facilities or infrastructure need to be added to the asset lists?			
	How will the vulnerability analysis be affected by additional maps/data or new hazard studies?			
	Have there been changes in development patterns that could influence the effects of hazards or create additional risks?			
	Has the vulnerability analysis changed as a result of the implementation of mitigation actions?			
Mitigation Strategy	Are there different or additional resources (financial, technical, and human) that are now available for mitigation planning?			
	Is the goal still applicable?			
	Should new mitigation actions be added to the Mitigation Action Plan?			
	During implementation of the mitigation actions, what has proven effective? What has proven not effective?			
	Do existing mitigation actions listed in the Mitigation Action Plan need to be reprioritized deleted, or revised?			
	Are the mitigation actions listed in the Mitigation Action Plan appropriate for available resources?			
Planning Mechanisms	Has the Mitigation Action plan been incorporated into existing planning mechanisms?			
	Has the Mitigation Action plan incorporated existing plan mechanisms?			

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Town of Apple Valley

Emergency Operations Plan
Part I Basic Plan

NOVEMBER 1, 2014

Town of Apple Valley

C A L I F O R N I A

OCTOBER 28,2014

TO: CITIZENS OF THE TOWN OF APPLE VALLEY, TOWN COUNCIL
                    MEMBERS AND TOWN OF APPLE VALLEY EMPLOYEES

SUBJECT: LETTER OF PROMULGATION

The preservation of life, property and the environment is an inherent responsibility of local, state, and federal government. The Town of Apple Valley has prepared this Emergency Operations Plan (EOP) to ensure the most effective and economical allocation of resources for the maximum benefit and protection of the civilian population in time of emergency.

While no plan can prevent death and destruction, good plans carried out by knowledgeable and well-trained personnel can and will minimize losses. This plan conforms to current State and Federal guidelines for emergency plans and complies with the California Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS) standards.

The objective of this plan is to incorporate and coordinate all the facilities and personnel of the Town into an efficient organization capable of responding to any emergency.

This EOP is an extension of the State of California Emergency Plan and the National Response Plan that will be reviewed and exercised periodically and revised as necessary to meet changing conditions.

The Town Council gives its full support to this plan and urges all officials, employees, and citizens, individually and collectively, to do their share in the total emergency effort for the Town of Apple Valley.

SIGNED CONCURRENCE

The following Town of Apple Valley Managers and EOC response staff concurs with the Town of Apple Valley Emergency Operations Plan dated November 1, 2014, with an understanding that revisions, as needed, will be processed by the Emergency Services Officer for approval.

Frank Robinson   Signed: _____

Town Manager   Date: _____

Marc Puckett   Signed: _____

Assistant Town Manager   Date: _____

Dennis Cron   Signed: _____

Assistant Town Manager   Date: _____

Lori Lamson   Signed: _____

Assistant Town Manager   Date: _____

La Vonda Pearson   Signed: _____

Town Clerk   Date: _____

Kathie Martin   Signed: _____

Marketing & Public Affairs Officer   Date: _____

John Brown   Signed: _____

Town Attorney, Best, Best & Krieger   Date: _____

Gina Whiteside   Signed: _____

Animal Services Manager   Date: _____

Nikki Salas   Signed: _____

Director of Human Resources & Risk Management   Date: _____

Ralph Wright   Signed: _____

Parks & Recreation Manager   Dated : _____

Lance Miller   Signed: _____

Public Works Director   Date: _____

Joseph Moon   Signed: _____

Environmental & Transit Services   Date: _____

Jim Andersen   Signed: _____

Code Enforcement Manager   Date: _____

Mike Cady   Signed: _____

Public Works Manager   Date: _____

Patrick Carroll   Signed: _____

Interim Building Official   Date: _____

Barbra Cornett   Signed: _____

Animal Services Supervisor   Date: _____

Lana Tomlin   Signed: _____

Police Chief   Dated: _____

San Bernardino County Sheriff's Department

Sid Hultquist   Signed: _____

Fire Chief   Dated: _____

Apple Valley Fire Protection District

Joseph A. Guarrera   Signed: _____

Emergency Services Officer   Dated: _____

Apple Valley Fire Protection District

Emergency Operations Plan

1. FOREWORD

This Emergency Operations Plan (EOP) provides guidance for the Town of Apple Valley's response to extraordinary emergency situations associated with natural, human-made and technological disasters. This plan is not intended to be used for normal day-to-day emergencies or the established routine procedures used to cope with such incidents. Rather, this plan concentrates on operational concepts and response procedures relative to large-scale emergencies and disasters.

This plan is a preparedness document designed to be read, understood, and exercise prior to an emergency. The EOP has been developed in accordance with the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). Town departments are responsible to assure the preparation and maintenance of the Town's Standard Operating Procedures (SOPs), resource lists, and checklist that detail how assigned responsibilities are preformed to support the implementation of the EOP. The SOPs include the specific emergency authorities that designated officials and their successors can assume during emergency situations.

This plan in itself cannot guarantee an efficient, effective response to an emergency. It must be utilized as a tool to assist in emergency response and short-term recovery activities. This plan must be flexible enough to adapt to a broad spectrum of disasters and must be supported with:

- Adequate personnel, equipment, and expertise from response agencies/organizations. Well coordinated response activities with interoperable communications.
- Continuous training and exercises.
- Awareness of local resources available through Town departments and by prearranged agreements before looking to assistance from the San Bernardino County Operational Area.
- Reviewing and testing of this plan on a regular basis.

2. TABLE OF CONTENTS

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3. INTRODUCTION

3.1 PURPOSE

The purpose of the Town of Apple Valley Emergency Operations Plan (EOP) is to establish a comprehensive, all-hazards approach to natural, human-made and technological disasters. The plan provides an overview of operational concepts and identifies components of the Town's Emergency Management Organization within the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). The plan also describes the overall emergency responsibilities of Town, county, state, and federal entities.

3.2 SCOPE

This plan establishes a system for coordinating the prevention, preparedness, response, recovery and mitigation phases of emergency management in Apple Valley. It is intended to be an overview of emergency management within the Town and not a detailed operational document. Detailed Standard Operating Procedures (SOPs) and checklists are distributed to emergency operations staff separately and are for internal use only.

3.3 PLAN ORGANIZATION

There are five parts to this Emergency Plan: The Basic Plan, Emergency Function Annexes, Support Annexes, Hazard-specific Annexes and Appendices.

Basic Plan: The basic plan describes the fundamental systems, strategies, policies, assumptions, responsibilities and operational priorities that California will utilize to guide and support emergency management efforts. Essential elements of the basic plan include:

- A description of the emergency services that are provided by governmental agencies and how resources are mobilized,
- An outline of the methods for carrying out emergency operations and the process for rendering mutual aid,
- An overview of the system for providing public information, and
- Emphasis on the need for continuity planning to ensure uninterrupted government operations.

These elements culminate with a comprehensive emergency management concept of operations that outlines the relationships and responsibilities for state government and its political subdivisions.

Emergency Function Annexes: This plan implements Emergency Function working groups, which will develop functional annexes that follow an established format to describe discipline- specific goals, objectives, operational concepts, capabilities, organizational structures and related policies and procedures. The functional annexes will be developed separately from the basic plan and will make reference to existing agency and department plans and procedures. Supporting plans and documents should be listed in an attachment to each functional annex.

Support Annexes: The support annexes describe the framework through which the Town of Apple Valley departments and agencies, the private sector, not-for-profit and voluntary organizations, and other nongovernmental organizations coordinate and execute the common emergency management strategies. The actions described in the support annexes apply to nearly every type of emergency.

Hazard Specific Annexes: The hazard, threat, or incident-specific annexes describe the policies, situation, concept of operations, and responsibilities for particular hazards, threats, or incidents.

Appendices: Subsequent plans and procedures that are developed in support of the Emergency Plan, such as mutual aid plans, hazard-specific plans, catastrophic plans and related procedures will be incorporated by reference and maintained separate from the basic plan.

3.4 RELATIONSHIP TO OTHER PLANS

Emergency Operations Plan (EOP)
The intent of the Town of Apple Valley's EOP is to provide the concept of operations and strategic activities for responding to any type of emergency incident impacting the Town. Other individual communities may maintain similar plans or procedures for implementation in response to localized incidents or initial activities prior to escalation to San Bernardino County. If the County EOP is activated during an incident or countywide emergency, the Town of Apple Valley will adopt command and control structures and procedures representative of County response operations in accordance with the requirements of SEMS and NIMS.

A number of agency- and organization-specific plans and organizational procedures support the Town EOP and annexes. These plans and procedures are interrelated and have a direct influence on the Town's preparation prior to a major emergency or disaster, its activities in response to such an emergency or disaster, and its ability to successfully recover from such incidents or events. These plans also provide local, County, regional, and State agencies and

entities with a consolidated framework for coordinating activities and resources, thus promoting efficient use of resources during all phases of emergency management.

Local Hazard Mitigation Plan (HMP)
The Town of Apple Valley, in coordination with San Bernardino County and the surrounding jurisdictions, has developed their Local Hazard Mitigation Plan. The plan identifies hazards, assesses the losses associated with the hazards, and investigates the vulnerability of the community towards different hazards. The plan also identifies alternatives for the future of the community to better prepare, minimize loss and educate the public of the hazards identified.

4. SITUATION AND ASSUMPTIONS

Situation

The Town of Apple Valley is located in the Mojave Desert of the County of San Bernardino, at an elevation of 3,000 feet. Known as the "High Desert", Apple Valley consists of 78 square miles in its incorporated boundaries and a sphere of influence encompassing 200 square miles. The Town borders Interstate 15 to the north, Joshua Road to the east, the foothills of the San Bernardino Mountains to the south, and the Mojave River to the west.

Apple Valley is primarily desert-rural and consists of a typical mountain-and-basin topography with sparse vegetation. The natural geographic vulnerabilities are: Mojave River, San Bernardino Mountains, Dry Lake Bed, and the Desert Knolls area (generally an area with a slope greater than 15%).

The Mojave River rises in the San Bernardino Mountains at the Lake Silverwood and Mojave River Forks Reservoirs. The River runs in a northerly direction the entire length of the Town's western boundary. Due to the porous soil and rapid evaporation, the River is primarily dry in the area adjacent to Apple Valley. A flow of water is present during major rains and upon release of water from Lake Silverwood (contained by the Cedar Springs Dam and Mojave Dam).

The Town of Apple Valley also consists of a dry lake bed area that consists of sparse population. This area and the area along the Mojave River is part of the 100 Year Flood Area.

Apple Valley is vulnerable to the affects of natural hazards such as earthquakes, flood/winter storms, wildfire, drought, high winds, and Dam failure. The Town is also vulnerable to a

variety of human-caused hazards such as epidemics, hazardous materials releases, terrorism, train derailments and utility failure.

Assumptions

A major emergency or disaster can occur any time, any place. It may cause significant degrees of human suffering, property damage and economic hardship to individuals, local government, and the business community. The Town of Apple Valley assumes there will be many emergency situations that may directly produce severe consequences and will impact the affect of the response to the incident. The following assumptions apply to this plan:

1. Due to limited staff and resources, a major emergency or disaster may overwhelm the capabilities of Apple Valley to provide prompt and effective emergency response and recovery. Mutual aid will be requested when disaster relief requirements exceed the Town's ability to meet them.
2. Transportation infrastructure may be damaged or disrupted. Emergency responders may have difficulty reaching people and evacuation routes may cause traffic backups slowing egress from damaged areas. The movement of emergency supplies may be impeded.
3. Communication infrastructure may be damaged or disrupted, thus slowing dissemination of information and reporting of persons needing help.
4. Homes, businesses, public buildings, antenna sites, and other critical facilities may be damaged or destroyed. Public utilities may be damaged and either completely or partially inoperable
5. Emergency medical services and transport ambulances may be in short supply. Medical and health care facilities that do remain open may be overwhelmed with medical care requests. Additionally, medicines may be in short supply.
6. Damage to facilities that use hazardous or toxic chemicals could result in the release of these hazardous materials into the environment.
7. Businesses in Apple Valley may not be able to supply the public with basic necessities such as food, water, blankets, etc. Additionally, businesses may have difficulty remaining open.
8. Volunteers may come from other areas to help, causing problems with accountability. Donated goods that are not presently needed may be dropped off at various locations.
9. Effective emergency operations require periodic training and exercising.
10. Apple Valley emergency personnel and disaster service workers will utilize the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS).

4.1 HAZARD AND THREAT ANALYSIS SUMMARY

Hazard Analysis

The Town of Apple Valley has identified hazard risks of various natural and human-cause emergencies and disasters. The matrix below identifies these hazards, the likelihood to occur, and the impact to the Town:

Hazard Analysis Matrix

		Impact		
		High	**Medium**	**Low**
Probability	**High**	Earthquake Flooding Wildfires		
	Medium	Drought and Water shortage	Extreme heat High Winds Straight line Winds	
	Low	Active Shooter Workplace violence		Dam Failure

Probability

High- Highly Likely/Likely
Medium- Possible
Low- Unlikely

Impact

High- Catastrophic/Critical
Medium- Limited
Low- Negligible

Threat Analysis Summary

This section of the plan consists of a series of threat assessments. The purpose is to describe the area at risk and the anticipated nature of the situation, which could result should the event threaten or occur.

The Town of Apple Valley encompasses over 78 square miles and is located in the northwest portion of San Bernardino County. The Town is bordered on the west by Victorville the east by the county unincorporated area, the south by Hesperia, and on the north by the county unincorporated area. It has a population of 69,135 (U.S. 2010 Census Report). Apple Valley is located within the Southern Administrative Region VI of the California Office of Emergency Services (CalOES).

The Town of Apple Valley is vulnerable to a wide range of threats. In the past, Apple Valley has experienced major emergencies such as earthquakes, flood / winter storms, and wildfires. These and other emergency incidents could occur at any time. Some things to consider based upon the Hazard Analysis:

- A major earthquake occurring in Apple Valley could have a catastrophic effect on the population.
- The Town has experienced several flooding emergencies from flash flooding.
- Many major highways (and rail lines) traverse or pass near the Town and transportation incidents (including hazardous material incidents) as well as pipeline ruptures or illegal dumping could affect the Town of Apple Valley.
- Severe wind surges pose a significant risk to life and property in Apple Valley by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes.
- Wind driven wild fire event could require significant impact on the population.

Any single incident as well as a combination of events could require evacuation and/or sheltering of the population. The Police Department is the lead agency in evacuations. The Town currently contracts for its fire and ambulance services. The American Red Cross (ARC) will be notified and work with Town staff if a shelter site is needed. The Town also relies on local volunteer groups such as, the Community Emergency Response Team (CERT), (FAD) and Emergency Communications Services (ECS) for assistance during emergencies.

See *Apple Valley's Local Hazard Mitigation Plan* for detailed information and maps on the hazards that could affect the Town.

5. EMERGENCY MANAGEMENT ORGANIZATION

5.1 ORGANIZATION, ROLES AND RESPONSIBILITIES

<u>General</u>

All participating agencies and response organizations will have various roles and responsibilities throughout an emergency. Therefore, it is critical the local command structure be established to support response and recovery efforts and maintain a significant amount of flexibility to expand and/or contract as the situation evolves. Typical duties may also change depending on the severity and size of the incident(s) and the availability of local resources. Because of this, it is also important to develop and maintain depth within the command structure and response organizations.

The Town of Apple Valley conducts all emergency management functions in accordance with SEMS and NIMS. During an emergency, the Town has the responsibility to manage and coordinate the overall emergency response and recovery activities. The Emergency Services Coordinator along with each Department is responsible for ensuring critical staff are identified and trained at a level enabling effective execution of existing response policies, plans, and procedures.

Most Town Departments have emergency functions in addition to their normal daily duties. Each Department is responsible for developing and maintaining its own Emergency Standard Operating Procedures (SOPs). Specific responsibilities are outlined and follow:

Emergency Management Organization

The Town of Apple Valley's Emergency Management Organization (including emergency response and recovery) will be directed by the Town Manager who serves as the Director of Emergency Services/EOC Director. The Director of Emergency Services is responsible to the Town Council and Disaster Council per Chapter No. 8 of the Town of Apple Valley's Municipal Code. The Director of Emergency Services has the overall responsibility for implementation of the Emergency Operations Plan (EOP).

The Director of Emergency Services/EOC Director is supported by the Emergency Management Organization and has overall responsibility for:

- Organizing, staffing, and operating the Emergency Operations Center (EOC);
- Operating communications and warning systems;
- Providing information and guidance to the public;

- Maintaining information on the status of resources, services, and operations;
- Directing overall operations;
- Obtaining support for the Town of Apple Valley and providing support to other jurisdictions as required;
- Identifying and analyzing potential hazards and recommending appropriate countermeasures;
- Collecting, evaluating, and disseminating damage assessment and other essential information; and
- Providing status and other reports to the San Bernardino County Operational Area via the Emergency Services Coordinator.

Roles and responsibilities of individual Town Departments, other levels of government, private sector, nongovernmental organizations and Individuals and households are described below to further clarify the Town's emergency management structure:

Town Departments

Town Council
Responsibilities include:
- Communicate with other Elected Officials;
- Consult with and assist in making important decisions with the Director of Emergency Services that might affect overall policy direction;
- Assist with the dissemination of public information; and
- Proclaim the existence of a local emergency.

Town Clerk's Office
Responsibilities include:
- Provide for a secure and safe place for all vital records of the Town;
- Must be present at Town Council meetings and is responsible for recording the minutes; and
- Assist with the Local Emergency Proclamation and Resolution process.

Economic/Community Development
Responsibilities include:
- Inspect and post as necessary all damaged buildings, both public and private, and determine if they are safe or if they should be evacuated;
- Estimate the extent of damage / cost of repair of structures;
- Assist in the Preliminary Damage Assessment (PDA) with local, state, and federal organizations to determine losses and recovery needs;

- Assist with the review and permit process of the repair or replacement of damaged structures, both public and private.

Parks & Recreation
Responsibilities include:
- Employees assist in the opening and operation of the Apple Valley shelter(s) – congruent upon the arrival of the ARC for operation relief;
- Provide any necessary resources (e.g. personnel, equipment, and facilities);
- Assist in any transportation needs (e.g. buses, vans, sedans, and trucks)

Engineering
Responsibilities include:
- Conduct a damage assessment of Town signal system;
- Assist in determining safe evacuation routes;
- Assist with inspections and/or liaison with utility companies; and
- Assist with damage surveys within the Town.

Fire Protection District
Responsibilities include:
- Respond to all types of fires, including structure, vegetation, and those involving vehicles or aircraft;
- Assist with medical aids from injuries or medical conditions;
- Respond to all types of hazardous materials spills, exposures, and releases; and
- Assist with rescues such as swift water, steep terrain, vehicle collisions, confined spaces, and structural collapses.
- Coordinate emergency response with all departments and agencies involved with the event;
- Advise San Bernardino County Operational Area (OA) aka San Bernardino County Fire – Office of Emergency Services (County OES) of the emergency and maintain contact throughout the event; and
- Identify the need and request mutual aid.
- Coordinate the Disaster Service Workers (DSWs) volunteers.
- Process unaffiliated volunteers as Disaster Service Workers (DSWs).

Human Resources
Responsibilities include:
- Maintain current addresses and telephone numbers of all Town employees;
- Assist with the Employee Message Center where employees or their families may call in or receive status reports;
- Handle questions and problem solve in the areas of health benefits;

- Collect paperwork on damaged Town facilities;
- Process claims for injuries to emergency responders who are Town employees; and
- Act as liaison with contracted third party administrator for workers compensation and risk liability for Town employees.

Management Services
Responsibilities include:

- Activate and support all activities in the Emergency Operations Center (EOC);
- Dissemination of accurate and timely emergency public information and warning to the public;
- Financial support, response, and recovery for the emergency/disaster;
- Support the response effort and the acquisition, transportation and mobilization of resources;
- Oversee the procurement and allocation of supplies and materials not normally provided through mutual aid channels;
- Ensure the payroll, accounts payables, and revenue collection process continues; and
- Collection, sorting, tracking, and distribution of donations.

Police Department
Responsibilities include:

- Protect lives, property, and the environment;
- Access and perimeter control;
- Evacuation of threatened populations to safe areas;
- Dissemination of accurate and timely emergency public information and warning to the public;

Public Works
Responsibilities include:

- Coordinate emergency response with all departments and agencies involved with the event;
- Provide assistance with barricades, sandbags, road closures, debris removal, emergency road repair, traffic control, and damage surveys and assessments of roadways and facilities;
- Eliminate an immediate threat to lives or public health and safety;
- Take protective measures to minimize damage to private and public facilities;
- Demolition and removal of public and private buildings and structures that pose an immediate threat to the safety of the general public;
- Tracking through documentation of all emergency activities; and

- Provide technical assistance and/or equipment within their capability for the Town and other jurisdictions within the State in accordance with the Public Works Mutual Aid Agreement.

County Government / Operational Area

The California Emergency Services Act designates each county as an Operational Area (OA) to coordinate emergency activities and resources of its political subdivisions. The governing bodies of political subdivisions within each county coordinate to establish the lead agency for the OA. The operational area lead agency serves as a coordinating link between the local government level and the region level of state government. OA responsibilities involve coordinating with the jurisdictions and organizations to deploy field-level emergency response personnel, activate emergency operations centers, and issue orders to protect the public.

State Government

During as state of war emergency, a state of emergency, or a local emergency, the CalOES Secretary coordinates the emergency activities of all state agencies in connection with such emergency and has the authority to use any state government resource to fulfill mutual aid requests or to support emergency operations. CalOES operates the California State Warning Center (CSWC) 24-hours a day to receive and disseminate emergency alerts and warnings. When needed the State Operations Center (SOC) and Regional Emergency Operations Centers (REOCs) are activated to coordinate emergency management information and resources. CalOES also coordinates the delivery of federal grant programs under Presidential declarations of emergency and major disaster.

Federal Government

The federal government supports emergency management throughout the nation and in California by providing tools, resources, and guidance to support California's emergency management system. When an emergency occurs that exceeds, or is anticipated to exceed resources located within the state, or when federal departments or agencies acting under their own authorities are partners in the unified command for an emergency, the federal government will implement the National Response Framework (NRF) to access federal department and agency capabilities, organized the federal response and ensure coordination with all response partners.

Private Sector

Private sector organizations play a key role before, during, and after an emergency. First, they must provide for the welfare and protection of their employees in the workplace. In addition, the Town must work seamlessly with businesses that provide water, power,

communication networks, transportation, medical care, security, and numerous other services upon which both response and recovery are particularly dependent.

Nongovernmental Organizations

Nongovernmental organizations (NGOs) play extremely important roles before, during, and after an emergency. For the Town of Apple Valley, NGOs such as the American Red Cross (ARC) provide sheltering, emergency food supplies, counseling services, and other vital services to support response and promote the recovery of disaster victims. NGOS collaborate with responders, governments at all levels, and other agencies and organizations.

Individuals and Households

Although not formally a part of the Town's emergency operations, individuals and households play an important role in the overall emergency management strategy. Community members can contribute by:

- Reducing hazards in their homes;
- Preparing emergency supply kits and household emergency plans;
- Monitoring emergency communications carefully;
- Volunteering with established organizations, like CERT (Community Emergency Response Team), ECS (Emergency Communications Services), and FADD (Friends of Animals During Disasters); and
- Enrolling in emergency response training courses.

5.2 STANDARDIZED EMERGENCY MANAGEMENT SYSTEM (SEMS) BASED EMERGENCY ORGANIZATION

SEMS requires that every emergency response involving multiple jurisdictions or multiple agencies include the five functions identified below. These functions must be applied at each level of the SEMS organization.

1. **Command/Management:** Command is responsible for the directing, ordering, and/or controlling of resources at the field response level. Management is responsible for overall emergency policy and coordination at the SEMS EOC levels. Command and Management are further discussed below:

    a. **Command:** A key concept in all emergency planning is to establish command and tactical control at the lowest level that can perform that role effectively in the organization. In the Incident Command System (ICS), the Incident Commander (IC), with appropriate policy direction and authority from the responding agency, sets the objectives to be accomplished and approves the strategy and tactics to be used to meet

those objectives. The IC must respond to higher authority. Depending upon the incident's size and scope, the higher authority could be the next ranking level in the organization up to the agency or department executive. This relationship provides an operational link with policy executives who customarily reside in the Department Operations Center (DOC) or EOC, when activated.

b. **Management:** The EOC serves as a central location from which multiple agencies or organizations coordinate information collection and evaluation, priority setting and resource management. Within the EOC, the Management function:

    i. Facilitates multiagency coordination and executive decision making in support of the incident response,

    ii. Implements the policies established by the governing bodies,

    iii. Facilitate the activities of the Multiagency (MAC) Group

2. **Operations:** Responsible for coordinating and supporting all jurisdictional operations in support of the response to the emergency through implementation of the organizational level's Action Plans (AP). At the Field Level, the Operations Section is responsible for the coordinated tactical response directly applicable to, or in support of the objectives in accordance with the Incident Action Plan (IAP). In the EOC, the Operations Section Coordinator manages functional coordinators who share information and decisions about discipline-specific operations.

3. **Logistics:** Responsible for providing facilities, services, personnel, equipment and materials in support of the emergency. Unified ordering takes place through the Logistics Section Ordering Managers to ensure controls and accountability over resource requests. As needed, Unit Coordinators are appointed to address the needs for communications, food, medical, supplies, facilities and ground support.

4. **Planning/Intelligence:** Responsible for the collection, evaluation and dissemination of operational information related to the incident for the preparation and documentation of the IAP at the Field Level or the AP at an EOC. Planning/Intelligence also maintains information on the current and forecasted situation and on the status of resources assigned to the emergency or the EOC. As needed, Unit Coordinators are appointed to collect and analyze data, prepare situation reports, develop action plans, set Geographic Information Systems (GIS) priorities, compile and maintain documentation, conduct advance planning, manage technical specialists and coordinate demobilization.

5. **Finance/Administration:** Responsible for all financial and cost analysis aspects of the emergency and for any administrative aspects not handled by the other functions. As needed, Unit Leaders are appointed to record time for incident or EOC personnel and hired equipment, coordinate procurement activities, process claims and track costs.

Standard ICS Structure under SEMS

5.3 EMERGENCY FUNCTIONS

The California State Emergency Plan establishes the California Emergency Functions (CA-EFs), which consist of seventeen primary activities deemed essential to addressing the emergency management needs of communities in all phases of emergency management. The California Emergency Functions were designed to bring together discipline-specific stakeholders at all levels of government to collaborate and function within the four phases of emergency management. The EFs consist of an alliance of agencies, departments and other stakeholders with similar functional responsibilities. This grouping allows each EF to collaboratively mitigate, prepare for, cohesively respond to and effectively recover from an emergency.

Table 1.1 California Emergency Functions

	CA-EF Title	Definition	Lead Agency
1.	Transportation	Assists in the management of transportation systems and infrastructure during domestic threats or in response to incidents.	Town of Apple Valley – Public Works Department
2.	Communications	Provides resources, support and restoration of government emergency telecommunications, including voice and data.	Town of Apple Valley – Information Technology Department
3.	Construction & Engineering	Organizes capabilities and resources to facilitate the delivery of services, technical assistance, engineering expertise, construction management and other support.	Town of Apple Valley – Engineering Department/Building and Safety Department
4.	Fire & Rescue	Monitors the status of fire mutual aid activities. Coordinates support activities related to the detection and suppression of urban, rural and wildland fires and emergency incident scene rescue activities and provides personnel, equipment and supplies to support local jurisdictions.	Apple Valley Fire Protection District
5.	Management	Coordinates and resolves issues among the CA-EFs in the four phases of emergency management to ensure consistency in the development and maintenance of the EOP annexes. During emergencies, serves in an advisory capacity for the Town to the EOC Director.	Town of Apple Valley /Apple Valley Fire Protection District Emergency Services Department
6.	Care &Shelter	Coordinates actions to assist responsible jurisdictions to meet the needs of victims displaced during an incident including food assistance, clothing, non-medical care and sheltering, family reunification and victim recovery.	Town of Apple Valley /Apple Valley Fire Protection District Emergency Services Department and American Red Cross
7.	Resources	Coordinates plans and activities to locate, procure and pre-position resources to support emergency operations.	Town of Apple Valley – EOC Management Section Purchasing Division
8.	Public Health & Medical	Coordinates Public Health and Medical activities and services in support resource needs for preparedness, response, and recovery from emergencies and disasters.	San Bernardino County – Public Health Department

	CA-EF Title	Definition	Lead Agency
9.	Search and Rescue	Supports and coordinates response of personnel and equipment to search for and rescue missing or trapped persons that may involve criminal acts and water rescues.	San Bernardino County Sheriff's Department – Apple Valley Fire Protection District
10.	Hazardous Materials	Coordinates resources and supports the responsible agencies to prepare for, prevent, minimize, assess, mitigate, respond to and recover from a threat to the public or environment by actual or potential hazardous materials releases.	Apple Valley Fire Protection District
11.	Food & Agriculture	Coordinates activities during emergencies impacting the agriculture and food industry and supports the recovery of impacted industries and resources after incidents.	San Bernardino County – Agriculture Weights & Measures
12.	Utilities	Provides resources and support to responsible jurisdictions and in partnership with private sector to restore gas, electric, water, wastewater and telecommunications.	Town of Apple Valley – Public Works Department
13.	Law Enforcement	Coordinates law enforcement personnel and equipment to support responsible law enforcement agencies, coroner activities and public safety in accordance with Law Enforcement and Coroner's Mutual Aid Plans.	Apple Valley Police Department
14.	Long-Term Recovery	Supports and enables economic recovery from the long-term consequences of extraordinary emergencies and disasters.	Town of Apple Valley – Town Manager's Office
15.	Public Information	Supports the accurate, coordinated, timely and accessible information to affected audiences, including governments, media, the private sector, the local populace, and the special needs population.	Town of Apple Valley – Public Information Department
16.	Evacuation	Supports the safe evacuation of persons, domestic animals and livestock from hazardous areas.	Apple Valley Police Department
17.	Volunteer & Donations Management	Supports responsible jurisdictions in ensuring the most efficient and effective use of affiliated and unaffiliated volunteers and organizations and monetary and in-kind donated resources to support incidents requiring a state response.	Town of Apple Valley/Apple Valley Fire Protection District Emergency Services Department and Desert Communities United Way and COAD.

California Emergency Functions		Town Council	Town Manager's Office	Town Clerk's Office	Community Development	Community Services	Engineering	Fire Protection District	Human Resources	Information Technology	Management Services	Police Department	Public Works	San Bernardino County – Public Health	San Bernardino County – Sherriff's	San Bernardino County – Agriculture Weights & Measures	American Red Cross	Apple Valley Unified School District	Victor Valley transit Authority	Utilities	Water Districts
1.	Transportation					S		S				S	P		S			S	S		
2.	Communications							P		S		S	S		S					S	
3.	Construction & Engineering				P		S						S							S	
4.	Fire & Rescue							P				S	S	S	S		S	S	S	S	S
5.	Management	S	P	S	S	P	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
6.	Care & Shelter					S		S	S			S	S	S			S	S	S		
7.	Resources		S					S	S		P	S	S		S						
8.	Public Health & Medical							S				S		P	S		S				
9.	Search & Rescue							S				S	S		P		S				
10.	Hazardous Materials							P				S	S		S		S				
11.	Food & Agriculture				S			S				S			S	P					S
12.	Utilities						S			S			P							S	
13.	Law Enforcement											P	S		S						
14.	Long Term Recovery	S	P	S	S	S	S	S	S	S	S	S	S							S	S
15.	Public Information	S	S	S		S		S	S	S		P	S		S						
16.	Evacuation							S				P	S		S	S	S	S	S		
17.	Volunteers & Donations Management					S		S				P	S		S		S				

P= Primary   S=Support

California Emergency Function Matrix

6. CONCEPT OF OPERATIONS

General

The Emergency Operation Plan addresses major emergencies as well as large-scale disasters, such as an earthquake. Some emergencies will be preceded by a warning period, providing sufficient time to warn the public and reduce the loss of life, property damage, and effects on the environment. Other emergencies occur with little or no warning, thus requiring immediate activation of the Emergency Operations Plan. All Town departments and Emergency Operations staff must be prepared to promptly and effectively respond to any foreseeable emergency, taking all appropriate actions.

The process of emergency management involves **five phases**:

> Prevention
> Preparedness
> Response
> Recovery
> Mitigation

Prevention Phase

The prevention phase includes actions taken to avoid an incident or to intervene and stop an incident from occurring. This involves actions taken to protect lives and property. It also involves applying intelligence and other information to a range of activities that may include such countermeasures as:

> Deterrence operations;
> Heightened inspections;
> Improved surveillance; and
> Interconnections of health and disease prevention among people, domestic animals and wildlife.

Preparedness Phase

The preparedness phase involves activities taken in advance of an emergency. These activities develop the Town of Apple Valley's capabilities and effective response to a disaster. To assist with preparedness, emphasis is on emergency planning, training, exercises, and public awareness programs.

Emergency planning includes the development of Standard Operating Procedures (SOP's) detailing departmental personnel assignments, notification rosters, and resource lists. EOC Position Notebooks with EOC responsibilities and action check lists have also been developed. In the event of an emergency, the SOP's and the EOC Position Notebooks are designed to be

used as a checklist by those who are trained to work a designated position as well as those who are not familiar with a particular emergency function. All emergency operations staff should become acquainted with the SOPs, EOC Position Notebooks, Town emergency policies, notification rosters, and resource lists which are distribute to employees.

Events that may trigger <u>increased</u> readiness are:

- Issuance of a credible long-term earthquake prediction; A flood or severe winter storm advisory;
- Conditions conducive to wildfires, such as the combination of high heat, strong winds, and low humidity;
- Wind surge;
- An expansive hazardous materials incident; An outbreak of disease activity;
- A rapidly-deteriorating International situation that could lead to an attack upon the United States; or
- Information or circumstances indicating the potential for acts of violence, terrorism, or civil unrest.

Response Phase
The response phase includes initial response and extended response activities. Upon the acknowledgement of a warning or the observation an emergency is imminent or likely to occur, the Town of Apple Valley will initiate actions to increase its readiness. During this phase, the priority is to save lives and to minimize the effects of the emergency or disaster.

The Town's initial response activities are primarily performed at the field response level. Emphasis is placed on minimizing the affects of the emergency or disaster. Field responders will use the Incident Command System (ICS). Some examples of initial response activities include:

- Brief the Town Manager and key officials or employees on the situation;
- Disseminate warnings, emergency public information, and instructions to the citizens of Apple Valley;
- Conduct evacuations and/or rescue operations: Care for displaced persons and treat the injured;
- Conduct initial damage assessments and surveys;
- Assess the need for mutual aid assistance;
- Restrict movement of traffic and people;
- Establish Unified Command(s);
- Coordinate with state and federal agencies working in the field; and
- Develop and implement incident Action Plans.

The Town's extended response activities are primarily conducted in the field and at the Town of Apple Valley Emergency Operations Center (EOC). Extended emergency operations involve the coordination and management of personnel and resources to mitigate an emergency and facilitate the transition to recovery operations. Examples of extended response activities include:

- Preparation of detailed damage assessments; Operation of mass care facilities;
- Conduct coroner operations;
- Procure required resources to sustain operations;
- Document situation status;
- Protect, control, and allocate resources;
- Restore vital utility services;
- Document expenditures;
- Develop and implement Action Plans for extended operations;
- Disseminate emergency public information;
- Declare a local emergency;
- Request a gubernatorial and federal declaration, if required;
- Prioritize resource allocations; and
- Inter/multiagency coordination.

Recovery Phase
Recovery comprises of steps the Town will take during and after an emergency to restore government function and community services to levels existing prior to the emergency. Recovery is both a short- and long-term process. Short-term operations seek to restore vital services to the community and provide for the basic needs of the public, such as binging necessary lifeline systems (e.g., power, communications, water and sewage, disposal of solid and hazardous wastes, or removal of debris) to an acceptable standard while providing for basic human need (e.g., food, clothing, and shelter).

Once stability is achieved, the Town can concentrate on long-term recovery efforts, which focus on restoring the community to a normal or improved state of affairs. The recovery period is also an opportune time to institute mitigation measures, particularly those related to the recent emergency. This is also the phase of reassessing procedures and functions of all annexes of this disaster plan for deficiencies. Resources to restore or upgrade damaged areas may be available if it can be shown extra repairs will mitigate or lessen the chances of, or damages caused by, another similar disaster in the future.

Mitigation Phase
Mitigation phase occurs both before and after emergencies or disasters. Post-disaster mitigation is actually part of the recovery process. This includes eliminating or reducing the

impact of hazards that exist within the Town of Apple Valley. Mitigation efforts include, but are not limited to:

- Amend local ordinances and statues, such as zoning ordinances, building codes, and other enforcement codes;
- Initiate structural retrofitting measures; Assess tax levies or abatements;
- Emphasize public education and awareness;
- Undertake flood control project;
- Remove fuel in areas having a high potential for wildfires; and
- Assess and alter land use planning.

6.1 EMERGENCY DECLARATIONS

As necessary, the Emergency Operations Center (EOC) will be activated and EOC staff will convene to evaluate the situation and make recommendations for a possible Local Declaration. There are four types of emergency declarations possible. They are:

Local Declaration

A Local Declaration will usually be proclaimed for large-scale emergencies or disasters threatening the safety of the persons and property within the Town of Apple Valley. Typically, EOC staff will discuss the emergency situation. If warranted, Town Code – Chapter 8 authorizes the Director of Emergency Services to issue a Local Declaration. The Town Council must formally ratify the declaration within seven days. The Proclamation of a Local Declaration provides the Town of Apple Valley with legal authority to:

- Request the governor proclaim a State of Emergency;
- Issue or suspend orders and regulations necessary to provide for the protection of life and property, including issuing orders or regulations imposing a curfew;
- Exercise full power to request mutual aid from state agencies and other jurisdictions;
- Require the emergency services of any Apple Valley official or employee;
- Obtain vital supplies and equipment and, if required, immediately commander the same for public use;
- Impose penalties for violation of lawful orders, and
- Conduct emergency operations without incurring legal liability for performance, or failure of performance per Article 17 of the Emergency Services Act.

State of Emergency

A State of Emergency may be proclaimed by the Governor when a Town or County declares an emergency. The Governor may also declare a State of Emergency when conditions of disaster or extreme peril exist which threaten the safety of persons and property within the state. Whenever the Governor declares a State of Emergency the following will apply:

- Mutual aid shall be rendered as needed;
- The Governor shall have the right to exercise all police powers vested in the State by the Constitution and the laws of the State of California within the designated area;
- The Governor may suspend orders, rules, or regulations of any state agency and any regulatory statute or statute prescribing the procedure for conducting state business;
- The Governor may commandeer or make use of any private property or personnel (other than media) in carrying out the responsibilities of his office; and
- The Governor may promulgate issue and enforce orders and regulations deemed necessary.

State of War Emergency

Whenever the Governor proclaims a State of War Emergency, or if a State of War Emergency exists, all provisions associated with a State of Emergency apply, plus:

All state agencies and political subdivisions are required to comply with the lawful orders and regulations of the Governor which are made or given within the limits of his authority as provided for in the California Emergency Services Act.

Presidential Declaration

If an emergency is beyond the ability of local and state government to mage effectively, the Governor will request federal assistance. The Federal Emergency Management Agency (FEMA) evaluates the request and recommends an action to the White House based on the disaster, the local community, and the state's ability to recover.

The President approves the request for federal disaster funding or FEMA informs the governor it has been denied. This decision process could take a few hours or several weeks depending on the nature of the disaster. Following a Presidential Declaration, federal assistance is available to supplement the efforts and resources of state and local governments to alleviate public and private sector damage and loss.

SAMPLE PROCLAMATION

RESOLUTION NO. 201X-_____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF APPLE VALLEY, CALIFORNIA, PROCLAIMING THE EXISTENCE OF A LOCAL EMERGENCY

WHEREAS, California Government Code Section 8630 empowers the Town Council of the Town of Apple Valley to proclaim the existence or threatened existence of a local emergency when the Town of Apple Valley is affected or likely to be affected by a public calamity; and

WHEREAS, conditions of extreme peril to the safety of persons and/or property have arisen within the Town of Apple Valley caused by _____(a)_____ commencing on or about ___(b)___ on the ___(c)___ day of _____(c)_____, 201X; and

WHEREAS, the initial estimated costs to repair the damages are greater than the Town's fiscal ability to recover; and

WHEREAS, existing conditions of extreme peril warrant and necessitate the proclamation of a local emergency.

NOW, THEREFORE, BE IT PROCLAIMED that a local emergency now exists in the Town of Apple Valley; and

IT IS FURTHER PROCLAIMED AND ORDERED that during the existence of said local emergency, the powers and duties of the Town Council and the emergency organization of the Town of Apple Valley shall be those prescribed by State law and Town of Apple Valley Municipal Code, Chapter 2.40.

IT IS FURTHER PROCLAIMED AND ORDERED that said local emergency shall be deemed to continue to exist until its termination is proclaimed by the Town Council of the Town of Apple Valley.

Adopted by the Town Council and signed by the Mayor and attested by the Town Clerk this _____ day of _____, 201X.

_____
MAYOR

Attest:

_____

TOWN CLERK

> (a) Enter disaster type, i.e., fire, flood, earthquake, epidemic, hazardous materials incident, etc.;
> (b) Enter the time including AM or PM; and
> (c) Enter date, month, and year the incident first struck.

6.2 NOTIFICATION AND MOBILIZATION

In the event of a major emergency or disaster, Notification System will be put into effect. It is important all employees and supervisors are aware of their position, especially in the case of assignment changes. Emergency notification and mobilization is based upon regular position assignment, not individuals. These assignments may be changed as an incident develops, or as needs are assessed. Emergency assignments allow employees to know when to respond during disaster operations and minimize the amount of phone calls necessary. This system does not affect the handling of smaller, local emergencies. These will be handled by on-duty units, mutual aid, and/or limited call-out of off-duty officers.

If employees are unable to report to their regular facility or alternate staging area, they are encouraged to report to the closest local jurisdiction to register as a Disaster Services Worker. All employees are declared to be Disaster Services Workers by Section 3100-3109 of the California Government Code.

Notification
The Fire District duty officer is the 24-hour point of contact for warnings and emergency notification of Town staff. However, initial contact may come through CONFIRE Dispatch, Chief of Police, Town Manager, Emergency Medical Services Manager, Department Heads, etc. Trained Town staff will be notified and fill the sections, as needed, to assist with the EOC activation.

Shift Change
Shifts are changed at 12 hour intervals until deactivation. The shift change allows for ½ hour overlap to brief incoming personnel.

Activation and Deactivation
Activation and Deactivation of the EOC is called by the EOC Director.

6.3 SEMS COORDINATION LEVELS

SEMS is the system required by California Government Code Section 8607(a) for managing response to multi-agency and multi-jurisdiction emergencies in California. SEMS incorporates the use of the Incident Command System (ICS), the Master Mutual Aid Agreement and existing mutual aid systems, the Operational Area Concept, and multi-agency or inter agency coordination. SEMS is an integrated management system, providing for **five Emergency Response Levels**. These levels as they relate to Apple Valley are:

There are five SEMS organization levels:

1. Field – The Field Level is where emergency response personnel and resources, under the command of responsible officials, carry out tactical decisions and activities in direct response to an incident or threat.

2. Local Government – The Local Government level includes cities, counties and special districts. Local governments manage and coordinate the overall emergency response and recovery activities within their jurisdiction. Local governments are required to use SEMS when their Emergency Operations Center (EOC) is activated or a local emergency is declared or proclaimed in order to be eligible for state reimbursement of response-related costs.

3. Operational Area (OA) – An OA is the intermediate level of the state's emergency management organization which encompasses a county's boundaries and all political subdivisions located within that county, including special districts. The OA facilitates and/or coordinates information, resources and decisions regarding priorities among local governments within the OA. The OA serves as the coordination and communication link between the Local Government Level and Regional Level. State, federal and tribal jurisdictions in the OA may have statutory authorities for response similar to that at the local level.

4. Region – The Regional Level manages and coordinates information and resources among OAs within the mutual aid region and also between the OA and the state level. The Regional Level also coordinates overall state agency support for emergency response activities within the region. California is divided into three California Emergency Management Agency (CalOES) Administrative Regions – Inland, Coastal and Southern – which are further divided into six mutual aid regions. The Regional Level operates out of the Regional Emergency Operations Center (REOC).

5. State – The state level of SEMS prioritizes tasks and coordinates state resources in response to the requests from the Regional level and coordinates mutual aid among the mutual aid regions and between the Regional Level and State Level. The state level also serves as the coordination and communication link between the state and the federal emergency response system. The state level requests assistance from other state governments through the Emergency Management Assistance Compact (EMAC) and similar interstate compacts/agreements and coordinates with the Federal Emergency Management Agency (FEMA) when federal assistance is requested. The state level operates out of the State Operations Center (SOC).

Multi-agency or Inter-agency Coordination
Multi-agency or inter-agency coordination is important for:

- Establishing priorities for response;
- Allocating critical resources;
- Developing strategies for handling multi-agency response problems;
- Sharing information; and
- Facilitating communications.

Multi-agency or Inter-agency Coordination in the EOC
Emergency response by multi-agency or inter-agency is coordinated at the EOC through:

- Representatives from the Town of Apple Valley's departments and agencies;
- Representatives from outside agencies including special districts, volunteer agencies, and private organizations;
- Coordination with agencies not represented in the EOC may be accomplished through other methods of communications; and
- Involvement by all departments and agencies in the EOC action planning process is essential for effective emergency management within the Town.

Coordination with the Field Response
Communication and coordination among SEMS levels is clearly necessary for effective emergency response. In a major emergency, the Apple Valley's EOC may be activated to coordinate the overall response. Incident Commanders (ICs), in the field, may communicate with the Department Operations Centers (DOCs) which in turn will communicate and coordinate with the EOC. Depending on the incident, the ICs may communicate directly with the EOC, usually to their counterpart in the Operations Section. When the EOC is directly overseeing the incident command teams, the EOC is operating in a centralized coordination and direction mode.

During multiple-incident situations within the Town, an Area Command may be established to provide for the ICs at separate locations. Generally, an Area Commander will be assigned and receive policy direction from the EOC.

Another scenario for the EOC / Area Command interaction would be the occurrence of several similar type incidents located in close proximity but in different jurisdictions. A Unified Area Command may be established to oversee Incident Commands operating in general proximity to each other. The Unified Area Command would coordinate with the activated local government EOCs.

Coordination with San Bernardino County Operational Area
Coordination and communications should be established between activated local government EOCs and the Operational Area (OA). For the Town of Apple Valley, this channel is through the Emergency Services Coordinator or designee by phone, radio, or computer. The Emergency Services Coordinator will notify and communicate with San Bernardino County Fire Office of Emergency Services who serves as the County/Operational Area EOC. The OA responsibilities involve coordinating with the Town and other organizations to deploy field-level emergency response personnel, activate emergency operations centers, and issue orders to protect the public.

The multi-agency coordination system (MACS) is the decision-making system used by member jurisdictions of the San Bernardino County Operational Area. Agencies and disciplines involved

at any level of the SEMS organization working together to facilitate decisions for overall emergency response activities, including the sharing of critical resources and the prioritization of incidents.

Coordination with Special Districts

Special districts are formed under various laws that provide the necessary authority to operate. Special districts often have unique resources, capabilities, and vulnerabilities. Coordination and communications with the EOC should be established among special districts who are involved in emergency response. This may be accomplished in various ways depending on the local situation. Special districts will work with the local government in their service areas to determine how best to establish coordination and communications in an emergency. If possible, the special district will have a liaison representative at the Town EOC and direct communications should be established between the special district DOC and the Town EOC.

Coordination with Private and Non-profit Agencies

Town EOCs will generally be a focal point for coordination of response activities with many non- governmental agencies. During an emergency, the Town of Apple Valley's will establish communication with private and volunteer agencies that provide services within the Town.

Agencies that play key role(s) in the response should have representative(s) in the EOC. Agencies that have county-wide response roles and cannot respond to numerous Town EOCs should be represented at the OA level.

If Apple Valley's EOC is unable to accommodate representatives from assisting agencies or agencies are unable to send representatives to the EOC, alternate means of communication and coordination will be established based on the emergency.

6.4 INCIDENT COMMAND SYSTEM (ICS)

The Incident Command System (ICS) is a nationally recognized on-scene emergency management system specifically designed to allow its user(s) adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents without being hindered by jurisdictional boundaries. ICS uses a common organizational structure to effectively accomplish management of the incident by objectives.

The **five functions** of the ICS organization are command, operations, planning, logistics, and finance:

Command is responsible for directing, ordering, and/or controlling resources by virtue of explicit legal, agency, or delegated authority. It includes the incident commander (IC) who is responsible for the overall management of the incident. The command function also includes the Information Officer, Liaison Officer, and Safety Officer.

Operations is responsible for the coordinated tactical response of all field operations directly applicable to or in support of the mission(s) in accordance with the Incident Action Plan. Operations develops the operations portion of the Incident Action Plan, requests resources to support tactical operations, maintains close communication with the Incident Commander, and ensures safer tactical operations. The operations function includes branches, divisions, groups, and air operations personnel.

Planning/ Intelligence is responsible for the analysis, collection, evaluation, documentation, validation and use of information about the development of the incident. The planning function includes he resource unit, situation unit, documentation unit, and demobilization unit.

Logistics is responsible for providing facilities, services, personnel, equipment, and tracking the status of resources and materials in support of the incident. The logistics function includes the supply unit, facilities unit, ground support unit, communications unit, food unit, and medical unit.

Finance is responsible for all financial and cost analysis aspects of the indent, and/or any administrative aspects not handled by the other functions. The finance function includes the time unit, procurement unit, compensation/claims unit, and the cost unit.

Principles of ICS
The system's organizational structure adapts to any emergency or incident to which emergency response agencies would expect to respond. Components of ICS are:

- Common terminology;
- Modular organization;
- Unified command and structure;
- Consolidated action plans;
- Manageable span-of-control;
- Pre-designed incident facilities;
- Comprehensive resource management; and
- Integrated communications.

Common titles for organizational functions, resources, and facilities within ICS are utilized. The organizational structure is developed based upon the type and size of an incident. Staff builds from the top down as the indent grows, with responsibility and performance placed initially with the Incident Commander (IC).

At all incidents there will be five functions. Initially, the IC may be performing all five functions. Then, as the incident grows, each function may be established as a section with several units under each section.

Unified Command

Unified command structure is a unified team effort that allows all agencies with responsibility for the incident to manage an incident by establishing a common set of incident objectives and strategies.

7. EMERGENCY OPERATIONS CENTER

7.1   EMERGENCY OPERATIONS CENTER ORGANIZATION

The Town of Apple Valley Emergency Operations Center (EOC) is a centralized location for decision making regarding the jurisdiction's emergency response. The EOC is where the emergency response actions can be managed and resource allocations and responses can be tracked and coordinated with the field, Operational Area (OA), and State. The Town's Emergency Services Coordinator is responsible for the operational readiness of the EOC.

When an emergency or disaster occurs, or has the potential to occur, the jurisdiction will activate the EOC. The EOC will organize according to the SEMS functions of Management, Operations, Planning/Intelligence, Logistics and Finance/Administration and will activate those functions necessary for the emergency.

Potential SEMS EOC functions are shown below:
1. **Management Section:** The following activities and responsibilities are part of the Management function:
    a. Overall EOC management
    b. Facilitation of Multiagency Coordination System (MACS) and MAC Groups
    c. Public information coordination and Joint Information Center (JIC) management
    d. Provision for public safety and risk communications and policy

2. **Operations Section:** The following activities and responsibilities are part of the Operations function:
    a. Transportation
    b.   Construction and Engineering
    c.   Fire and Rescue
    d.   Care and Shelter
    e. Resources
    f.   Public Health and Medical
    g. Hazardous Materials
    h. Utilities
    i.   Law Enforcement
    j.   Long-Term Recovery
    k. Evacuation
    l.   Volunteer and Donations Management
    m. Functional needs support services
    n. Others as needed.

3. **Planning/Intelligence Section:** The following activities and responsibilities are part of the Planning function:
    a. Situation Status

   b. Resource Status
   c. Situation Analysis
   d. Information Display
   e. Documentation
   f. Advance Planning
   g. Technical Services
   h. Action Planning
   i. Demobilization

4. **Logistics Section:** The following activities and responsibilities are part of the Logistics function:
   a. Field Incident Support
   b. Communications Support
   c. Transportation Support
   d. Personnel
   e. Supply and Procurement
   f. Resource Tracking
   g. Sanitation Services
   h. Computer Support

5. **Finance/Administration:** The following activities and responsibilities are part of the Finance function:
   a. Fiscal Management
   b. Time-Keeping
   c. Purchasing
   d. Compensation and Claims
   e. Cost Recovery
   f. Travel Request, Forms and Claims

Department / Agency	Management	Operations	Planning/Intel	Logistics	Finance/Admin
Town Council	X	X	X	X	X
Town Manager's Office	P	X	X	X	X
Town Clerk's Office	X	X	X	X	X
Community Development	X	X	P	X	X
Community Services	X	X	X	X	X
Engineering	X	X	X	X	X
Fire Protection District	X	P	X	X	X
Human Resources	X	X	X	X	X
Information Technology	X	X	X	X	X
Management Services	X	X	X	X	P
Police Department	X	P	X	X	X
Public Works	X	X	X	P	X

Key: P – Primary Responsibility   X – Support Role

Apple Valley Primary EOC Design

1-EOC Manager
2-EOC Coordinator
3-Liaison Officer
4-PIO
5-Safety/Security
6-Operations
  Coordinator
7-Operations
  Fire/Law Rep
8-Agency Rep
9-Agency Rep
10-Agency Rep
11-Agency Rep
12-Planning/Intel
  Coordinator
13-Planning/Intel
  Assistant
14-Logistics Coord.
15-Logistics Asst.
16-Finance/Admin
  Coordinator
17-Finance/Admin
  Assistant
18-Dispatch/Msg
  Center
19-Policy Group

Interior doorway

1 2

3 4

13

12

6 7

16

17

8 9

15

10 11

14

CP331

18

Exit

5

interior doorway

Policy Group 19

7.2   SPECIAL DISTRICTS, PRIVATE AND NON-PROFIT AGENCIES

Depending on the size and kind of incident, involvement from special districts, utilities, volunteer organizations and/or private organizations may be necessary in Apple Valley's EOC. During EOC activations, these agencies respond to Apple Valley-focused emergencies and will coordinate and communicate directly with staff in the EOC. Ideally, the agency will provide a representative to the EOC and will serve in the Management Section to better facilitate coordination.

7.3 PRIMARY EOC AND ALTERNATE EOC

The Town of Apple Valley's primary and alternate EOCs are:
Primary
Apple Valley Unified School District
Educational Support Center Multipurpose Room
12555 Navajo Road

Alternate
Apple Valley Fire Protection District Station #336
19235 Yucca Loma Road

The alternate EOC will be activated only when the primary EOC is damaged, inaccessible, and/or evacuation of EOC responders becomes necessary. When the use of the alternate EOC becomes necessary, those occupying the primary EOC will be asked to relocate to the alternate EOC site. If the primary EOC is unusable before its activation, EOC responders will be asked to report to the alternate EOC site. The Logistics Section will arrange for relocation of EOC staff members to the alternate EOC. Direction and control authority will be transferred from the primary EOC to the alternate EOC when necessary by the EOC Director. All Section Chiefs will advise appropriate emergency response personnel of the transition.

7.4 ACTIVATION/DEACTIVATION OF EOC

Level One EOC Activation: Level One is a minimum activation. This level may be used for situations which initially only require a few people, e.g., a short term earthquake prediction at condition one or two level; alerts of storms, red flag warnings ; or monitoring of a low risk planned event. At a minimum, Level One staffing consists of the EOC Director. Section Coordinators and a situation assessment activity in the Planning and Intelligence Section may be included in this level. Other members of the organization could also be part of this level of activation e.g., the Communications Unit, from the Logistics Section, or an Information Officer.

Level Two EOC Activation: Level Two activation is normally achieved as an increase from Level One or a decrease from Level Three. This activation level is used for emergencies or planned

events that would require more than a minimum staff but would not call for a full activation of all organization elements, or less than full staffing. One person may fulfill more than one SEMS function. The EOC Director, in conjunction with the General Staff, will determine the required level of continued activation under Level Two, and demobilize functions or add additional staff to functions as necessary based upon event considerations. Representatives to the EOC from other agencies or jurisdictions may be required under Level Two to support functional area activations.

Level Three EOC Activation: Level Three activation involves a complete and full activation with all organizational elements at full staffing. Level Three would normally be the initial activation during any major emergency.

The numbering sequence of EOC staffing progression is established in the SEMS guidelines and is opposite of the NIMS numbering sequence. Given that the SEMS guideline has been in place since the inception of SEMS, State Emergency Plan recommends continuing the sequence as established in the SEMS guidance documents.

Depending on the nature of the emergency, the Director of Emergency Services or designee may activate the Town of Apple Valley's EOC.

How to activate the EOC
1. Contact the Town Manager. Identify yourself and provide the nature and magnitude of the emergency/disaster. Provide a call-back confirmation phone number if requested.
2. Designate and contact personnel using the various call-out systems in place to set up and staff the EOC.
3. Begin documenting information on the incident.
4. Notify San Bernardino County OES that Apple Valley's EOC has been activated.

<u>**WHEN TO ACTIVATE THE EOC AND LEVELS OF ACTIVATION**</u>

Town of Apple Valley – EOC Activation Guideline		
Event/Situation	*Activation Level*	**Minimum Staffing**
- Severe weather advisory - Minor earthquake 4.0 – 4.9 magnitude - Flood watch - Planned event (such as parade, sports event, political events, concert)	**Monitoring**	- Emergency Services Coordinator (remotely or EOC) - Department Staffing
- Severe weather - Small incidents involving two or more departments - Localized flooding	**One**	- Emergency Services Coordinator (remotely or EOC) - Department Staffing - DOC (maybe)
- Moderate earthquake (5.0 – 5.9) - Wildfire affecting developed area - Major wind or rain storm - Two or more large incidents involving two or more departments / agencies	**Two**	- EOC Director - Emergency Services Coordinator - Section Chiefs - Branch & Units as needed - Liaison Representatives as appropriate - DOC
- Major Town or regional emergency, multiple departments with heavy resource involvement - Major earthquake (6.0 +)	**Three**	- All EOC Positions

The numbering sequence of EOC staffing progression is established in the SEMS guidelines and is opposite of the NIMS numbering sequence. Given that the SEMS guideline has been in place since the inception of SEMS, State Emergency Plan recommends continuing the sequence as established in the SEMS guidance documents.

<u>**Who can activate the EOC**</u>

Town Manager
Assistant Town Manager
Police Chief
Fire Chief

Deactivation

Deactivation occurs based on incident status and may occur through a gradual decrease in staffing or all at once. EOC Responders must follow deactivation procedures. Notification of deactivation must be communicated to San Bernardino County OES.

7.5   FIELD/EOC COMMUNICATIONS AND COORDINATION

Responsibility for emergency response is based on statutory authority. The emergency response is coordinated under SEMS/ICS, which provides a flexible, adaptable and expandable response organization to address all-hazards of varying magnitude and complexity.

An EOC is activated to support field operations when an emergency requires additional resources, or when requested resources exceed that which is available from within the jurisdiction. Field Incident Commanders and EOCs will establish communications when the EOC is activated. Local government EOCs will establish communications with the Operational Area EOC (OAEOC). The OAEOC will communicate with the Regional Emergency Operations Center (REOC) and the REOC will communicate with the State Operations Center (SOC)

7.6   FIELD/EOC DIRECTION AND CONTROL INTERFACE

During response to minor or moderate events, jurisdictions may manage the emergency with existing resources and may or may not activate their local EOC. Personnel that are part of a field level emergency response will utilize the Incident Command System (ICS) to manage and direct on-scene operations.

The EOC Director will establish jurisdictional objectives and priorities and communicate those to everyone in the organization through the Action Plan. The EOC Action Plan does not direct or control field units but supports their activities. IC(s) will ensure incident objectives and priorities are consistent with those policies and guidelines established at the city level by the EOC Director.

 It is the responsibility of the IC to communicate critical information the EOC Director in a timely manner.

8. MUTUAL AID

Overview

California's emergency assistance is based on a statewide mutual aid system designed to ensure that adequate support and/or additional resources are provided to a jurisdiction whenever their own resources are overwhelmed or inadequate. The basis for this system is the ***California Disaster and Civil Defense Master Mutual Aid Agreement* (MMAA)**, which is entered into by and between the State of California, its various departments and agencies and the various political subdivisions (San Bernardino County), municipal corporations and public agencies to assist each other by providing resources during an emergency. This plan promotes the establishment of emergency assistance agreements between public and private sector agencies at all levels.

The agreement obligates each signatory entity to provide aid to each other during an emergency without expectation of reimbursement. Under specific conditions, federal and state monies may be appropriated to reimburse public agencies who aid other jurisdictions. If other agreements, memoranda and contracts are used to provide assistance for consideration, the terms of those documents may affect disaster assistance eligibility and local entities may only be reimbursed if funds are available.

Formal mutual aid requests will follow specified procedures and are processed through pre-identified mutual aid coordinators. Mutual aid requests will follow discipline-specific chains (i.e. fire, law enforcement, emergency manager, etc.) from one level of government to the next. The mutual aid coordinator receives the mutual aid request and coordinates the provision of resources from within the coordinator's geographic area of responsibility. In the event resources are unavailable at one level of government, the request is forwarded to the next higher level of government to be filled.

Mutual Aid Regions
To facilitate the coordination and flow of mutual aid, the State is divided into six Mutual Aid Regions. The Town of Apple Valley is located in region VI.

Mutual Aid Agreements

The California Disaster and Civil Defense MMAA creates a formal structure wherein each jurisdiction retains control of its own facilities, personnel and resources, but may also receive or render assistance to other jurisdictions within the State. State government is obligated to provide available resources to assist local jurisdictions in emergencies. It is the responsibility of local jurisdictions to negotiate, coordinate and prepare mutual aid agreements. Mutual aid agreements exist for law enforcement, fire, public works, medical services and emergency managers.

Mutual aid assistance may be provided under one or more of the following plans:

Law Enforcement
Coroner
Urban Search and Rescue
Emergency Managers
Public Works
California Medical

Mutual Aid Coordination

Formal mutual aid requests will follow specified procedures and are processed through pre-identified mutual aid coordinators. Mutual aid requests will follow discipline-specific chains (e.g., fire, law enforcement, emergency manager, etc.) from one level of government to the next. The mutual aid coordinator receives the mutual aid request and coordinates the provision of resources from within the coordinator's geographic area of responsibility. In the event resources are unavailable at one level of government, the request is forwarded to the next higher level of government to be filled.

Field Level Requests: Requests for MMAA resources originate from the Field Level and are managed by the Incident Commander (IC). If the IC is unable to obtain the resource through existing local channels, the request is elevated to the next successive government level until obtained or cancelled.

Local Government Request: Local jurisdictions are responsible for the protection of life and property within the municipal geographic boundaries. The local jurisdiction where the incident occurred should assess its resource inventory and existing local agreements to determine if the requested resource is available. When locally committed resources are exhausted and mutual aid is needed, the local official will request assistance from the OA Mutual Aid Coordinator.

Operational Area Requests: The OA is a composite of its political subdivisions, (i.e. municipalities, contract cities, special districts and county agencies). The OA Mutual Aid Coordinator assesses the availability of resources within the OA and fulfills the resource request based upon that assessment. In the event resources are unavailable at the OA level, the request is forwarded to the responsible Region Mutual Aid Coordinator to be filled.

Region Level Requests: The state is geographically divided into six Mutual Aid Regions. For Law Enforcement Mutual Aid, Region I is divided into two sub-regions. Each Mutual Aid Region is comprised of multiple Operational Areas and has a Regional Mutual Aid Coordinator. The Region Mutual Aid Coordinator is granted the authority to coordinate the mutual aid response of discipline-specific resources within the Region to support a mutual aid request by a jurisdiction also within the Region. In the event resources are unavailable at the Region level, the request is forwarded to the State Mutual Aid Coordinator to be filled.

State Level Requests: On behalf of the Governor, the Secretary of CalOES has the responsibility for coordination of state mutual aid resources in support of local jurisdictions during times of emergency. The Secretary will analyze and coordinate the request by forwarding the request to an unaffected REOC or tasking an appropriate state agency to fill the need.

Interstate Mutual Aid

Mutual aid may also be obtained from other states. California is a member of the interstate Emergency Management Assistance Compact (EMAC), a congressionally ratified organization that provides form, structure and procedures for rendering emergency assistance between states. After a state of emergency declaration, California can request and receive reimbursable assistance through EMAC for other member states quickly and efficiently without issues of liability. The Secretary of CalOES and the states' EMAC Coordinator are responsible for facilitating requests for assistance pursuant to EMAC.

Volunteer and Private Mutual Aid

A significant component of our mutual aid system is through volunteer and private agencies. These include agencies such as the American Red Cross (ARC) and Salvation Army who mobilize to proved assistance with mass care and sheltering. During these large-scale incidents, these agencies will typically provide a representative to the Apple Valley EOC.

Many private agencies, churches, non-profits and other organizations offer to provide their assistance during emergencies. If needed, the Town may request the agency to provide a liaison to the EOC to help facilitate and coordinate mutual aid.

Mutual Aid Resource Management

It is the policy of the state that contracts and agreements for emergency response and disaster repair and restoration should be entered into by the lowest level of government. When local resources are exhausted and additional resources are required, resource requests (mission tasking) will follow an established process for ordering, tracking, mobilizing and demobilizing. Depending on the scale of the emergency, limited resources may need to be rationed or controlled.

Resource ordering: All resource requests, at each level, must include the following:

> Clearly describe the current situation;
> Describe the requested resources;
> Specify the type or nature of the service the resource(s) will proved;
> Provide delivery location with a common map reference;
> Provide local contact at delivery location with primary and secondary means of contact; Prove the name of the requesting agency and/or OA Coordinator contact person; Indicate time frame needed and an estimate of duration; and
> Resource request involving personnel and/or equipment with operators will need to indicate if logistical support is required, (e.g., food, shelter, fuel and reasonable maintenance).

Resource directories: Each state agency and local government entity should identify sources for materials and supplies internally and externally.

Daily updates: The requesting agencies are responsible to report to CalOES the number and status of resources deployed on a mission on a daily basis.

Federal assistance: When resources are not available within the state or through existing agreements with other states, California may request assistance from the federal government. Requests for federal assistance during an emergency will be coordinated through the State Operations Center (SOC).

9. INFORMATION COLLECTION, ANALYSIS, AND DISSEMINATION

Emergency Operations Centers (EOCs) are responsible for gathering timely, accurate, accessible and consistent intelligence during an Emergency. Situation reports should create a common operating picture and be used to adjust the operational goals, priorities and strategies.

To ensure effective intelligence flow, emergency response agencies at all levels must establish communications systems and protocols to organize, integrate and coordinate intelligence among the affected agencies. The flow of **situation reports** among the levels of government should occur as:

Field: Field situation reports should be disseminated to local EOC.

Local EOC: Local EOC will summarize reports received from the field, Department Operation Centers (DOCs) and other reporting disciplines, and send to the Operational Area (OA) EOC.

OA EOC: The OA EOC will summarize reports received from responsible local EOCs, county field units, county DOCs and other reporting disciplines, and forward to the CalOES Regional Emergency Operations Center (REOC).

REOC: The REOC will summarize situation reports received from the OA EOC, state field units, state DOCs and other reporting disciplines, and forward to the State Operations Center (SOC).

SOC: The SOC will summarize situation reports received from the REOC, state DOCs, state agencies and other reporting disciplines, and distribute to state officials and others on the distribution list.

Joint Field Office (JFO): When the state-federal JFO is activated, the REOC and SOC situation reports will be assimilated into the JFO situation report. The REOC organization may be collocated with the federal organization at the JFO.

WebEOC

The Town of Apple Valley utilizes WebEOC; a crisis information management system for sharing elements of the crisis. This allows the Town to have a common operating picture, situational awareness and information coordination throughout San Bernardino County during an emergency. Apple Valley's EOC responders are able to share real time information with other agencies within the County which allows for a coordinated deployment of resources available to emergency managers.

10. PUBLIC INFORMATION

Public information consists of the processes, procedures and systems to communicate timely and accurate information by accessible means and in accessible formats on the incident's cause, size and current situation to the public, responders and additional stakeholders (both directly affected and indirectly affected). Public information must be coordinated and integrated as part of the Multiagency Coordination System across jurisdictions, agencies and organization; among federal, state, tribal and local governments; and with the private sector and Non-Government Organizations (NGOs). Public information includes processes, procedures and organizational structures required to gather, verify, coordinate and disseminate information.

Public Awareness and Education
The public's response to any emergency is based on an understanding of the nature of the emergency, the potential hazards, the likely response of emergency services and knowledge of what individuals and groups with and without access and functional needs should do to increase their chances of survival and recovery.

Pre-disaster awareness and education programs are viewed as equal in importance to all other preparation for emergencies. The Town of Apple Valley places a high priority in public disaster education by providing citizens emergency training such as Federal Emergency Management Agency (FEMA) Community Emergency Response Team (CERT) training, emergency preparedness workshops, disaster preparedness presentations and amateur radio classes. In addition to the public awareness and training programs offered, the Town provides preparedness outreach through the public safety fair yearly.

Emergency Public Information
During an emergency, the Town of Apple Valley is responsible for the dissemination of information about the emergency to keep the public informed about what has happened, the actions of the emergency response agencies and to summarize the expected outcomes of the emergency actions. The EOC's Public Information Officer's (PIO) primary role is to disseminate emergency instructions and critical information to the media and the public.

Joint Information Center
To facilitate multi-agency public information communications and coordination, Apple Valley's PIO may activate a Joint Information Center (JIC). A JIC is activated when multiple agencies need to collaborate to provide timely, useful and accurate information to the public.

11. FUNCTIONAL NEEDS

Populations with access and functional needs include those members of the community that may have additional needs before, during, and after an incident in functional areas, including but not limited to maintaining, independence, communication, transportation, supervision, and medical care.

Individuals in need of additional response assistance may include those who:

- Have disabilities;
- Live in institutionalized settings;
- Are elderly;
- Are children;
- Are from diverse cultures;
- Have limited English proficiency or are non-English speaking; or
- Are transportation disadvantaged.

Lessons learned from recent emergencies concerning people with disabilities and older adults have shown that the existing paradigm of emergency planning, implementation and response must change to meet the needs of these groups during an emergency. These lessons show four areas that are repeatedly identified as most important to people with disabilities and older adults:

1. **Communications and Public Information** – Emergency notification systems must be accessible to ensure effective communication for people who are deaf/hard of hearing, blind/low vision, or deaf/blind.
2. **Evacuation and Transportation** – Evacuation plans must incorporate disability and older adult transportation providers for identifying and the movement of people with mobility impairments and those with transportation disadvantages.
3. **Sheltering** – Care and shelter plans must address the access and functional needs of people with disabilities and older adults to allow for sheltering in general population shelters.
4. **Americans with Disabilities Act** - When shelter facilities are activated, the (jurisdiction) will ensure they accommodate the provisions of the Americans with Disabilities Act (ADA).

The Town of Apple Valley will do everything reasonable possible to educate and coordinate with people with access and functional needs. The Town has an active Community Emergency Response Team (CERT) Program that assists with public education. Some of the target groups include schools, churches, mobile home parks and other community groups. Booths are set up at community events to educate the community as a whole; emergency preparedness and response information for people with access and functional needs is always included. Functional needs support services will be provided by FEMA guidance FNSS shelter manual.

12. CONTINUITY OF GOVERNMENT

Introduction

A major disaster could destroy the ability of local government to carry out executive functions by causing death or injury to key government officials, destroying established seats of government, destroying the ability of local government to carry out executive functions, and cause the destruction of vital records. Government is responsible for providing continuity of effective leadership and authority, direction of emergency operations and management of recovery operations. The California Government Code and the Constitution of California provide the authority of state and local government to reconstitute itself in the event incumbents are unable to serve. It is particularly essential the Town of Apple Valley continue to function as a government entity.

Lines of Succession

The first step in assuring continuity of government is to have personnel who are authorized and prepared to carry out emergency actions for government in the event of a disaster.

Article 15, Section 8638 of the California Government Code authorizes the governing body to appoint the following standby officers:

- Three for each member of the governing body.
- Three for the chief executive, if he/she is not a member of the governing body. (In case a standby office becomes vacant because of removal, death, resignation, or other cause, the governing body shall have the power to appoint another person to fill said office. Standby officers shall be designated Nos. 1, 2, and 3 as the case may be.

Article 15, Section 8644 of the California Government Code establishes a method for reconstituting the governing body. It authorizes, should all members of the governing body, including all standby members, be unavailable, temporary officers shall be appointed to serve until a regular member or a standby member becomes available or until the election or appointment of a new regular or standby member. Temporary officers shall be appointed as follows:

- By the chairman of the board of supervisors of the county in which the political subdivision is located, and if he/she is unavailable;
- By the chairman of the board of supervisors of any other county within 150 miles of the political subdivision, beginning with the nearest and most populated county and going to the farthest and least populated, and if he/she is unavailable;
- By the mayor of any Town within 150 miles of the political subdivision, beginning with the nearest and most populated Town and going to the farthest and least populated.

Town Manager	1. Town Manager 2. Deputy Town Manager 3. Director of Finance
Director of Emergency Services	1. Town Manager 2. Fire Chief 3. Police Chief
Assistant Director of Emergency Services	1. Emergency Services Officer 2. Fire Division Chief 3. (To be appointed by Director of Emergency Services)
Fire Chief	1. Fire Chief 2. Fire Division Chief 3. Fire Duty Officer
Police Chief	1. Police Chief 2. Police Lieutenant 3. Police Sergeant
Town Clerk	1. Town Clerk 2. Administrative Secretary 3. (To be appointed by Director of Emergency Services)
Building and Safety/Engineering	1. Building Official 2. Town Engineer 3. Assistant Town Engineer
Community Development	1. Community Development Director 2. Senior Analyst 1 3. Senior Analyst 2
Administrative Services	1. Administrative Services Manager 2. Administrative Analyst 3. Administrative Secretary
Public Information	1. Public Relations Officer 2. Events Coordinator 3. Police Public Information Officer
Finance	1. Finance Director 2. Finance Manager 3. (To be appointed by Director of Emergency Services)
Public Works	1. Public Works Director 2. Public Works Supervisor 3. (To be appointed by Director or Emergency Services)

Emergency Services Director Lines of Succession

In cases where the Town Manager cannot be contacted, an alternate Director of Emergency Services should be contacted. The alternate Directors of Emergency Services are:

First Alternate: Deputy Town Manager
Second Alternate: Fire Chief
Third Alternate: Police Chief

(The individual who serves as Acting Director shall have the authority and powers of the Director, and will serve until the Director is again able to serve, or until a successor has been appointed by Town Council.)

12.1 ALTERNATE GOVERNMENT FACILITIES

When government offices are not operable because of emergency conditions, the temporary seat of government will be selected from public buildings remaining that offer maximum security and safety. The primary and alternate locations are listed below:

Primary Seat of Government
Town Council Chambers
14955 Dale Evans Parkway
Apple Valley, CA. 92307

Alternate Seat of Government
Mojave Water Agency
13846 Conference Center Drive
Apple Valley, CA. 92307

12.2 VITAL RECORD RETENTION

For the Town of Apple Valley, the Town Clerk's Office is responsible for the preservation and protection of the Town's vital records. Vital records are defined as those records that are essential to:

- Protect and preserve the rights and interests of individuals, governments, corporations and other entities. Records of this type would include authorizing legislation, land use, infrastructure engineering drawings, payroll, accounts receivable, and licenses.
- Conduct emergency response and recovery operations. Records of this type would include utility system maps, locations of emergency supplies, and equipment, emergency operations plans and procedures, and personnel rosters.
- Reestablish normal governmental functions and protect the rights and interests of government. Records of this type would include the municipal code, minutes, resolutions, official proceedings, and financial records of the Town.

Vital records for the Town of Apple Valley are printed on acid free paper and stored in a vault within the Town.

13. RECOVERY OVERVIEW

Recovery involves the restoration of services to the public and returning the affected area(s) to pre-emergency conditions. As the immediate threat to life, property, and the environment subsides, the rebuilding of Apple Valley will begin through various recovery activities. Typically, recovery activities will be both short-term and long-term, ranging from restoration of essential utilities such as water and power, to mitigation measures designed to prevent future occurrences of a given threat facing the Town. Examples of recovery activities include:

- Restoration of utilities;
- Apply for state and federal assistance programs;
- Provide public assistance information for disaster assistance;
- Conduct hazard mitigation analyses;
- Indentify residual hazards; and
- Determine and recover costs associated with response and recovery.

Short-term Recovery

Short-term recovery operations will begin during the response phase of the emergency. The major objectives of short-term recovery operations include rapid and orderly debris removal and coordinated restoration of essential services (electric, water and sanitary systems). Short-term recovery operations will include all the agencies participating in the Town's disaster response. Structures that present public safety threats will be demolished and abated during short-term recovery operations.

Long-term Recovery

Long-term recovery continues the short-term recovery actions, but focuses on community restoration. Long-term recovery may continue for a number of months or years depending on the severity and extent of the damage sustained. These activities include those necessary to restore a community to a state of normalcy, given the changes that result from a major disaster. Long-term recovery activities require significant planning to maximize opportunities and mitigate risks after a major incident.

13.1 RECOVERY ORGANIZATION

Town of Apple Valley

For the Town of Apple Valley, recovery operations will be directed through the Town Manager's Office. Recovery activities will be coordinated and managed by the Town Manager and the Emergency Services Coordinator with the assistance of other designated Town representatives. Below is a basic organizational diagram of recovery activities and the responsible EOC Sections:

Town Manager			
Town Council			

Planning/Intel	**Operations**	**Logistics**	**Finance/Admin**
Building Permits	Medical Facility	Government	Public Finance
Code Enforcement	Services Restoration	Operations &	Budgeting
Land Use & Zoning	Debris Removal	Functions	Contracting
Environmental	Demolition	Space Acquisition	Accounting & Claims
Review	Construction	Supplies &	Processing
Plan Review	Building & Safety	Equipment	Taxation
Redevelopment	Inspections	Vehicles &	Insurance
Recovery	Housing Programs	Transportation	Settlements
Documentation	Clear Transportation	Personnel	
Hazard Mitigation	Routes		
Projects			

Individuals and Households

Individuals and households will try to stabilize their circumstances by seeking adequate shelter, assessing damage to their property, resuming work and other regular activities, applying for federal assistance and obtaining insurance proceeds.

Private Sector

The private sector engages in activities necessary to resume business operation, including assessing damage, implementing continuity of business plans, caring for employees, shifting operations to temporary facilities or other locations, applying for federal assistance and obtaining insurance proceeds. In coordination with CalOES and local governments, businesses also play a key role in donating goods and services for the community to recover.

Non-government Organizations

Non-government (NGO) and community-based organizations, such as the American Red Cross, will provide support to individuals and households who are displaced by a disaster and work with governmental organizations to support the transition from care and shelter operations to interim housing arrangements. Community organizations active before a disaster may expand their services to meet increased needs. Such groups include churches, neighborhood health clinics and food distribution agencies. NGO and community based organizations may provide a range of services such as donations management, emergency food, clothing and shelter, as

well as support of housing reconstruction. They provide these services independently or in coordination with federal, state and local efforts.

State

When a State of Emergency is proclaimed in the impacted counties, CalOES will lead California's recovery operations and coordinate assistance provided by other state agencies and the federal government. When federal assistance is required, CalOES will work together with FEMA and other federal agencies to ensure effective delivery of services.

13.2 Recovery Damage Assessment

The Town of Apple Valley and the special districts will record a detailed assessment of damage during the recovery phase. This detailed assessment provides the base for determining the type and amount of state and/or federal financial assistance available for recovery. Apple Valley's Damage Assessment Response Team(s) (DART) is responsible for the collection and submission of the detailed assessment of damage for the Town.

Under federal disaster assistance programs, documentation must be obtained regarding damage sustained to:

- Roads;
- Water control facilities;
- Public buildings and related equipment;
- Public utilities;
- Facilities under construction;
- Recreational and park facilities;
- Educational institutions, and
- Certain private non-profit facilities.

13.3 Recovery Documentation

The damage assessment documentation information should include the location and extent of damage and estimate of costs for debris removal, emergency work, and repairs to damaged facilities to pre-disaster condition. The cost of compliance with building codes for new construction, repair, and restoration will also be documented. The cost of improving facilities may be included under federal mitigation programs.

FORMS (Windshield Survey)

AFTER ACTION/CORRECTIVE ACTION (AA/CA) REPORT SURVEY TEMPLATE

For responses to

TITLE OF EVENT

(This AA/CA Report template can be used for a declared, un-declared, or pre-planned event, an exercise, and/or training for SEMS/NIMS compliance).

Federally funded exercises: Completed AA/CA reports completed in this Word template can be attached to the Department of Homeland Security, Grants and Training, ODP Secure Portal.

GENERAL INFORMATION

Information Needed	Text goes in text boxes below.
Name of Agency:	
Type of Agency:* (Select one) * City, County, Operational Area (OA), State agency (State), Federal agency (Fed), special district, Tribal Nation Government, UASI City, non-governmental or volunteer organization, other.	
OES Admin Region: (Coastal, Inland, or Southern)	
Completed by:	
Date report completed:	
Position: (Use SEMS/NIMS positions)	
Phone number:	
Email address:	
Dates and Duration of event: (Beginning and ending date of response or exercise activities - using mm/dd /yyyy)	
Type of event, training, or exercise:* * Actual event, table top, functional or full scale exercise, pre-identified planned event, training, seminar, workshop, drill, game.	
Hazard or Exercise Scenario:* *, Civil Disorder, Dam Failure, Drought, Earthquake, Fire (structural), Fire (Woodland), Flood, Landslide, Mudslide, Terrorism, Wild Fire, Winter Storm, chemical, biological release/threat, radiological release/threat, nuclear release/threat, explosive release/threat, cyber, or other/specify.	

SEMS/NIMS FUNCTION EVALUATION

MANAGEMENT (Public Information, Safety, Liaison, etc.)

	Satisfactory	**Needs Improvement**
Overall Assessment of Function (check one)		

If "needs improvement" please briefly describe improvements needed:	
Planning	
Training	
Personnel	
Equipment	
Facilities	

FIELD COMMAND (Use for assessment of field operations, i.e., Fire, Law Enforcement, etc.)

	Satisfactory	**Needs Improvement**
Overall Assessment of Function (check one)		

If "needs improvement" please briefly describe improvements needed:	
Planning	
Training	
Personnel	
Equipment	
Facilities	

OPERATIONS (Law enforcement, fire/rescue, medical/health, etc.)

	Satisfactory	**Needs Improvement**
Overall Assessment of Function (check one)		

If "needs improvement" please briefly describe improvements needed:	
Planning	

Training	
Personnel	
Equipment	
Facilities	

PLANNING/INTELLIGENCE (Situation analysis, documentation, GIS, etc.)

	Satisfactory	Needs Improvement
Overall Assessment of Function (check one)		

If "needs improvement" please briefly describe improvements needed:	
Planning	
Training	
Personnel	
Equipment	
Facilities	

LOGISTICS (Services, support, facilities, etc.)

	Satisfactory	Needs Improvement
Overall Assessment of Function (check one)		

If "needs improvement" please briefly describe improvements needed:	
Planning	
Training	
Personnel	
Equipment	

Facilities	

FINANCE/ADMINISTRATION (Purchasing, cost unit, etc.)

	Satisfactory	Needs Improvement
Overall Assessment of Function (check one)		

If "needs improvement" please briefly describe improvements needed:	
Planning	
Training	
Personnel	
Equipment	
Facilities	

AFTER ACTION REPORT QUESTIONNAIRE

(The responses to these questions can be used for additional SEMS/NIMS evaluation)

Response/Performance Assessment Questions	yes	no	COMMENTS
1. Were procedures established and in place for responding to the disaster?			
2. Were procedures used to organize initial and ongoing response activities?			
3. Was the ICS used to manage field response?			
4. Was Unified Command considered or used?			
5. Was the EOC and/or DOC activated?			
6. Was the EOC and/or DOC organized according to SEMS?			
7. Were sub-functions in the EOC/DOC assigned around the five SEMS functions?			
8. Were response personnel in the EOC/DOC trained for their assigned position?			
9. Were action plans used in the EOC/DOC?			
10. Were action planning processes used at the field response level?			

11. Was there coordination with volunteer agencies such as the Red Cross?		
12. Was an Operational Area EOC activated?		
13. Was Mutual Aid requested?		
14. Was Mutual Aid received?		
15. Was Mutual Aid coordinated from the EOC/DOC?		
16. Was an inter-agency group established at the EOC/DOC level? Were they involved with the shift briefings?		
17. Were communications established and maintained between agencies?		
18. Was the public alert and warning conducted according to procedure?		
19. Was public safety and disaster information coordinated with the media through the JIC?		
20. Were risk and safety concern addressed?		
21. Did event use Emergency Support Function (ESFs) effectively and did ESF have clear understanding of local capability?		
22. Was communications inter-operability an issue?		

Additional Questions

23. What response actions were taken by your agency? Include such things as mutual aid, number of personnel, equipment and other resources. ***Note: Provide statistics on number of personnel and number/type of equipment used during this event. Describe response activities in some detail.***

_____
_____

24. As you responded, was there any part of SEMS/NIMS that did not work for your agency? If so, how would (did) you change the system to meet your needs?

_____
_____

25. As a result of your response, did you identify changes needed in your plans or procedures? Please provide a brief explanation.

_____
_____

26. As a result of your response, please identify any specific areas needing training and guidance that are not covered in the current SEMS Approved Course of Instruction or SEMS Guidelines.

_____
_____

27. If applicable, what recovery activities have you conducted to date? Include such things as damage assessment surveys, hazard mitigation efforts, reconstruction activities, and claims filed.

_____

NARRATIVE
Use this section for additional comments.

_____
_____
_____

POTENTIAL CORRECTIVE ACTIONS

Identify issues, recommended solutions to those issues, and agencies that might be involved in implementing these recommendations.   Address any problems noted in the SEMS/NIMS Function Evaluation.

Indicate whether issues are an internal agency specific or have broader implications for emergency management.

(Code: I= Internal; R =Regional, for example, OES Mutual Aid Region, Administrative Regions, geographic regions, S=Statewide implications)

Code	Issue or Problem Statement	Corrective Action / Improvement Plan	Agency(s)/ Depts. To Be Involved	Point of Contact Name / Phone	Estimated Date of Completion

13.3 RECOVERY DOCUMENTATION

THE RECOVERY DOCUMENTING INFORMATION SHOULD INCLUDE THE LOCATION AND EXTENT OF DAMAGE, AND ESTIMATES OF COSTS FOR:

- Debris removal,
- Emergency work, and
- Repairing or replacing damaged facilities to a non-vulnerable and mitigated condition.
- The cost of compliance with building codes for new construction, repair, and restoration will also be documented. The cost of improving facilities may be provided under federal mitigation programs.

Documentation is essential to recovering expenditures related to emergency response and recovery operations. Documentation must begin at the field response level and continue throughout the operation of the EOC as the disaster unfolds.

Included in the EOC Planning/Intelligence Section is the Documentation Branch that will coordinate the collection of all incident documentation for dissemination and filing.

13.4 RECOVERY AFTER-ACTION REPORTS

Local officials or the EOC Director may request a formal AAR on all EOC requests. The Homeland Security exercise evaluation program (HSEEP) will be followed.   Findings will be presented at the Apple Valley Disaster Meeting. Corrected action reports and improvement plans will be imitated after the AAR process is completed and approved.

SEMS regulations under Title IX, Division 2, Chapter 1, Section 2450(a) require any federal, state, or local jurisdiction proclaiming or responding to a Local Emergency for which the governor has declared a *State of Emergency* or *State of War Emergency* shall complete and transmit an AAR to CalOES within 90 days of the close of the emergency period. Upon completion of the AAR, corrective actions are identified to make recommendations for correcting problems noted in the response/recovery effort, or during exercises and training. Depending on the level of the AAR, corrective action may encompass anything from detailed recommendations for improving individual agency plans and procedures to broader system-wide improvements. Priority corrective actions are assigned to relevant stakeholders and tracked to ensure the identified problem has been addressed.

13.5 RECOVERY DISASTER ASSISTANCE

Local Assistance Center

The Town of Apple Valley will assist individuals affected by the disaster. This may include offering disaster assistance phone numbers or provide a location for a Local Assistance Center (LAC) where affected citizens can access disaster assistance directly from various agencies. LACs are staffed with representatives of local and state agencies and NGOs and provide a convenient "one-stop shop" for disaster survivors who can access recovery assistance and referrals to other programs and assistance that may not be represented. The Town's objective is to provide citizens with the necessary information to help themselves recover from the disaster.

Individual Assistance (IA) Programs

Non-Governmental Organizations Assistance: Many NGOs, such as the American Red Cross, the Mennonite Disaster Services and the Salvation Army, provide recovery assistance to individuals, families and community organizations. This may include assistance for shelter, food, clothing, and housing reconstruction.

State Assistance: The state does not have authority to offer financial assistance to private sector disaster victims under the California Disaster Assistance Act (CDAA). However, CalOES actively coordinates with federal, state, local and NGOs to provide other types of recovery assistance to individuals, households, businesses and the agricultural community. Under the Welfare and Institutions Code, the California Department of Social Services (CDSS) is authorized to assist those who receive the maximum grant under the Federal Individuals and Households Program (IHP) and still have eligible losses as identified by the FEMA inspector.

The State also has a variety of other programs and services to assist individuals, businesses, and farmers in recovering from a disaster.

FEMA Assistance: Under the Stafford Act, FEMA provides a wide range of programs for individuals and households. This assistance includes:

- **Housing Assistance:** The IHP provides financial and direct assistance to eligible homeowners and renters displaced from their pre-disaster primary residence.
- **Other Needs Assistance:** The IHP provides financial assistance for uninsured disaster related necessary expenses and serious needs, including personal property, medical, dental, and transportation expenses.
- **Additional Programs:** Other Stafford Act Programs that may be made available as a result of a major disaster declaration includes: crisis counseling, disaster unemployment assistance, and legal services.

Low-Interest Loans: The U.S. Small Business Administration (SBA) provides low-interest disaster loans to homeowners, renters, businesses and private non-profit organizations in declared disaster areas. Loans may be made for uninsured physical damage to homes, businesses and other properties, or for economic losses. Following Presidential disaster declarations, SBA implements its program in conjunction with FEMA's IA Stafford Act programs. When a Presidential disaster declaration is not viable or warranted or does not include IA due to the scope of the disaster, it may be appropriate for CalOES to coordinate requests for SBA assistance, since this can be done independently of a FEMA declaration. In order to pursue SBA assistance, the damage incurred by the community must meet certain minimum thresholds.

Agricultural Assistance: The U.S. Department of Agriculture (USDA) provides low-interest loans to farmers, ranchers, and aqua culturists for physical and/or crop production losses in areas designated a disaster by the Secretary of Agriculture. This designation may also follow a Presidential disaster declaration. As a result, the SBA may also provide economic injury disaster loans to small non-farm businesses, small agricultural cooperatives, and most private non-profit organizations of any size.

Public Assistance (PA) Programs

State Assistance: The California Disaster Assistance Act (CDAA) authorizes the state to provide financial assistance for costs incurred by local governments as a result of a disaster. CDAA assistance may be implemented in circumstances when local resources are exceeded but the President does not declare an emergency or major disaster under the Stafford Act. In general, the state's share of work that is eligible under CDAA is no more than 75 percent of total state eligible costs. However, funding may vary with the type of disaster at the discretion of the Legislature. There are two levels of CDAA assistance:

- ✧ **Secretary's Concurrence:** Under CDAA, the CalOES Secretary may concur with a local government request for state assistance independently of a Governor's Proclamation of a State of Emergency. A Secretary's Concurrence is limited to eligible permanent repair work. There is generally a 75%-25% cost share between state and local governments.
- ✧ **During a State of Emergency:** When the Governor proclaims a State of Emergency, both emergency and permanent work is eligible for assistance. Again there is generally a 75%-25% cost share between state and local governments.

Federal Assistance: Under a declaration of emergency or major disaster, the President may designate certain counties in the affected areas as eligible for the Public Assistance (PA). Major assistance programs available under the Stafford Act are managed by FEMA:

 ✧ **FEMA Public Assistance Grant Program:** FEMA provides state agencies, local governments, tribal governments and certain private non-profit entities with federal grants to cover eligible disaster recovery work on a cost-share basis. In accordance with the Stafford Act, the federal cost share is a minimum of 75 percent. The State of California shares the remaining cost with the applicant. Eligible costs must be associated with:

   ▪ Debris removal;
   ▪ Emergency work necessary to save lives, protect public health and safety and protect property;
   ▪ Restoration of damaged facilities, including buildings, equipment and Infrastructure and also to pre-disaster design and function; and/or
   ▪ Implementation of cost-effective hazard mitigation measures during repairs to damaged facilities to reduce the risk of future damage to those facilities.

 ✧ **Assistance to Tribal Governments:** In accordance with the National Response Framework, the state coordinates with impacted tribal governments within the State and initiates requests for a Stafford Act Presidential declaration of an emergency or major disaster on behalf of an impacted tribe when appropriate. Within California, tribal governments may submit Requests for Public Assistance to CalOES, which reviews the requests and submits them to FEMA. FEMA may then work directly with the tribal governments as grantees.

Non-Stafford Act Programs: The federal government provides recovery assistance through authorities and programs outside of the Stafford Act. These programs may be implemented in conjunction with Stafford Act programs under a disaster declaration or separately. Depending on the program, the agencies may provide assistance directly to recipients or through another state agency besides CalOES. Examples include:

 ✧ **Federal Highway Administration:** Under the Emergency Relief Program, the Federal Highway Administration (FHWA) provides assistance to the Department of Transportation (Caltrans) and local governments for damage to roads, bridges and other facilities on the federal-aid system. Caltrans implements this program on behalf of FHWA.

 ✧ **Natural Resources Conservation Service:** Under the Emergency Watershed Protection Program, the Natural Resources Conservation Service (NRCS) provides assistance to state agencies and local governments for emergency work necessary to protect life, property and public health and safety in watersheds that have been damaged by a disaster, such as a wildfire or flood.

 ✧ **U.S. Army Corps of Engineers:** Under the Rehabilitation and Inspection Program, the United State Army Corps of Engineers (USACE) provides assistance for flood

fighting, emergency repair and repairs to damaged facilities. The USACE provides this assistance for levees and other flood control works that meet pre-disaster criteria for participation in the program.

- ✧ **U.S. Department of Housing and Urban Development:** The United States Department of Housing and Urban Development's (HUD) Community Development Block Grants may be requested by state, local and tribal governments for a wide range of recovery purposes.
- ✧ **Congressional Appropriations:** The U.S. Congress may make disaster-specific appropriations that allow federal agencies to provide assistance beyond existing authorities and programs. State coordination of this assistance depends on the nature of the appropriation and the federal agency that is charged with its implementation.

Hazard Mitigation Grant Program

The Hazard Mitigation Grant Program (HMGP) provides grants to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

The HMGP is only available to applicants that reside within a federally declared disaster area. Eligible applicants are:

> State and local governments;
> Indian tribes or other tribal organizations; and
> Certain non-profit organizations.

Although individuals may not apply directly to the state for assistance, local governments may sponsor an application on their behalf.

The amount of funding available for the HMGP under a particular disaster declaration is limited. The program may provide a state with up to 7.5 percent of the total disaster grants awarded by the Federal Emergency Management Agency (FEMA). States that meet higher mitigation planning criteria may qualify for a higher percentage under the Disaster Mitigation Act of 2000. FEMA can fund up to 75 percent of the eligible costs of each project. The grantee must provide a 25 percent match.

14. ADMINISTRATION AND LOGISTICS

14.1 ADMINISTRATION

For the Town of Apple Valley, the administrative actions prior to an emergency include:

- An established written Emergency Operations Plan (EOP) and Standard Operating Procedures (SOPs);
- Track emergency services training records;
- Document drills and exercises to include the critiques; and
- Include non-government organizations in the Town's emergency planning activities.

The administrative actions during and after an emergency include:

- Maintenance of written log-type records;
- Issuance of press releases;
- Submission of status reports, requests for assistance and initial damage assessment requests to the OA EOC;
- Utilize pre-established bookkeeping and accounting methods to track and maintain records of expenditures and obligations; and
- Document recovery operations.

14. 2 LOGISTICS

For the Town of Apple Valley, logistics before an emergency include:

- Acquiring and typing Town equipment;
- Stockpiling supplies;
- Designating emergency facilities, such as shelter sites;
- Establish mutual aid agreements, such as with American Red Cross; and
- Prepare a resource contact list.

Logistics during an emergency include:

- Move emergency equipment into place;
- Arrange for food and transportation;
- Arrange for shelter facilities;
- If needed, call on mutual aid; and

- If needed, provide backup power and communications.

The Town of Apple valley will maintain a list of current contracts for equipment and supplies that might be needed during an event.

15. EMERGENCY PLAN MAINTENANCE AND DISTRIBUTION

The Town's Emergency Services Coordinator is responsible for regular reviews and maintenance of the Town of Apple Valley Emergency Operations Plan (EOP). Modifications may occur as a result of post-incident critiques and/or changes to responsibilities, procedures, laws or regulations. The Emergency Services Coordinator will also be responsible for soliciting and incorporating input from persons with access and functional needs and those who serve them into the EOP revision. The EOP shall be ADA compliant. Revisions will be prepared, coordinated, published and distributed to all Town departments and other agencies as shown on the distribution list.

15. 1 RECORD OF CHANGES

Upon final approval of the Plan, individuals will be documented on the "Record of Distribution" form and will be inserted into the Plan.

Record of Changes			
Change #	Date	Person Making Change	Summary of Change

15.2 RECORD OF DISTRIBUTION

Record of Plan Distribution			
Name & Title	Agency	Date of Delivery	Number of Copies

16. STANDARD OPERATING PROCEDURES (SOP) DEVELOPMENT

The Standard Operating Procedures (SOPs) for the Town of Apple Valley are published separately to support the Emergency Operations Plan (EOP). The SOPs detail how a particular function or task will be carried out during an emergency. They include:

Guidance information;
Responsibilities of responding
employees/agencies; Procedures;
Personnel Assignments;
Contact Lists;
Equipment Lists;
and Forms.

It is the responsibility of the Town's Emergency Services Coordinator working with the various Town Departments and other agencies to update the SOPs on an as needed basis.

17. TRAINING AND EXERCISES

Training

Training and testing are essential to ensure emergency response personnel of all levels of government and the public are operationally ready. As part of the emergency management training curriculum, it is recommended that personnel with emergency responsibilities complete emergency management courses as described in the SEMS Approved Course of Instruction (ACI) and the NIMS integration criteria. In addition to SEMS and NIMS courses, Town of Apple Valley employees are provided EOP orientation, Disaster Service Worker training, EOC Section Specific training and other additional specialized training as available. The Town's Emergency Services Coordinator is responsible to provide and maintain the training and testing records to demonstrate the compliance with SEMS and NIMS requirements.

Exercises

Exercises provide personnel with an opportunity to become thoroughly familiar with the procedures, facilities and systems which will actually be used in emergency situations. The Town of Apple Valley participates in all-hazard exercises that involve emergency management/response personnel from multiple disciplines and/or multiple jurisdictions. The Exercises:

Are realistic as
possible;
Stress the application of standardized emergency
management;
Are based on risk assessments (credible threats, vulnerabilities and
consequences); Include non-governmental organizations and the private
sector, when appropriate; Incorporate the concepts and principles of SEMS and
NIMS;
Demonstrate continuity of operations issues;
and
Incorporate issues related to access and functional needs

populations. Exercises range from seminars/workshops to full-scale

demonstrations:

Seminars/Workshops are low-stress, informal discussions in a group setting with little or no simulation. It is used to provide information and introduce people to policies, plans and procedures.

Drills/Tests are conducted on a regular basis to maintain the readiness of operational procedures, personnel and equipment. Examples include tests of outdoor warning systems and the Emergency Alert System.

Tabletop Exercises provide a convenient and low-cost method designed to evaluate policy, plans and procedures and resolve coordination and responsibilities. Such exercises are a good way to see if policies and procedures exist to handle certain issues.

Functional Exercises are designed to test and evaluate the capability of an individual function such as communications, public evacuation, or medical.

Full-Scale Exercises simulate an actual emergency. They typically involve complete emergency management staff and are designed to evaluate the operational capability of the emergency management system.

The federal government, through FEMA, promulgates the Homeland Security Exercise and Evaluation Program (HSEEP), which is a standardized methodology for exercise design, development, conduct, evaluation and improvement to ensure homeland security and terrorist response capabilities are adequately tested and exercised. On a yearly basis, a HSEEP-compliant training and exercising plan is developed for the Town of Apple Valley. The Town's Emergency Services Coordinator is responsible for the creation of this plan and conducting and/or participating in various exercises throughout the year.

APPENDICES

APPENDIX 1   AUTHORITIES AND REFERENCES

Authorities
Local Authorities

Apple Valley Ordinance:
No. 1664 Emergency Preparedness and Functions

Apple Valley Resolution:
No. 229 California Master Mutual Aid Agreement
No. 83-50 Registered Volunteer Disaster Service Workers
No. 95-48 Adoption of Standardized Emergency Management System (SEMS)
No. 2006-204 Adoption of National Incident Management System (NIMS)
No. 2011-098 Establish Citizen Corps Council
No. 2012-034 Adoption of Local Hazard Mitigation Plan

State Authorities

California Emergency Services Act
California Disaster Assistance Act
California Code of Regulations,
Title 19
California Civil Code, Chapter 9, Section 1799.102 – Good Samaritan Liability
California Disaster and Civil Defense Master Mutual Aid Agreement

Federal Authorities

Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended
Federal Civil Defense Act of 1950 (Public Law 920) as amended

References
Title 44 Code of Federal
Regulations National Incident
Management System National
Response Framework

Homeland Security Presidential Directive (HSPD-5) Standardized Emergency Management System Guidelines California Catastrophic Incident Base Plan: Concept of Operations California Emergency Plan

California Hazardous Materials Incident Contingency Plan

California Law Enforcement Mutual Aid Plan

California Fire Service and Rescue Emergency Mutual Aid Plan

Town of Apple Valley General Plan, Safety Element

Town of Apple Valley Hazard Mitigation Plan

APPENDIX 2 GLOSSARY OF TERMS

Action Plan (AP): See EOC Action Plan and Incident Action Plan.

Activation: 1) Initial activation of an EOC may be accomplished by a designated official of the emergency response agency that implements SEMS as appropriate to accomplish the agency's role in response to the emergency. 2) An event in the sequence of events normally experienced during most emergencies.

After-Action Report (AAR): A report that examines response actions, application of SEMS, modifications to plans and procedures, training needs and recovery activities. After action reports are required under SEMS after any emergency that requires a declaration of an emergency. Reports must be submitted within 90 days to CalOES.

Agency: A division of government with a specific function offering a particular kind of assistance. In the Incident Command System (ICS), agencies are defined either as jurisdictional (having statutory responsibility for incident management) or as assisting or cooperating (providing resources or other assistance). Governmental organizations are most often in charge of an incident, though in certain circumstances private sector organizations may be included. Additionally, Non-Governmental Organizations (NGOs) may be included to provide support.

All-Hazards: Any incident, natural or manmade, that warrants action to protect life, property, environment, public health or safety and minimize disruptions of government, social, or economic activities.

California Disaster and Civil Defense Master Mutual Aid Agreement (MMAA): An agreement entered into by and between the State of California, its various departments and agencies and the various political subdivisions, municipal corporations and public agencies of the State of California to assist each other by providing resources during an emergency. Mutual Aid occurs when two or more parties agree to furnish resources and facilities and to render services to each other in response to any type of disaster or emergency.

California Emergency Functions (CA-EF): The California Emergency Functions are a grouping of state agencies, departments and other stakeholders with similar functional activities/responsibilities whose responsibilities lend to improving the state's ability to collaboratively prepare for, effectively mitigate, cohesively respond to and rapidly recover from any emergency. California Emergency Functions unify a broad-spectrum of stakeholders with various capabilities, resources and authorities to improve collaboration and coordination for a particular discipline. They also provide a framework for the state government to support

regional and community stakeholder collaboration and coordination at all levels of government and across overlapping jurisdictional boundaries.

California Emergency Services Act (ESA): An Act within the California Government Code to insure that preparations within the state will be adequate to deal with natural, manmade, or war-caused emergencies which result in conditions of disaster or in extreme peril to life, property and the natural resources of the state and generally to protect the health and safety and preserve the lives and property of the people of the state.

Catastrophe: Any natural or manmade incident, including terrorism that results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions.

Command: The act of directing, ordering, or controlling by virtue of explicit statutory, regulatory, or delegated authority.

Command/Management: Command is responsible for the directing, ordering, and/or controlling of resources at the field response level. Management is responsible for overall emergency policy and coordination at the SEMS EOC levels.

Command Post: See Incident Command Post.

Command Staff: The Command Staff at the SEMS Field Level consists of the Information Officer, Safety Officer and Liaison Officer. They report directly to the Incident Commander. They may have an assistant or assistants, as needed. These officers are also found at the EOC levels in SEMS and they report directly to the EOC Director and comprise the Management Staff. They may have an assistant or assistants, as needed.

Common Terminology: Normally used words and phrases-avoids the use of different words/phrases for same concepts, consistency, to allow diverse incident management and support organizations to work together across a wide variety of incident management functions and hazard scenarios.

Communications: Process of transmission of information through verbal, written, or symbolic means.

Continuity of Government (COG): Activities that address the continuance of constitutional governance. COG planning aims to preserve and/or reconstitute the institution of government and ensure that a department or agency's constitutional, legislative, and/or administrative responsibilities are maintained. This is accomplished through succession of leadership, the pre-

delegation of emergency authority and active command and control during response and recovery operations.

Continuity of Operations (COOP): Planning should be instituted (including all levels of government) across the private sector and non-governmental organizations as appropriate, to ensure the continued performance of core capabilities and/or critical government operations during any potential incident.

Coordination: The process of systematically analyzing a situation, developing relevant information and informing appropriate command authority of viable alternatives for selection of the most effective combination of available resources to meet specific objectives. The coordination process (which can be either intra-or inter-agency) does not involve dispatch actions. However, personnel responsible for coordination may perform command or dispatch functions within the limits established by specific agency delegations, procedures, legal authority, etc. Multiagency or Interagency coordination is found at all SEMS levels.

Coordination Center: Term used to describe any facility that is used for the coordination of agency or jurisdictional resources in support of one or more incidents.

Corrective Actions: Implementing procedures that are based on lessons learned from actual incidents or from training and exercises.

Cost Unit: Functional unit within the Finance/Administration Section responsible for tracking costs, analyzing cost data, making cost estimates and recommending cost-saving measures.

Critical Infrastructure: Systems and assets, whether physical or virtual, so vital to the United States that the incapaTown or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters.

Cyber Threat: An act or threat that poses potentially devastating disruptions to critical infrastructure, including essential communications such as voice, email and Internet connectivity

Cyber Security: The protection of data and systems in networks that are connected to the internet, including measures to protect critical infrastructure services. These services may include essential communications such as voice, email and internet connectivity.

Demobilization: The orderly, safe and efficient return of an incident resource to its original location and status.

Department Operations Center (DOC): An Emergency Operations Center (EOC), specific to a single department or agency. Their focus is on internal agency incident management and response. They are often linked to and, in most cases, are physically represented in a combined agency EOC by authorized agent(s) for the department or agency.

Disaster: A sudden calamitous emergency event bringing great damage loss or destruction.

Division: The partition of an incident into geographical areas of operation. Divisions are established when the number of resources exceeds the manageable span of control of the Operations Section Chief. A Division is located within the ICS organization between the Branch and resources in the Operations Section.

Documentation Unit: Functional unit within the Planning/Intelligence Section responsible for collecting, distributing, recording and safeguarding all documents relevant to an incident or within an EOC.

Emergency: Any incident(s), whether natural or manmade, that requires responsive action to protect life or property. Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, an emergency means any occasion or instance for which, in the determination of the President, federal assistance is needed to supplement state and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States.

Emergency Management Assistance Compact (EMAC): A congressionally ratified organization that provides form and structure to interstate mutual aid. Through EMAC, a disaster-affected state can request and receive assistance from other member states quickly and efficiently, resolving two key issues upfront: liability and reimbursement.

Emergency Management Community: The stakeholders in emergency response in California including the residents of California, the private sector and federal, state, local and tribal governments.

Emergency Operations Center (EOC): The physical location at which the coordination of information and resources to support incident management (on-scene operations) activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOC may be organized by major functional disciplines (e.g., fire, law enforcement and medical services), by jurisdiction (e.g., federal, state, regional, tribal, Town, county), or some combination thereof.

Emergency Operations Plan: The ongoing plan maintained by various jurisdictional levels for responding to a wide variety of potential hazards.

Emergency Resource Directory (ERD): A directory containing information on agency or organization personnel emergency certifications and qualifications and vendor and support organization supplies, equipment, etc. that may be needed during an emergency. Supplies and equipment can include such items potable water tenders, portable toilets, heavy equipment, prepared meals, bulk foodstuffs, cots, rental office trailers, etc. To the extent possible and when appropriate, equipment should be typed by capability according to a common and accepted typing schematic. Emergency resource directories should only include those items likely to be needed by the preparing agency or organization in the performance of their duties and should not attempt to include everything that may be needed in any emergency.

Emergency Response Agency: Any organization responding to an emergency, or providing mutual aid support to such an organization, whether in the field, at the scene of an incident, or to an operations center.

Emergency Response Personnel: Personnel affiliated with or sponsored by emergency response agencies.

EOC Action Plan: The plan developed at SEMS EOC levels, which contains objectives, actions to be taken, assignments and supporting information for the next operational period.

Essential Facilities: Police, fire, emergency operations centers, schools, medical facilities and other resources that have a role in an effective and coordinated emergency response.

Evacuation: Organized, phased and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas and their reception and care in safe areas.

Federal: Of or pertaining to the federal government of the United States of America.

Finance/Administration Section: The section responsible for all administrative and financial considerations surrounding an incident or EOC activation.

Function: Function refers to the five major activities in ICS: Command, Operations, Planning, Logistics and Finance/Administration. The same five functions are also found at all SEMS EOC Levels. At the EOC, the term Management replaces Command. The term function is also used when describing the activity involved, (e.g. the planning function). A sixth function, Intelligence/Investigations, may be established, if required, to meet emergency management needs.

Group: Established to divide the incident management structure into functional areas of operation. Groups are composed of resources assembled to perform a special function not necessarily within a single geographic division. Groups, when activated, are located between branches and resources in the Operations Section. See Division.

Hazard: Something that is potentially dangerous or harmful, often the root cause of an unwanted outcome.

Incident: An occurrence or event, natural or manmade that requires a response to protect life or property. Incidents can, for example, include major disasters, emergencies, terrorist attacks, terrorist threats, civil unrest, wild-land and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes, tornadoes, tropical storms, tsunamis, war- related disasters, public health and medical emergencies and other occurrences requiring an emergency response.

Incident Action Plan (IAP): An oral or written plan containing general objectives reflecting the overall strategy for managing an incident. It may include the identification of operational resources and assignments. It may also include attachments that provide direction and important information for management of the incident during one or more operational periods. At the SEMS EOC level it is called the EOC Action Plan.

Incident Base: The location at which primary Logistics functions for an incident are coordinated and administered. There is only one base per incident. (Incident name or other designator will be added to the term base.) The Incident Command Post may be co-located with the Base.

Incident Command: Responsible for overall management of the incident and consists of the Incident Commander, either single or unified command or any assigned supporting staff.

Incident Commander (IC): The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

Incident Command Post (ICP): The field location where the primary functions are performed. The ICP may be co-located with the incident base or other incident facilities.

Incident Command System (ICS): A standardized on-scene emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by

jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.

Information: Pieces of raw, unanalyzed data that identifies persons, evidence, events; or illustrates processes that specify the occurrence of an event. May be objective or subjective and is intended for both internal analysis and external (news media) application. Information is the "currency" that produces intelligence.

Intelligence: Product of an analytical process that evaluates information collected from diverse sources, integrates the relevant information into a cohesive package and produces a conclusion or estimate. Information must be real, accurate and verified before it becomes intelligence for planning purposes. Intelligence relates to the specific details involving the activities of an incident or EOC and current and expected conditions and how they affect the actions taken to achieve operational period objectives. Intelligence is an aspect of information. Intelligence is primarily intended for internal use and not for public dissemination.

Intelligence/Investigations: Intelligence gathered within the Intelligence/Investigations function is information that either leads to the detection, prevention, apprehension and prosecution of criminal activities (or the individual(s) involved) including terrorist incidents or information that leads to determination of the cause of a given incident (regardless of the source) such as public health events or fires with unknown origins. This is different from the normal operational and situational intelligence gathered and reported by the Planning Section.

Interoperability: Allows emergency management/response personnel and their affiliated organizations to communicate within and across agencies and jurisdictions via voice, data, or video-on-demand, in real-time, when needed and when authorized.

Joint Information Center (JIC): A facility established to coordinate all incident-related public information activities. It is the central point of contact for all news media. Public information officials from all participating agencies should co-locate at the JIC.

Joint Information System (JIS): Integrates incident information and public affairs into a cohesive organization designed to provide consistent, coordinated, accurate, accessible, timely and complete information during crisis or incident operations. The mission of the JIS is to

provide a structure and system for developing and delivering coordinated interagency messages; developing, recommending and executing public information plans and strategies on behalf of the IC; advising the IC concerning public affairs issues that could affect a response effort; and controlling rumors and inaccurate information that could undermine public confidence in the emergency response effort.

Jurisdiction: A range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority. Jurisdictional authority at an incident can be political or geographical (e.g., federal, state, tribal and local boundary lines) or functional (e.g., law enforcement, public health).

Key Resources: Any publicly or privately controlled resources essential to the minimal operations of the economy and government.

Liaison: A form of communication for establishing and maintaining mutual understanding and cooperation.

Liaison Officer: A member of the Command Staff (Management Staff at the SEMS EOC Levels) responsible for coordinating with representatives from cooperating and assisting agencies or organizations. At SEMS EOC Levels, reports directly to the EOC Director and coordinates the initial entry of Agency Representatives into the Operations Center and also provides guidance and support for them as required.

Local Government: According to federal code30 a county, municipality, Town, town, township, local public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under state law), regional or interstate government entity, or agency or instrumentality of a local government; an Indian tribe or authorized tribal entity, or in Alaska a Native village or Alaska Regional Native Corporation; a rural community, unincorporated town or village, or other public entity.

Logistics: Providing resources and other services to support incident management.

Logistics Section: The section responsible for providing facilities, services and material support for an incident or EOC activation.

Management Staff: See Command Staff.

Mitigation: Provides a critical foundation in the effort to reduce the loss of life and property from natural and/or manmade disasters by avoiding or lessening the impact of a disaster and

providing value to the public by creating safer communities. Mitigation seeks to fix the cycle of disaster damage, reconstruction and repeated damage. These activities or actions, in most cases, will have a long-term sustained effect.

Mobilization: The process and procedures used by all organizations—federal, state, tribal and local-for activating, assembling and transporting all resources that have been requested to respond to or support an incident.

Mobilization Center: An off-emergency location where emergency services personnel and equipment may be temporarily located, pending assignment to emergencies, release, or reassignment.

Multiagency or Inter-Agency Coordination: The participation of agencies and disciplines involved at any level of the SEMS organization working together in a coordinated effort to facilitate decisions for overall emergency response activities, including the sharing of critical resources and the prioritization of incidents.

Multiagency Coordination Group (MAC Group): Typically, administrators/executives, or their appointed representatives, who are authorized to commit agency resources and funds, are brought together and form MAC Groups. MAC Groups may also be known as multiagency committees, emergency management committees, or as otherwise defined by the System. It can provide coordinated decision making and resource allocation among cooperating agencies and may establish the priorities among incidents, harmonize agency policies and provide strategic guidance and direction to support incident management activities.

Multiagency Coordination System(s) (MACS): Multiagency coordination systems provide the architecture to support coordination for incident prioritization, critical resource allocation, communications systems integration and information coordination. The elements of multiagency coordination systems include facilities, equipment, personnel, procedures and communications. Two of the most commonly used elements are EOC and MAC Groups. These systems assist agencies and organizations responding to an incident.

Mutual Aid Agreements and/or Assistance Agreements: Written or oral agreements between and among agencies/organizations and/or jurisdictions that provide a mechanism to quickly obtain emergency assistance in the form of personnel, equipment, materials and other associated services. The primary objective is to facilitate rapid, short-term deployment of emergency support prior to, during, and/or after an incident.

Mutual Aid Coordinator: An individual at local government, Operational Area, Region or State Level that is responsible to coordinate the process of requesting, obtaining, processing and using mutual aid resources. Mutual Aid Coordinator duties will vary depending upon the mutual aid system.

Mutual Aid Region: A mutual aid region is a subdivision of CalOES established to assist in the coordination of mutual aid and other emergency operations within a geographical area of the state, consisting of two or more Operational Areas.

National: Of a nationwide character, including the federal, state, tribal and local aspects of governance and policy.

National Incident Management System (NIMS): Provides a systematic, proactive approach guiding government agencies at all levels, the private sector and non-governmental organizations to work seamlessly to prevent, protect against, respond to, recover from and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life or property and harm to the environment.

National Response Framework (NRF): A guide to how the nation conducts all-hazards incident management.

Non-governmental Organization (NGO): An entity with an association that is based on the interests of its members, individuals, or institutions. It is not created by a government, but it may work cooperatively with the government. Such organizations serve a public purpose, not a private benefit. Examples of NGO include faith-based charity organizations and the American Red Cross.

Officer: 1) The ICS title for the personnel responsible for the Command Staff (Management Staff at EOC) positions of Safety, Liaison and Public Information. 2) One who holds an office or post; especially one elected or appointed to a position of authority or trust in a corporation, government, institution, etc.

Operational Area (OA): An intermediate level of the state emergency organization, consisting of a county and all other political subdivisions within the geographical boundaries of the county.

Operational Period: The time scheduled for executing a given set of operation actions, as specified in the Incident Action Plan. Operational periods can be of various lengths, although usually they last 12-24 hours.

Operations Section: The section responsible for all tactical incident operations and implementation of the Incident Action Plan. In ICS, it normally includes subordinate branches, divisions, and/or groups. At the SEMS EOC levels the section is responsible for the coordination of operational activities. The Operations Section at an EOC contains branches, groups or units necessary to maintain appropriate span of control.

Organization: Any association or group of persons with like objectives. Examples include, but are not limited to, governmental departments and agencies, private sector, and/or non-governmental organizations.

Planning Section: The section responsible for the collection, evaluation and dissemination of operational information related to the incident or EOC activities and for the preparation and documentation of the IAP or EOC action plan respectively. This section also maintains information on the current and forecasted situation and on the status of resources assigned to the incident or EOC activation.

Political Subdivisions: Includes any Town, Town and county, county, tax or assessment district, or other legally authorized local governmental entity with jurisdictional boundaries.

Preparedness: A continuous cycle of planning, organizing, training, equipping, exercising, evaluating and taking corrective action in an effort to ensure effective coordination during incident response. Within NIMS, preparedness focuses on the following elements: planning, procedures and protocols, training and exercises, personnel qualification and certification and equipment certification.

Prevention: Actions to avoid an incident or to intervene to stop an incident from occurring. Prevention involves actions to protect lives and property. It involves applying intelligence and other information to a range of activities that may include such countermeasures as deterrence operations; heightened inspections; improved surveillance and security operations; investigations to determine the full nature and source of the threat; public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and, as appropriate, specific law enforcement operations aimed at deterring, preempting, interdicting, or disrupting illegal activity and apprehending potential perpetrators and bringing them to justice.

Private Sector: Organizations and entities that are not part of any governmental structure. The private sector includes for-profit and not-for-profit organizations, formal and informal structures, commerce and industry.

Protocols: Sets of established guidelines for actions (which may be designated by individuals, teams, functions, or capabilities) under various specified conditions.

Public Information: Processes, procedures and systems for communicating timely, accurate and accessible information on the incident's cause, size and current situation; resources committed; and other matters of general interest to the public, responders and additional stakeholders (both directly affected and indirectly affected).

Public Information Officer (PIO): A member of the Command Staff (Management Staff at the SEMS EOC Levels) responsible for interfacing with the public and media and/or with other agencies with incident-related information requirements.

Recovery: The development, coordination and execution of service- and site-restoration plans; the reconstitution of government operations and services; individual, private–sector, non-governmental and public assistance programs to provide housing and to promote restoration; long-term care and treatment of affected persons; additional measures for social, political, environmental and economic restoration; evaluation of the incident to identify lessons learned; post incident reporting; and development of initiatives to mitigate the effects of future incidents.

Recovery Plan: A plan developed to restore the affected area or community.

Region Emergency Operations Center (REOC): Facilities found at CalEMA Administrative Regions. REOC provide centralized coordination of resources among Operational Areas within their respective regions and between the Operational Areas and the State Level.

Reimbursement: Provides a mechanism to recoup funds expended for incident-specific activities.

Resource Management: Efficient emergency management and incident response requires a system for identifying available resources at all jurisdictional levels to enable timely and unimpeded access to resources needed to prepare for, respond to, or recover from an incident. Resource management under NIMS includes mutual aid agreements and assistance agreements; the use of special federal, state, tribal and local teams; and resource mobilization protocols.

Resources: Personnel and major items of equipment, supplies and facilities available or potentially available for assignment to incident operations and for which status is maintained.

Resources are described by kind and type and may be used in operational support or supervisory capacities at an incident or at an EOC.

Response: Activities that address the short-term, direct effects of an incident. Response includes immediate actions to save lives, protect property and meet basic human needs. Response also includes the execution of EOP and of mitigation activities designed to limit the loss of life, personal injury, property damage and other unfavorable outcomes. As indicated by the situation, response activities include applying intelligence and other information to lessen the effects or consequences of an incident; increased security operations; continuing investigations into nature and source of the threat; ongoing public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and specific law enforcement operations aimed at preempting, interdicting, or disrupting illegal activity and apprehending actual perpetrators and bringing them to justice.

Response Personnel: Includes federal, state, territorial, tribal, sub-state regional and local governments, private sector organizations, critical infrastructure owners and operators, NGO and all other organizations and individuals who assume an emergency management role. Also known as an Emergency Responder.

Safety Officer: A member of the Command Staff (Management Staff at the SEMS EOC Levels) responsible for monitoring incident operations and advising the IC on all matters relating to operational safety, including the health and safety of emergency responder personnel. The Safety Officer may have assistants.

Section: 1) The organizational level having responsibility for a major functional area of incident or EOC Management, (e.g. Operations, Planning, Logistics, Finance/Administration) and Intelligence/ Investigations (if established). The section is organizationally situated between the branch and the Incident Command. 2) A separate part or division as: a. A portion of a book, treatise, or writing. b. A subdivision of a chapter. c. A division of law.

Situation Report: Often contain confirmed or verified information regarding the specific details relating to the incident.

Span of Control: The number of resources for which a supervisor is responsible, usually expressed as the ratio of supervisors to individuals. (Under NIMS, an appropriate span of control is between 1:3 and 1:7, with optimal being 1:5.)

Special District: A unit of local government (other than a Town, county, or Town and county) with authority or responsibility to own, operate and maintain systems, programs, services, or

projects (as defined in California Code of Regulations (CCR) Section 2900(s) for purposes of natural disaster assistance. This may include a joint power authority established under Section 6500 et. seq. of the Code.

Stafford Act: The Robert T. Stafford Disaster Relief and Emergency Assistance Act establishes the programs and processes for the federal government to provide disaster and emergency assistance to states, local governments, tribal nations, individuals and qualified private nonprofit organizations. The provisions of the Stafford Act cover all-hazards including natural disasters and terrorist events. Relevant provisions of the Stafford Act include a process for Governors to request federal disaster and emergency assistance from the President. The President may declare a major disaster or emergency.

Staging Area: Established on an incident for the temporary location of available resources. A Staging Area can be any location on an incident in which personnel, supplies and equipment can be temporarily housed or parked while awaiting operational assignment.

Standard Operating Procedure (SOP): Complete reference document or an operations manual that provides the purpose, authorities, duration and details for the preferred method of performing a single function or a number of interrelated functions in a uniform manner.

Standardized Emergency Management System (SEMS): A system required by California Government Code and established by regulations for managing response to multiagency and multijurisdictional emergencies in California. SEMS consists of five organizational levels, which are activated as necessary: Field response, Local Government, Operational Area, Region and State.

Standardized Emergency Management System (SEMS) Guidelines: The SEMS guidelines are intended to assist those responsible for planning, implementing and participating in SEMS.

Standardized Emergency Management System (SEMS) Regulations: Regulations establishing the Standardized Emergency Management System (SEMS) based upon the Incident Command System (ICS) adapted from the system originally developed by the Firefighting Resources of California Organized for Potential Emergencies (FIRESCOPE) program including those currently in use by state agencies, the Multiagency Coordination System (MACS) as developed by FIRESCOPE program, the Operational Area concept and the Master Mutual Aid Agreement and related mutual aid systems. Regulations are found at TITLE 19. DIVISION 2. Chapter 1, ∞ 2400 et. Seq.

State: When capitalized, refers to any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands and any possession of the United States. See Section 2 (14), Homeland Security Act of 2002, Public Law 107−296, 116 Stat. 2135 (2002).

State Operations Center (SOC): The SOC is operated by the California Emergency Management Agency at the State Level in SEMS. It is responsible for centralized coordination of state resources in support of the three CalOES Administrative Regional Emergency Operations Centers (REOCs). It is also responsible for providing updated situation reports to the Governor and legislature.

Strategy: The general plan or direction selected to accomplish incident objectives.

System: An integrated combination of people, equipment and processes that work in a coordinated manner to achieve a specific desired output under specific conditions.

Technical Assistance: Support provided to state, tribal and local jurisdictions when they have the resources but lack the complete knowledge and skills needed to perform a required activity (such as mobile-home park design or hazardous material assessments).

Technical Specialists: Personnel with special skills that can be used anywhere within the SEMS organization. No minimum qualifications are prescribed, as technical specialists normally perform the same duties during an incident that they perform in their everyday jobs and they are typically certified in their fields or professions.

Terrorism: Under the Homeland Security Act of 2002, terrorism is defined as activity that involves an act dangerous to human life or potentially destructive of critical infrastructure or key resources; is a violation of the criminal laws of the United States or of any state or other subdivision of the United States in which it occurs; and is intended to intimidate or coerce the civilian population, or influence or affect the conduct of a government by mass destruction, assassination, or kidnapping. See Section 2 (15), Homeland Security Act of 2002, Public Law 107−296, 116 Stat. 2135 (2002).

Threat: An indication of possible violence, harm, or danger.

Tools: Those instruments and capabilities that allow for the professional performance of tasks, such as information systems, agreements, doctrine, capabilities and legislative authorities.

Tribal: Any Indian tribe, band, nation, or other organized group or community, including any Alaskan Native Village as defined in or established pursuant to the Alaskan Native Claims Settlement Act (85 stat. 688) [43 U.S.C.A. and 1601 et seq.].

Type: 1) An ICS resource classification that refers to capability. Type 1 is generally considered to be more capable than Types 2, 3, or 4, respectively, because of size, power, capaTown, or (in the case of incident management teams) experience and qualifications. 2) A class, kind, or group sharing one or more characteristics; category. 3) A variety or style of a particular class or kind of things.

Unified Command: An ICS application used when more than one agency has incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated members of the UC, often the senior person from agencies and/or disciplines participating in the UC, to establish a common set of objectives and strategies and a single IAP.

Unit: The organizational element with functional responsibility for a specific incident planning, logistics, or finance/administration activity.

Vital Records: The essential agency records that are needed to meet operational responsibilities under national security emergencies or other emergency or disaster conditions (emergency operating records), or to protect the legal and financial rights of the Government and those affected by Government activities (legal and financial rights records).

Volunteer: For purposes of NIMS, a volunteer is any individual accepted to perform services by the lead agency (which has authority to accept volunteer services) when the individual performs services without promise, expectation, or receipt of compensation for services performed. See 16 U.S.C. 742f(c) and 29 CFR 553.101.

APPENDIX 3 ACRONYMS LIST

AAR	After Action Report
ADA	Americans with Disabilities Act
AP	Action Plan
ARC	American Red Cross
CA-EF	California Emergency Function
CalOES	California Office of Emergency Services
CAL FIRE	California Fire
Caltrans	California Department of Transportation
CALWAS	California Warning System
CAP	Corrective Action Planning
CARES	California Animal Response in Emergency System
CCC	California Citizen Corp
CCR	California Code of Regulations
CDC	Center for Disease Control
CDAA	California Disaster Assistance Act
CERT	Community Emergency Response Team
CHP	California Highway Patrol
CISD	Critical Incident Stress Debriefing
CLERS	California Law Enforcement Radio System
COG	Continuity of Government
COOP	Continuity of Operations
CSWC	California State Warning Center
DHS	Department of Homeland Security
DOC	Department Operating Center
DOJ	Department of Justice
DSW	Disaster Service Worker
EAS	Emergency Alert System
ECS	Emergency Communications Services
EMAC	Emergency Management Assistance Compact
EMMA	Emergency Managers Mutual Aid
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ESF	Emergency Support Function
FBI	Federal Bureau of Investigation
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map

HazMat	Hazardous Materials
HMGP	Hazard Mitigation Grant Program
HSEEP	Homeland Security Exercise and Evaluation
IA	Individual Assistance
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
IDE	Initial Damage Estimate
JFO	Joint Field Office
JIC	Joint Information Center
JIS	Joint Information System
LAC	Local Assistance Center
MAC	Multi-Agency Coordination
MHz	Megahertz
MMAA	California Disaster and Civil Defense Master
NAWAS	National Warning System
NDAA	Natural Disaster Assistance Act
NGO	Non-Government Organization
NIMS	National Incident Management System
NRF	National Response Framework
NWS	National Weather Service
OA	Operational Area
OASIS	Operational Area Satellite Information System
PA	Public Assistance
PDA	Preliminary Damage Assessment
PIO	Public Information Officer
REOC	Regional Emergency Operations Center
RIMS	Response Information Management System
SEMS	Standardized Emergency Management System
SOC	State Operation Center
SOP	Standard Operating Procedure
VOAD	Voluntary Organizations Active in Disaster

APPENDIX 4 STANDARDIZED EMERGENCY MANAGEMENT SYSTEM EOC POSITION CHECKLISTS

The following checklists are extracted from the state planning guide *SEMS Local Government EOC Position Checklists.* They are based on the generic SEMS operating structure shown below. The EOC Director may alter this generic structure as needed based on operational requirements.

EOC Director

EOC Coordinator
Safety Officer
Security Officer
Public Information Officer*
Rumor Control

Liaison
Agency Representatives

Operations

Fire & Rescue Branch

Fire Operations Unit
Disaster Medical Unit
HazMat Unit

Law Enforcement Branch

L.E. Operations Unit
Coroner/Fatalities Mgmt. Unit **
Search & Rescue Unit

Construction/Engineering Branch

Utilities Unit
Damage/Safety Assessment Unit
Public Works Unit

Health & Welfare Branch

Care & Shelter Unit
Functional needs Unit

Planning/Intelligence

Situation Analysis Unit
Documentation Unit
Advance Planning Unit
Demobilization Unit
Technical Specialists

Logistics

Communications Branch

Communications Unit
Information Systems Unit

Transportation Unit
Personnel Unit
Supply/Procurement Unit
Facilities Unit

Finance/Administration

Time Keeping Unit
Compensation & Claims Unit
Purchasing Unit
Recovery Unit

Generic Checklist
(For All Positions)

Activation Phase:

- €   Check in with the Personnel Unit (in Logistics) upon arrival at the EOC.
- €   Report to EOC Director, Section Chief, Branch Coordinator, or other assigned Supervisor.
- €   Set up your workstation and review your position responsibilities.
- €   Establish and maintain a position log which chronologically describes your actions taken during your shift.
- €   Determine your resource needs, such as a computer, phone, plan copies, and other reference documents.
- €   Ensure RIMS (Response Information Management System) is operational.

Demobilization Phase:

- €   Deactivate your assigned position and close out logs when authorized by the EOC Director.
- €   Complete all required forms, reports, and other documentation. All forms should be submitted through your supervisor to the Planning/Intelligence Section, as appropriate, prior to your departure.
- €   Be prepared to provide input to the after-action report.
- €   If another person is relieving you, ensure they are thoroughly briefed before you leave your work station.
- €   Clean up your work area before you leave.
- €   Leave a forwarding phone number where you can be reached.

Management Section

EOC Director

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Establish the appropriate Staffing level for the EOC and continuously monitor organizational effectiveness ensuring that appropriate modifications occur as required.
2. Exercise overall management responsibility for the coordination between Emergency Response Agencies within the Operational Area. In conjunction with the General Staff, set priorities for response efforts. Ensure that all agency actions are accomplished within the priorities established.
3. Ensure that Inter-Agency Coordination is accomplished effectively within the EOC.

Activation Phase:

€ Determine appropriate level of activation based on situation as known.
€ Mobilize appropriate personnel for the initial activation of the EOC.
€ Respond immediately to EOC site and determine operational status.
€ Obtain briefing from whatever sources are available.
€ Ensure that the EOC is properly set up and ready for operations.
€ Ensure that an EOC check-in procedure is established immediately.
€ Ensure that an EOC organization and staffing chart is posted and completed.
€ Determine which sections are needed, assign Section Chiefs as appropriate and ensure they are staffing their sections as required.
  o Operations Section Chief
  o Logistics Section Chief
  o Planning/Intelligence Section Chief
  o Finance/Administration Chief
€ Determine which Management Section positions are required and ensure they are filled as soon as possible.
  o Liaison Officer
  o EOC Coordinator
  o Public Information Branch Coordinator
  o Safety Officer
  o Security Officer
€ Ensure that telephone and/or radio communications with Operational Area EOC are established and functioning.
€ Schedule the initial Action Planning meeting.
€ Confer with the General Staff to determine what representation is needed at the EOC from other emergency response agencies.
€ Assign a liaison officer to coordinate outside agency response to the EOC, and to assist as necessary in establishing an Interagency Coordination Group.

Operational Phase:

- € Monitor general staff activities to ensure that all appropriate actions are being taken.
- € In conjunction with the Public Information Unit, conduct news conferences and review media releases for final approval, following the established procedure for information releases and media briefings.
- € Ensure that the Liaison Officer is providing for and maintaining effective interagency coordination.
- € Based on current status reports, establish initial strategic objectives for the Town EOC.
- € In coordination with Management Staff, prepare management function objectives for the initial Action Planning Meeting.
- € Convene the initial Action Planning meeting. Ensure that all Section Chiefs, Management Staff, and other key agency representatives are in attendance. Ensure that appropriate Action Planning procedures are followed. (refer to Planning/Intelligence Section, "Action Planning Job Aid." Ensure the meeting is facilitated appropriately by the Planning/Intelligence Section.
- € Once the Action Plan is completed by the Planning/Intelligence Section, review, approve and authorize its implementation.
- € Conduct periodic briefings with the general staff to ensure strategic objectives are current and appropriate.
- € Conduct periodic briefings for elected officials or their representatives.
- € Formally issue Emergency Proclamation for the Town, and coordinate local government proclamations with other emergency response agencies, as appropriate.
- € Brief your relief at shift change, ensuring that ongoing activities are identified and follow-up requirements are known.

Demobilization Phase:

- € Authorize demobilization of sections, branches and units when they are no longer required.
- € Notify the Operational Area EOC, and other appropriate organizations of the planned demobilization, as appropriate.
- € Ensure that any open actions not yet completed will be handled after demobilization.
- € Ensure that all required forms or reports are completed prior to demobilization.
- € Be prepared to provide input to the after action report.
- € Deactivate the Town EOC at the designated time, as appropriate.
- € Proclaim termination of the emergency response and proceed with recovery operations.

EOC Coordinator (ESC)

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Facilitate the overall functioning of the EOC.
2. Assist and serve as an advisor to the EOC Director and General Staff as needed, providing information and guidance related to the internal functions of the EOC and ensure compliance with operational area emergency plans and procedures.
3. Assist the Liaison Officer in ensuring proper procedures are in place for directing agency representatives and conducting VIP/visitor tours of the EOC.

Activation Phase:

- € Follow generic Activation Phase Checklist.
- € Assist the EOC Director in determining appropriate staffing for the EOC.
- € Provide assistance and information regarding section staffing to all general staff.

Operational Phase:

- € Assist the EOC Director and the General Staff in developing an overall strategic objectives as well as section objectives for the Action Plan.
- € Advise the EOC Director on procedures for enacting emergency proclamations, emergency ordinances and resolutions, and other legal requirements.
- € Assist the Planning/Intelligence Section in the development, continuous updating, and execution of the EOC Action Plan.
- € Provide overall procedural guidance to General Staff as required.
- € Provide general advice and guidance to the EOC Director as required.
- € Ensure that all notifications are made to the Operational Area EOC.
- € Ensure that all communications with appropriate emergency response agencies is established and maintained.
- € Assist EOC Director in preparing for and conducting briefings with Management Staff**,** the Town Council, the media, and the general public.
- € Assist the EOC Director and Liaison Officer, in establishing and maintaining an Interagency Coordination Group comprised of outside agency representatives and executives <u>not assigned</u> to specific sections within the EOC.
- € Assist the Liaison Officer with coordination of all EOC visits.
- € Provide assistance with shift change activity as required.

Demobilization Phase:

- € Follow generic Demobilization Phase Checklist.

Public Information Branch Coordinator

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Serve as the coordination point for all media releases.
2. Represent the jurisdiction as the lead Public Information Officer.
3. Ensure that the public within the affected area receives complete, accurate, and consistent information about life safety procedures, public health advisories, relief and assistance programs and other vital information.
4. Coordinate media releases with Public Information Officers representing other affected emergency response agencies within the Operational Area as required.
5. Develop the format for press conferences, in conjunction with the EOC Director.
6. Maintaining a positive relationship with the media representatives.
7. Supervising the Public Information Branch.

Activation Phase:

€ Follow generic Activation Phase Checklists.
€ Determine staffing requirements and make required personnel assignments for the Public Information Branch as necessary.

Operational Phase:

€ Obtain policy guidance from the EOC Director with regard to media releases.
€ Keep the EOC Director advised of all unusual requests for information and of all major critical or unfavorable media comments. Recommend procedures or measures to improve media relations.
€ Coordinate with the Situation Status Unit and identify method for obtaining and verifying significant information as it is developed.
€ Develop and publish a media briefing schedule, to include location, format, and preparation and distribution of hand-out materials.
€ Implement and maintain an overall information release program.
€ Establish a Media Information Center, as required, providing necessary space, materials, telephones, and electrical power.
€ Maintain up-to-date status boards and other references at the media information center.
€ Provide adequate staff to answer questions from members of the media.
€ Interact with other Town EOC as well as Operational Area EOC PIOs and obtain information relative to public information operations.
€ Develop content for state Emergency Alert System (EAS) releases if available.
€ Monitor EAS releases as necessary.
€ In coordination with other EOC sections and as approved by the EOC Director, issue timely and consistent advisories and instructions for life safety, health, and assistance for the public.
€ At the request of the EOC Director, prepare media briefings for members of the Town Council and provide other assistance as necessary to facilitate their participation in media briefings and press conferences.
€ Ensure that a rumor control function is established to correct false or erroneous information.
€ Ensure that adequate staff is available at incident sites to coordinate and conduct tours of the disaster areas.
€ Provide appropriate staffing and telephones to efficiently handle incoming media and public calls.

€   Prepare, update, and distribute to the public a Disaster Assistance Information Directory, which contains locations to obtain food, shelter, supplies, health services, etc.

€   Ensure that announcements, emergency information and materials are translated and prepared for special populations (non-English speaking, hearing impaired etc.).

€   Monitor broadcast media, using information to develop follow-up news releases and rumor control.

€   Ensure that file copies are maintained of all information released.

€   Provide copies of all media releases to the EOC Director.

€   Conduct shift change briefings in detail, ensuring that in-progress activities are identified and follow-up requirements are known.

€   Prepare final news releases and advise media representatives of points-of-contact for follow-up stories.

Demobilization Phase:

€   Follow generic Demobilization Phase Checklist.

Rumor Control Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Provide staffing for rumor control telephone bank.
2. Establish a "Disaster Hotline" with an up-to-date recorded message.
3. Supervise the Rumor Control Unit.

Activation Phase:

€   Follow generic Activation Phase Checklist.

Operational Phase:

€   Obtain "confirmed" disaster information.
€   Operate a telephone bank for receiving incoming inquiries from the general public.
€   Correct rumors by providing factual information based on confirmed data.
€   Establish a "Disaster Hotline" recorded message and provide updated message information periodically.
€   Refer inquiries from member of the media to the lead Public Information Officer or designated staff.

Demobilization Phase:

€   Follow generic Demobilization Phase Checklist.

Liaison Officer

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Oversee all liaison activities, including coordinating outside agency representatives assigned to the EOC and handling requests from other EOCs for EOC agency representatives.
2. Establish and maintain a central location for incoming agency representatives, providing workspace and support as needed.
3. Ensuring that position specific guidelines, policy directives, situation reports, and a copy of the EOC Action Plan is provided to Agency Representatives upon check-in.
4. In conjunction with the EOC Coordinator, provide orientations for VIPs and other visitors to the EOC.
5. Ensuring that demobilization is accomplished when directed by the EOC Director.

Activation Phase:

€ Follow generic Activation Phase Checklist.
€ Obtain assistance for your position through the Personnel Unit in Logistics, as required.

Operational Phase:

€ Contact Agency Representatives already on-site, ensuring that they:
  o Have signed into the EOC,
  o Understand their assigned functions,
  o Know their work locations,
  o Understand EOC organization and floor plan.
€ Determine if additional representation is required from:
  o Other agencies,
  o Volunteer organizations,
  o Private organizations,
  o Utilities not already represented.
€ In conjunction with the EOC Director and EOC Coordinator, establish and maintain an Interagency Coordination Group comprised of outside agency representatives and executives not assigned to specific sections within the EOC.
€ Assist the EOC Director and EOC Coordinator in conducting regular briefings for the Interagency Coordination Group and with distribution of the current EOC Action Plan and Situation Report.
€ Request that Agency Representatives maintain communications with their agencies and obtain situation status reports regularly.
€ With the approval of the EOC Director, provide agency representatives from the EOC to other EOCs as required and requested.
€ Maintain a roster of agency representatives located at the Town EOC. Roster should include assignment within the EOC (Section or Interagency Coordination Group). Roster should be distributed internally on a regular basis.

Demobilization Phase:

- € Follow generic Demobilization Phase Checklist
- € Release agency representatives that are no longer required in the Town EOC when authorized by the EOC Director.

Agency Representatives

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Agency Representatives should be able to speak on behalf of their agencies, within established policy limits, acting as a liaison between their agencies and the EOC.
2. Agency Representatives may facilitate requests to or from their agencies, but normally do not directly act on or process resource requests.
3. Agency Representatives are responsible for obtaining situation status information and response activities from their agencies for the EOC.

Activation Phase:

€ Follow generic Activation Phase Checklist.
€ Check in with the Liaison Officer and clarify any issues regarding your authority and assignment, including the functions of other representatives from your agency (if any) in the EOC.
€ Establish communications with your home agency; notify the Logistics Section Communications Unit and the Liaison Officer of any communications problems.
€ Unpack any materials you may have brought with you and set up your assigned station, request through the Liaison Officer and/or Logistics to obtain necessary materials and equipment.
€ Obtain an EOC organization chart, floor plan, and telephone list from the Liaison Officer.
€ Contact the Town EOC sections or branches that are appropriate to your responsibility; advise them of your availability and assigned work location in the EOC.

Operational Phase:

€ Facilitate requests for support or information that your agency can provide.
€ Keep current on the general status of resources and activity associated with your agency.
€ Provide appropriate situation information to the Planning/Intelligence Section.
€ Represent your agency at planning meetings, as appropriate, providing update briefings about your agency's activities and priorities.
€ Keep your agency executives informed and ensure that you can provide agency policy guidance and clarification for the EOC Director as required.
€ On a regular basis, inform your agency of the Town EOC priorities and actions that may be of interest.
€ Maintain logs and files associated with your position.

Demobilization Phase:

€ Follow generic Demobilization Phase Checklist.
€ When demobilization is approved by the EOC Director, contact your agency and advise them of expected time of demobilization and points of contact for the completion of ongoing actions or new requirements.
€ Ensure that you complete all final reports, close out your activity log, and transfer any ongoing missions and/or actions to the Liaison Officer or other appropriate individual.
€ Ensure copies of all documentation generated during the operation are submitted to the Planning/Intelligence Section.

Safety Officer

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Ensure that all buildings and other facilities used in support of the EOC are in a safe operating condition.
2. Monitor operational procedures and activities in the EOC to ensure they are being conducted in safe manner considering the existing situation and conditions.
3. Stop or modify all unsafe operations outside the scope of the EOC Action Plan, notifying the EOC Director of actions taken.

Activation Phase:

€ Follow generic Activation Phase Checklist.

Operational Phase:

€ Tour the entire EOC facility and evaluate conditions; advise the EOC Director of any conditions and actions which might result in liability, (unsafe layout or equipment set-up, etc.)

€ Study the EOC facility and document the locations of all fire extinguishers, emergency pull stations, and evacuation routes and exits.

€ Be familiar with particularly hazardous conditions in the facility; take action when necessary.

€ Prepare and present safety briefings for the EOC Director and General Staff at appropriate meetings.

€ If the event which caused activation was an earthquake, provide guidance regarding actions to be taken in preparation for aftershocks.

€ Ensure that the EOC facility is free from any environmental threats - e.g., radiation exposure, air purity, water quality, etc.

€ Keep the EOC Director advised of unsafe conditions; take action when necessary.

€ Coordinate with the Finance/Administration Section in preparing any personnel injury claims or records necessary for proper case evaluation and closure.

Demobilization Phase:

€ Follow generic Demobilization Phase Checklist.

Security Officer

***** Read This Entire Position Checklist Before Taking Action *****

Responsibilities:

€   Provide 24-hour security for the EOC.
€   Control personnel access to the EOC in accordance with policies established by the EOC Director.

Activation Phase:

€   Follow the generic Activation Phase Checklist.

Operational Phase:

€   Determine the current EOC security requirements and arrange for staffing as needed.
€   Determine needs for special access to EOC facilities.
€   Provide executive and V.I.P. security as appropriate and required.
€   Provide recommendations as appropriate to EOC Director.
€   Prepare and present security briefings for the EOC Director and General Staff at appropriate meetings.

Demobilization Phase:

€   Follow the generic Demobilization Phase Checklist.

Operations Section

Operations Section Chief

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Ensure that the Operations Function is carried out including coordination of response for all operational functions assigned to the EOC.
2. Ensure that operational objectives and assignments identified in the EOC **A**ction Plan are carried out effectively.
3. Establish the appropriate level of branch and unit organizations within the Operations Section, continuously monitoring the effectiveness and modifying accordingly.
4. Exercise overall responsibility for the coordination of Branch and Unit activities within the Operations Section.
5. Ensure that the Planning/Intelligence Section is provided with Branch Status Reports and Major Incident Reports (utilizing the Response Information Management System formats if available).
6. Conduct periodic Operations briefings for the EOC Director as required or requested.
7. Overall supervision of the Operations Section.

Activation Phase:

€ Follow the generic Activation Phase Checklist.
€ Ensure that the Operations Section is set up properly and that appropriate personnel, equipment, and supplies are in place, including maps and status boards.
€ Meet with Planning/Intelligence Section Chief; obtain a preliminary situation briefing.
€ Based on the situation, activate appropriate branches within the section. Designate Branch Coordinators as necessary.
    o Fire & Rescue
    o Law Enforcement
    o Health and Welfare
    o Construction & Engineering
€ Determine need for Mutual Aid.
€ Request additional personnel for the section as necessary for 24-hour operation.
€ Obtain a current communications status briefing from the Communications Branch Coordinator in Logistics. Ensure that there is adequate equipment and frequencies available for the section.
€ Determine estimated times of arrival of section staff from the Personnel Branch in Logistics.
€ Confer with the EOC Director to ensure that the Planning/Intelligence and Logistics Sections are staffed at levels necessary to provide adequate information and support for operations.
€ Coordinate with the Liaison Officer regarding the need for Agency Representatives in the Operations Section.
€ Establish radio or cell-phone communications with Incident Commander(s) operating in Town, and coordinate accordingly.
€ Determine activation status of other EOCs in the Operational Area and establish communication links with their Operations Sections if necessary.
€ Based on the situation known or forecasted, determine likely future needs of the Operations Section.

€   Identify key issues currently affecting the Operations Section; meet with Section personnel and determine appropriate section objectives for the first operational period.

€   Review responsibilities of branches in section; develop an Operations Plan detailing strategies for carrying out Operations objectives.

€   Adopt a proactive attitude. Think ahead and anticipate situations and problems before   they occur.

Operational Phase:

€   Ensure that all section personnel are maintaining their individual position logs.

€   Ensure that situation and resources information is provided to the Planning/Intelligence Section on a regular basis or as the situation requires, including Branch Status Reports and Major Incident Reports (utilize Response Information Management System format if available).

€   Ensure that all media contacts are referred to the Public Information Branch.

€   Conduct periodic briefings and work to reach consensus among staff on objectives for forth-coming operational periods.

€   Attend and participate in EOC Director's Action Planning meetings.

€   Provide the Planning/Intelligence Section Chief with the Operations Section's objectives prior to each Action Planning meeting.

€   Work closely with each Branch Coordinator to ensure that the Operations Section objectives, as defined in the current Action Plan, are being addressed.

€   Ensure that the branches coordinate all resource needs through the Logistics Section.

€   Ensure that intelligence information from Branch Coordinators is made available to the Planning/Intelligence Section in a timely manner.

€   Ensure that fiscal and administrative requirements are coordinated through the Finance/Administration Section (notification of emergency expenditures and daily time sheets).

€   Brief the EOC Director on all major incidents.

€   Complete a Major Incident Report for all major incidents; forward a copy to the Planning/Intelligence Section.

€   Brief Branch Coordinators periodically on any updated information you may have received.

€   Share status information with other sections as appropriate.

Demobilization Phase:

€   Follow the generic Demobilization Phase Checklist.

Fire & Rescue Branch Coordinator

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Coordinate fire, disaster medical, hazardous materials, and search and rescue operations in the unincorporated county or contract areas.
2. Assist the EOC Fire & Rescue Branch Coordinator in acquiring mutual aid resources, as necessary.
3. Coordinate the mobilization and transportation of all resources through the Logistics Section.
4. Complete and maintain branch status reports (in RIMS format if available) for major incidents requiring or potentially requiring operational area, state and federal response, and maintains status of unassigned fire & rescue resources in the Town.
5. Implement the objectives of the EOC Action Plan assigned to the Fire & Rescue Branch.
6. Overall supervision of the Fire & Rescue Branch.

Activation Phase:

€ Follow the generic Activation Phase Checklist.
€ Based on the situation, activate the necessary Units within the Fire & Rescue Branch:
  o Fire Operations Unit
  o Search & Rescue Unit
  o Disaster Medical Unit
  o Hazmat Unit
€ If the mutual aid system is activated, coordinate use of Town fire resources with the Operational Area Fire & Rescue Mutual Aid Coordinator.
€ Prepare and submit a preliminary branch status report and major incident reports as appropriate to the Operations Section Chief.
€ Prepare objectives for the Fire & Rescue Branch; provide them to the Operations Section Chief prior to the first Action Planning meeting.

Operational Phase:

€ Ensure that Branch and Unit position logs and other files are maintained.
€ Maintain current status on Fire & Rescue missions being conducted in the Town.
€ Provide the Operations Section Chief and the Planning/Intelligence Section with an overall summary of Fire & Rescue Branch operational periodically or as requested during the operational period.
€ On a regular basis, complete and maintain the Fire & Rescue Branch Status Report on RIMS forms if available.
€ Refer all contacts with the media to the Public Information Branch.
€ Ensure that all fiscal and administrative requirements are coordinated through the Finance/Administration Section (notification of any emergency expenditures and daily time sheets).
€ Prepare objectives for the Fire & Rescue Branch for the subsequent operational period; provide them to the Operations Section Chief prior to the end of the shift and the next Action Planning meeting.
€ Provide your relief with a briefing at shift change; inform him/her of all ongoing activities, branch objectives for the next operational period, and any other pertinent information.

Demobilization Phase:

€   Follow the generic Demobilization Phase Checklist.

Fire Operations Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Assist Incident Commanders in the field by providing coordination for mutual aid requests to and from the Operational Area Fire / Rescue Mutual Aid Coordinator, as appropriate.
2. Respond to requests for fire resources from the field in a timely manner, following established priorities (life safety, protection of the environment, and protection of property).
3. Monitor and track fire resources utilized during the event.
4. Provide general support to field personnel as required.
5. Supervise the Fire Operations Unit.

Activation Phase:

€ Follow generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a position log and other appropriate files.
€ Establish and maintain radio or cell-phone communication with the Department Operations Center, or Fire & Rescue Branch at the Field Level.
€ Obtain regular status reports on the fire situation from the Department Operations Center or Fire & Rescue Branch at the Field Level.
€ Assess the impact of the disaster/event on the Town Fire Department's operational capability.
€ Establish the objectives of the Fire Operations Unit based on the nature and severity of the disaster, and provide them to the Fire & Rescue Branch Coordinator prior to the first Action Planning meeting.
€ Provide fire status updates to the Fire & Rescue Branch Coordinator on a regular basis.
€ Evaluate and process all requests for fire Mutual Aid resources through the Operational Area Fire & Rescue Mutual Aid Coordinator.
€ If not addressed at the Incident Command Post or DOC, ensure that incident facilities are established (staging areas, etc.) to coordinate incoming fire mutual aid resources, as required.
€ In conjunction with Planning/Intelligence, determine if current and forecasted weather conditions will affect fire and rescue operations.
€ Inform the Fire & Rescue Branch Coordinator of all significant events that occur.
€ Coordinate with the Law Enforcement Branch to determine status of evacuations and shelter locations.
€ Assist in establishing camp facilities (or the use of commercial lodging) through the Logistics Section, if not addressed at the ICP or DOC.
€ Reinforce the use of proper procedures for media contacts.

Demobilization Phase:

€ Follow generic Demobilization Phase Checklist.

Town of Apple Valley
Emergency Operations Plan

Town of Apple Valley

Disaster Medical Unit Leader

> ****** Read This Entire Position Checklist Before Taking Action ******

Responsibilities:

1. Ensure that all available disaster medical resources are identified and mobilized as required.
2. Provide assistance to Incident Command Posts and Department Operations Centers in establishing triage teams.
3. Determine the status of medical facilities within the affected area.
4. Coordinate the transportation of injured victims to appropriate medical facilities as required.
5. Supervise the disaster Medical Unit.

Activation Phase:

€ Follow generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain position logs and other necessary files.

€ Work closely with all Operations Section Branch Coordinators to determine the scope of disaster medical assistance required.

€ Determine the status and availability of medical mutual aid resources in the operational area; specifically paramedics and ambulances.

€ Establish radio or telephone communication with area hospitals and other medical facilities to determine their capability to treat disaster victims.

€ Determine status and availability of specialized treatment such as burn centers.

€ Assist the Search and Rescue Unit Leader in providing triage for extricated victims.

€ Coordinate with the Logistics Section to acquire suitable transportation for injured victims as required or requested.

€ Establish and maintain communication with the Operational Area EOC and determine status and availability of medical resources.

€ Coordinate with the Logistics Section to obtain necessary supplies and equipment to support disaster medical operations in the field.

€ Inform the Fire & Rescue Branch Coordinator of all significant events.

€ Reinforce the use of proper procedures for media contacts. This is particularly critical in emergency medical situations where statistical information is requested by the media.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Search & Rescue Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Determine the scope of the search and rescue mission.
2. Assist in mobilizing Search and Rescue Teams at the request of Department Operations Centers or Field Incident Commanders.
3. Provide search and rescue support as required to other emergency response agencies consistent with established priorities and objectives.
4. Ensure that deployed teams are provided with adequate support.
5. Supervise the Search & Rescue Unit.

Activation Phase:

€ Follow generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain position log and other appropriate files.
€ Work closely with all Operations Section Branch Coordinators to determine the scope of search and rescue assistance required.
€ Coordinate with the Fire and Rescue Branch Coordinator to determine missions for search and rescue teams based on established priorities.
€ Mobilize and deploy available search and rescue teams to locations within the jurisdiction, or to other emergency response agencies within the Operational Area, in a manner consistent with established policies and priorities.
€ Establish radio or cell-phone communication with all deployed search and rescue team leaders to determine the scope of support required.
€ Work closely with the Logistics Section to determine the status and availability of search   and rescue resources in the Operational Area; specifically larger jurisdictions who have organized USAR teams.
€ Coordinate with the Law Enforcement Branch to determine availability of search dog units.
€ Coordinate with Construction and Engineering to provide on-site assistance with rescue operations at the request of team leaders.
€ Coordinate with the Disaster Medical Unit to provide on-site assistance to extricated victims requiring medical treatment.
€ Coordinate with the coroner's unit to provide on-site assistance in managing fatalities at   search locations.
€ Ensure that each team leader develops a safety plan for each assigned mission.
€ Monitor and track the progress and status of each search and rescue team.
€ Ensure that team leaders report all significant events.
€ Assist in establishing camp facilities (or commercial lodging) for Search and Rescue Teams through the Logistics Section, if not addressed at the ICP or DOC.
€ Inform the Fire & Rescue Branch Coordinator of all significant events.
€ Reinforce the use of proper procedures for media contacts. This is particularly critical in instances where the media is seeking statistical information or personal identities of injured victims or fatalities.

Demobilization Phase:

€   Follow the generic Demobilization Phase Checklist.

Hazmat Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Determine the scope of hazardous materials incidents throughout the jurisdiction.
2. Assist in mobilizing hazardous materials teams at the request of Department Operations Centers or Field Incident Commanders.
3. Request assistance from and / or provide hazardous materials support as required to Operational Area Emergency Response Agencies consistent with established priorities and objectives.
4. Ensure that deployed teams are provided with adequate support.
5. Supervise the Hazmat Unit.

Activation Phase:

€ Follow generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a position log and other appropriate files.
€ Work closely with all Operations Section Branch Coordinators to determine the scope of HazMat incident response required.
€ Coordinate with the Fire and Rescue Branch Coordinator to determine missions for HazMat teams based on established priorities.
€ Mobilize and deploy available HazMat teams to the Operational Area or to other emergency response agencies within the Operational Area, in a manner consistent with the Hazmat Mutual Aid System and established priorities.
€ Establish radio or cell-phone communication with all deployed HazMat teams to determine the scope of support required.
€ Work closely with the Logistics Section to determine the status and availability of Hazmat Response Teams in the Operational Area.
€ Coordinate with construction and engineering to provide on-site assistance with HazMat operations at the request of team leaders.
€ Coordinate with the Disaster Medical Unit to determine medical facilities where victims of HazMat incidents can be transported following decontamination.
€ Coordinate with the Coroner's Unit to provide on-site assistance in managing fatalities at HazMat scenes.
€ Monitor and track the progress and status of each HazMat team.
€ Ensure that Hazmat Team Leaders report all significant events.
€ Assist in establishing camp facilities (or commercial lodging) for HazMat teams through the Logistics Section, if not addressed at the ICP or DOC.
€ Inform the Fire & Rescue Branch Coordinator of all significant events.
€ Reinforce the use of proper procedures for media contacts. This is particularly critical in instances where the media is seeking technical information on the hazardous material, statistical information, or personal identities of injured victims or fatalities.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Law Enforcement Branch Coordinator

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Coordinate movement and evacuation operations during a disaster.
2. Alert and notify the public of the impending or existing emergency within the Town.
3. Coordinate law enforcement and traffic control operations during the disaster.
4. Coordinate site security at incidents.
5. Coordinate Law Enforcement Mutual Aid requests from emergency response agencies through the Law Enforcement Mutual Aid Coordinator at the Operational Area EOC.
6. Supervise the Law Enforcement branch.

Activation Phase:

€ Follow the generic Activation Phase Checklist.
€ Based on the situation, activate the necessary Units within the Law Enforcement Branch:
  o Law Enforcement Operations Unit
  o Coroner Unit
€ Contact and assist the Operational Area EOC Law Enforcement and Coroner's Mutual Aid Coordinator with the coordination of mutual aid resources requested or provided by the .
€ Provide an initial situation report to the Operations Section Chief.
€ Based on the initial EOC strategic objectives. Prepare objectives for the Law Enforcement Branch and provide them to the Operations Section Chief prior to the first Action Planning meeting.

Operational Phase:

€ Ensure that Branch and Unit position logs and other appropriate files are maintained.
€ Maintain current status on Law Enforcement missions being conducted in the Town.
€ Provide the Operations Section Chief and the Planning/Intelligence Section with an overall summary of Law Enforcement Branch operational periodically or as requested during the operational period.
€ On a regular basis, complete and maintain the Law Enforcement Branch Status Report. (Use RIMS Forms if available).
€ Refer all contacts with the media to the Public Information Branch.
€ Determine need for Law Enforcement Mutual Aid.
€ Determine need for Coroner's Mutual Aid.
€ Ensure that all fiscal and administrative requirements are coordinated through the Finance/Administration Section (notification of any emergency expenditures and daily time sheets).
€ Prepare objectives for the Law Enforcement Branch for the subsequent Operations period; provide them to the Operations Section Chief prior to the end of the shift and the next Action Planning Meeting.
€ Provide your relief with a briefing at shift change, informing him/her of all ongoing activities, branch objectives for the next operational period, and any other pertinent information.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Law Enforcement Operations Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Coordinate requests for Law Enforcement Mutual Aid Resources through the Operational Area Law Enforcement Mutual Aid Coordinator.
2. Establish and maintain communication with Law Enforcement Branch Directors in the field or at the Department Operations Center (DOC) if activated.
3. Respond to requests for Law Enforcement resources from the field in a timely manner, following established priorities (life safety, protection of the environment, and protection of property).
4. Monitor and track law enforcement resources utilized during the event.
5. Provide general support to field personnel as required.
6. Supervise the law enforcement operations unit.

Activation Phase:

€   Follow generic Activation Phase Checklist.

Operational Phase:

€   Establish and maintain a position log and other appropriate files.
€   Establish and maintain radio or cell-phone communication with the Department Operations Center, or Law Enforcement Branch Directors at the field level.
€   Obtain regular status reports on the law enforcement situation from the Department Operations Center or Law Enforcement Branch at the field level.
€   Assess the impact of the disaster/event on the Police Department's operational capability.
€   Establish the objectives of the Law Enforcement Operations Unit based on the nature and severity of the disaster, and provide them to the Law Enforcement Branch Coordinator prior to the first Action Planning meeting.
€   If the Department Operations Center is not activated, ensure that the assignment of law enforcement resources are closely monitored and coordinated, and that on-scene time is logged at the field level.
€   If not addressed at the ICP or DOC, ensure that incident facilities are established (staging areas etc.) to coordinate incoming law enforcement mutual aid resources, as required.
€   In conjunction with Planning/Intelligence, determine if current and forecasted weather conditions will affect law enforcement operations.
€   Coordinate major evacuation activity with the Fire Operations Branch, as required.
€   Coordinate with the Care and Shelter Unit to establish suitable shelter locations and appropriate shelter facilities for evacuated population.
€   Assist in establishing camp facilities (or commercial lodging) for law enforcement personnel, through the Logistics Section, if not addressed at the ICP or DOC.
€   Reinforce the use of proper procedures for media contacts.
€   Provide law enforcement status updates to the Law Enforcement Branch Coordinator on a regular basis.
€   Evaluate and process all requests for law enforcement resources through the Operational Area Law Enforcement Mutual Aid Coordinator.

Demobilization Phase:

€   Follow the generic Demobilization Phase Checklist.

Coroner Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. At the direction of the Sheriff / Coroner, establish and oversee an interim system for managing fatalities resulting from the disaster / event.
2. At the direction of the Sheriff / Coroner, establish and oversee the operation of temporary morgue facilities and maintain detailed records of information relative to each fatality.
3. Supervision of the Coroner Unit.

Activation Phase:

€ Follow generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a position log and other appropriate files.
€ Ensure that locations where fatalities are discovered are secured.
€ Ensure that fatality collection points are established and secured as necessary.
€ Ensure that temporary morgue facilities are established in accordance with guidelines established by the Sheriff / Coroner.
€ Request Coroner's Mutual Aid through the Sheriff / Coroner at the Operational Area EOC as required.
€ Procure, through logistics, all necessary fatalities management equipment and supplies, such as temporary cold storage facilities or vehicles, body bags, etc..
€ Coordinate with the Search & Rescue Unit To determine location and number of extricated fatalities.
€ Ensure that human remains are transported from fatality collection points to temporary morgue(s), if so advised by the Sheriff / Coroner.
€ Assist the Sheriff / Coroner with identification of remains and notification of next of kin   as required.
€ In conjunction with local mortuaries and cemeteries, assist with the reburial of any coffins that were surfaced and / or disturbed as a result of the disaster.
€ Keep the Law Enforcement Branch Coordinator informed of Coroners Unit activities on a regular basis.
€ Inform the Law Enforcement Branch Coordinator and the Public Information Branch of the number of confirmed fatalities resulting from the disaster or event. **(NOTE: This information must be verified with the Sheriff / Coroner prior to release).**
€ Ensure that all media contacts are referred to the Public Information Branch.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Construction / Engineering Branch Coordinator

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Survey all utility systems, and restore systems that have been disrupted, including coordinating with utility service providers in the restoration of disrupted services.
2. Survey all public and private facilities, assessing the damage to such facilities, and coordinating the repair of damage to public facilities.
3. Survey all other infrastructure systems, such as streets and roads within the Town.
4. Assist other sections, branches, and units as needed.
5. Supervise the Construction/Engineering Branch.

Activation Phase:

€ Follow the generic Activation Phase Checklist.
€ Based on the situation, activate the necessary units within the Construction/Engineering Branch:
  o Utilities Unit
  o Damage/Safety Assessment Unit
  o Public Works Unit
€ Contact and assist the Operational Area Public Works Mutual Aid Coordinator with the coordination of mutual aid resources as necessary.
€ Provide an initial situation report to the Operations Section Chief.
€ Based on the initial EOC strategic objectives, prepare objectives for the Construction/Engineering Branch and provide them to the Operations Section Chief prior to the first Action Planning meeting.

Operational Phase:

€ Ensure that branch and unit position logs and other necessary files are maintained.
€ Maintain current status on all construction/engineering activities.
€ Ensure that damage and safety assessments are being carried out for both public and private facilities.
€ Request mutual aid as required through the Operational Area Publics Works Mutual Aid Coordinator.
€ Determine and document the status of transportation routes into and within affected areas.
€ Coordinate debris removal services as required.
€ Provide the Operations Section Chief and the Planning/Intelligence Section with an overall summary of Construction/Engineering Branch activities periodically during the operational period or as requested.
€ Ensure that <u>all</u> Utilities and Construction/Engineering Status Reports, as well as the Initial Damage Estimation are completed and maintained. (Utilize RIMS forms if available).
€ Refer all contacts with the media to the Public Information Branch.
€ Ensure that all fiscal and administrative requirements are coordinated through the Finance/Administration Section (notification of any emergency expenditures and daily time sheets).
€ Prepare objectives for the Construction/Engineering Branch for the subsequent operations period; provide them to the Operations Section Chief prior to the end of the shift and the next Action Planning meeting.
€ Provide your relief with a briefing at shift change, informing him/her of all ongoing activities, branch objectives for the next operational period, and any other pertinent information.

Demobilization Phase:

€   Follow the generic Demobilization Phase Checklist.

Utilities Unit Leader

> ****** Read This Entire Position Checklist Before Taking Action ******

Responsibilities:

1. Assess the status of utilities; provide Utility Status Reports as required.
2. Coordinate restoration of damaged utilities with utility representatives in the Town EOC if present, or directly with Utility companies.
3. Supervise the Utilities Unit.

Activation Phase:

€ Follow generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a position log and other necessary files.
€ Establish and maintain communications with the utility providers for the Town.
€ Determine the extent of damage to utility systems in the Town.
€ Coordinate with the Liaison Officer to ensure that agency representatives from affected utilities are available to respond to the Town EOC.
€ Ensure that all information on system outages is consolidated and provided to the Situation Analysis Unit in the Planning/Intelligence Section.
€ Ensure that support to utility providers is available as necessary to facilitate restoration of damaged systems.
€ Keep the Public Health Branch Coordinator informed of any damage to sewer and sanitation systems, as well as possible water contamination problems.
€ Keep the Construction/Engineering Branch Coordinator informed of the restoration status.
€ Complete and maintain the Utilities Status Report (Utilize RIMS forms if available).
€ Refer all contacts with the media to the Public Information Branch.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Damage/Safety Assessment Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Collect initial damage/safety assessment information from other branches/units within the Operations Section.
2. If the disaster is winter storm, flood, or earthquake related, ensure that dam inspection teams have been dispatched.
3. Provide detailed damage/safety assessment information to the Planning/Intelligence Section, with associated loss damage estimates.
4. Maintain detailed records on damaged areas and structures.
5. Initiate requests for Engineers from the Operational Area, to inspect structures and/or facilities.
6. Supervise the Damage/Safety Assessment Unit.

Activation Phase:

€ Follow generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a position log and other necessary files.
€ Obtain initial damage/safety assessment information from Fire & Rescue Branch, Law Enforcement Branch, Utilities Unit and other branches/units as necessary.
€ Coordinate with the American Red Cross, utility service providers, and other sources for additional damage/safety assessment information.
€ Prepare detailed damage/safety assessment information, including estimate of value of the losses, and provide to the Planning/Intelligence Section.
€ Clearly label each structure and/or facility inspected in accordance with ATC-20 standards and guidelines.
€ Maintain a list of structures and facilities requiring immediate inspection or engineering assessment.
€ Initiate all requests for engineers and building inspectors through the Operational Area EOC.
€ Keep the Construction/Engineering Branch Coordinator informed of the inspection and engineering assessment status.
€ Refer all contacts with the media to the Public Information Branch.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Public Works Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

- € Assist other Operation Section Branches by providing construction equipment and operators as necessary.
- € Provide heavy equipment assistance to the Damage/Safety Assessment Unit as required.
- € Provide emergency construction and repair to damaged roadways. Assist with the repair of utility systems as required.
- € Providing flood-fighting assistance, such as sandbagging, rerouting waterways away from populated areas, and river, creek, or stream bed debris clearance.
- € Supervise the Public Works Unit.

Activation Phase:

- € Follow generic Activation Phase Checklist.

Operational Phase:

- € Establish and maintain a position log and other necessary files.
- € Ensure that appropriate staff is available to assist other emergency responders with the operation of heavy equipment, in coordination with the Logistics Section.
- € Ensure that engineering staff are available to assist the Damage/Safety Assessment Unit in inspecting damaged structures and facilities.
- € As requested, direct staff to provide flood fighting assistance, clear debris from roadways and water ways, assists with utility restoration, and build temporary emergency structures as required.
- € Work closely with the Logistics Section to provide support and materiel as required.
- € Keep the Construction/Engineering Branch Coordinator informed of unit status.
- € Refer all contacts with the media to the Public Information Branch.

Demobilization Phase:

- € Follow the generic Demobilization Phase Checklist.

Health and Welfare Branch Coordinator

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Safeguard the public health of citizens by ensuring there is an ample supply of potable water, a functioning sanitation system, and vector controls are established, as required.
2. In coordination with volunteer and private agencies, provide clothing, shelter, and other mass care services as required, to disaster victims.
3. Supervise the Health and Welfare Branch.

Activation Phase:

€ Follow the generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a Health and Welfare Unit position logs and other necessary files.
€ Ensure that all potable water supplies remain safe, and free from contaminates.
€ Ensure that sanitation systems are operating effectively and not contaminating water supplies.
€ Ensure that a vector control plan is established and implemented for the affected area(s).
€ Provide the Operations Section Chief and the Planning/Intelligence Section with an overall summary of Health and Welfare Branch Operational periodically during the operations period or as requested.
€ Complete and maintain the Care & Shelter Status Reports (utilizing RIMS forms if available).
€ Ensure that the Public Health Branch is available to assist the Coroner Unit in mitigating managing mass fatality situations.
€ Ensure coordination of all mass care activities occurs with the Red Cross and other volunteer agencies as required.
€ Prepare objectives for the Health and Welfare Branch for the subsequent operations period; provide them to the Operations Section Chief prior to the end of the shift and the next Action Planning meeting.
€ Refer all contacts with the media to the Public Information Branch.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Care & Shelter Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Coordinate directly with the American Red Cross and other volunteer agencies to provide food, potable water, clothing, shelter and other basic needs as required to disaster victims within the Town.
2. Assist the American Red Cross with inquiries and registration services to reunite families or respond to inquiries from relatives or friends.
3. Assist the American Red Cross with the transition from mass care to separate family/individual housing.
4. Supervise the Care & Shelter Unit.

Activation Phase:

€ Follow generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain your position log and other necessary files.
€ Coordinate with the Liaison Officer to request an Agency Representative from the American Red Cross. Work with the Agency Representative to coordinate all shelter and congregate care activity.
€ Establish communications with other volunteer agencies to provide clothing and other basic life sustaining needs.
€ Ensure that each activated shelter meets the requirements as described under the Americans With Disabilities Act.
€ Assist the American Red Cross in staffing and managing the shelters to the extent possible.
€ In coordination with the American Red Cross, activate an inquiry registry service to reunite families and respond to inquiries from relatives or friends.
€ Assist the American Red Cross with the transition from operating shelters for displaced persons to separate family/individual housing.
€ Complete and maintain the Care and Shelter Status Report Form (utilize RIMS forms if available).
€ Refer all contacts with the media to the Public Information Branch.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Public Health Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Assess the status and availability of potable water within the jurisdiction
2. Assess the status of the sanitation system within the jurisdiction.
3. Inspect and assess emergency supplies such as foodstuffs and other consumables for purity and utility.
4. Assess the need for a vector control plan for the affected disaster area(s) within the jurisdiction.
5. Supervise the Public Health Unit.

Activation Phase:

€ Follow generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a position log and other necessary files.
€ Coordinate with the Utilities Unit Leader to determine current status of water and sanitation systems.
€ If systems are damaged, request assistance from County Public Health to assess drinking water quality and potential health risks from ruptured sewer / sanitation systems.
€ Develop a distribution system for drinking water throughout the Town as required.
€ Contact and coordinate with the Logistics Section, to obtain chemical (portable) toilets and other temporary facilities for the disposal of human waste and other infected waste.
€ Inspect emergency supplies to be used in the EOC or by field emergency responders, such as foodstuffs, drugs, and other consumables for purity and utility.
€ Determine the need for vector control, and coordinate with County Public Health for Vector control services as required.
€ Inform the Health & Welfare Branch Coordinator on all activities of the Public Health Unit periodically during the operational period, or as requested.
€ Refer all contacts with the media to the Public Information Branch.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Planning/Intelligence Section

Planning/Intelligence Section Chief

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Ensure that the following responsibilities of the Planning/Intelligence Section are addressed as required:
   a. Collecting, analyzing, and displaying situation information,
   b. Preparing periodic Situation Reports,
   c. Preparing and distributing the EOC Action Plan and facilitating the Action Planning meeting,
   d. Conducting Advance Planning activities and report,
   e. Providing technical support services to the various EOC sections and branches, and documenting and maintaining files on all EOC activities.
2. Establish the appropriate level of organization for the Planning/Intelligence Section.
3. Exercise overall responsibility for the coordination of branch/unit activities within the section.
4. Keep the EOC Director informed of significant issues affecting the Planning/Intelligence Section.
5. In coordination with the other Section Chiefs, ensure that Branch Status Reports are completed and utilized as a basis for Situation Status Reports, and the EOC Action Plan.
6. Supervise the Planning/Intelligence Section.

Activation Phase:

€ Follow the generic Activation Phase Checklist.
€ Ensure that the Planning/Intelligence Section is set up properly and that appropriate personnel, equipment, and supplies are in place, including maps and status boards.
€ Based on the situation, activate branches within section as needed and designate Branch or Unit Leaders for each element:
   o Situation Analysis Unit
   o Advance Planning Unit
   o Documentation Unit
   o Technical Services Unit
€ Request additional personnel for the section as necessary to maintain a 24-hour operation.
€ Establish contact with the Operational Area EOC when activated, and coordinate Situation Status Reports with their Planning/Intelligence Section.
€ Meet with Operations Section Chief; obtain and review any major incident reports.
€ Review responsibilities of branches in section; develop plans for carrying out all responsibilities.
€ Make a list of key issues to be addressed by Planning/Intelligence; in consultation with section staff, identify objectives to be accomplished during the initial Operational Period.
€ Keep the EOC Director informed of significant events.
€ Adopt a proactive attitude, thinking ahead and anticipating situations and problems before they occur.

Operational Phase:

€ Ensure that Planning/Intelligence position logs and other necessary files are maintained.
€ Ensure that The Situation Analysis Unit is maintaining current information for the situation status report.

€   Ensure that major incidents reports and branch status reports are completed by the Operations Section and are accessible by Planning Intelligence (Utilize RIMS forms if available).

€   Ensure that a situation status report is produced and distributed to EOC Sections and Operational Area EOC at least once, prior to the end of the operational period.

€   Ensure that all status boards and other displays are kept current and that posted information is neat and legible.

€   Ensure that the Public Information Branch has immediate and unlimited access to all status reports and displays.

€   Conduct periodic briefings with section staff and work to reach consensus among staff on section objectives for forthcoming operational periods.

€   Facilitate the EOC Director's Action Planning meetings approximately two hours before the end of each operational period.

€   Ensure that objectives for each section are completed, collected and posted in preparation for the next Action Planning meeting.

€   Ensure that the EOC Action Plan is completed and distributed prior to the start of the next operational period.

€   Work closely with each branch/unit within the Planning/Intelligence Section to ensure the section objectives, as defined in the current EOC Action Plan are being addressed.

€   Ensure that the advance planning unit develops and distributes a report which highlights forecasted events or conditions likely to occur beyond the forthcoming operational period; particularly those situations which may influence the overall strategic objectives of the EOC.

€   Ensure that the Documentation Unit maintains files on all EOC activities and provides reproduction and archiving services for the EOC, as required.

€   Provide technical services, such as energy advisors and other technical specialists to all EOC sections as required.

€   Ensure that fiscal and administrative requirements are coordinated through the Finance/Administration Section.

Demobilization Phase:

€   Follow the generic Demobilization Phase Checklist.

Situation Analysis Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Oversee the collection, organization, and analysis of disaster situation information.
2. Ensure that information collected from all sources is validated prior to posting on status boards.
3. Ensure that situation status reports are developed utilizing RIMS forms, for dissemination to EOC staff and also to the Operational Area EOC.
4. Ensure that an EOC Action Plan is developed (utilizing RIMs form) for each operational period, based on objectives developed by each EOC Section.
5. Ensure that all maps, status boards and other displays contain current and accurate information.
6. Supervise Situation Analysis Unit.

Activation Phase:

€   Follow the generic Activation Phase Checklist.
€   Ensure there is adequate staff available to collect and analyze incoming information, maintain the Situation Status Report on RIMS, and facilitate the Action Planning process.
€   Prepare Situation Analysis Unit objectives for the initial Action Planning meeting.

Operational Phase:

€   Ensure position logs and other necessary files are maintained.
€   Oversee the collection and analysis of all event/or disaster related information.
€   Oversee the preparation and distribution of the Situation Status Report (utilizing RIMS forms if available). Coordinate with the Documentation Unit for manual distribution and reproduction as required.
€   Ensure that each EOC Section provides the Situation Analysis Unit with Branch Status Reports, (utilizing RIMS forms), on a regular basis.
€   Meet with the Public Information Branch Coordinator to determine the best method for ensuring access to current information.
€   Prepare a situation summary for the EOC Action Planning meeting.
€   Ensure each section provides their objectives at least 30 minutes prior to each Action Planning meeting.
€   Convene and facilitate the Action Planning meeting following the meeting process guidelines.
€   In preparation for the Action Planning meeting, ensure that all EOC objectives are posted on chart paper, and that the meeting room is set up with appropriate equipment and materials (easels, markers, sit stat reports, etc
€   Following the meeting, ensure that the Documentation Unit publishes and distributes the Action Plan prior to the beginning of the next operational period.
€   Ensure that adequate staff are assigned to maintain all maps, status boards and other displays.

Demobilization Phase:

€   Follow the generic Demobilization Phase Checklist.

Documentation Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Collect, organize and file all completed event or disaster related forms, to include: all EOC position logs, situation status reports, EOC Action Plans and any other related information, just prior to the end of each operational period.
2. Provide document reproduction services to EOC staff.
3. Distribute the EOC situation status reports, EOC Action Plan, and other documents, as required.
4. Maintain a permanent electronic archive of all situation reports and Action Plans associated with the event or disaster.
5. Assist the EOC Coordinator in the preparation and distribution of the After-action Report.
6. Supervise the Documentation Unit.

Activation Phase:

€   Follow the generic Activation Phase Checklist.

Operational Phase:

€   Maintain a position log.
€   Meet with the Planning/Intelligence Section Chief to determine what EOC materials should be maintained as official records.
€   Meet with the Recovery Unit Leader to determine what EOC materials and documents are necessary to provide accurate records and documentation for recovery purposes.
€   Initiate and maintain a roster of all activated EOC positions to ensure that position logs are accounted for and submitted to the Documentation Unit at the end of each shift.
€   Reproduce and distribute the Situation Status Reports and Action Plans. Ensure distribution is made to the Operational Area EOC.
€   Keep extra copies of reports and plans available for special distribution as required.
€   Set up and maintain document reproduction services for the EOC.

Demobilization Phase:

€   Follow the generic Demobilization Phase Checklist.

Advance Planning Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Development of an Advance Plan consisting of potential response and recovery related   issues likely to occur beyond the next operational period, generally within 36 to 72 hours.
2. Review all available status reports, Action Plans, and other significant documents. Determine potential future impacts of the event or disaster; particularly issues which might modify the overall strategic EOC objectives.
3. Provide periodic briefings for the EOC Director and General Staff addressing Advance Planning issues.
4. Supervise the Advance Planning Unit.

Activation Phase:

€   Follow the generic Activation Phase Checklist.

Operational Phase:

€   Maintain a position log.
€   Monitor the current situation report to include recent updates.
€   Meet individually with the general staff and determine best estimates of the future direction & outcomes of the event or disaster.
€   Develop an Advance Plan identifying future policy related issues, social and economic impacts, significant response or recovery resource needs, and any other key issues likely to affect EOC operations within a 36 to 72 hour time frame.
€   Submit the Advance Plan to the Planning Intelligence Chief for review and approval prior to conducting briefings for the General Staff and EOC Director.
€   Review Action Planning objectives submitted by each section for the forthcoming operational period. In conjunction with the general staff, recommend a transition strategy to the EOC Director when EOC activity shifts predominately to recovery operations.

Demobilization Phase:

€   Follow the generic Demobilization Phase Checklist.

Technical Services Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Provide technical observations and recommendations to the Town EOC in specialized areas, as required.
2. Ensure that qualified specialists are available in the areas required by the particular event or disaster.
3. Supervise the Technical Services Unit.

Activation Phase:

€ Follow the generic Activation Phase Checklist.

Operational Phase:

€ Maintain a position log and other necessary files.
€ Coordinate with the Logistics Section to ensure that technical staff are located and mobilized.
€ Assign technical staff to assist other EOC Sections in coordinating specialized areas of response or recovery.
€ Assign technical staff to assist the Logistics Section with interpreting specialized resource capability and requests.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Demobilization Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Develop a Demobilization Plan for the EOC based on a review of all pertinent planning documents, and status reports.
2. Supervise personnel assigned to the Demobilization Unit.

Activation Phase:

€ Follow the generic Activation Phase Checklist.

Operational Phase:

€ Monitor the current situation report to include recent updates.
€ Meet individually with the general staff and administer the section worksheet for the Demobilization Plan.
€ Meet with the EOC Director and administer the EOC Director's worksheet for the Demobilization Plan.
€ Utilizing the worksheets, develop a draft Demobilization Plan and circulate to the EOC Director and General Staff for review.
€ Finalize the Demobilization Plan for approval by the EOC Director.
€ Demobilization planning must occur at least once during the operational period for as long as EOC Sections are formally staffed.
€ Advise all Section Chiefs to ensure that demobilized staff complete all reports, time sheets, and exit surveys in coordination with the personnel unit prior to leaving the EOC.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Logistics Section

Logistics Section Chief

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Ensure the Logistics function is carried out in support of the EOC. This function includes providing communication services, resource tracking; acquiring equipment, supplies, personnel, facilities, and transportation services; as well as arranging for food, lodging, and other support services as required.
2. Establish the appropriate level of branch and/or unit staffing within the Logistics Section, continuously monitoring the effectiveness of the organization and modifying as required.
3. Ensure section objectives as stated in the EOC Action Plan are accomplished within the operational period or within the estimated time frame.
4. Coordinate closely with the Operations Section Chief to establish priorities for resource allocation to activated Incident Commands within the Town.
5. Keep the EOC Director informed of all significant issues relating to the Logistics Section.
6. Supervise the Logistics Section.

Activation Phase:

- € Follow the generic Activation Phase Checklist.
- € Ensure the Logistics Section is set up properly and that appropriate personnel, equipment, and supplies are in place, including maps, status boards, vendor references, and other resource directories.
- € Based on the situation, activate branches/units within section as needed and designate   Branch and Unit Leaders for each element:
    - o Communications Branch
    - o Personnel Unit
    - o Transportation Unit
    - o Facilities Unit
    - o Supply/Procurement Unit
    - o Resource Status Unit
- € Mobilize sufficient section staffing for 24 hour operations.
- € Establish communications with the Logistics Section at the Operational Area EOC if activated.
- € Advise Branches and Units within the section to coordinate with appropriate branches in the Operations Section to prioritize and validate resource requests from Incident Command Posts in the field. This should be done prior to acting on the request.
- € Meet with the EOC Director and General Staff and identify immediate resource needs.
- € Meet with the Finance/Administration Section Chief and determine level of purchasing authority for the Logistics Section.
- € Assist branch and Unit Leaders in developing objectives for the section as well as plans to accomplish their objectives within the first operational period, or in accordance with the Action Plan.
- € Provide periodic Section Status Reports to the EOC Director.
- € Adopt a proactive attitude, thinking ahead and anticipating situations and problems before they occur.

Operational Phase:

- € Ensure that Logistic Section position logs and other necessary files are maintained.
- € Meet regularly with section staff and work to reach consensus on section objectives for forthcoming operational periods.
- € Provide the Planning/Intelligence Section Chief with the Logistics Section objectives at least 30 minutes prior to each Action Planning meeting.
- € Attend and participate in EOC Action Planning meetings.
- € Ensure that the Supply/Procurement Unit coordinates closely with the Purchasing Unit in the Finance/Administration Section, and that all required documents and procedures are completed and followed.
- € Ensure that transportation requirements, in support of response operations, are met.
- € Ensure that all requests for facilities and facility support are addressed.
- € Ensure that all Town resources are tracked and accounted for, as well as resources ordered through Mutual Aid.
- € Provide section staff with information updates as required.

Demobilization Phase:

- € Follow the generic Demobilization Phase Checklist.

Communications Branch Coordinator

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Ensure radio, telephone, and computer resources and services are provided to EOC staff as required.
2. Oversee the installation of communications resources within the Town EOC. Ensure that a communications link is established with the Operational Area EOC.
3. Determine specific computer requirements for all EOC positions.
4. Implement RIMS if available, for internal information management to include message and e-mail systems.
5. Ensure that the EOC Communications Center is established to include sufficient frequencies to facilitate operations, and that adequate communications operators are available for 24-hour coverage.
6. Develop and distribute a Communications Plan which identifies all systems in use and lists specific frequencies allotted for the event or disaster.
7. Supervise the communications branch.

Activation Phase:

€ Follow the generic Activation Phase Checklist.
€ Based on the situation, activate the necessary units within the Communications Branch:
  o Communications Unit
  o Information Systems Unit
€ Prepare objectives for the Communications Branch; provide them to the Logistics Section Chief prior to the initial Action Planning meeting.

Operational Phase:

€ Ensure that communication branch position logs and other necessary files are maintained.
€ Keep all sections informed of the status of communications systems, particularly those that are being restored.
€ Coordinate with all EOC sections/branches/units regarding the use of all communication systems.
€ Ensure that the EOC Communications Center is activated to receive and direct all event or disaster related communications to appropriate destinations within the EOC.
€ Ensure that adequate communications operators are mobilized to accommodate each discipline on a 24-hour basis or as required.
€ Ensure that RIMS Communications links, if available, are established with the Operational Area EOC.
€ Ensure that communications links are established with activated EOC within the Operational Area, as appropriate.
€ Continually monitor the operational effectiveness of EOC communications systems. Provide additional equipment as required.
€ Ensure that technical personnel are available for communications equipment maintenance and repair.
€ Mobilize and coordinate amateur radio resources to augment primary communications systems as required.
€ Keep the Logistics Section Chief informed of the status of communications systems.
€ Prepare objectives for the Communications Branch; provide them to the Logistics Section Chief prior to the next Action Planning meeting.
€ Refer all contacts with the media to the Public Information Branch.

Demobilization Phase:

€   Follow the generic Demobilization Phase Checklist.

Communications Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Install, activate, and maintain telephone and radio systems for the EOC.
2. Assist EOC positions in determining appropriate numbers of telephones and other communications equipment required to facilitate operations.
3. Acquire radio frequencies as necessary to facilitate operations.
4. Assign Amateur Radio Operators as needed to augment primary communications networks.
5. Supervise the EOC Communications Center and the Communications Unit.

Activation Phase:

€   Follow generic Activation Phase Checklist.

Operational Phase:

€   Establish and maintain a position log and other necessary files.
€   Continually monitor and test the activated radio and telephone systems. Keep the Communications Branch Coordinator informed of system failures and restoration activities.
€   Develop instructional guidance for use of radios and telephones and conduct training sessions for EOC staff as necessary.
€   Meet periodically with the Operations Section Branches to ensure that their radio frequencies are adequate. Make modifications as necessary to maintain their operational capability.
€   Coordinate with Pacific Bell Telephone Company in the Town to obtain portable telephone banks, as necessary.
€   Refer all contacts with the media to the Public Information Branch.

Demobilization Phase:

€   Follow the generic Demobilization Phase Checklist.

Information Systems Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Install, activate, and maintain information systems for the EOC.
2. Assist EOC positions in determining appropriate types and numbers of computers and computer applications required to facilitate operations.
3. Install RIMS, if available, on all computers for internal information management to include message and e-mail systems.
4. Supervise the Information Systems Unit.

Activation Phase:

€ Follow generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a position log and other necessary files.
€ Continually monitor and test RIMS if available, and ensure automated information links with the Operational Area EOC are maintained.
€ Keep the Communications Branch Coordinator informed of system failures and restoration activities.
€ Develop instructional guidance for use of computers and computer programs such as RIMS. Be prepared to conduct training sessions for EOC staff as necessary.
€ Request additional computer equipment as required through the Communications Branch Coordinator.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Transportation Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. In coordination with the Construction/Engineering Branch Coordinator, and the Situation Analysis Unit, develop a transportation plan to support EOC operations.
2. Arrange for the acquisition or use of required transportation resources.
3. Supervise the Transportation Unit.

Activation Phase:

€ Follow the generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a position log and other necessary files.
€ Routinely coordinate with the Situation Analysis Unit to determine the status of transportation routes in and around the Town.
€ Routinely coordinate with the Construction/Engineering Branch Coordinator to determine progress of route recovery operations.
€ Develop a Transportation Plan which identifies routes of ingress and egress; thus facilitating the movement of response personnel, the affected population, and shipment of resources and materiel.
€ Establish contact with local transportation agencies and schools to establish availability of equipment and transportation resources for use in evacuations and other operations as needed.
€ Keep the Logistics Section Chief informed of significant issues affecting the Transportation Unit.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Personnel Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Provide personnel resources as requested in support of the EOC and Field Operations.
2. Identify, recruit and register volunteers as required.
3. Develop an EOC organization chart.
4. Supervise the Personnel Unit.

Activation Phase:

€ Follow the generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain personal log and other necessary files.

€ In conjunction with the Documentation Unit, develop a large poster size EOC organization chart depicting each activated position. Upon check in, indicate the name of the person occupying each position on the chart. The chart should be posted in a conspicuous place, accessible to all EOC personnel.

€ Coordinate with the Liaison Officer and Safety Officer to ensure that all EOC staff, to include volunteers, receive a current situation and safety briefing upon check-in.

€ Establish communications with volunteer agencies and other organizations that can provide personnel resources.

€ Coordinate with the Operational Area EOC to activate the Emergency Management Mutual Aid System (EMMA), if required.

€ Process all incoming requests for personnel support. Identify the number of personnel, special qualifications or training, where they are needed and the person or unit they should report to upon arrival. Determine the estimated time of arrival of responding personnel, and advise the requesting parties accordingly.

€ Maintain a status board or other reference to keep track of incoming personnel resources.

€ Coordinate with the Liaison Officer and Security Officer to ensure access, identification, and proper direction for responding personnel upon arrival at the EOC.

€ Assist the Fire Rescue Branch and Law Enforcement Branch with ordering of mutual aid resources as required.

€ To minimize redundancy, coordinate all requests for personnel resources from the field level through the EOC Operations Section prior to acting on the request.

€ In coordination with the Safety Officer, determine the need for crisis counseling for emergency workers; acquire mental health specialists as needed.

€ Arrange for child care services for EOC personnel as required.

€ Establish registration locations with sufficient staff to register volunteers, and issue them disaster service worker identification cards.

€ Keep the Logistics Section Chief informed of significant issues affecting the Personnel Unit.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Supply/Procurement Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Oversee the procurement and allocation of supplies and materiel not normally provided through mutual aid channels.
2. Coordinate procurement actions with the Finance /Administration Section.
3. Coordinate delivery of supplies and materiel as required.
4. Supervise the Supply/Procurement Unit.

Activation Phase:

€ Follow the generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a position log and other necessary files.
€ Determine if requested types and quantities of supplies and materiel are available in Town inventory.
€ Determine procurement spending limits with the Purchasing Unit in Finance/ Administration. Obtain a list of pre-designated emergency purchase orders as required.
€ Whenever possible, meet personally with the requesting party to clarify types and amount of supplies and materiel, and also verify that the request has not been previously filled through another source.
€ In conjunction with the Resource Status Unit, maintain a status board or other reference depicting procurement actions in progress and their current status.
€ Determine if the procurement item can be provided without cost from another jurisdiction or through the Operational Area.
€ Determine unit costs of supplies and materiel, from suppliers and vendors and if they will accept purchase orders as payment, prior to completing the order.
€ Orders exceeding the purchase order limit must be approved by the Finance/ Administration Section before the order can be completed.
€ If vendor contracts are required for procurement of specific resources or services, refer the request to the Finance/Administration Section for development of necessary agreements.
€ Determine if the vendor or provider will deliver the ordered items. If delivery services are not available, coordinate pickup and delivery through the Transportation Unit.
€ In coordination with the Personnel Unit, provide food and lodging for EOC staff and volunteers as required. Assist field level with food services at camp locations as requested.
€ Coordinate donated goods and services from community groups and private organizations. Set up procedures for collecting, inventorying, and distributing usable donations.
€ Keep the Logistics Section Chief informed of significant issues affecting the Supply/Procurement Unit.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Facilities Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Ensure that adequate essential facilities are provided for the response effort, including securing access to the facilities and providing staff, furniture, supplies, and materials necessary to configure the facilities in a manner adequate to accomplish the mission.
2. Ensure acquired buildings, building floors, and or workspaces are returned to their original state when no longer needed.
3. Supervise the facilities unit.

Activation Phase:

€ Follow the generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a position log and other necessary files.
€ Work closely with the EOC Coordinator and other sections in determining facilities and furnishings required for effective operation of the EOC.
€ Coordinate with branches and units in the Operations Section to determine if assistance with facility acquisition and support is needed at the field level.
€ Arrange for continuous maintenance of acquired facilities, to include ensuring that utilities and restrooms are operating properly.
€ If facilities are acquired away from the EOC, coordinate with assigned personnel and designate a Facility Manager.
€ Develop and maintain a status board or other reference which depicts the location of each facility; a general description of furnishings, supplies and equipment at the site; hours of operation, and the name and phone number of the Facility Manager.
€ Ensure all structures are safe for occupancy and that they comply with ADA requirements.
€ As facilities are vacated, coordinate with the facility manager to return the location to its original state. This includes removing and returning furnishings and equipment, arranging for janitorial services, and locking or otherwise securing the facility.
€ Keep the Logistics Section Chief informed of significant issues affecting the facilities unit.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Resource Status Unit Leader

> ****** Read This Entire Position Checklist Before Taking Action ******

Responsibilities:

1. Coordinate with the other units in the Logistics Section to capture and centralize resource status information.
2. Develop and maintain resource status boards in the Logistics Section.
3. Supervise the Resource Status Unit.

Activation Phase:

€ Follow the generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a position log and other necessary files.
€ Coordinate closely with all units in the Logistics Section particularly Supply/
€ Procurement, personnel, and transportation.
€ As resource requests are received in the Logistics Section, post the request on a status board and track the progress of the request until filled.
€ Status boards should track requests by providing at a minimum, the following information: date & time of the request, items requested, priority designation, time the request was processed and estimated time of arrival or delivery to the requesting party.
€ Work closely with other logistics units and assist in notifying requesting parties of the status of their resource request. This is particularly critical in situations where there will be delays in filling the request.
€ An additional status board may be developed to track resource use by the requesting party. Information categories might include the following: actual arrival time of the resource, location of use, and an estimate of how long the resource will be needed.
€ <u>Keep in mind that it is generally not necessary to track mutual aid resources unless they are ordered through the Logistics Section.</u>

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Finance/Administration Section

Finance/Administration Section Chief

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Ensure that all financial records are maintained throughout the event or disaster.
2. Ensure that all on-duty time is recorded for all Town emergency response personnel.
3. Ensure that all on-duty time sheets are collected from Field Level Supervisors or Incident Commanders and their staffs.
4. Ensure there is a continuum of the payroll process for all Town employees responding to the event or disaster.
5. Determine purchase order limits for the procurement function in Logistics.
6. Ensure that workers' compensation claims, resulting from the response are processed within a reasonable time, given the nature of the situation.
7. Ensure that all travel and expense claims are processed within a reasonable time, given the nature of the situation.
8. Provide administrative support to all EOC Sections as required, in coordination with the Personnel Unit.
9. Activate units within the Finance/Administration Section as required; monitor section activities continuously and modify the organization as needed.
10. Ensure that all recovery documentation is accurately maintained during the response and submitted on the appropriate forms to the Federal Emergency Management Agency (FEMA) and/or the Governor's Office of Emergency Services.
11. Supervise the Finance/Administration Section.

Activation Phase:

€   Follow the generic Activation Phase Checklist.
€   Ensure that the Finance/Administration Section is set up properly and that appropriate personnel, equipment, and supplies are in place.
€   Based on the situation, activate units within section as needed and designate Branch Coordinators for each element:
    o   Time Keeping Unit
    o   Compensation & Claims Unit
    o   Purchasing Unit
    o   Recovery Unit
€   Ensure that sufficient staff are available for a 24-hour schedule, or as required.
€   Meet with the Logistics Section Chief and review financial and administrative support requirements and procedures; determine the level of purchasing authority to be delegated to Logistics Section.
€   Meet with all Unit Leaders and ensure that responsibilities are clearly understood.
€   In conjunction with Unit Leaders, determine the initial Action Planning objectives for the first operational period.
€   Notify the EOC Director when the Finance/Administration Section is operational.
€   Adopt a proactive attitude, thinking ahead and anticipating situations and problems before they occur.

Operational Phase:

- € Ensure that Finance/Administration position logs and other necessary files are maintained.
- € Ensure that displays associated with the Finance/Administrative Section are current, and that information is posted in a legible and concise manner.
- € Participate in all Action Planning meetings.
- € Brief all Unit Leaders and ensure they are aware of the EOC objectives as defined in the Action Plan.
- € Keep the EOC Director, General Staff, and elected officials aware of the current fiscal situation and other related matters, on an on-going basis.
- € Ensure that the Recovery Unit maintains all financial records throughout the event or disaster.
- € Ensure that the Time Keeping Unit tracks and records all agency staff time.
- € In coordination with the Logistics Section, ensure that the Purchasing Unit processes purchase orders and develops contracts in a timely manner.
- € Ensure that the Compensation & Claims Unit processes all workers' compensation claims, resulting from the disaster, in a reasonable time-frame, given the nature of the situation.
- € Ensure that the Time-Keeping Unit processes all time-sheets and travel expense claims promptly.
- € Ensure that the Finance/Administration Section provides administrative support to other EOC Sections as required.
- € Ensure that all recovery documentation is accurately maintained by the Recovery Unit during the response, and submitted on the appropriate forms to Federal Emergency Management Agency (FEMA) and/or the Governor's Office of Emergency Services.

Demobilization Phase:

- € Follow the generic Demobilization Phase Checklist.

Time Keeping Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Track, record, and report all on-duty time for personnel working during the event or disaster.
2. Ensure that personnel time records, travel expense claims and other related forms are prepared and submitted to county budget and payroll office.
3. Supervise the time keeping unit.

Activation Phase:

€ Follow the generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain position logs and other necessary files.
€ Initiate, gather, or update time reports from all personnel, to include volunteers assigned to each shift; ensure that time records are accurate and prepared in compliance with Town policy.
€ Obtain complete personnel rosters from the Personnel Unit. Rosters must include all EOC Personnel as well as personnel assigned to the field level.
€ Provide instructions for all supervisors to ensure that time sheets and travel expense claims are completed properly and signed by each employee prior to submitting them.
€ Establish a file for each employee or volunteer within the first operational period; to maintain a fiscal record for as long as the employee is assigned to the response.
€ Keep the Finance/Administration Section Chief informed of significant issues affecting the Time-Keeping Unit.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Compensation and Claims Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Oversee the investigation of injuries and property / equipment damage claims involving the Town, arising out of the event or disaster.
2. Complete all forms required by worker's compensation program.
3. Maintain a file of injuries and illnesses associated with the event or disaster which includes results of investigations.
4. Supervise the Compensation and Claims Unit.

Activation Phase:

€ Follow the generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain a position log and other necessary files.
€ Maintain a chronological log of injuries and illnesses, and property damage reported during the event or disaster.
€ Investigate all injury and damage claims as soon as possible.
€ Prepare appropriate forms for all verifiable injury claims and forward them to Workmen's Compensations within the required time-frame consistent with Town Policy & Procedures.
€ Coordinate with the Safety Officer regarding the mitigation of hazards.
€ Keep the Finance/Administration Chief informed of significant issues affecting the Compensation and Claims Unit.
€ Forward all equipment or property damage claims to the Recovery Unit.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Purchasing Unit Leader

> ****** Read This Entire Position Checklist Before Taking Action ******

Responsibilities:

1. Coordinate vendor contracts not previously addressed by existing approved vendor lists.
2. Coordinate with Supply/Procurement Unit on all matters involving the need to exceed established purchase order limits.
3. Supervise the Purchasing Unit.

Activation Phase:

€ Follow the generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain position logs and other necessary files.
€ Review the Town's emergency purchasing procedures.
€ Prepare and sign contracts as needed; obtain concurrence from the Finance/Administration Section Chief.
€ Ensure that all contracts identify the scope of work and specific site locations.
€ Negotiate rental rates not already established, or purchase price with vendors as required.
€ Admonish vendors as necessary, regarding unethical business practices, such as inflating prices or rental rates for their merchandise or equipment during disasters.
€ Finalize all agreements and contracts, as required.
€ Complete final processing and send documents to Budget and Payroll for payment.
€ Verify costs data in the pre-established vendor contracts and/or agreements.
€ In coordination with the Logistics Section, ensure that the Purchasing Unit processes purchase orders and develops contracts in a timely manner.
€ Keep the Finance/Administration Section Chief informed of all significant issues involving the Purchasing Unit.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

Recovery Unit Leader

**** Read This Entire Position Checklist Before Taking Action ****

Responsibilities:

1. Collect and maintain documentation of all disaster information for reimbursement from the Federal Emergency Management Agency (FEMA) and/or Cal EMA
2. Coordinate all fiscal recovery with disaster assistance agencies.
3. Prepare and maintain a cumulative cost report for the event or disaster.
4. Supervise the Recovery Unit and <u>all</u> recovery operations.

Activation Phase:

€ Follow the generic Activation Phase Checklist.

Operational Phase:

€ Establish and maintain position log and other necessary files.

€ In conjunction with Budget Office, compute costs for use of equipment owned, rented, donated or obtained through mutual aid.

€ Obtain information from the Resources Status Unit regarding equipment use times.

€ Ensure that the Budget Office establishes a disaster accounting system, to include an exclusive cost code for disaster response.

€ Ensure that each section is documenting cost recovery information from the onset of the event or disaster; collect required cost recovery documentation daily at the end of each shift.

€ Meet with the Documentation Unit Leader and review EOC Position logs, journals, all status reports and Action Plans to determine additional cost recovery items that may have been overlooked.

€ Act as the liaison for the EOC, with the county and other disaster assistance agencies; to coordinate the cost recovery process.

€ Prepare all required state and federal documentation as necessary to recovery all allowable disaster response and recovery costs.

€ Contact and assist Incident Commanders, and obtain their cumulative cost totals for the event or disaster, on a daily basis.

€ Prepare and maintain a cost report for the Finance/Administration Chief, EOC Director, and Town Council. The report should provide cumulative analyses, summaries, and total disaster / event related expenditures for the Town.

€ Organize and prepare records for final audit.

€ Assist the EOC Coordinator and Planning/Intelligence Section with preparation of the After-Action Report.

Demobilization Phase:

€ Follow the generic Demobilization Phase Checklist.

RESOURCE LIST

C-O-N-F-I-D-E-N-T-I-A-L

NOT FOR PUBLIC VIEW

(For EOC General Staff & Management Team ONLY)

SUBJECT HEADINGS

- Air Conditioning/Refrigeration
- Airports
- Barricades
- Bee Control
- Board-Up Service
- Boats
- Building Inspections
- Building Materials & Supplies
- Buildings, Stationary & Temporary
- Business Records
- Campgrounds
- Chambers of Commerce
- Communications
- Compressors
- Computers
- Concrete
- Construction Contractors
- Construction Equipment & Supplies – Rent & Lease
- Containers
- Courier Services
- Demolition Contractors
- Electrical Contractors
- Electronic Equipment
- Environmental/Haz Mat Consultants
- Explosives
- Fax Service
- Fencing Contractors/Materials
- Film/Video Production & Services
- Fire & Water Damage Restoration
- Fire Extinguishers
- Fire Protection Services
- Fuel
- Garbage/Trash & Rubbish Disposal
- Generators
- Glass
- Government Resources
- Hardware
- Hauling/Trailers
- Heating Contractors
- Hotels & Other Lodging Accommodations
- Ice
- Law Enforcement Services
- Lighting
- Linen Supply Service
- Locks & Locksmiths
- Lumber

- Manpower, Temporary
- Maps
- Markets
- Media
- Medical Services & Supplies
- Mental Health Services
- Mortuary Services
- Moving Services
- Non-Profit Organizations
- Offices & Supplies
- Parking Area Maintenance & Marking
- Parks
- Pest Control
- Photography
- Pipes & Pipelines
- Print, Copy & Duplicating Services
- Pumps
- Rental Service Stores
- Restaurants & Supplies
- Safety Equipment & Clothing
- Sand & Gravel
- Sandbags
- Saws
- Scaffolding & Aerial Lifts
- Schools
- Security (Private) Services
- Septic/Sewer Contractors & Cleaners
- Sharpening Service
- Shelter (Human) Supplies
- Sound Systems
- Storage/Warehousing
- Sweeping Service – Power
- Television/Cable Service
- Toilets, Portable
- Tools
- Towing, Automotive
- Tractors
- Translators & Interpreters
- Transportation
- Tree Services
- Utilities
- Water – Bottled & Bulk
- Water Hauling
- Water Purification & Filtration Equipment
- Weed Control Service
- Welding

AIR CONDITIONING/ REFRIGERATION

Accurate Heating & Air
Apple Valley
961-7455
Contractor; Repair

Allbridge Electric Heating & Air Conditioning
Apple Valley
242-5442
Contractor

Apple Air
Apple Valley
242-5442
Equipment-Room Units-Sales & Service

April Air
Hesperia
949-1995
Refrigeration Equipment-Commercial-Sales & Service

B R Tinsley Inc
18165 Hwy 18, Apple Valley
242-3684
Contractor; Coolers-Evaporative-Sales & Service

BCS Mechanical
Hesperia
948-4436
Refrigeration Equipment-Commercial-Sales & Service

Comfy Air
Hesperia
956-1585
Refrigeration Equipment-Commercial-Sales & Service

Desert Heating & Air Conditioning
Apple Valley
240-6290
Contractor; Repair

Diamond Aire
Apple Valley
961-7059
Contractor; Repair

F H A Service
12175 Pawnee, Apple Valley
247-5126
Contractor

Holman Air Conditioning & Heating
21962 Hwy 18, Apple Valley
247-3924
Contractor; Equipment-Room Units-Sales & Service; Coolers-Evaporative-Sales & Service

J M & J Plumbing & Heating Air Conditioning
Apple Valley
242-5519
Contractor; Repair; Coolers-Evaporative-Sales & Service

Milhd Air Conditioning
Apple Valley
240-1341
Contractor

Pol-Air Inc
Victorville
241-1067
Refrigeration Equipment-Commercial-Sales & Service

Reliable Heating & Air Conditioning
Apple Valley
247-5095
Contractor

Service Plus Refrigeration A/C & Equipment Repair
22775 Colony, Apple Valley
559-0380
Refrigeration Equipment-Commercial-Sales & Service

AIRPORTS

Apple Valley Airport
21600 Corwin, Apple Valley
247-2371

Hesperia Airport
Hesperia
948-1177

Southern California Logistical Airport (SCLA)
Victorville
342-1900

BARRICADES

Hi-Way Safety Inc
Chino
800-228-1701

Tops N Barricades
Hesperia
949-5991

BEE CONTROL

Green, David
247-5566

Kelleher, Tom
Apple Valley
247-5619

Monroe, Joe
Apple Valley
240-5648

BOARD-UP SERVICE

ABC Glass & Screens
Victorville
245-8355
Glass Board-Up Service

Envirozone
Hesperia
244-0008
Glass Board-Up Service

Vern's Mobile Glass Inc
Victorville
241-0994
Glass Board-Up Service

BOATS

B & B Cycles/Bombardier Sea-Doo
Victorville
241-7387
Dealer

Barstow Motorcycle Center
Barstow
256-4090
Dealer

Duffy Electrical Boat Co
Adelanto
246-1211
Dealer

Hi Desert Kawasaki Cycle Center
Victorville
241-2028
Dealer

Schwarzenbach's Apple Valley Marine
24021 Hwy 18, Apple Valley
247-8037
Dealer

Silverwood Lake Marina
Summit Valley
389-2299
Renting & Leasing

Silverwood Sea-Doo Rentals
Summit Valley
389-0057
Renting & Leasing

T-N-T Motorsports
Hesperia
949-3842
Dealer

BUILDING INSPECTIONS

Building Industry Association
Victorville
951-2453

Building Inspector, The
Victorville
241-5800

First Safety Home Inspection
12658 Tonikan, Apple Valley
240-2839

Hawkins, Les

Apple Valley
961-7215

HBI Home & Building Inspections
949-2160

HouseMaster Home Inspection Service
Spring Valley Lake
843-9139

BUILDING MATERIALS & SUPPLIES

A & L Builders Supply
Victorville
245-3717

Anderson True Value Lumber & Hardware
Phelan
868-3335

Barr Lumber Company
22092 Hwy 18, Apple Valley
247-7204

Ellis Truss Company & Wall Panels
Hesperia
244-8566

Endura Steel Inc.
Hesperia
244-5456

H & E Do It Yourself Center
Hesperia
949-5389

H & E Do It Yourself Center
Victorville
241-6660

High Desert Truss & Supply
Hesperia
244-7996

Lowe's – Store #1001
Victorville
949-9565

M F G West
Adelanto
246-4042

Murrill, Ronald
Hesperia
949-2212

Valley Hardware & Building Supply
Lucerne Valley
248-6622

Victor Valley Roofing
Hesperia
948-7277

Westside Building Material
Hesperia
244-5484

BUILDINGS, STATIONARY & TEMPORARY

Affordable Sheds
Hesperia
244-9063
Portable

Aussie Steel Buildings
Phelan
947-6559
Metal

Coleman, W & J
16220 Monache, Apple Vly
242-8323
Sheds

Crew Construction
Hesperia
948-0143
Metal

Dudley Steel Buildings
17177 Navajo, Apple Valley
240-3299
Metal

Dunagan Construction
Adelanto
246-6426
Metal

EMH Construction
Adelanto
985-3131
Metal

Forbes Steel Buildings

Phelan
868-5811
Pre-Cut, Prefabricated,
Modular

Gold West Mobile Home Sales
Victorville
241-7009
Mobile Homes-Dealer

High Desert Housing Ltd
Victorville
241-6468
Mobile Homes-Dealer

Kamper's Korner
Victorville
241-7351
Motor Homes

M & L Keith & Associates
Hesperia
244-1315
Metal

M & L Keith & Associates
Victorville
843-5716
Metal

Manufactured Home Center
22241 Nisqually, Apple Vly
240-0077
Mobile Homes-Dealer

Max Steel Buildings
Adelanto
246-9196
Metal, Pre-Cut,
Prefabricated, Modular

Peterson's Lumber & Sawmill
Hesperia
244-3949
Portable

Prince Mobile Homes Inc
Victorville
241-7482
Mobile Homes-Dealer

Range R V Center
Hesperia
949-4090
Motor Homes

Rollman, J.
Pinon Hills
868-6149
Metal

Shed World Inc
Oak Hills
244-5263
Portable

Tuff Shed Inc
22311 Bear Valley, Apple Vly
240-1072
Sheds

Victor Valley Fabricators
14075 Joshua, Apple Valley
247-8852
Metal

W W Nelson Comp Inc
Hesperia
956-3181
Metal

BUSINESS RECORDS

Archive Management Svcs
800-660-2724
Storage; Destruction

Iron Mountain
800-899-4766
Storage

Shred-It
800-697-4733
Destruction

Sure-Shred
888-500-3707
Destruction

CAMPGROUNDS

Adelanto RV Park
Adelanto
246-7775
Campground & RV Park

Hesperia Lake Park & Campground
Hesperia
244-5951
Camp

Kampgrounds of America KOA
Victorville
245-6867
Campground & RV Park

CHAMBERS OF COMMERCE

Adelanto Chamber
Adelanto
246-5711

Apple Valley Chamber
17852 Hwy 18, Apple Valley
242-2753

Barstow Chamber
Barstow
256-8617

Helendale Chamber
Helendale
952-2231

Hesperia Chamber
Hesperia
244-2135

Hispanic Chamber
Victorville
241-6661

Lucerne Valley Chamber
Lucerne Valley
248-7215

Phelan Chamber
Phelan
868-3291

Victor Valley African American Chamber
Victorville
952-9152

Victorville Chamber
Victorville
245-6506

Wrightwood Chamber
Wrightwood
249-4320

COMMUNICATIONS

Advanced Micro

Technologies
Victorville
241-8357
Telephone Parts & Service

Apple Valley Communications
21805 Hwy 18, Apple Valley
247-2668
FAX: 247-0087
Telecommunication Equip & Systems, Telephone Parts & Service

Cell Comm
Victorville
951-5222
Radio Equipment/ Systems

Cingular Wireless PCS Store
Victorville
243-9706
Telephone Communications Svc

Civil Air Patrol
Victorville
246-5142
Ham Radio Communications

Clinton Communications
Spring Valley Lake
843-3399
Telephone Parts & Service

CommDown
Communications
Apple Valley
946-6080
Telecommunication Equip & Systems

ComSerCo
Victorville
245-8462
Radio Equipment/ Systems, Telecommunication Equip & Systems

CSC Communications
Victorville
843-3581
Telecommunication Equip & Systems, Telephone Parts & Service

Digital Technologies
Victorville
241-1621
Telecommunication Equip & Systems/ Service & Repair

Goldstone Deep Space Communications
Barstow
255-8000

Hi-Desert Communications
Victorville
243-2332

Radio Equipment/ Systems High Desert CB
Hesperia
947-9917
Radio Equipment/ Systems

Inland Empire Communications
Victorville
241-7741
Service

Johnson, D
Apple Valley
946-4000
Telecommunication Equip & Systems

Loma Information Systems Inc
Victorville
245-5493
Telecommunication Equip & Systems

Mobile Telesys Inc
Victorville
843-9661
Telephone Communications Service

Nextel Communications
Victorville
243-2332
Public Safety Call Center: 888-639-0020
Cellular & Wireless Phones & Service

N R Systems
Hesperia
956-1204

Telecommunication Equip & Systems/ Service & Repair

Pro Maxim Communications
Victorville
843-5880
Telecommunication Equip & Systems/ Service & Repair

Siecom Networks LLC
Hesperia
949-2340
Telecommunication Equip & Systems/ Service & Repair

Spectrasite Broadcast Towers Inc
Spring Valley Lake
381-8750
Service

Stan's Telephone Installation Repair Service
Apple Valley
247-4320
Telecommunication Equip & Systems, Telephone Parts & Service

Sun Start Communications
11659 Itoya Vista, Apple Vly
961-9025
Telephone Parts & Service

Tel-Craft Communications
Victorville
955-7870
Telecommunication Equip & Systems, Telephone Communications Service, Telephone Parts & Service

Telepro Systems
Victorville
243-7466
Telecommunication Equip & Systems

Tri Town Voice & Data Networks Inc
20361 Ottawa, #2, Apple Vly
240-7877
Telecommunication Equip & Systems/ Service & Repair

Verizon
Victorville

800-483-7988
Utility-Customer Relations
Department

Verizon Phonemart
Victorville
243-0200
Telecommunication Equip &
Systems

Volt Information Sciences
Victorville
245-1264
Telecommunication Equip &
Systems/ Service & Repair

COMPRESSORS

Harbor Freight Tools
Hesperia
949-0558

Inquipco
Las Vegas, NV
800-598-3465
Rentals

**Western Outdoor Power
Equipment**
Victorville
245-2861

COMPUTERS

**Aaron's Sales & Lease
Ownership**
Victorville
952-9955
Rent & Lease

Accell
Hesperia
244-0580
Installation

Apple Valley Stationers
18152 Hwy 18, Apple Valley
242-3531
Service & Repair

California Software Svcs
19360 Seneca, Apple Valley
242-4957
Service & Repair

Compunet Solutions

Apple Valley
242-2229
Service & Repair

Double J Internet
Apple Valley
956-5787
Service & Repair

Rent-A-Center
Victorville
241-2222, 241-1322
Rent & Lease

Sunrise Computing
Lucerne Valley
248-1000
Service & Repair

T K Computer Repair Svc
18387 Hwy 18, Apple Valley
946-5415
Service & Repair

Traylors Electronics
22110 Hwy 18, Apple Valley
240-5703
Service & Repair

CONCRETE

A & L Builders Supply
Victorville
245-3717
Blocks & Shapes

**A-1 Backhoe-Skip & Dump
Truck Service**
Victorville
245-7875
Break, Cut, Saw, Etc.

Agcon Inc
Oro Grande
245-6546
Ready Mixed

**Apple Valley Construction
Co Inc**
9312 Deep Creek, Apple Vly
247-4810
Break, Cut, Saw, Etc.

Asboth Concrete
Apple Valley
961-1704
Contractor

Bonato Concrete Inc
11657 Itoya Vista, Apple Vly
247-2478
Contractor

Carreira William
Hesperia
948-3962
Break, Cut, Saw, Etc.

Cherokee Construction
Hesperia
956-7604
Break, Cut, Saw, Etc.

Conco Construction
Apple Valley
247-8814
Contractor

Creative Concrete
Apple Valley
247-7595
Contractor

**Cutting Edge Concrete
Services Inc**
13600 Hitt Rd, Apple Valley
247-8801
Break, Cut, Saw, Etc.

**Elliott's Concrete Cutting &
Coring**
Apple Valley
242-7062
Break, Cut, Saw, Etc.

Hager C
Oak Hills
949-8324
Ready Mixed

Hi Grade Materials Co
Hesperia
244-9325
Aggregates; Ready Mixed

**High Desert Concrete
Pumping**
Hesperia
947-2999
Concrete Pumping Service

**Jack's Concrete Cutting &
Removal**
Hesperia
948-3046
Break, Cut, Saw, Etc.

Kelley's Concrete Cutting & Breaking
Apple Valley
247-2106
Break, Cut, Saw, Etc.

Lourenco Concrete Pumping
Hesperia
949-6023
Concrete Pumping Service

Martinez Pascual H
Apple Valley
247-5790
Contractor

Olvera's Concrete
Victorville
245-1542
Break, Cut, Saw, Etc.

Philistine Concrete
Hesperia
949-1265
Break, Cut, Saw, Etc.

Robertson's Ready Mix
Adelanto
888-255-1447
Concrete Pumping Service;
Ready Mixed

Roth D
Hesperia
244-5029
Concrete Pumping Service

Rutledge David
Apple Valley
247-4573
Contractor

Service Rock Products
Victorville
245-7997
Ready Mixed

Smitty's Concrete Pumping Service
Hesperia
949-0606
Concrete Pumping
Equipment & Service

Sonora Equipment Rental Inc
Hesperia

949-2269
Break, Cut, Saw, Etc.

Sumiden Wire Product Corp
Victorville
246-6091
Prestressed Concrete

Sunrise Concrete Pumping
Hesperia
947-9800
Concrete Pumping Service

Synertech
Adelanto
246-3330
Concrete Products

Westside Building Material Corp
Hesperia
244-5484
Blocks & Shapes

Whalen Construction
Apple Valley
247-3373
Contractor

CONSTRUCTION CONTRACTORS

A-1 Backhoe – Skip & Dump Truck Service
Victorville
245-7875
Backhoe; Dealers & Service

Ability Signs & Crane Service
Hesperia
244-0809
Crane

Action Backhoe & Grading
Oak Hills
949-6535
Backhoe, Excavation

Adams, Fred A
Apple Valley
240-4376
Masonry

Advanced Plumbing
Hesperia

949-4909
Backhoe

Allfence
12205 Central, Apple Valley
961-3362
Masonry

Apple Valley Construction Co Inc
9312 Deep Creek, Apple Vly
247-4810
Backhoe; Excavation, Drilling & Boring

Arrowhead Rockdrill Co Inc
Barstow
255-8990
Dealers & Service

Aviation Environmental Services Inc
Victorville
951-1923
Dealers & Service

Barstow Pump & Drilling
Barstow
253-4905
Drilling & Boring

Beattie Asphalt Paving
Hesperia
949-1230
Paving

Beinschroth, A J & Sons
18794 Sentenac, Apple Vly
242-2101
Masonry

Bertram, Charles R
Hesperia
244-6794
Paving

Blackmore's Masonry Construction
Hesperia
244-3971
Masonry

Bledsoe Grading Inc
Oak Hills
949-4020
Excavation

Cal Customized Professional Landscape
Hesperia
244-2718
Backhoe; Excavation

Caplinger Construction Inc
Hesperia
948-7801
Grading

Carlson Masonry
Construction
Apple Valley
242-0138
Masonry

Commercial Scaffolding Inc
Victorville
955-5938
Scaffolding & Aerial Lifts

Conexdrill Co Inc
Oak Hills
244-6047
Drilling & Boring

Cooley Construction Inc
Victorville
245-1377
Paving, Excavation

David Montoya Paving
Hesperia
949-1144
Paving

Deloss Crane & Rigging
Victorville
241-1066
Crane

Desert Empire Drilling
Barstow
253-5637
Drilling & Boring

DiVencenzo Construction
Apple Valley
247-8838
Masonry

Don Parker Masonry
Victorville
241-0866
Masonry

Don's Grading

Hesperia
948-1439
Excavation

Dump Truck Tractor Hauling Services
Victorville
951-7599
Backhoe

Eagle Water Well Drilling & Pump Service
Newberry Springs
257-3553
Drilling & Boring

Earthworks Trucks & Equipment
Hesperia
949-7708
Dealers & Service

Fagan Baylift Equipment
Hesperia
949-4222
Forklifts-Sales & Rental

Gee Backhoe Service
Apple Valley
247-0161
Backhoe; Excavation

Gosselin Masonry Company
22420 Cholena, Apple Valley
247-8666
Masonry

Green Equipment & Tool Co
Hesperia
949-0355
Dealers & Service

Gutierrez Construction
Hesperia
956-1252
Paving

Gutierrez Masonry
Hesperia
244-9880
Masonry

H W Masonry
Adelanto
246-3846
Masonry

HCS Cutler Construction
Supplies Inc
Victorville
951-5055
Dealers & Service

Hesperia Equipment Repair
Hesperia
244-4522
Dealers & Service

Hi Desert Drillers Inc.
Apple Valley
946-2695
Drilling & Boring

Howard's Hoe & Dump Truck Service
20239 Hinton Dr, Apple Vly
247-5579
Backhoe

Hub Construction Supplies & Equipment
Hesperia
948-2339
Dealers & Service

Independent Well Drilling
Apple Valley
247-9882
Drilling & Boring

Inquipco
Las Vegas, NV
702-644-1700
Crane

J & J Hoist & Crane & Industrial Services
Hesperia
244-9365
Crane

J O Reid Equipment Rentals Inc
Apple Valley
247-8082
Excavation

Jake's Crane Rigging & Transport International
Las Vegas, NV
800-553-5253
Crane

JDL Enterprises
Helendale

952-3313
Masonry

Joshua Grading & Excavating
Baldy Mesa
949-5867
Excavation

KAT Equipment Leasing Inc
Hesperia
949-2924
Crane

Kenny's Masonry
Apple Valley
240-1870
Masonry

Kordyak, Michael
Hesperia
244-0581
Framing

Langille, K
Phelan
868-3360
Excavation

Long, William L, Construction Backhoe & Dozer Service
Hesperia
244-7506
Grading, Excavation

M B M Tractor Service
Hesperia
947-6798
Backhoe

McAllister, H F Grading
Apple Valley
242-8811 or
240-6185
Excavation

McDougall's Pump Svc Inc
Newberry Springs
248-3344
Drilling & Boring

Medrano's Paving Co
Hesperia
244-5331
Paving

Mojave Equipment Co Inc

Victorville
243-3116
Paving

Nutty Bolts Screws & Fasteners
Hesperia
948-2658
Dealers & Service

Partin, Ray
25122 Little Teepee, Apple Vly
240-3848
Paving

Reed's Tractor
Phelan
868-5341
Excavation

Robertson's Ready Mix
Adelanto
888-255-1447
Cement-Retail

Scott Mark Tractor Trenching Service
Hesperia
949-3362
Excavation

Solomon's Excavation
Lucerne Valley
248-6454
Excavation

Sully-Miller Contracting
Victorville
241-3384
Paving

Sydner James F
Apple Valley
242-2565
Backhoe

Tops N Barricades
Hesperia
949-5991
Shoring

Wallis, Randall, N Water Well Drilling & Pump Svc
Barstow
800-726-3979
Drilling & Boring

Westech Industries Inc
21834 Bear Valley, Apple Vly
961-8488
Excavation

Westside Building Material Corp
Hesperia
244-5484
Dealers & Service

Yeghoian, Robert R., Company Inc
12191 Pawnee, Apple Valley
247-8741
Grading, Paving, Excavation

Yucca Crane
21566 Viento, Apple Valley
247-2887
Crane; Dealers & Service

CONSTRUCTION EQUIPMENT & SUPPLIES – RENT & LEASE

Accent Fence Co
21888 Bear Valley, Apple Vly
247-7213

Advance Disposal Company
Hesperia
244-9773

Apex Rentals
Hesperia
244-9349

Apple Valley Construction Co Inc
9312 Deep Creek, Apple Vly
247-4810

Don Enlow Water Truck
Apple Valley
242-2567

Gold Star Equipment Rentals
21834 Bear Valley
Apple Valley
247-3687
Heavy Equipment, Lighting

JC Rentals
Hesperia
244-7707

Johnson Rental Service
Hesperia
947-0967
Lighting

Kat Equipment Leasing Inc
Hesperia
949-2924

KJ Heavy Equipment
Phelan
868-2323

Mojave Equipment Co Inc
Victorville
243-3116
Excavation

R P Water Truck Services
Victorville
241-5323

Ricks Equipment
Apple Valley
961-7764

Sonora Equipment Rental Inc
Hesperia
949-2269

CONTAINERS

A Allied Storage Containers Inc
888-807-3888
Cargo & Freight

A Royal Wolf Portable Storage
800-447-7223
Cargo & Freight

American Portable Storage
800-838-4006
Cargo & Freight

A-Mobile Mini
800-234-5669
Cargo & Freight

B Stephen Cooperage Inc
Ontario
877-591-3786

Barrels & Drums

JS Container Inc
800-383-2812
Cargo & Freight

Trico Drum Sales Inc
Adelanto
246-0512
Barrels & Drums

U-Store-It
18690 Hwy 18, Apple Valley
242-5604
Boxes

COURIER SERVICE

D & J Delivery Service
Hesperia
948-2355

ICBM
Hesperia
949-2258
Messenger Service

KTR Inc
Victorville
243-1200

On-Time Delivery Service
Hesperia
947-6565

Paul's Delivery Service Inc
Lucerne Valley
248-3311

DEMOLITION CONTRACTORS

Apple Valley Construction Co Inc
9312 Deep Creek, Apple Vly
247-4810

Cutting Edge Concrete Services Inc
13600 Hitt, Apple Valley
247-8801

Earth Development
Phelan
868-5512

Hi Desert Construction

Apple Valley
247-4170

Kelley's Concrete Cutting & Breaking
Apple Valley
247-2106

ELECTRICAL CONTRACTORS

ABC Electric
Apple Valley
242-2684
Contractor

Allbright Electric Heating & Air Conditioning
Apple Valley
240-2276
Contractor

Arbor Del
Apple Valley
240-1680
Contractor

Bromley Electric
Apple Valley
247-3731
Contractor

Cherry Electric
Apple Valley
240-3245
Contractor

Choice Electric
Apple Valley
946-4016
Contractor

Energized Substation Maintenance
13467 Nomwaket, Apple Vly
247-2365
Electrical Power Systems-
Testing & Maintenance

Home Electrician
10990 Neola Court, Apple Vly
247-7002
Contractor

Jones Electric
Apple Valley
247-5609

Contractor

PTL Electric
14475 Havasu, Apple Valley
242-4884
Contractor; Service & Repair

Sharky Electric Inc
Apple Valley
247-7005
Contractor

Standard Electric Works
22000 Hwy 18, Apple Valley
247-8909
Electric Motors-Dealers &
Repair

Vance Electric
Apple Valley
247-8760
Contractor

ELECTRONIC EQUIPMENT

Atco Technology Inc
13560 Tonikan, Apple Valley
247-5500
Equipment & Surplus-
Wholesale & Mfrs

Digital Telemetry Systems
13580 Nomwaket, Apple Vly
247-9512
Equipment & Surplus-New &
Used

ENVIRONMENTAL/ HAZ MAT CONSULTANTS

Contact should also be made with AVFPD Hazardous Materials Team

A Sensitive Environment
877-301-1936
Asbestos Abatement

AAA Asbestos Testing for Demo & Remodeling Permit Profile
877-301-1936
Asbestos Inspection

Affordable Air Conditioning & Heating Service
Hesperia
947-1146
Air Cleaning & Purifying
Equipment

April Air
Hesperia
949-1995
Air Cleaning & Purifying
Equipment

Aviation Environmental Servicees Inc
Victorville
951-1923
Consultant

BCS Mechanical
Hesperia
948-4436
Air Cleaning & Purifying
Equipment

Brickley Environmental Inc
San Bernardino
800-530-3366
Asbestos Abatement; Lead
Detection & Removal

C & A Tripp Associates
Apple Valley
247-4753
Air Cleaning & Purifying
Equipment

Chem-Trec
800-424-9300
24 hour service

Circle Mountain Biological Consultants
Wrightwood
249-4948
Environmental

Crime Scene Steri-Clean
Alta Loma
909-481-2285
Biohazard Cleanup

Dadson
Silver Lakes
955-0003
Chemical Cleaning-Industrial

Environmental Asbestos & Lead Klean-Up
Mira Loma
909-685-5314
Asbestos Abatement

J & B Environmental Inc
Phelan
868-3801
Consultant

M & M Environmental Safety Services
Victorville
951-0700
Environmental

Mojave Desert Air Quality Management District
Victorville
245-1661
Government-Air Quality
Control

Montgomery Watson Americas
Victorville
246-3101
Consultant

Nieves F
Victorville
956-1666
Haz Mat

Rainbow Cleaning Systems
Apple Valley
946-6088
Air Cleaning & Purifying
Equipment

Tri State Environmental
Hesperia
956-0024
Consultant

EXPLOSIVES

Austin Powder Co
Victorville
951-3392

FAX SERVICE

Aim Mail Center

20162 Hwy 18, Apple Valley
242-7300
Transmission Service

Apple Valley Stationers
18152 Hwy 18, Apple Valley
242-3531
Equipment & Systems-
Service & Repair

Copierworks
Apple Valley
240-9446
Equipment & Systems-
Service & Repair

Desert Stationers-Office Plus
Victorville
241-7111
Equipment & Systems

Hayes Photocopier
13839 Pioneer, Apple Valley
240-2895
Equipment & Systems-
Service & Repair

Image Source
Victorville
241-8044
Equipment & Systems

Mail Call
20811 Bear Valley, Apple Vly
240-0060
Transmission Service

Type-Set-Go Printing & Graphics
22749 Hwy 18, Apple Valley
240-1361
Transmission Service

FENCING CONTRACTORS/ MATERIALS

Accent Fence Co
21888 Bear Valley, Apple Vly
247-7213
Contractor & Materials

All American Fence Erectors
Hesperia

948-2428
Contractor & Materials

Allfence
12205 Central, Apple Valley
961-3362
Contractor

Best Fence Company
Hesperia
947-7565
Contractor; Repair

Carlson Masonry Construction
Apple Valley
242-0138
Contractor

Custom Iron Works Specialist
Victorville
843-5232
Contractor

David's Ornamental Welding
Hesperia
956-7689
Materials

Dillman, Hal
Hesperia
244-7220
Contractor

Don Parker Masonry
Victorville
241-0866
Contractor

Family Fence
Apple Valley
240-6939
Contractor

H W Masonry
Adelanto
246-3846
Contractor

K & L Fencing
Hesperia
244-1375
Contractor

Marsano Welding
22164 Ottawa, Apple Valley

961-2293
Contractor

Perris Fence & Supply Inc
Yucca Valley
365-1151
Materials

Peterson's Lumber & Sawmill
Hesperia
244-3949
Materials

Sunset Gate & Door Co
Hesperia
947-4565
Contractor

V & L Powdercoating
22163 Powhatan, Apple Vly
240-6635
Materials

Walker Fence Co
Hesperia
244-4882
Contractor

Wiese McBeth & Watkins
Victorville
245-5836
Contractor

Wild West Fence
Lucerne Valley
248-2112
Contractor

FILM/VIDEO PRODUCTION & SERVICES

Novoa Entertainment
Hesperia
947-7464
Film; Production Services

Presser Thomas H
Hesperia
947-3001
Production Services

RAQ Systems
Hesperia
244-0438

Equipment-Sales & Rentals

Rodeo Video
Victorville
245-2616
Equipment-Sales & Rentals

Transfers Unlimited
19031 Hwy 18, Apple Valley
242-5444
Production Services

Video Doctor
Hesperia
949-3122
Equipment-Sales & Rentals

West Coast Production News
Silver Lakes
843-9688
Film

FIRE & WATER DAMAGE RESTORATION

A & J Carpet Cleaning
Hesperia
948-8171

A Clean Pro
Victorville
245-5556

A-1 Carpet Care
Victorville
800-442-5326

Ace Carpet Cleaning
Hesperia
244-3158

Lloyd Painting Company
Hesperia
949-2798

Mallard Carpet Care
Silver Lakes
952-3825

Purofirst Fire & Water Restoration
13600 Pawnee, Apple Valley
961-1885 or 961-8980

ServiceMaster of the Victor Valley
Hesperia
948-1506

Seven Star Construction
Hesperia
949-8000

United Restoration
Victorville
381-8868

FIRE EXTINGUISHERS

Fire Protection Concepts
Apple Valley
247-0858

Hi Desert Fire Protection Services Inc
Hesperia
947-7336

M & D Fire Equip Co
13641 John Glenn, Apple Vly
240-7929

South West Fire Protection
Apple Valley
240-5176

Stoody Industrial & Welding
Victorville
530-0765

FIRE PROTECTION SERVICES

Apple Valley Fire Protection District (AVFPD)
22400 Headquarters Drive,
Apple Vly
247-7618
FAX: 247-3895
Dispatch: 245-5311

AVFPD Station #332
18857 Hwy 18, Apple Valley
242-3252

AVFPD Station #334
12143 Kiowa, Apple Valley
247-0162

AVFPD Station #335
21860 Tussing Ranch, Apple
Vly
247-9666

AVFPD Station #336
19235 Yucca Loma, Apple
Vly
961-8942

Barstow Fire District
Barstow
256-2254
FAX: 256-5314

Bureau of Land Management
18809 Central, Apple Valley
240-8541
FAX: 240-8598
Dispatch: 909-383-5654

California Department of Forestry
243-8100
FAX: 909-881-6970
Dispatch: 909-881-6900

California State Fire Marshal
Sacramento
916-653-7147

Daggett Fire Department
Daggett
254-2415
FAX: 254-2415
Dispatch: 909-881-6900

Fort Irwin Fire Department
386-1419

Hesperia Fire Department
Hesperia
947-1600
FAX: 244-9174
Dispatch: 245-5311

Marine Corps Logistics Base
Barstow
577-3300

Newberry Springs Fire Department
Newberry Springs
257-4342
FAX: 257-4314

Dispatch: 245-5311

San Bernardino County Fire Department
San Bernardino
909-387-5974
FAX: 909-387-5542
Dispatch: 909-881-6900
Or 909-356-3805

San Bernardino County Fire Marshal/Haz Mat
San Bernardino
909-387-4631
Dispatch: 909-356-3805

US Forest Service
909-866-3437
FAX: 909-866-2867
Dispatch: 909-383-5654

Victorville Fire Department
Victorville
955-5225
FAX: 955-7098
Dispatch: 245-5311

Yermo Fire Department
Yermo
254-2331
FAX: 254-3267
Dispatch: 245-5311

FUEL

Airgas
Hesperia
244-1606
Gas-Industrial, Medical-Cylinder & Bulk

American Biofuels
Adelanto
246-4698
Diesel

Apex Rentals
Hesperia
244-9349
Propane

Apple Valley Chevron
17937 Hwy 18, Apple Valley
242-2197
Service Station-Gas

Apple Valley Mobil

22488 Hwy 18, Apple Valley
240-3885
Service Station-Gas

Apple Valley Ultramar
21898 Hwy 18, Apple Valley
247-4876
Service Station-Gas

Beck Oil Inc
Victorville
245-4191
Diesel

California Tool & Welding Supply
Victorville
245-2402
Gas-Industrial, Medical-Cylinder & Bulk

Chevron Stations Inc
19180 Bear Valley, Apple Vly
247-2937
Service Station-Gas

FerrellGas
18768 Hwy 18, Apple Valley
946-2136
Propane

Gold Star Equipment Rentals
21834 Bear Valley, Apple Vly
247-3687
Propane

Goodspeed Auto Fueling
Hesperia
947-7540 or 947-7164
Petroleum Products

High Desert Fuel
22506 Bear Valley, Apple Vly
247-0311
Fuel Supplies

K N R Automotive Repair
20307 Bear Valley, Apple Vly
240-3928
Propane

K N R II
21650 Hwy 18, Apple Valley
240-5212
Propane

Kelly Gas

Adelanto
246-3714
Propane

Newton Petroleum Enterp
Hesperia
949-0362
Petroleum Products

Proflame Gas Co
Hesperia
244-2113
Propane

Proflame Inc
Adelanto
246-6200
Propane

Silver Valley Propane
Lucerne Valley
248-2226
Propane

Stoody Industrial & Welding
Victorville
530-0765
Gas-Industrial, Medical-Cylinder & Bulk

Thomas Gas Co
Lucerne Valley
248-3356
Propane

U S A Station No 237
Victorville
243-9703
Petroleum Products

U-Haul
Victorville
245-0196
Propane

Ultramar Depot No 6
17838 Wika, Apple Valley
946-4003
Gasoline-Retail

GARBAGE/TRASH & RUBBISH DISPOSAL

A-AAA-ACME-Same Day-Seven Day-Appliance-Discount-Repair
19963 Rancherias, Apple Vly
242-3075
Disposal Equipment-Household-Dealers

Advance Disposal Co Inc
Hesperia
244-9773
Collection & Hauling; Containers

AVCO Disposal Inc
Victorville
243-3967 or 245-8607
Collection & Hauling; Containers
FAX: 245-4708
E-mail: burrtec@burrtec.com

Desert Disposal
Barstow
256-2730
Trash Removal

Dump Truck Tractor Hauling Service
Victorville
951-7599
Rubbish Containers & Hauling

Earth Development
Phelan
868-5512
Collection

On Time & Ready Rubbish & Discard Removal
Hesperia
947-3031
Collection & Hauling; Containers

San Bernardino County Landfill
Victorville
800-722-8004

Sun Country Disposal Co
Phelan
868-4232
Trash Removal

GENERATORS

A G Engineering Inc.
Rancho Cucamonga
909-944-8504
Commercial & Industrial

Advanced Generators Inc
Victorville
961-0281
Electric Repair & Service

Alternate Energy Mgmt Svc (Stephen Mounce)
20061 Rimrock Rd East, Apple Vly
242-1595
Alternative Energy Mgmt Systems

Apex Rentals
Hesperia
244-1731
Rentals

Associated Power
San Bernardino
909-881-1571
Commercial & Industrial

B & B Cycles
Victorville
241-7387
Electric Repair & Service

PCH Mower & Solar
Hesperia
949-0505
Commercial & Industrial

Standard Electric Works
22000 Hwy 18, Apple Valley
247-8909
Electric Repair & Service

United Rentals
Hesperia
947-4810
Electric Repair & Service

Western Outdoor Power Equipment Co Inc
Victorville
245-2861
Electric Repair & Service

GLASS

Doctor Glass
Victorville
241-8339
Repair

AFG Industries Inc
Victorville
241-2237
Wholesale

Ace Glass Co
Apple Valley
247-5659
Wholesale

Vern's Mobile Glass Inc
Victorville
241-0994
Wholesale

GOVERNMENT RESOURCES

Adelanto, Town of
246-2300
FAX: 246-8421

Apple Valley, Town of
14955 Dale Evans Parkway
240-7000
FAX: 247-3885

Barstow, Town of
256-3531
FAX: 256-4472

BNSF Railway (Barstow)
FAX: 255-7810

CA: Army National Guard (Armory)
17988 Hwy 18, Apple Vly
242-4370
FAX: 413-473-7382

CA: Assemblyman Dennis Mountjoy
916-319-2059 (Sac)
240-1782 (AV)
FAX: 916-319-2159 (Sac)

CA: Contractors State Licensing Board
800-343-8389

CA: Dept of Transportation (Cal-Trans)

241-2321 (AV)
252-2314 (Barstow)
249-3277 (Cajon)

CA: Governor Arnold Schwarzenegger
916-445-2841
FAX: 916-445-4633
E-mail:
governor@governor.ca.gov

CA: Homeland Security
916-324-8908

CA: OES-Individual & Public Assistance Program; Hazard Mitigation
916-845-8100

CA: OES-Information & Public Affairs
916-262-1843

CA: OES-Southern Region (Los Alamitos)
562-795-2900
FAX: 562-795-2877

CA: OES-Warning Center
916-262-1621

CA: Water Quality Control Board
241-6583 (VV)

California Integrated Seismic Network
ShakeMap:
http://earthquake.usgs.gov/shakemap

Civil Air Patrol
246-5142

FED: Center for Disease Control (CDC)
888-232-3228
www.cdc.gov

FED: Congressman Jerry Lewis
202-225-5861 (DC)
1-800-233-1700 (Redlands)
FAX: 202-225-6498 (DC)
FAX: 909-335-9155 (Redlands)

FED: Dept of Defense

703-545-6700
www.defenselink.mil

FED: Dept of Energy
202-401-0404
www.doe.gov

FED: Dept of Fish & Game
245-9981

FED: Dept of Health and Human Services (DHHS) – Office of Emergency Preparation
202-566-1600
www.ndms/dhhs.gov

FED: Dept of Homeland Security
202-456-1414
(White House operator)

FED: Dept of Justice-Community Resource Associates
202-399-9908
www.usdoj.gov

FED: Dept of Transportation (DOT) – Office of Intelligence & Security
202-366-6525
www.dot.gov

FED: FEMA – Government Affairs
202-646-4300
www.fema.gov

FED: EPA – Office of Emergency Response
202-566-0200
www.epa.gov

FED: FBI
951-7119 (VV)
310-477-6565

FED: FEMA
800-621-3362

FED: Hazardous Materials Information Center
800-467-4922
www.hazmat.dot.gov

FED: Highway Administration (FTA)
202-366-1524
www.fhwa.dot.gov

FED: National Flood Insurance Policy
800-427-4661

FED: Office of Pipeline Safety
202-366-4831
www.ops.dot.gov

FED: Radiological Monitoring and Assessment Center (FRMAC)
702-295-3521
www.nv.doe.gov/programs/frmac

FED: Railroad Administration
247-6808 (AV)

FED: Senator Barbara Boxer
202-224-3553 (DC)
909-888-8525 (San Bernardino)
FAX: 909-888-8613 (SB)

FED: Senator Dianne Feinstein
202-224-3841 (DC)
310-914-7300 (LA)
FAX: 202-228-3954 (DC)

Hesperia Recreation & Parks District
244-5488

Hesperia, Town of
947-1024
FAX: 947-2881
PIO: 760-947-1020

HOPE Coalition America
888-388-4673
www.operationhope.org
FEMA emergency economic volunteer response program

Mojave Desert Air Quality Management District
245-1661
FAX: 241-3492

Mojave Desert and Mountain Solid Waste
241-5361 (VV)

National Weather Service
www.wrh.noaa.gov

SBC: Coroner
909-356-3805
FAX: 909-387-2989
24-Hour: 909-356-3805

SBC: Fairgrounds
951-2200
FAX: 951-2419

SBC: Health
909-387-6219
24-Hour: 909-356-3805

SBC: Office of Aging
(provides list of non-ambulatory residents)

SBC: Office of Emergency Svcs (OES)
909-356-3998 (Rialto)
FAX: 909-356-3965
24-Hour: 909-356-3805

SBC: Public Works
909-387-2857
After-Hours: 909-356-3805

SBC: ECS/RACES
909-356-3938

SBC: Solid Waste System
909-386-8701

SBC: Supervisor Bill Postmus
909-387-4830 (SB)
843-2760 (VV)
FAX: 843-2768 or
909-387-3029

SBC: Transportation/ Flood Control
909-387-2623 (SB)
247-8208 (AV)
24-Hour: 909-356-3805

U S Geological Survey
650-329-4390

Victor Valley Wastewater Reclamation Authority
246-8638

Victorville, Town of
955-5000
FAX: 245-7243
EPO: 955-5232

HARDWARE

Ace Hardware
Lucerne Valley
248-6101
Retail

Anderson True Value Lumber & Hardware
21041 Bear Valley, Apple Vly
240-9951
Retail

Barr Lumber Co
22092 Highway 18
Apple Valley
247-7204
Retail

H & E Do It Yourself Ctr
Hesperia
949-5389
Retail

H & E Do It Yourself Ctr
Victorville
241-6660
Retail

Home Depot Inc
Victorville
955-2999
Retail

Nutty Bolts Screws & Fasteners
Hesperia
948-2658
Retail

Stone's Hardware
Hesperia
244-9448
Retail

T A Tools
Hesperia
949-7843
Retail

Valley Hardware & Building Supply

Lucerne Valley
248-6622
Retail

HAULING/TRAILERS

A & B Hitches & Mufflers
Hesperia
244-3550
Trailer Hitches; Trailers-Equipment & Parts

A-1 We Haul-U-Store
Hesperia
947-8026

Advanced Performance Muffler Service
Hesperia
948-4588
Trailer Hitches; Trailers-Utility

Apple Valley Utility Trailer Parts
22175 Powhatan, #B, Apple Vly
247-2544
Trailers-Equipment & Parts

ASAP Water Office & Storage Container Units
Hesperia
244-9188
Trailers-Rent & Lease

Aztek Trailers
Hesperia
948-0777
Trailers-Utility

Brycar-Desert Auto & Muffler-Draw-Title Hitch & Accessory Warehouse
Hesperia
244-7183
Trailer Hitches; Trailers-Equipment & Parts

Carson Trailer
Hesperia
948-4420
Trailers-Utility

Creech Steve
Apple Valley
247-7100

Dump Truck Tractor Hauling Service
Victorville
951-7599

Gene's Auto Parts
Hesperia
244-0208
Trailer Hitches

Gold Star Equipment Rentals
21834 Bear Valley, Apple Vly
247-3687
Trailers-Rent & Lease

Graham Trucking
Victorville
245-5560

Holbrook Shop & Mfg
Hesperia
244-3550
Trailer Hitches

Howard's Muffler Service
Victorville
245-5831
Trailer Hitches

Kamper's Korner
Victorville
241-7351
Trailer Hitches

Lawrence Robert
Hesperia
949-7731

Lucerne Valley Trailer
Lucerne Valley
248-2574
Trailers-Rent & Lease

Range RV Center
Hesperia
949-4090
Trailer Hitches

RJ Manufacturing
Apple Valley
240-0669
Trailers-Utility

RV Supply Center
Hesperia
949-1222
Trailers-Equipment & Parts

U-Haul Co-Independent Dealers
21576 Waalew, Apple Valley
240-1525
Trailers-Rent & Lease

U-Haul Co-Independent Dealers
20307 Bear Valley, Apple Vly
240-6538
Trailers-Rent & Lease

U-Haul Co-Independent Dealers
21650 Hwy 18, Apple Valley
961-2237
Trailers-Rent & Lease

U-Haul Co-Independent Dealers
22075 Hwy 18, Apple Valley
961-8703
Trailers-Rent & Lease

United Rentals
Hesperia
947-4810
Trailers-Rent & Lease

HAZARDOUS MATERIALS/ ENVIRONMENTAL CONSULTANTS

See "Environmental/ Hazardous Materials Consultants"

HEATING CONTRACTORS

Accurate Heating & Air
Apple Valley
961-7455

A-Efficient Air Conditioning
Apple Valley
947-4473

Allbright Electric Heating & Air Conditioning
Apple Valley
240-2276

B R Tinsley Inc
18165 Hwy 18, Apple Valley
242-3684

Desert Heating & Air Conditioning
Apple Valley
240-6290

Diamond Aire
Apple Valley
961-7059

Econo-West Inc
Apple Valley
240-6910

F H A Services
12175 Pawnee, Apple Valley
247-5126

Holman Air Conditioning & Heating
21962 Hwy 18, Apple Valley
247-3924

J M & J Plumbing & Heating Air Conditioning
Apple Valley
242-5519

HOTELS & OTHER LODGING ACCOMMODATIONS

Apple Valley Lodge
19599 Hwy 18, Apple Valley
242-5658

Apple Valley Motel
21255 Hwy 18, Apple Valley
247-7455

Best Western Green Tree Inn
Victorville
245-3461

Budget Inn
Victorville
241-8010

Comfort Suites
Victorville
245-6777

Days Inn Suites

Hesperia
948-0600

Econo Lodge
Hesperia
949-1515

Economy Inn
Victorville
241-0075

E-Z 8 Motel
Victorville
241-7516

Hesperia Country Club Inn
Hesperia
244-3701

Holiday Inn Express
Hesperia
244-7674

Howard Johnson Express Inn
Victorville
243-7700

Motel 6
Victorville
243-0666

Ramada Inn
Victorville
245-6565

Red Roof Inn
Victorville
241-1577

Super 8 Motel
Hesperia
949-3231

ICE

Also available at all AVFPD stations

All Nu Ice Co
22233 Powhatan, Apple Vly
247-0070
Ice; Dry Ice

Kar Ice Service
Barstow
256-2648
Ice

LAW ENFORCEMENT SERVICES

Also see "Security (Private) Services"

Adelanto Police Department
Adelanto
246-1000

Apple Valley Police Department
14931 Dale Evans Parkway, Apple Vly
240-7400

Barstow Police Department
Barstow
256-2211

Barstow Sheriff Station
Barstow
256-4838

California Army National Guard
17988 Hwy 18, Apple Valley
242-2509

California Highway Patrol
Victorville
241-1186
FAX: 241-6409
Road Information:
800-427-7623

California Highway Patrol
Barstow
256-1727

Federal Bureau of Investigations
Victorville
951-7119 or 310-477-6565

Hesperia Police Department
Hesperia
947-1500

Lucerne Valley Sheriff Station
Lucerne Valley
248-7328

Marine Corps Logistics Base Military Police
Barstow
577-666

Phelan Sheriff Station
Phelan
249-3212

San Bernardino County Sheriff
San Bernardino
(909) 387-3545
PIO: 909-387-3700

Victor Valley Sheriff Station
Victorville
243-8720

Victorville Police Department
Victorville
241-2911

Wrightwood Sheriff Station
Wrightwood
249-3212

LIGHTING

A Sky Tracker
800-300-6966
Searchlights

Cherry Electric
Apple Valley
240-3245
Lighting Fixtures-Repair & Maintenance

Franz Electric
Hesperia
244-4513
Lighting Fixtures-Repair & Maintenance

Golden Lighting Ltd
Hesperia
244-5183
Lighting Fixtures-Supplies & Parts

Raines Electric
Victorville
952-1091
Lighting Fixtures-Repair & Maintenance

Rexel Calcon
Victorville
241-6201
Light Bulbs & Tubes

LINEN SUPPLY SERVICE

Aramark Uniform Services
San Bernardino
800-888-1286

Aztec Uniform & Towel Rental Inc
800-499-2227

Braun Linen Service
800-245-1269

Mission Linen & Uniform Service
Lancaster
909-947-2040

Prudential Overall Supply
Victorville
951-8440

LOCKS & LOCKSMITHS

Arrow Locksmithing
Apple Valley
247-3348

Budget Lock & Key
Apple Valley
242-0708

Desert Door Service
Apple Valley
961-1507

Mel's Lock & Key
Apple Valley
242-1182

Precision Lock & Safe
21754 Bear Valley, Apple Vly
247-1288

LUMBER

Barr Lumber Co
22092 Hwy 18, Apple Valley

247-7204
Retail

H & E Do It Yourself Center
Victorville
241-6660
Retail

Peterson's Lumber & Sawmill
Hesperia
244-3949
Retail

Valley Hardware & Building Supply
Lucerne Valley
248-6622
Retail

MANPOWER, TEMPORARY

Adelanto Correctional Facility
Adelanto
246-3328

Labor Ready
Hesperia
948-4226

Manpower Staffing Svcs
Victorville
245-8221

PSS Staffing
19035 Hwy 18, #220, Apple Vly
242-4483
FAX: 242-4823

Select Personnel Svcs Inc.
Victorville
245-1460
FAX: 245-8209

Tempo-Temporary Svcs
Victorville
245-6548

Victor Valley Personnel Services
Victorville
245-6548

Employment Development Dept
Victorville
241-5147
FAX: 241-2843

United Personnel Services
21615 Taos, Apple Valley
247-4399
FAX: 247-8901

MAPS

Apple Valley Blueprint & Supply Co
18375 Hwy 18, Apple Valley
242-2702

Lifestyle Store The
Hesperia
948-3333

MARKETS

7-Eleven Food Store
17979 Hwy 18, Apple Valley
242-8110
Convenience Store

7-Eleven Food Store
21718 Bear Valley, Apple Vly
247-9202
Convenience Store

99 Cent Mart
20240 Hwy 18, Apple Valley
242-7574
Convenience Store

Albertson's Food & Drug
20261 Hwy 18, Apple Valley
242-3660
Grocery Store

Big Jake Supplies
Lucerne Valley
248-2148
Wholesale

Food 4 Less
20801 Bear Valley, Apple Vly
247-4990
Grocery Store

Joe's Market
13663 Navajo, Apple Valley

240-7232
Market

John's Beer & Wine Market
20339 Bear Valley, Apple Vly
240-9180
Market

John's Market
18855 Hwy 18, Apple Valley
242-6811
Market

Kiowa Market
12165 Kiowa, Apple Valley
247-1541
Market

Knoll's Market
16025 Kamana, Apple Valley
946-0888
Market

La Zacataecana Market
21937 Hwy 18, Apple Valley
240-5029
Market

Lucerne Valley Market
Lucerne Valley
248-7311
Market

Michael's Ultramar
13601 Apple Valley, Apple
Vly
961-1544
Market

Oshio Mart
Lucerne Valley
248-6171
Market

Pic N Pump
21270 Bear Valley, Apple Vly
247-3551
Market

Ralphs Grocery Company
20220 Hwy 18, Apple Valley
946-3064
Grocery Store

Smart & Final
Hesperia
245-1835 or 775-7620
24-hour: 323-869-6220

Wholesale Grocer
*(customer information sheet
in Logistics binder)*

Stater Bros Market
21602 Bear Valley, Apple Vly
240-3124
Grocery Store

MEDIA

Apple Valley News
Newspaper
244-0021

Charter Communications
Television
Victorville
866-499-8080
FAX: 241-7659
J. Miller: 843-3049

Clear Channel
Radio
Victorville
241-1313
FAX: 241-0205
Hotlines:
    KZXY – 955-1357
    KATJ – 245-2434

Daily Press
Newspaper
Victorville
241-7744
FAX: 241-1860
After-Hours: 951-6230

Desert Dispatch
Newspaper
Barstow
256-2257

Highway Country
Radio
Barstow
256-1073

**Infinity Broadcasting Corp.
(KFROG)**
Radio
Hesperia
244-2000
FAX: 244-1198

KABC – Channel 7

Television
Los Angeles
323-668-2800
FAX: 310-557-3200
www.abc7.com

KCAL – Channel 9
Television
Los Angeles
323-467-9999
FAX: 323-464-2526
www.kcal.com

KCBS – Channel 2
Television
Los Angeles
323-460-3000
FAX: 323-460-3733
www.channel2000.com

KCOP – Channel 13
Television
Los Angeles
323-883-9802
FAX: 323-850-1265
www.upn13.com

KFI (KACE)
Radio
Los Angeles
213-385-0101
FAX: 213-385-7076

KHIZ-TV 64
Television
Victorville
241-5888
FAX: 241-0056

KICS USA
Radio
Adelanto
246-3866

KIQQ AM-FM
Radio
Barstow
255-2636

KMEX (Spanish)
Television
Los Angeles
310-216-3434
FAX: 310-348-3493
www.kmex.com

KNBC – Channel 4

Television
Burbank
818-840-4444
FAX: 818-840-3535
www.nbc4la.com

KTLA – Channel 5
Television
Los Angeles
323-460-5501
FAX: 323-460-5333
www.ktla.com

KTTV – Channel 11
Television
Los Angeles
310-584-2000
FAX: 310-584-2024
www.fox11la.com

KVEA (Spanish)
Television
Glendale
818-502-5747
FAX: 818-502-5864
www.kvea.com

Radio Mexico
Radio
Victorville
955-8722
FAX: 955-5751

Route 66 Radio
Radio
Victorville
951-7966

Senior News
Newspaper
Apple Valley
242-2783
FAX: 242-1596

Sun, The
Newspaper
Victorville
843-355
FAX: 843-1059

Sun, The
Newspaper
San Bernardino
909-889-9666

MEDICAL SERVICES

& SUPPLIES

A ACLS Advanced Air Ambulance
800-633-3590
Ambulance Service – Air

AAAEMS – Accredited Air Ambulance Emergency Medical Services and Worldwide Medical Transport Inc
800-558-5387
Ambulance Service – Air

Ambulatory Surgical Centers
Victorville
951-5162
Hospital

American Medical Response
Victorville
952-7416
FAX: 245-1683
Ambulance Service

American Red Cross
Victorville
245-6511
Blood Bank

Apple Valley Surgery Center
18122 Hwy 18, Apple Valley
946-1170
Hospital

Apria Healthcare
Victorville
241-4488
Oxygen

Blood Bank of San Bernardino and Riverside Counties
Hesperia
949-6344
Blood Bank
FAX: 949-1126

California Tool & Welding Supply
Victorville
245-2402

Oxygen

Community Hospice of Victor Valley
16192 Siskiyou, Apple Valley
946-4730
Hospice

Community Hospital of San Bernardino
San Bernardino
909-877-6333
Hospital

Desert Medical Equipment
13630 Pawnee, Apple Valley
247-2903
Medical Equipment & Supplies; Wheelchairs & Scooters

Desert Valley Hospital
Victorville
241-8000
Hospital

Family Practice Associates
15863 Kasota, Apple Valley
946-1100
Clinic

Fibermedix
Victorville
241-7581
Medical Equipment & Supplies-Repair

Gambro Healthcare
16049 Kamana, Apple Valley
242-8311
Clinic

Health Link Transportation
Hesperia
949-2273
Non-Emergency Ground Transport

Jones & Jones Medical Associate's Inc
18660 Hwy 18, Apple Valley
946-2112
Clinic

Liberty Ambulance
Ridgecrest
375-6565
Ambulance Service

Lloyds Pharmacy
Hesperia
948-3784
Wheelchairs & Scooters

Loma Linda University Behavioral Medical Center
1710 Barton Road, Redlands
909-558-9200
Hospital

Loma Linda University Children's Hospital
11234 Anderson, Loma Linda
800-825-5437
Hospital

Loma Linda University Community Medical Center
25333 Barton, Loma Linda
909-558-6000
Hospital

Loma Linda University Medical Center
11234 Anderson
Loma Linda
909-558-4000
Hospital

Longs Drugs
20180 Hwy 18, Apple Valley
946-3335
Pharmacy

Med Event Medical Services
Devore
909-880-2979
Ambulance Service

Med-Cab Non-Emergency Medical Transportation
Victorville
951-3594
Ambulance Service; Non-Emergency Ground Transport

Mercy Air
Rialto
909-357-9006
Ambulance Service – Air
Dispatch: 888-499-9495
FAX: 909-829-7026

Option One

Victorville
951-9006
Oxygen

Pacific Pulmonary Services
Hesperia
956-1450
Oxygen

Prim Med Pharmacy Services Inc
18182 Hwy 18, Apple Valley
242-3998
Pharmacy

Quick Medical Supplies
15940 Quantico, Apple Valley
946-1414
Medical Equipment & Supplies

Rancho Drugs
17798 Hwy 18, Apple Valley
242-4900
Pharmacy

Rite Aid Pharmacies
Apple Valley
247-1840
Pharmacy

Santa Fe Family Health No 2
18182 Hwy 18, Apple Valley
242-1234
Clinic

St. Bernardine Medical Center
San Bernardino
909-883-8711
Hospital

St. Mary Choice Medical Group
18564 Hwy 18, Apple Valley
242-7777
Clinic

St. Mary Medical Center
18300 Hwy 18, Apple Valley
242-2311
Hospital

Star Care Non-Emergency
15485 Blackfoot, Apple Vly
961-8114

Non-Emergency Ground Transport

Valley Medical & Dental Supply Inc
Hesperia
962-9953
Medical Equipment & Supplies

Value Medical Supplies
Adelanto
246-8179
Medical Equipment & Supplies

V-Care Medical Supplies
Victorville
843-3749
Medical Equipment & Supplies

Veterans-Department of Veterans Affairs Medical Center
11201 Benton
Loma Linda
909-825-7084
Hospital

Victor Valley Community Hospital
Victorville
245-8691
Hospital

MENTAL HEALTH SERVICES

Behavioral Health Consultants Inc
Victorville
843-0506

Desert Behavioral Health A Family Counseling Corp
16195 Siskiyou, Apple Valley
946-2070

Family Service Agency of San Bernardino
Victorville
843-9953

Fitter & Associates
Victorville

243-2482

Oasis Counseling Center
Victorville
245-9446

Voll Carole A MFT
20770 Hwy 18, Apple Valley
240-0537

MORTUARY SERVICES

AAA Low Cost Caskets
Montclair
909-625-3490
Caskets

Alternative Funeral Services
Victorville
241-1990
Directors, Equipment &
Supplies; Cremation

Desert View Memorial Park & Mortuary
Victorville
949-0326
Homes & Directors;
Cremation

Dudley Apple Valley Mortuary
16095 Tuscola, Apple Valley
242-5009
Homes & Directors;
Cremation

Hall High Desert Mortuary
Victorville
951-2605
Homes & Directors

Infinity Caskets
Hesperia
244-6414
Caskets; Homes & Directors

Kern Hesperia Mortuary
Hesperia
244-9313
Homes & Directors

Kern Memorial Chapel
Victorville
245-9361

Homes & Directors

Loewen Group International Inc
Victorville
843-7950
Homes & Directors

Mead Mortuary
Barstow
256-5671
Homes & Directors

Sunset Hills Memorial Park
24000 Waalew, Apple Valley
247-0155
Directors, Equipment &
Supplies; Cremation

Victor Valley Memorial Park & Crematorium
Victorville
245-4291
Cremation

Victor Valley Mortuary Inc
Victorville
245-8164
Homes & Directors;
Cremation

MOVING SERVICES

Apple Valley Transfer & Storage
21284 Corwin, Apple Valley
247-4878
Movers

Atlas Van Lines Agent
21284 Corwin, Apple Valley
247-4878
Movers

Barstow Transfer & Storage Co
Barstow
253-7212
Movers

Hesperia Transfer & Storage Co
Hesperia
244-5431
Movers

Hi Desert Moving Co

Apple Valley
242-8989
Movers

Hi Desert Transfer & Storage Inc
Hesperia
244-0089
Movers

Isaac Moving Service
Victorville
245-9353
Movers

Penske Truck Rental
Apple Valley
961-1040
Moving Equipment Rental

Penske Truck Rental
Victorville
245-7736
Moving Equipment Rental

U-Store It
18690 Hwy 18, Apple Valley
242-5604
Moving Equipment Rental

U-Store It
22075 Hwy 18, Apple Vly
247-8040
Moving Equipment Rental

NON-PROFIT ORGANIZATIONS

American Red Cross
Victorville
245-6511
FAX: 245-3180
E-mail:
help@archighdesert.org

Apple Valley Moose Lodge, #1810
24955 Hwy 18, Apple Valley
247-2305

Apple Valley Senior Citizens Club
13188 Central, Apple Valley
247-3155

Assistance League of Victor Valley

21812 Hwy 18, Apple Valley
961-2468

CDC Victorville
Victorville
243-2931
Disabled Services

Desert Communities United Way
Victorville
245-2213
FAX: 245-2590

Helping Hands for the Blind
Victorville
955-6500

High Desert Homeless Services
Victorville
245-5991 or 245-7513

Jess Ranch Master Association The
19280 Jess Ranch Parkway, Apple Vly
961-1456

Rolling Start Inc
Victorville
843-7959
Disabled Services

Salvation Army
Victorville
245-2545

Victor Valley Community Services Council
Victorville
243-9646

Volunteer Center of Victor Valley
Victorville
245-8592

OFFICES & SUPPLIES

Apple Valley Stationers
18152 Hwy 18, Apple Valley
242-3531
Furniture & Equipment-Dealer; Supplies

B & E Copy Centers

Victorville
245-0281
Supplies

Desert Stationers-Office Plus
Hesperia
244-1400
Furniture & Equipment-Dealer; Supplies

Desert Stationers-Office Plus
Victorville
241-7111
Furniture & Equipment-Dealer; Supplies

First Class Postal
Victorville
947-8393
Supplies

High Desert Rubber Stamp
Hesperia
948-0082
Supplies

Jim's Office Furniture
Hesperia
949-6677
Furniture & Equipment-Dealer

OfficeMax
Victorville
951-8281
Furniture & Equipment-Dealer; Supplies

Staples Store, The
Victorville
955-2288
Supplies

PARKING AREA MAINTENANCE & MARKING

Cooley Construction Inc
Victorville
245-1377

Hi Desert Sweepers
Hesperia
244-9380

Medrano's Paving Co
Hesperia
244-5331

Ragains Sweeping Service
Apple Valley
247-0878

Yeghoian Robert R Company Inc
12191 Pawnee, Apple Valley
247-8741

PARKS

Brewster Park
21024 Otoe, Apple Valley
240-7000 Ext 7884

Corwin Park
18575 Corwin, Apple Valley
240-7000 Ext 7884

Ferrarese Park
13073 Mesquite, Apple Vly
240-7000 Ext 7884

Hesperia Lake Park & Campground
Hesperia
244-5951

Horseman's Center
22727 Hwy 18, Apple Valley
240-7000 Ext 7884

James A. Woody Community Center Park
13467 Navajo, Apple Valley
240-7000 Ext 7884

Lions Park
Highway 18 b/w Flathead & Dale Evans Parkway, Apple Vly
240-7000 Ext 7884

Mendel Park
21860 Tussing Ranch, Apple Vly
240-7000 Ext 7884

Mojave Narrows Regional Park
Victorville
245-2226

Norm Schmidt Park

14053 Tuweep Trail, Apple Vly
240-7000 Ext 7884

Silverwood Lake SRA
Smith Valley
389-2303

Sycamore Rocks Park
23450 South, Apple Valley
240-7000 Ext 7884

Thunderbird Park
20700 Wichita, Apple Valley
240-7000 Ext 7884

Virginia Park
17242 Central, Apple Valley
240-7000 Ext 7884

Yucca Loma Park
21351 Yucca Loma, Apple Vly
240-7000 Ext 7884

PEST CONTROL

Acnow Termite & Pest Control Inc
Victorville
241-4477
Service

Adscot Pest Control Inc
Victorville
247-7999 or 962-9240
Service

All-Pro Termite & Pest Control Co
Apple Valley
242-2344
Service

American Structural Pest Control
Hesperia
949-9778
Service

California Turf & Irrigation Supply
Hesperia
244-3621
Supplies & Equipment

Clark Pest Control

Victorville
245-8870
Service

Dewey Pest Control Co
Apple Valley
242-5252
Service; Supplies & Equipment

John's Desert Pest Control
14170 Hopi, Apple Valley
247-4040
Service

JRJ Environmental Services
Hesperia
947-5293
Service

JRJ Environmental Services
Victorville
955-7759
Service

Montaque & English Inc
22924 Wren, Apple Valley
961-8872
Service

Numero Uno Exterminator
Victorville
243-7729
Service

P C O-Tech
Hesperia
947-6650
Supplies & Equipment

PHOTOGRAPHY

Ballistic Fotographix
Hesperia
947-1953
Commercial

Cline Rick Photography
Victorville
962-9929
Commercial

G L V Photography
Victorville
241-2925

Aerial; Commercial

James T Blakely
Photography
Victorville
241-0717
Commercial

John S Reid Photography
Hesperia
244-8144
Commercial

PIPES & PIPELINES

Aardvark Pumping Svc Inc
Apple Valley
247-9001
Contractor

Alpha Omega Septic
Pumping Service
Victorville
243-2161
Contractor

American Leak Detection
Victorville
245-3335
Pipe/Leak Locator

Apple Valley Construction Co Inc
9312 Deep Creek, Apple Vly
247-4810
Contractor

Arizona Pipeline Co
Hesperia
244-8212
Contractor
FAX: 244-0963

BCS Mechanical
Hesperia
948-4436
Pipe/Leak Locator

Broughton Construction Co
Hesperia
948-2212
Contractor

CalNev Pipeline Co
San Bernardino
909-387-9505

Flynn's Plumbing & Heating
Apple Valley
247-6932
Pipe/Leak Locator

High Desert Underground
Hesperia
244-5313
Contractor

Mobile Pipe Wrappers & Coaters Inc
Adelanto
246-4707
Lining & Coating

Roland Engineering
13600 Pawnee, Apple Valley
247-8533
Contractor

PRINT, COPY & DUPLICATING SERVICES

Aim Mail Center
20162 Hwy 18, Apple Valley
242-7300
Copy & Duplication

Apple Valley Blueprint & Supply Co
18375 Hwy 18, Apple Valley
242-2702
Printer; Copy & Duplication

Budget Printing Center
18409 Hwy 18, Apple Valley
242-1300
Printer-Business Forms

E P S Promotional Products
Apple Valley
946-3832
Printer

Mac's Printing & Label Co
Apple Valley
947-3228
Printer

Phoenix Printing & Promotion Inc
21075 Bear Valley, Apple Vly

240-2317
Printer

Type-Set-Go Printing & Graphics
22749 Hwy 18, Apple Valley
240-1361
Printer

PROPANE

See "Fuel"

PUMPS

Barstow Pump & Drilling
Barstow
253-4905
Supplies & Parts

Clarks Water Well Service
Newberry Springs
257-3955
Supplies & Parts

Desert Empire Drilling
Barstow
253-5637
Dealer; Service & Repair; Supplies & Parts

Eagle Water Well Drilling & Pump Service
Newberry Springs
257-3553
Dealer; Supplies & Parts

Hi-Desert Drillers Inc
Apple Valley
946-2695
Service & Repair; Supplies & Parts

Howard Pump A Division of Beylik Drilling Inc
Yermo
254-3351
Supplies & Parts

Independent Well Drilling
Apple Valley
247-9882
Supplies & Parts

McDougall's Pump Svc Inc
Newberry Springs

248-3344
Dealer; Supplies & Parts

Osborne GA Pipe & Supply Inc
Victorville
243-1443
Supplies & Parts

Pump Check
Victorville
243-1178
Testing

Pump Services
Victorville
243-0340
Service & Repair

Randall Wallis Water Well Service
Barstow
253-3271
Service & Repair; Supplies & Parts

REFRIGERATION/ AIR CONDITIONING

See "Air Conditioning/ Refrigeration"

RENTAL SERVICE STORES

All Star Party Rentals
Hesperia
949-7369

Apex Rentals
Hesperia
244-9349

Barr Lumber Co
22092 Hwy 18, Apple Valley
247-7204

Bear Valley Party Rentals
Victorville
955-5195

Budget Truck Rental
Hesperia
244-1401

Fagan Baylift Equipment

Hesperia
949-4222

Gold Star Equipment Rentals
21834 Bear Valley, Apple Vly
247-3687

Hesperia Equipment Rentals
Hesperia
244-3558

Johnson Rental Service – CAT Rental Store
Hesperia
947-0967

Kelley's General Engineering & Contracting
Apple Valley
247-2106

Mojave Equipment Co Inc
Victorville
243-3116

Rental Service Corporation
13450 Nomwaket, Apple Vly
240-7746

Ryder Truck Rental-One-Way Inc
Hesperia
244-1401

United Rentals
Hesperia
947-4810

Valley Hardware Tool
Lucerne Valley
248-6224

RESTAURANTS & SUPPLIES

Amy's Mexican Restaurant
18768 Hwy 18, Apple Valley
242-1474
Restaurant

Apple Valley Airport Wings Café
21600 Corwin, Apple Valley
247-7818
Restaurant

Arby's Roast Beef
21550 Bear Valley, Apple Vly
240-6661
Fast-Food

Bear Valley Party Rental
Victorville
955-5195
Caterers' Equipment & Supplies

Bum Steer, The
23323 Hwy 18, Apple Valley
247-1336
Restaurant

Burger King
20610 Bear Valley, Apple Vly
247-9229
Fast-Food

Carl's Jr Restaurant
21675 Yucca Loma, Apple Vly
247-6334
Fast-Food

Carmen's Ponderosa Restaurant
9544 Kiowa, Apple Valley
247-7727
Restaurant

Chevo's Mexican Restaurant & Seafood
21749 Hwy 18, Apple Valley
961-2770
Fast-Food

D J's Subs & Sandwiches
17772 Wika, Apple Valley
242-5504
Restaurant

DeGarcia's A Mexican Restaurant
19397 Bear Valley, Apple Vly
961-0022
Fast-Food

Del Taco
13730 Navajo, Apple Valley
247-3364
Fast-Food

Dinapoli's Fire House
17856 Hwy 18, Apple Valley
242-5802

Restaurant

Domino's Pizza
20200 Hwy 18, Apple Valley
946-2323
Delivery

El Ranchito Restaurant
13663 Navajo, #2, Apple Vly
961-1824
Fast-Food

Golden China Restaurant
21683 Yucca Loma, Apple Vly
247-1118
Restaurant

J & T's Branding Company
13685 John Glenn, Apple Vly
240-5050
Restaurant

Jack In The Box
21630 Bear Valley, Apple Vly
240-1746
Fast-Food

Jack In The Box
20168 Hwy 18, Apple Valley
946-2203
Fast-Food

Jenny's Country Cookin'
21660 Bear Valley, Apple Vly
247-7710
Restaurant

Jessica's Baja Grill
21044 Bear Valley, Apple Vly
240-4438
Fast-Food

Johnny D's
19250 Bear Valley, Apple Vly
961-2133
Restaurant

Kam's Chinese Restaurant
18564 Hwy 18, Apple Vly
242-5093
Restaurant

Kentucky Fried Chicken
18447 Hwy 18, Apple Valley
242-2351
Fast-Food

La Fonda Restaurant
17790 Wika, Apple Valley
946-5344
Restaurant

Las Brisas Restaurant
21919 Hwy 18, Apple Valley
240-1051
Restaurant

Little Caesar's Pizza
20920 Bear Valley, Apple Vly
247-0100
Delivery; Fast-Food

Lola's Mexican Restaurant
21290 Bear Valley, #105/106,
Apple Vly
241-5223
Fast-Food

Marcelinos Mexican
Restaurant
21510 Bear Valley, Apple Vly
240-4344
Restaurant

McDonald's Restaurant
20221 Hwy 18, Apple Valley
242-0384
Fast-Food

McDonald's Restaurant
19200 Bear Valley, Apple Vly
247-0951
Fast-Food

Mollie's Kountry Kitchen
21851 Hwy 18, Apple Valley
240-6130
Restaurant

Nick's Pizza House II
21510 Bear Valley, Apple Vly
240-3532
Restaurant

Overland Meat Co
18841 Hwy 18, Apple Valley
242-5110
Deli

Phoenix Chinese Restaurant
21680 Bear Valley, Apple Vly
240-1138
Restaurant

Pizza Hut
20811 Bear Valley, Apple Vly
240-6181
Delivery

Pizza Hut
18564 Hwy 18, Apple Valley
946-1669
Delivery; Fast-Food

Pollo Bravo
22171 Hwy 18, Apple Valley
240-1302
Fast-Food

Taco Bell
20185 Hwy 18, Apple Valley
242-3388
Fast-Food

Tom's Famous Burgers #19
22095 Hwy 18, Apple Valley
247-7017
Fast-Food

Tom's Famous Burgers #20
18313 Hwy 18, Apple Valley
242-7727
Fast-Food

Viva Maria
20162 Hwy 18, Apple Vly
946-2087
Restaurant

Waffle Iron
Apple Valley
247-3913
Restaurant

Wendy's
17928 Wika, Apple Valley
242-5358
Fast-Food

RUBBISH & GARBAGE/TRASH

See "Garbage/Trash & Rubbish"

SAFETY EQUIPMENT & CLOTHING

Airgas
Hesperia
244-1606

California Tool & Welding Supply
Victorville
245-2402

SAND & GRAVEL

A & L Builders Supply
Victorville
245-3717

Agcon Inc
Oro Grande
245-6546

Almond & Sons Colored Rock
Victorville
949-0999

Angel
Hesperia
948-9422

Apple Valley Construction Co Inc
9312 Deep Creek, Apple Vly
247-4810

California Bio-Mass
Victorville
246-7946

Clyde Thomas
Oak Hills
244-7077

Graham Equipment
Victorville
241-4875

Hi Grade Materials Co
Hesperia
244-9325

Humphrey Dale
Victorville
246-8333

Service Rock Products
Victorville
245-7997

Victorville Industrial Materials Inc
Oro Grande

245-8333

Westside Building Material Corp
Hesperia
244-5484

SANDBAGS

Barr Lumber
22092 Hwy 18, Apple Valley
247-7204

H & E
Victorville
241-6660

Hi Desert Material
Hesperia
948-2339

Home Depot
Victorville
955-2999

Hub Construction
Hesperia
948-2339

SAWS

3-D Small Engine & Power Tool Repair Inc
21969 Hwy 18, #6 & #7, Apple Vly
240-3363

BVM Outdoor Power Equipment
Hesperia
947-5772

Tuttle Tool Grinding
Hesperia
244-3715
Sharpening & Repair

Western Outdoor Power Equipment Co Inc
Victorville
245-2861

SCAFFOLDING & AERIAL LIFTS

Commercial Scaffolding Inc

Victorville
955-5938

SCHOOLS

Also see list of "Essential/ Critical Facilities" (Attachment #1)

Adelanto Elementary School District
Adelanto
246-8691

Apple Valley Christian School
22434 Nisqually, Apple Vly
247-8412

Apple Valley Head Start School
13589 Navajo, Apple Valley
247-6955

Apple Valley High School
11837 Navajo, Apple Valley
247-7206
AVUSD

Apple Valley Middle School
12555 Navajo, Apple Valley
247-7267
AVUSD

Apple Valley Unified School District
22974 Bear Valley, Apple Vly
247-8001
AVUSD
FAX: 247-4103

Desert Knolls Elementary School
18213 Symeron, Apple Valley
242-3441
AVUSD

Granite Hills High School
22900 Esaws, Apple Valley
961-2290
AVUSD

Hesperia Unified School District
Hesperia
244-4411

Lewis Center for Educational Research
20702 Thunderbird, Apple Vly
242-3514
Thunderbird Campus

Lewis Center for Educational Research
17500 Mana, Apple Valley
946-5414
Mojave River Campus

Lucerne Valley Unified School District
Lucerne Valley
248-6108

Mariana Elementary School
10601 Manhasset, Apple Vly
247-7258
AVUSD

Mesquite Elementary School
13073 Mesquite, Apple Vly
961-1066
AVUSD

Mojave Mesa Elementary School
15552 Wichita, Apple Valley
242-5883
AVUSD

Rancho Verde Elementary School
14334 Pioneer, Apple Valley
247-2663
AVUSD

Rio Vista Elementary School
13590 Havasu, Apple Valley
240-0280
AVUSD

Sandia Elementary School
21331 Sandia, Apple Valley
240-5125
AVUSD

St. Mary Catholic School
18350 Hwy 18, Apple Valley
242-2001

St. Timothy Episcopal School

15757 St. Timothy, Apple Vly
242-4256

Sycamore Rocks Elementary School
23450 South, Apple Valley
240-3332
AVUSD

Valley Christian School
19923 Bear Valley, Apple Vly
247-2933

Victor Elementary School District
Victorville
245-1691

Victor Valley College
Victorville
245-4271
FAX: 245-9019

Victor Valley Union High School District
Victorville
955-3200

Vista Campana Middle School
20700 Thunderbird, Apple Vly
242-7011
AVUSD

Willow Park Continuation High School
21950 Nisqually, Apple Vly
240-4252
AVUSD

Yucca Loma Elementary School
21351 Yucca Loma, Apple Vly
247-2623
AVUSD

SECURITY (PRIVATE) SERVICES

Also see "Law Enforcement Services"

A 2 Z Lock & Security
Victorville
962-1985

Equipment Systems & Monitoring

ADT Security Services
Victorville
955-8338
Equipment Systems & Monitoring

Advanced K-9 Academy
Hesperia
244-0149
Guard & Patrol Service

American Camera Systems
15940 Quantico, Apple Valley
242-0537
Equipment Systems & Monitoring

American Central Alarm Inc
Hesperia
948-6701
Equipment Systems & Monitoring

Apple Valley Communications Inc
21805 Hwy 18, Apple Valley
247-2668
Consultant; Equipment Systems & Monitoring

B-Alert K-9 Service
Hesperia
244-2911
Guard & Patrol Service

Burns/Pinkerton-Securitas Companies
Victorville
245-7070
Guard & Patrol Service

D C Alarms
Hesperia
244-0808
Equipment Systems & Monitoring

Digatron
Apple Valley
961-1787
Equipment Systems & Monitoring

Enforcement One Security Services

Victorville
245-3399
Guard & Patrol Service

Guard Vision Private Security Inc
Hesperia
956-8854
Guard & Patrol Service

Henry's Private Security Co
Hesperia
948-6201
Guard & Patrol Service

Hi Desert Alarm & Fire Sprinklers
Victorville
245-8600
Equipment Systems & Monitoring

High Desert Industrial Security Services
Victorville
952-3922
Equipment Systems & Monitoring; Guard & Patrol Service

IPC Security
Victorville
241-4198
Guard & Patrol Service

Knight Guard Alarm Svcs
Hesperia
949-3537
Equipment Systems & Monitoring

New Way Security
Adelanto
246-3339
Guard & Patrol Service

Pinkerton Security & Investigations
Victorville
245-7070
Guard & Patrol Service

Power Systems Surveillance
Victorville
843-9851

Equipment Systems & Monitoring

Price's Academy of Self Defense & BSIS Security Officer Training
Victorville
245-0166
Guard & Patrol Service

Protek Security
Apple Valley
240-6400 or 247-0906
Equipment Systems & Monitoring

Reb Software Technology
Apple Valley
961-8800
Equipment Systems & Monitoring

Safe & Sound Security
Apple Valley
247-7233
Equipment Systems & Monitoring

Shield Security Inc
Victorville
843-3300
Guard & Patrol Service

Valley Security Systems
Victorville
243-3338
Equipment Systems & Monitoring

Wired Communications Inc
Hesperia
947-3454
Equipment Systems & Monitoring

SEPTIC/SEWER CONTRACTORS & CLEANERS

A & A Septic & Ace Pumping
Apple Valley
240-6619
Septic Tank & Systems Cleaning

A-1 Plumber
Apple Valley
242-4737
Plumbing Drains & Sewer Cleaning

AAA Leak Detection
Apple Valley
240-0439
Plumbing Drains & Sewer Cleaning

Aardvark Pumping Service Inc
Apple Valley
242-3120
Septic/Sewer Contractor & Cleaner

Alpha Omega Septic Pumping Service
Victorville
243-2161
Septic/Sewer Contractor & Cleaner

Apple Valley Construction Co Inc
9312 Deep Creek, Apple Vly
247-4810
Septic/Sewer Contractor & Cleaner

Aqua Plumbing
Apple Valley
240-7590
Sewer Contractor & Cleaner

Broughton Construction Co
Hesperia
948-2212
Sewer Contractor & Cleaner

Burns Septic & Sewer Service
Hesperia
948-0009
Septic/Sewer Contractor & Cleaner

Doug's Full Service Plumbing
Apple Valley
240-3762
Plumbing Drains & Sewer Cleaning

Flynn's Plumbing & Heating
Apple Valley
247-6932
Plumbing Drains & Sewer Cleaning

Honest John's Septic Tank
9312 Deep Creek, Apple Vly
247-9687
Septic Tank & Systems Cleaning

Innis Andrea
Apple Valley
247-7008
Plumbing Drains & Sewer Cleaning

J M & J Plumbing & Heating/Air Conditioning
Apple Valley
242-5519
Plumbing Drains & Sewer Cleaning

Joe Yancho Plumbing
Apple Valley
247-4824
Plumbing Drains & Sewer Cleaning

Meyer Warren W & Sons Construction
Hesperia
244-2717
Sewer Contractor & Cleaner

Mineo Brothers Septic Svc
Hesperia
947-1130
Septic Tank & Systems Cleaning; Treatment & Supplies

Omega Portable Toilets
Lucerne Valley
248-7980
Septic Tank & Systems Cleaning

Ram-Rooter Sewer & Drain Cleaning Service
Hesperia
244-6701
Septic Tank & Systems Cleaning

Roto Rooter Service
Victorville
245-2947
Septic/Sewer Contractor &
Cleaner

Skunk Bros Plumbing
Victorville
241-1475
Septic Tank & Systems
Cleaning

Valley Septic Pumping
Lucerne Valley
248-2913
Septic Tank & Systems
Cleaning

**Victor Valley Wastewater
Reclamation**
Adelanto
246-8638
Public Agency

SHARPENING
SERVICE

Shear Delight
19575 Bear Valley, Apple Vly
240-7762

Tuttle Tool Grinding
Hesperia
244-3715

**Valley Sewing & Vacuum
Center**
Victorville
245-2109

SHELTER (HUMAN)
SUPPLIES

***Also see list of shelters,
"Critical Facilities"
(Attachment #1)***

Bear Valley Party Rentals
Victorville
955-5195
Tent Rentals

Big 5 Sporting Goods
Victorville
241-8655

Sporting Goods-Retail

Canvas World
Hesperia
949-8186
Canvas Goods

Comfort Systems Inc
Oak Hills
949-0822
Awnings & Canopies

Country Oak & Stoves
Hesperia
949-2077
Awnings & Canopies

Del Rio Sunrooms
Hesperia
948-8838
Awnings & Canopies

**High Desert Patio
Enclosures**
Victorville
245-7245
Awnings & Canopies

Hillco
Apple Valley
242-8218
Awnings & Canopies

J & I Military Surplus
Hesperia
949-6650
Military Surplus Equipment

Kamper's Korner
Victorville
241-7351
Camping Equipment

Lifestyle Store The
Hesperia
948-3333
Awnings & Canopies

Valley Sporting Goods Inc
18335 Hwy 18, Apple Valley
242-2334
Camping Equipment

SOUND SYSTEMS

**Apple Valley
Communications**

21805 Hwy 18, Apple Valley
247-2668
Equipment

Brett Kahn DJ & MC
Victorville
951-0386
Equipment-Rental

D B Music & Sound
Hesperia
949-3838
Equipment

**It's Showtime Productions
Services**
Apple Valley
961-8828
Equipment

STORAGE/
WAREHOUSING

Hesperia Self Storage
Hesperia
244-4545
Warehouse-Merchandise &
Self Storage

Sunrise Self Storage
Hesperia
244-5625
Warehouse-Merchandise

Universal Self Storage
Hesperia
947-4526
Warehouse-Merchandise &
Self Storage

U-Store-It
18690 Hwa 18, Apple Valley
242-5604
Warehouse-Merchandise &
Self Storage

U-Store-It
22075 Hwy 18, Apple Valley
247-8040
Warehouse-Merchandise &
Self Storage

SWEEPING SERVICE-
POWER

Bertram Charles R
Hesperia
244-6794

Hi Desert Sweepers
Hesperia
244-9380

Hy Tek Industries
Victorville
951-3881

Ragains Sweeping Service
Apple Valley
247-0878

TELEVISION/
CABLE SERVICE

Aaron's Sales & Lease
Ownership
Victorville
951-9955
Rentals

Al & Ken's Satellite & Audio
Silver Lakes
951-2398
Cable & CATV

Arrowstar Satellite
Victorville
955-3474
Cable & CATV

Charter Communications
Victorville
843-3000
Cable & CATV

Digital Satellite Systems
Hesperia
244-4488
Cable & CATV

Dish Man, The
Hesperia
948-0887
Cable & CATV

Hi-Desert Satellite
Hesperia
244-3474
Cable & CATV

Johnson, Stan

Victorville
843-7263
Cable & CATV

Kirchoff Construction
Hesperia
947-9923
Cabling & Installation

MSAT
21011 Bear Valley, Apple Vly
247-1116
Cable & CATV

Pete's Electronics
Victorville
243-2456
Cable & CATV

Rent-A-Center
Victorville
241-1322 or 241-2222
Rentals

Son's Satellite Systems
Lucerne Valley
248-6030
Cable & CATV

Steve's Satellite Systems
Apple Valley
961-1720
Cable & CATV

Superior Satellite Systems & Paging Service
Hesperia
956-2320
Cable & CATV

Video Doctor Satellite
Hesperia
947-3553
Cable & CATV

Wired Communications Inc
Hesperia
947-3454
Cable & CATV

Yeadon, Shari
Oak Hills
244-6693
Parts & Service

TOILETS, PORTABLE

A-1 Portables
Apple Valley
247-9195

Aardvark Portable Toilets
Apple Valley
242-3802

Jim's Ott's Plus
Victorville
955-6753

Omega Portable Toilets
Lucerne Valley
243-2169 or 248-7980

Wayne's Pumping & Portables
Phelan
868-6025

TOOLS

American Best Recycling
Victorville
241-8414

Apex Rentals
Hesperia
244-9349
Electric-Repair

Dalhover Tool Co Inc
Hesperia
244-4801

Harbor Freight Tools
Hesperia
949-0558

HCS Cutler Construction Supplies Inc
Victorville
951-5055
Electric-Repair

J R T Enterprises Inc
Apple Valley
242-2100
Electric-Repair

Junkyard Jack
Apple Valley
961-9240
Wholesale & Mfrs

T A Tools
Hesperia

949-7843

Williams Tool Repair
Hesperia
949-3310
Electric-Repair; Pneumatic

Y P Tools & Etc
Victorville
962-9968

TOWING, AUTOMOTIVE

A A & Sons Towing
Apple Valley
240-9158
Automotive

A-Action Towing
13605 John Glenn, Apple Vly
240-6757
Automotive

A-B Towing
Victorville
241-8414
Automotive

Advanced Towing & Recovery
Apple Valley
242-4332
Automotive

All American Towing
Hesperia
947-1869
Automotive

All American Towing
Victorville
843-1869
Automotive

All Pro Towing
13625 Manhasset, Apple Vly
240-4133 or 242-4014
Automotive

Associated American Towing
Adelanto
246-6090
Automotive

Bob's Transmission

Hesperia
947-2387
Automotive

Cajon Towing & Transport
Apple Valley
949-7306
Automotive

Certified II Car Repair
Victorville
243-3390
Automotive

Coker Jim Towing
Victorville
241-1301
Automotive

Courtesy Auto
Hesperia
244-2269
Automotive

Desert Valley Towing
13606 John Glenn, Apple Vly
240-4207
Automotive

G & M Towing & Recovery
Hesperia
244-1868
Automotive & Equipment

Hesperia Towing
Hesperia
947-6839
Automotive

Hi-Desert Auto Wrecking & Towing
Lucerne Valley
248-6116
Automotive

Jim & Sons Towing
Hesperia
248-7631
Automotive

Jim's Garage & Towing
Lucerne Valley
248-7631
Automotive

O P M Towing
Victorville
955-6611

Automotive

Stagecoach Towing
Hesperia
947-5092
Automotive

Super Auto Body & Paint
Victorville
962-9966
Automotive

Target Auto
Adelanto
246-6242
Automotive

Too Bits Towing
13625 Manhasset, Apple Vly
240-9191
Automotive

Victor Valley Towing
Victorville
245-2556
Automotive

Wade's Automotive Inc
Hesperia
949-1968
Automotive

Wayne's Towing
Hesperia
947-6897
Automotive

Wito Speed Towing
Victorville
243-3383
Automotive

TRACTORS

Hesperia Equipment Repair
Hesperia
244-4522
Repair

High Desert Farm Supply
Lucerne Valley
248-2815
Dealer

Homestead Tractor
22311 Bear Valley, Apple Vly
240-1062

Dealer; Repair

Jim's Tractor Tech
Hesperia
244-1446
Repair

K & R Tractorworks
Baldy Mesa
947-6450
Garden

Liberty West Tractor
Lucerne Valley
248-6214
Dealer

Mojave Equipment Co Inc
Victorville
243-3116
Repair

United Rentals Inc
Hesperia
947-4810
Dealer

Walkers Tractors Service
Hesperia
949-3103
Garden

TRANSLATORS & INTERPRETERS

Braille Institute
Rancho Mirage
321-1111
Blind Services

German Translation Svcs
Apple Valley
242-8848

Goss Sara Lora
Victorville
241-9152

Mojave Deaf Services
Victorville
245-4138
Deaf Services

TRANSPORTATION

A Krazy Concepts by Golf Car Ray
Hesperia
948-6728
Golf Carts

Accommodation Travel Station
Victorville
241-1000
Bus-Charter & Rental

Admiral Limousine
Apple Valley
961-9226
Limousine Svc

Advantage Rent-A-Car
Victorville
243-3696
Auto Rental

Affordable Car Rentals
Victorville
241-7285
Auto Rental

Apple Valley Unified School District (Transportation Dept)
22973 Bear Valley, Apple Vly
247-2125
FAX: 247-7499
Bus Provider

ARS Limousine Service
Apple Valley
247-6065
Limousine Svc

Bee Line Express
Hesperia
956-0092
Bus-Charter & Rental

Brian Motors
Hesperia
948-7296
Auto Rental

Dream Chasers Limousine Service
Apple Valley
242-1703
Limousine Svc

Ebmeyer Charter & Tour
Apple Valley

242-4011
Bus-Charter & Rental

Enterprise Rent-A-Car
13631 Navajo, Apple Valley
240-0300
Auto Rental

Gold Star Equipment Rentals
21834 Bear Valley, Apple Vly
247-3687
Truck Rental

Golf Carts by Del Mar
Hesperia
948-6728
Golf Carts

Greyhound Bus Lines
Victorville
245-2041
Bus Lines

Heavy Lift Helicopters
19378 Central, Apple Valley
240-4247
Helicopter Charter & Rental Service

Herrin Limousine
Victorville
243-3911
Limousine Svc

Hertz Local Edition
Victorville
843-0320 OR 962-9234
Auto Rental

Hi-Desert Taxi
Hesperia
949-8294
Taxicab

K N R II
21650 Hwy 18, Apple Valley
240-5212
Truck Rental

K N R Rentals
Victorville
843-7622
Truck Rental

Mina's Auto Sales
Victorville
243-7405

Auto Rental

Penske Truck Rental
Victorville
245-7736
Truck Rental

Red Hawk Taxi & Shuttle Service
Hesperia
949-9554
Shuttle Service; Taxicab

Royal Shuttle
21250 Sitting Bull, Apple Vly
247-5879
Shuttle Service

Ryder Truck Rental
Hesperia
244-0168
Truck Rental

Silver Lakes Golf Cars Etc
Helendale
952-2278
Golf Carts

Superior Shuttle Service
Hesperia
244-1510
Shuttle Service

Taxi Service of Adelanto
Adelanto
246-7752
Taxicab

Thrifty Car Rental
Victorville
241-9196
Auto Rental

U-Haul Co
Barstow
256-8786
Truck Rental

Ultimate Limousine, The
Victorville
843-9955
Limousine Svc

United Rentals
Hesperia
947-4810
Truck Rental

Valley Hi Toyota-Honda
Victorville
241-6484
Auto Rental

Victor Valley Transit Authority
Hesperia
948-3030
Bus Provider
FAX: 948-1380

Victorville Suzuki-Kawasaki
Victorville
241-2386
All-Terrain Vehicles

Yellow Cab of Victor Valley
Hesperia
956-5633
Taxicab

TRASH/GARBAGE & RUBBISH

See "Garbage/Trash & Rubbish"

TREE SERVICES

A Backhoe-Skip & Dump Truck Service
Victorville
245-7875

All in One Tree Service
Apple Valley
961-7524

Barnes Richard
Apple Valley
247-1904

Gary's Tree Service & Stump Removal
Apple Valley
240-0746
Stump Removal

High Desert Tree Service
Hesperia
244-7384

Munoz Andres
10945 Kiowa, Apple Valley
247-3126

Quality Tree Service
Apple Valley
247-6245

Tip Top Arborists Inc
Victorville
843-8412
Removal

Wilderness Tree Service
Victorville
241-9152

UTILITIES

Apple Valley Foothill CWD
22545 Del Oro, Apple Valley
247-1101
Water

Apple Valley Heights CWD
9430 Cerra Vista, Apple Vly
247-7330
Water

Apple Valley Ranchos Water Company
21760 Ottawa, Apple Vly
247-6484
FAX: 247-1654
Water

Apple Valley View Mutual Water Company
24288 Shoshone, Apple Vly
247-4217
Water

Charter Communications
Victorville
843-3000
Cable

County Service Area 64
Victorville
955-9885
Water

Department of Water Resources
Hesperia
389-2202
Water

Dig Alert
800-422-4133

Edison
Victorville
951-3237 OR 800-655-4555
FAX: 951-3159
Electric

Juniper Riviera CWD
25715 Santa Rosa, Apple Vly
247-9818
Water

Mariana Ranchos CWD
9600 Manzanita, Apple Vly
247-9405
Water

Mojave Water Agency
Apple Valley
240-9201
Water

Rancheritos Mutual Water Company
21832 Viento, Apple Valley
247-3730
Water

Southern California Water Company
13608 Hitt, Apple Valley
247-7420
FAX: 247-3441
Water

Southwest Gas Corp
Victorville
951-4037 OR 800-443-8093
Emergencies: 800-762-9294
FAX: 951-4042
Gas

Spring Valley Lake CSA 64
(AV equestrian area)
955-9885
Water

Thunderbird CWD
24737 Standing Rock, Apple Vly
247-2503
Water

Verizon
Victorville
242-0266
FAX: 243-5652
Telephone

Victor Valley Wastewater Reclamation Authority
Victorville
246-8638
FAX: 246-5440

VIDEO SERVICES

See "Film/Video Production & Services"

WATER-BOTTLED & BULK

High Desert Bottled Water
Hesperia
244-3334

King Water
Victorville
241-4800

Master's Water Service
Hesperia
244-5073

Route 66 H20 Inc
Apple Valley
247-1966

Water World
Victorville
843-5292

Watermart
Phelan
868-9957

WATER DAMAGE RESTORATION

See "Fire & Water Damage Restoration"

WATER HAULING

Creative Water Service
10274 Merino, Apple Valley
240-5805

Don Enlow Water Truck Rental
Apple Valley

242-2567

Max's Water Service
Lucerne Valley
248-2913

Stay Wet Water Trucks
Hesperia
956-5695

WATER PURIFICATION & FILTRATION EQUIPMENT

AAA Purification
16048 Tuscola, Apple Valley
242-9714
Purification & Filtration Equipment; Water Treatment Equip, Service & Supplies

Apple Valley Pump & Well Services
Apple Valley
961-0740
Well Drilling, Equip & Service

California Turf Irrigation Supply
Hesperia
244-3621
Well Drilling, Equip & Service

Cleghorn Treatment Plant
Hesperia
389-2329
Purification & Filtration Equipment; Water Treatment Equip, Service & Supplies

Culligan Water Conditioning
16048 Tuscola, Apple Valley
242-8884
Purification & Filtration Equipment; Water Treatment Equip, Service & Supplies

Hi Desert Drillers Inc
Apple Valley
946-2695
Well Drilling, Equip & Service

Independent Well Drilling
Apple Valley

247-9882
Well Drilling, Equip & Service

Lifetime Solutions
Victorville
951-7605
Purification & Filtration
Equipment

McDougall's Well Drilling
Lucerne Valley
248-7464
Well Drilling, Equip & Service

Rainsoft Water Treatment Systems
Victorville
951-7605
Purification & Filtration
Equipment

Superior Soft Water
Barstow
256-3621
Purification & Filtration
Equipment

Tibban Tanks
Adelanto
246-4646
Water Well Drilling & Pump
Contractor

Van Norman Well Drilling Inc
Lucerne Valley
248-7543
Well Drilling, Equip & Service

Wallis Randall Water Well Service
Barstow
800-726-3979
Supply Systems

Water Doctor
Victorville
951-7605
Purification & Filtration
Equipment

WEED CONTROL SERVICE

Adscot Pest Control Inc
13599 Delmar, Apple Valley

247-7999

All-Pro Termite Pest Control Co
Apple Valley
242-2344

Dump Truck Tractor Hauling Service
Victorville
951-7599

K & R Tractorworks
Baldy Mesa
947-6450

Kempton Company
Apple Valley
247-7838

LawnMaster
Apple Valley
242-2931

Ragains Lawn Care
Apple Valley
247-0878

Walkers Tractors Service
Hesperia
949-3103

WELDING

Accurate Arc Welding
Victorville
946-2433

Advanced Performance Fabricators
Hesperia
948-4588

Airgas
Hesperia
244-1606
Equipment & Supplies

Allfence
12205 Central, Apple Valley
961-3362

Allied Muffler of Hesperia Inc
Hesperia
949-0044

American Welding Shop

Helendale
245-1678

Bear Valley Fabricators & Steel Supply Inc
22060 Bear Valley, Apple Vly
247-5381

C & D Fabworks
Hesperia
949-3907

California Tool & Welding Supply
Hesperia
244-1955 or 245-2402 (VV)
Equipment & Supplies

Certified Metal Supply LLC
Victorville
530-0058
Equipment & Supplies

David's Ornamental Welding
Hesperia
956-7689

Desert Industrial Inc
Hesperia
956-7724

Dyell Machine & Hydraulic Welding
Hesperia
244-3333

Gene's Auto Parts
Hesperia
244-0208
Equipment & Supplies

General Industrial Services Inc
10500 Caribou, Apple Valley
247-7300

Hayes Welding
Adelanto
246-4878

High Desert Metal Works
22276 Ottawa, Apple Valley
247-7763

Innis RV Parts & Service
Hesperia
949-6686

J & A Muffler Shop
Victorville
951-8383

Kuykendall Ray A
Hesperia
956-2545

Maloney Enterprise
Hesperia
949-5902

Marsano Welding
22164 Ottawa, Apple Valley
961-2293

McWelco Products
Hesperia
244-8876

Mechanical Man The
Hesperia
244-2049
Service Equipment & Repair

Medici Welding
Lucerne Valley
248-6913

New Brian L
20713 Otowi, Apple Valley
240-2167

On Line Fabrication
Hesperia
948-8800

Ornamental Welding & Design
Hesperia
244-1304

Project Fab
Hesperia
949-8530

R & S Welding
Hesperia
947-8247

R T Welding & Fabrication
Hesperia
948-5337

Radmyc Welding & Fabrication
Hesperia
244-2521

SCR Welding Service
Hesperia
244-1394

Stoody Industrial & Welding
Victorville
530-0765
Equipment & Supplies

V & L Powdercoating
22163 Powhatan, Apple Vly
240-6635

Victor Valley Fabricators
14075 Joshua, Apple Valley
247-8852

Victor Valley Welding-Hydraulics
Hesperia
244-3222

Vinman Performance Coatings & Fabrication
Hesperia
947-4450

Wiese McBeth & Watkins
Victorville
245-5836

FIRST RESPONDERS/FACILITIES CONTACT LIST

C-O-N-F-I-D-E-N-T-I-A-L

NOT FOR PUBLIC VIEW

(FOR EOC GENERAL STAFF & MANAGEMENT TEAM ONLY)

EOC RESPONSE STAFF
LOCAL EMERGENCY RESPONSE AGENCIES
ESSENTIAL FACILITIES
CRITICAL FACILITIES

NAME	AGENCY/TITLE	EOC POSITION	HOME PHONE	NEXTEL PHONE
Acevedo, Orlando	TAV/	Liaison Section Coordinator		
Antobam, Kofi	TAV/Assistant Director of Finance	Finance/Accounting Manager	C	
Bell, Frank	AVPD/Lieutenant	Operations Section Coordinator	O	
Bossard, Denise	TAV/Executive Secretary	Liaison Officer	N	
Cady, Mike	TAV/Public Works	Public Works/Building & Safety Branch Coordinator	F I	
Carroll, Patrick	TAV/Building Official	Damage/Safety Assessment Unit	D E	
Cornett, Barbara	TAV/Animal Control Supervisor	Animal Care Unit	N	
Cron, Dennis	TAV/Public Services Manager	Liaison Section Coordinator	T I	
Guarrera, Joseph	AVFPD/TAV Emergency Services Officer	EOC Coordinator	A L	
Hill, Trish	AVPD/Community Liaison Officer	PIO	I N	
Hultquist, Sid	AVFPD/Fire Chief	EOC Director (alternate)/ Fire Services Coordinator	F O R	
Martin, Kathie	TAV/Public Relations Officer	PIO	M A	
Parsons, Mike	AVFPD/Division Chief	Operations Section Coordinator	T I	
Puckett, Marc	TAV/Director of Finance	Finance/Administration Section Coordinator	O N	
Reynolds, Mark	AVFPD/Finance Officer	Finance/Administration Section Coordinator		
Robinson, Frank	TAV/Town Manager	EOC Director		
Tomlin, Lana	AVPD/Police Chief	EOC Director (alternate)/Law Enforcement Svcs Coordinator		
Ward, Susan	TAV/Administrative Services Manager	Planning/Intelligence Section Coordinator		
Webb, Sierra	TAV/Events Coordinator	PIO		
Whiteside, Gina	TAV/Projects Manager	Planning/Intelligence Section Coordinator		

LOCAL EMERGENCY RESPONSE AGENCIES

AGENCY	ADDRESS	PHONE
American Medical Response	14828 7th Street, Victorville	(760) 245-7051
American Red Cross-High Desert Chapter	16248 Desert Knolls Drive, Victorville	(760) 245-6511
Apple Valley Fire Protection District	22400 Headquarters Drive, Apple Valley	(760) 247-7618
Apple Valley Police Department	14931 Dale Evans Parkway, Apple Valley	(760) 247-7400
Bureau of Land Management	18809 Central Road, Apple Valley	(760) 240-8541
California Army National Guard	17988 Highway 18, Apple Valley	(760) 242-2509
California Highway Patrol	14210 Amargosa Road, Victorville	(760) 241-1186
Cal-Trans	13693 Mariposa Road, Victorville	(760) 241-2321
Federal Bureau of Investigations	14011 Park Avenue, Victorville	(760) 951-7119
Reach-Upland Fire Air Ambulance	1257 N. Airport Drive, Upland	(909) 931-4180
Mercy Air Ambulance	1670 Miro Way, Rialto	(888) 499-9495
Salvation Army Corps	14585 La Paz Drive, Victorville	(760) 245-2545
San Bernardino County Fire Department	157 W. 5th Street, San Bernardino	(909) 387-5974
San Bernardino County Sheriff's Department	14455 Civic Drive, Victorville	(760) 243-8720

ESSENTIAL FACILITIES

Essential facilities are defined as structures, areas, or systems that significantly or directly affect the public health and safety of the community, i.e., police and fire stations, hospitals, utilities (water, sewer, electrical, gas, communications), and Shelter/Schools. For records of industrial facilities in the Town of Apple Valley that handle hazardous materials, refer to the Apple Valley Fire Protection District, Fire & Life Safety Section.

Sector #	Essential Facility	Location	*Daytime Phone #	Facility Type
1	Apple Valley Fire Station #331/EOC	22400 Headquarters Drive	247-7618	Fire
1	Apple Valley Fire Station #332	18857 Highway 18	242-3252	Fire
1	Apple Valley Fire Station #333	20604 Highway 18	247-7141	Fire
1	St. Mary Medical Center	18300 Highway 18	242-2311	Hospital
1	Apple Valley Police Department	14931 Dale Evans Pkwy	240-7400	Police
1	Church of the Valley	14933 Wakita	247-7817	Shelter
1	Mojave Mesa Elementary School	15552 Wichita Road	242-5883	Shelter/School
1	Rancho Verde Elementary School	14334 Pioneer Road	247-2663	Shelter/School
1	Academy of Academic Excellence	18350 Highway 18	946-5414	Shelter/School
1	Sycamore Rocks Elementary School	23450 South Road	240-3332	Shelter/School
1	Phoenix Academy	20700 Thunderbird Road	242-7011	Shelter/School
1	Southwest Gas Corporation Victorville Tap	Southeast corner of Central Road and Quarry Road	241-9321	Utility/Gas
1	Verizon Desert Knolls Remote	15740 Outer Highway 18	800-772-5153	Utility/Telephone
1	Verizon North Apple Valley Remote	West side of Central Road @ El Centro Road	800-772-5153	Utility/Telephone
1	Apple Valley Ranchos Water Company Bell Mountain Tank	200 yards west of Dale Evans Parkway & 1.7 miles north of Corwin Rd	247-6411	Utility/Water
1	Apple Valley Ranchos Water Company Corwin Booster	Corwin Road, north side, 1 lot east of Choco Road	247-6411	Utility/Water
1	Apple Valley Ranchos Water Company Desert Knolls Reservoir	Kasson Court @ Kasson Road (north of Kaibab Road)	247-6411	Utility/Water
1	Apple Valley Ranchos Water Company Stoddard Booster	Lafayette Street, east of Rialto Avenue	247-6411	Utility/Water
1	Apple Valley Ranchos Water Company Stoddard Tank	Navajo Road, north of Stoddard Wells Road	247-6411	Utility/Water
1	Apple Valley Ranchos Water Company Well #10R	16514 South Road	247-6411	Utility/Water
1	Apple Valley Ranchos Water Company Well #12	To the rear of 13288 Choco Road	247-6411	Utility/Water
1	Apple Valley Ranchos Water Company Well #15	To the rear of 14081 Quinnault Road	247-6411	Utility/Water
1	Apple Valley Ranchos Water	To the rear of 21483	247-6411	Utility/Water

	Company Well #24	Waalew Road		
1	Apple Valley Ranchos Water Company Well #7	16916 Dante Road (300 yards west of Stoddard Wells Road)	247-6411	Utility/Water

Sector #	Essential Facility	Location	*Daytime Phone #	Facility Type
1	Apple Valley Ranchos Water Company Youngstown Booster	23860 Cahuilla Road	247-6411	Utility/Water
1	Apple Valley Ranchos Water Company Youngstown Reservoir	South Road, north side, east of Moccasin Road	247-6411	Utility/Water
1	Southern California Water Company Central Plant Well	.25 miles north of Waalew Road, west side	247-3391	Utility/Water
1	Southern California Water Company Papago Well	17230 Central Road	247-3391	Utility/Water
1	Southern California Water Company Yucca Terrace Tanks	Half-way up side of hill on rock outcropping north of Yucca Terrace and Valley Crest Terrace	247-3391	Utility/Water
2	Apple Valley Fire Station #334	12143 Kiowa Road	247-0164	Fire
2	Apple Valley Fire Station #336	19235 Yucca Loma Road		Fire
2	Apple Valley Community Center	13467 Navajo Road	247-6411	Shelter
2	Apple Valley District Officesl	12555 Navajo Road	247-7267	Shelter/School
2	Desert Knolls Elementary School	18213 Symeron Road	242-3441	Shelter/School
2	Vanguard Prep	13073 Mesquite Road	961-1066	Shelter/School
2	New Hope Community Church	12345 Navajo Road	247-2127	Shelter
2	Rio Vista Elementary School	13590 Havasu Road	240-0280	Shelter/School
2	Willow Park Continuation High School	21950 Nisqually Road	240-4252	Shelter/School
2	Yucca Loma Elementary School	21351 Yucca Loma Road	247-2623	Shelter/School
2	Southern California Edison Lions Park Substation	Southwest of Lions Park on Highway 18	800-611-1911 (24-hr)	Utility/Electrical
2	Verizon Apple Valley Central Office	13643 Navajo Road	800-772-5153	Utility/Telephone
2	Verizon West Apple Valley Remote	12295 Yorkshire Road	800-772-5153	Utility/Telephone
2	Apple Valley Ranchos Water Company Hilltop Reservoir	To the rear of 20600 Highway 18	247-6411	Utility/Water
2	Apple Valley Ranchos Water Company Well #16	Northwest corner of Sitting Bull Road & Tawya Road	247-6411	Utility/Water
2	Apple Valley Ranchos Water Company Well #17	To the rear of 14909 Nokomis Road	247-6411	Utility/Water
2	Apple Valley Ranchos Water Company Well #18	14510 Riverside Drive	247-6411	Utility/Water
2	Apple Valley Ranchos Water Company Well #19	21308 Sitting Bull Road	247-6411	Utility/Water
2	Apple Valley Ranchos Water Company Well #20	To the rear of 14670 Mandan Road	247-6411	Utility/Water
2	Apple Valley Ranchos Water Company Well #21	21292 Powhattan Road	247-6411	Utility/Water

Sector #	Essential Facility	Location	*Daytime Phone #	Facility Type
2	Apple Valley Ranchos Water Company Well #22	21090 Ottawa Road	247-6411	Utility/Water
2	Apple Valley Ranchos Water Company Well #23	15302 Apple Valley Road	247-6411	Utility/Water
2	Apple Valley Ranchos Water Company Well #25	18555 Tuscola Road	247-6411	Utility/Water
2	Apple Valley Ranchos Water Company Well #26	18588 Seneca Road	247-6411	Utility/Water
Sector #	**Essential Facility**	**Location**	***Daytime Phone #**	**Facility Type**
2	Apple Valley Ranchos Water Company Well #28	Riverside Drive (2 lots north of Symeron Road)	247-6411	Utility/Water
2	Apple Valley Ranchos Water Company Well #32	Apple Valley Country Club Golf Course	247-6411	Utility/Water
2	Apple Valley Ranchos Water Company Well #4	To the rear of 21760 Ottawa Road	247-6411	Utility/Water
2	Southern California Water Company Anoka Well	Anoka Road, south side, 350-feet east of Pauhaska Road	247-3391	Utility/Water
2	Southern California Water Company Bear Valley Well	To the rear of 21834 Bear Valley Road	247-3391	Utility/Water
2	Southern California Water Company Mesquite Well	.2 miles north of Pah-Ute Road, 300-feet west of Mesquite Road (down gravel track)	247-3391	Utility/Water
2	Southern California Water Company Mohawk Well & Tank	Southeast corner of Mohawk Road and Nandina Road	247-3391	Utility/Water
3	Apple Valley Fire Station #335	21860 Tussing Ranch Road	247-9666	Fire
3	Apple Valley High School	11837 Navajo Road	247-7206	Shelter/School
3	Lone Wolf Colony	23200 Bear Valley Road	247-7878	Shelter
3	Mariana Elementary School	10601 Manhasset Road	247-7258	Shelter/School
3	Sandia Elementary School	21331 Sandia Road	240-5125	Shelter/School
3	Southern California Edison South Substation	Southeast corner of Deep Creek Road and Grande Vista Road	800-611-1911 (24-hr)	Utility/Electrical
3	Southwest Gas Corporation Roundup Way Tap	South side of Roundup Way, .15 miles east of Kiowa Road	241-9321	Utility/Gas
3	Verizon Del Oro Remote	21665 Del Oro Street	800-772-5153	Utility/Telephone
3	Verizon South Apple Valley Remote	9755 Navajo Road	800-772-5153	Utility/Telephone
3	Apple Valley Foothill County Water District Well & Tank	22545 Del Oro Road	247-1101	Utility/Water
3	Apple Valley Heights County Water District Wells	Pioneer Road, .2 miles south of Tussing Ranch Road, west side	247-7330	Utility/Water
3	Apple Valley Ranchos Water Company Hilltop Well #30 & Tank	Westmont Drive, north of Valley Center Drive, and east of Apple Valley Road	247-6411	Utility/Water

3	Apple Valley Ranchos Water Company Well #11R	11775 Jamacha Road	247-6411	Utility/Water
3	Apple Valley Ranchos Water Company Well #31	Apple Valley Road, west side .2 miles south of Bear Valley Road	247-6411	Utility/Water
3	Apple Valley Ranchos Water Company Well #9	11029 Saratoga Road	247-6411	Utility/Water
1, 2, 3	Sewer Stations … refer to Town of Apple Valley Public Works	Various Locations	240-7000 Ext. 7520	Utility/Sewer

For after-hours contact information, see the Emergency Services Officer.

CRITICAL FACILITIES

Critical facilities are defined as structures, areas, or systems that, when damaged, could significantly impact the community. Although direct health and safety issues may not be a consideration, structural damage will have significant consequences to the community or affect a large portion of its population, i.e., traffic lights, railroad crossings, bridges, schools, nursing homes.

Sector #	Critical Facility	Location or Responsible Agency	*Daytime Phone #	Facility Type
1	Valley Crest Residential Care	18524 Corwin Road	242-3188	Assisted Living
1	A&L Manor	20330 Rimrock Road East	946-0288	Nursing Home
1	Rimrock Residential Care Home	20115 Rimrock Road East	242-7340	Nursing Home
1	Granite Hills High School	22900 Esaws Avenue	961-2290	School
1	Lewis Center for Educational Research/Thunderbird Campus	20702 Thunderbird Road	242-3514	School
1	St. Timothy's Episcopal School	15757 St. Timothy Road	242-4256	School
1	Bridge: Dale Evans Parkway & Interstate 15 *(out of Town limits but may disrupt transportation routes)*	Controlled by Cal-Trans	241-2321	Transportation/Bridge
1	Bridge: Highway 18 @ Mojave River *(out of Town limits but may disrupt transportation routes)*	Controlled by Cal-Trans	241-2321	Transportation/Bridge
1	Rail Spur: Dale Evans Parkway between Corwin Road & Johnson Road	Controlled by CEMEX	381-7639 (Safety Mgr)	Transportation/Rail
1	Traffic Light: Central Road & Esaws Road	Controlled by Town of Apple Valley	240-7000	Transportation/Traffic Light
1	Traffic Light: Highway 18 & Apple Valley Road	Controlled by Cal-Trans	241-2321	Transportation/Traffic Light
1	Traffic Light: Highway 18 & Bass Hill Road	Controlled by Cal-Trans	241-2321	Transportation/Traffic Light
1	Traffic Light: Highway 18 &	Controlled by Cal-Trans	241-2321	Transportation/Traffic

Sector #	Critical Facility	Location or Responsible Agency	*Daytime Phone #	Facility Type
	Central Road			Light
1	Traffic Light: Highway 18 & Corwin Road	Controlled by Cal-Trans	241-2321	Transportation/Traffic Light
1	Traffic Light: Highway 18 & Dale Evans Parkway	Controlled by Cal-Trans	241-2321	Transportation/Traffic Light
1	Traffic Light: Highway 18 & Flathead Road	Controlled by Cal-Trans	241-2321	Transportation/Traffic Light
1	Traffic Light: Highway 18 & Kasota Road	Controlled by Cal-Trans	241-2321	Transportation/Traffic Light
1	Traffic Light: Highway 18 & Kiowa Road	Controlled by Cal-Trans	241-2321	Transportation/Traffic Light
1	Traffic Light: Highway 18 & Navajo Road	Controlled by Cal-Trans	241-2321	Transportation/Traffic Light
1	Traffic Light: Highway 18 & Quinnault Road	Controlled by Cal-Trans	241-2321	Transportation/Traffic Light

Sector #	Critical Facility	Location or Responsible Agency	*Daytime Phone #	Facility Type
1	Traffic Light: Highway 18 & Rancherias Road	Controlled by Cal-Trans	241-2321	Transportation/Traffic Light
1	Traffic Light: Highway 18 & Tao Road	Controlled by Cal-Trans	241-2321	Transportation/Traffic Light
2	AAA Agape Senior Care Placement Inc.	14650 Pamlico Road	242-5683	Nursing Home
2	Sitting Bull Academy	19445 Sitting Bull Rd	961-8479	Schooll
2	Apple Valley Head Start	13589 Navajo Road	247-6955	School
2	Lewis Center for Educational Research/Mojave River Campus	17500 Mana Road	946-5414	School
2	Bridge: Bear Valley Road @ Mojave River	Controlled by Town of Apple Valley	240-7000	Transportation/Bridge
2	Traffic Light: Apple Valley Road & Sitting Bull Road	Controlled by Town of Apple Valley	240-7000	Transportation/Traffic Light
2	Traffic Light: Apple Valley Road & Yucca Loma Road	Controlled by Town of Apple Valley	240-7000	Transportation/Traffic Light
2	Traffic Light: Bear Valley Road & Apple Valley Road	Controlled by Town of Apple Valley	240-7000	Transportation/Traffic Light
2	Traffic Light: Bear Valley Road & Kiowa Road	Controlled by Town of Apple Valley	240-7000	Transportation/Traffic Light
2	Traffic Light: Bear Valley Road & Navajo Road	Controlled by Town of Apple Valley	240-7000	Transportation/Traffic Light
2	Traffic Light: Navajo Road & Sitting Bull Road	Controlled by Town of Apple Valley	240-7000	Transportation/Traffic Light
2	Traffic Light: Bear Valley Road & Jess Ranch Parkway	Controlled by Town of Apple Valley	240-7000	Transportation/Traffic Light
2	Traffic Light: Bear Valley Road & Reata Road	Controlled by Town of Apple Valley	240-7000	Transportation/Traffic Light
3	Merrill Gardens at Apple Valley	11825 Apple Valley Road	961-1212	Assisted Living

3	Abundant Care Ranch	10408 Mockingbird	247-3537	Nursing Home
3	Apple Valley Christian Center	11959 Apple Valley Road	240-5051	Nursing Home
3	Valley Christian School	19923 Bear Valley Road	247-2933	School
3	Bridge: Railroad bridge over Deep Creek Road, just north of Rock Springs Road	Controlled by Mitsubishi Cement Plant	248-7373	Transportation/Bridge
3	Rail Spur: Central Road between Tussing Ranch Road & Ocotillo Road	Controlled by Mitsubishi Cement Plant	248-7373	Transportation/Rail
3	Rail Spur: Kiowa Road between Tussing Ranch Road & Ocotillo Road	Controlled by Mitsubishi Cement Plant	248-7373	Transportation/Rail
2	Rock Springs Retirement	20594 Bear Valley	247-1766	Indep Living
1	County School			
2	Apple Valley Senior Citizen Club	13188 Central Rd		Shelter

Hazard Mitigation Plan

2013

Town of Apple Valley, CA

Primary Point of Contact
Joseph A. Guarrera
Emergency Services Officer
Town of Apple Valley
22400 Headquarters Drive
Apple Valley, CA 92307
760-247-7618 (Office)
jguarrera@applevalleyfd.com

RESOLUTION NO. _____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF APPLE VALLEY, CALIFORNIA, ADOPTING THE 2011 LOCAL HAZARD MITIGATION PLAN UPDATE, AUTHORIZING FUTURE NON-SUBSTANTIVE AMENDMENTS TO THE PLAN, AND RESCINDING RESOLUTION NO. 2005-12

WHEREAS, the preservation of life and property is an inherent responsibility of local, State and Federal government; and

WHEREAS, the Town of Apple Valley joined with agencies in San Bernardino County to develop, adopt and maintain a multi-jurisdictional Hazard Mitigation Plan; and

WHEREAS, the Town is charged and entrusted with the protection of persons and property prior to and during emergencies, and/or disaster conditions; and

WHEREAS, the goal of a Hazard Mitigation Plan is to minimize, reduce or eliminate loss of life and/or property; and

WHEREAS, this Hazard Mitigation Plan represents a comprehensive description of the Town's commitment to reducing, preventing or eliminating potential impacts of disasters caused by natural and human-caused hazards; and

WHEREAS, the Town of Apple Valley previously adopted its Hazard Mitigation Plan with the adoption of Resolution No. 2005-12; and

WHEREAS, the Town Council desires to rescind Resolution No. 2005-12 and adopt the updated Hazard Mitigation Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, the Town has undertaken a comprehensive planning effort in developing the Local Hazard Mitigation Plan by organizing resources, assessing risks, and developing and implementing a mitigation plan and monitoring process; and

WHEREAS, the Hazard Mitigation Plan is a Federal requirement under the Disaster Mitigation Act of 2000 for the Town to receive Federal funds for disaster recovery and mitigation; and

WHEREAS, the Hazard Mitigation Plan established a coordinated effort to support mitigation activities and identifies measures to combat natural and man-made hazards within our Town; and

WHEREAS, the Hazard Mitigation Plan is an extension of the State of California Multi-Hazard Mitigation Plan, and will be reviewed and exercised periodically and revised as necessary to meet changing conditions; and

WHEREAS, the Town of Apple Valley agrees to adopt this Hazard Mitigation Plan and urges all officials, employees, public and private organizations, and citizens, individually and collectively, to do their share in furthering the goals and objectives of hazard mitigation within the Town of Apple Valley.

NOW, THEREFORE, THE TOWN COUNCIL OF THE TOWN OF APPLE VALLEY DOES HEREBY RESOLVE, DETERMINE AND ORDER AS FOLLOWS:

Section 1.   Resolution No. 2005-12 is hereby rescinded.

Section 2.   The Town Council approves the Local Hazard Mitigation Plan of the Town of Apple Valley.

Section 3.   The Town Council authorizes the Director of Emergency Services to make necessary administrative and operational changes to the plan that are in keeping with the intent of the plan as approved.

Section 4.   The Town Council authorizes the Director of Emergency Services, or his duly appointed representative, to perform all duties required to carry out the Local Hazard Mitigation Plan.

Section 5.   That the Town Clerk shall certify to the passage and adoption of this resolution and enter it into the book of original resolutions.

PASSED, APPROVED, AND ADOPTED this _____ day of _____ 2011.

Curt Emick, MAYOR

ATTEST:

LA VONDA PEARSON
TOWNCLERK

Table of Contents

Executive Summary

The Disaster Mitigation Act of 2000 (DMA) was passed by Congress to emphasize the need for mitigation planning to reduce vulnerability to natural and human-caused hazards. DMA 2000 amended the Robert

T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act; 42 United States Code 5121 et seq.) by repealing the act's previous Mitigation Planning section (409) and replacing it with a new Mitigation Planning section (322).

To implement the DMA 2000 planning requirements, the Federal Emergency Management Agency (FEMA) established mitigation planning requirements for states, tribes, and local communities, including the requirement to develop a Hazard Mitigation Plan to address known hazards that impact the Town of Apple Valley. The Town of Apple Valley's Hazard Mitigation Plan includes resources and information to assist Town residents, public and private sector organizations, and others interested in participating in planning for natural hazards. This Hazard Mitigation Plan provides a list of activities that may assist Apple Valley in reducing risk and preventing loss from future hazard events. The action items address multi-hazard issues, as well as activities for earthquakes, flooding, and wildfires. While we cannot predict or protect ourselves against every possible hazard that may strike the community, we can anticipate many impacts and take steps to reduce the harm they will cause. This Hazard Mitigation Plan starts an ongoing process to evaluate the risks different types of hazards pose to the Town, and to engage the Town and the community in dialogue to identify which steps are most important to pursue to reduce these risks. The Plan contains a background on the purpose and methodology used to develop the mitigation plan, a profile of Apple Valley, and sections on hazards that occur within the City.

The Town and community members have worked to address certain aspects of the risk – such as strengthening infrastructures, developing strategies, and establishing emergency preparedness plans. This Plan will formalize this process and assure that these activities continue to be explored and improved over time. Over many years, this constant focus on disasters will make the Town, its residents, and businesses much safer.

This Plan meets the requirements of the federal DMA 2000, which calls for all communities to prepare mitigation plans. By preparing this plan, the Town of Apple Valley is eligible to receive federal mitigation funding after disasters and to apply for mitigation grants before disasters strike.

This Plan promotes sound public policy designed to protect citizens, critical facilities, infrastructure, private property, and the environment from natural hazards. This can be achieved by increasing public awareness, documenting the resources for risk reduction and loss-prevention, and identifying activities to guide the Town toward building a safer, more sustainable community.

SECTION 1 – INTRODUCTION

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 we cannot 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 community must be prepared to provide efficient and effective response and recovery.

The purpose of this Hazard Mitigation Plan is to assess the significant natural and manmade hazards that may affect the Town of Apple Valley and its inhabitants, evaluate and incorporate ongoing mitigation activities and related programs in the community, determine additional mitigation measures that should be undertaken, and to outline a strategy for implementation of mitigation projects. In addition, this plan has been developed to identify actions, policies and tools for implementation over the long-term resulting in reduction of future losses community wide. The established mitigation projects provided were identified and reviewed by members of the planning committee. The Town of Apple Valley has established an effective, inclusive, comprehensive, and long-term plan against natural and manmade hazards.

Citizens and professionals active in disaster planning, response, and mitigation provided important input in the development of the plan and recommended goals and objectives, mitigation measures, and priorities for actions.

This plan fulfills the requirements of the following programs:

1. Pre-Disaster Mitigation (PDM)

2. National Flood Insurance Programs (NFIP) Community Rating System (CRS)

3. Hazard Mitigation Grant Program (HMGP)

Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5165, enacted under section 104 of the Disaster Mitigation Act of 2000, P.L. 106-390, provides new and revitalized approaches to mitigation planning. Section 322, in concert with other sections of the Act, provides a significant opportunity to reduce the

Nation's disaster losses through mitigation planning and emphasizing the need for State, local and tribal entities to closely coordinate mitigation planning and implementation efforts.

A major requirement of the law is the development of local hazard mitigation plans. These plans must be developed and approved by the Federal Emergency Management Agency (FEMA) before November 1,

2004, in order for the local jurisdictions to be eligible for Hazard Mitigation Grant Program (HMGP) project funding from a Presidentially-declared disaster that occurs after this date. Local mitigation plans must be reviewed, updated and re-approved by FEMA every five years to remain eligible. This Mitigation Plan has been updated to meet the requirements of the Act and the regulations established by FEMA. The FEMA regulations were published in the Federal Register on February 26, 2002, as an interim final rule at 44 CFR Parts 201 and 206. FEMA may revise the Interim Final Rule and publish a Final Rule; however, until such time, the Interim Final Rule will serve as the rule for mitigation planning implementation.

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

This section is to provide a broad perspective, brief history and describes the makeup and development of the community.

1.3.1. Physical Setting

The Town of Apple Valley is located in the Mojave Desert of the County of San Bernardino, at an elevation of 3,000 feet. Known as the "High Desert", Apple Valley consists of 78 square miles in its incorporated boundaries and a sphere of influence encompassing 200 square miles. The Town borders Interstate 15 to the north, Joshua Road to the east, the foothills of the San Benrardino Mountains to the south, and the Mojave River to the west.

Apple Valley is primarily desert-rural and consists of a typical mountain-and-basin topography with sparse vegetation. The natural geographic vulnerabilities are: Mojave River, San Bernardino Mountains, Dry Lake Bed, and the Desert Knolls area (generally an area with a slope greater than 15%).

Apple Valley experiences an average of 350 days of sunshine per year with summer temperatures ranging from 40 degrees Fahrenheit (F) to 100 degrees F., and winter temperatures dipping down to 10 degrees F. to a high of 70 degrees F. Prevailing winds range from 5-20 knots/hour from the south/southwest to the northeast.

The Mojave River rises in the San Bernardino Mountains at the Lake Silverwood and Mojave River Forks Reservoirs. The River runs in a northerly direction the entire length of the Town's western boundary. Due to the porous soil and rapid evaporation, the River is primarily dry in the area adjacent to Apple Valley. A flow of water is present during major rains and upon release of water from Lake Silverwood (contained by the Cedar Springs Dam and Mojave Dam).

The Town of Apple Valley also consists of a dry lake bed area that consists of sparse population. This area and the area along the Mojave River is part of the 100 Year Flood Area (Flood Zone A).

FIGURE 1 REGIONAL SETTING (CREDIT: 2011 GOOGLE MAP DATA)

1.3.2. History

The Town of Apple Valley was incorporated in 1988; however, its history goes back much further. Local historians have found signs of Serrano Indian camps along the Mojave River in Apple Valley. They were already there when Father Francisco Garces arrived in 1776, as he established the Spanish missions throughout California. In the late 1800s, the Paiute Indians also migrated to this area. The Mojave River Trail hosted trappers, gold prospectors, pack mules and Mormon wagon trains—over 13,000 people passed through there between 1849 and 1859. It was in 1860 that the first cabin was built in Apple Valley by Silas Cox, and the first road was cut the following year.

There are many stories as to how Apple Valley acquired its name. According to the late Mary Hampton, local historian, the name arose from the abundance of apple orchards that existed there in the 1920s. Some say the name "Apple Valley" originated from The Appleton Land Company that was based in this area in the early 1900s. Ursula Poates, one of the first settlers in the area, is credited with saying, "There were some apples being raised along the river in those early days, but not by the ton, so I just cut it down and called it Apple Valley!" By 1920, apples were being grown by the ton at award-winning orchards. Unfortunately, with the Great Depression and the cost of pumping water for irrigation, the orchards died off in the 1930s.

With a pleasant climate and lots of land, many types of ranches were built in the area. They touted the dry desert air as a cure for ailments of all sorts, including tuberculosis and asthma. Other ranches provided a haven for shell-shock victims of World War I, while still others developed into guest ranches. People would come to Apple Valley to enjoy the western lifestyle where they could ride horses, attend rodeos and just get away from the big city.

The modern founders of Apple Valley were Newton T. Bass and B.J. "Bud" Westlund, who were partners in the oil and gas industry in Long Beach, CA. Westlund and Bass formed the Apple Valley Ranchos Land Co. in 1946 and marketed the area as a destination resort and quality residential community - "The Golden Land of Apple Valley". They built the Apple Valley Inn and Hilltop House, and invited famous celebrities of Hollywood to come visit. Within ten years there were banks, churches and a school, along with a golf course, hospital and 180 businesses.

1.3.3. Demographics:

San Bernardino County Designated as a Coastal County within the State of California

The number of Americans residing in a coastal county passed the 150 million mark in 2005, making the coastal population larger than the entire U.S. population in 1950. Today, more than half of the U.S. population lives in a coastal area (as defined by the National Oceanic and Atmospheric Administration - NOAA), even though the 673 coastal counties constitute only about one fourth of the country's landmass.

FIGURE 2 – U.S. CENSUS BUREAU

As indicated by the map prepared by the U. S. Census Bureau, San Bernardino County is designated as a Coastal County within the State of California. Particular data exists demonstrating the effects of various types of risks within the county. It is important to use this information as a source point for evaluating the various risks that prevail not only in San Bernardino County, but the City of Yucaipa.

The growth in population of coastal areas illustrates the importance of emergency planning and preparedness for areas that are more susceptible to inclement weather conditions. The U.S. Census Bureau's official population estimates, along with annually updated socioeconomic data from the new American Community Survey, provide a detailed look at the nation's growing coastal population. Emergency planners and community leaders can better assess the needs of coastal populations using census data.

In 2005, the Town of Apple Valley had a population of 63,868 and that population has grown to 74,266 in 2009, with a median age of 33.41 and an average household size of 2.94.

Demographic Overview	
Current population (2009):	74,266
Current regional population (2007) :	333,061
Avg. Household Size (2009) :	2.94
Median Age (2009):	33.41
Home Ownership (2009):	70.43%
Total Households (2009):	25,088
Sources: Claritas Pop Facts Demographic Snapshot Report 04/09, Victorvalleyca.com Regional Profile 1/8/09	
* Regional population estimate is based on a total of Victorville, Hesperia, Apple Valley, and Adelanto populations; unincorporated areas are not included in this estimate.	

Historic and Projected Population Estimates				
1995	2000	2005	2009	2014
50,586	54,239	63,868	74,266	85,843
Annual Growth Rate:		Waiting for update		
Source: Claritas Pop Facts Demographic Snapshot Report 4/6/09; Town of Apple Valley Building and Safety Department; California Dept. of Finance, Table E-1 City/County Population Estimates witn Annual Percentage of Change.				

Age Distribution of Population		
Age Group	Total (2009)	% Distribution
0-17 years	20,915	28.16%
18-24 years	7,808	10.52%

25-34 years	10,001	13.47%
35-54 years	17,555	23.63%
55-74 years	13,147	17.70%
75 years and older	4,840	6.52%
TOTAL	74,266	100%

Claritas "Pop-Facts: Demographic Snapshot Report – 2009 Est. Population by Age," 4/6/09

Educational Attainment of Population over 25 Years of Age		
Years of School Completed	Total (2009)	% Distribution
Less than High School	7,973	17.5%
High School	12,659	27.80%
Some College	13,794	30.29%
Associate's Degree	3,624	7.96%
Bachelor's Degree	4,520	9.92%
Graduate Degree or higher	2,973	6.52%

Claritas "Pop-Facts: Demographic Snapshot Report/Est. Population by Age 25+ by Educational Attainment," 4/6/09

Income Level		
Per Capita (2009)	Median Household (2009)	Average Household (2009)
$22,848	$51,927	$66,959

Claritas "Pop-Facts: Demographic Snapshot Report /Est. Population by Age 25+ Educational Attainment,"4/6/09

Household Income Distribution

Annual Income	Total (2009)	% Distribution
Under $35,000	8,480	33.79%
$35,000- $49,999	3,695	14.73%
$50,000-$74,999	4,793	19.10%
$75,000- $99,999	3,246	12.94%
Over $100,000	4,874	19.42%
Claritas "Pop-Facts: Demographic Snapshot Report /Est. Households by Household income " 4/6/09		

Figure 3 Demographics Town of Apple Valley 2009

1.3.4 Existing Land Use

The land use types in Apple Valley are all related to a single, over-arching concept: that Apple Valley's quality of life is tied to its rural character, and that this character is to be preserved and protected for the long term health of the community. In Apple Valley "rural" means space -- unscarred mountains and vistas of desert valleys, neighborhoods of large lots where keeping horses is allowed, an extensive multi-use trail system, and landscaping consistent with the desert environment. The land use designations established in the Town's General Plan are provided below. The single family land use designations are consistent with those defined in Measure N (see further discussion below). Three land use designations are new to the General Plan: Estate Residential ., Mobile Home Park and Mixed Use.

Very Low Density Residential (R-VLD; 1 dwelling unit per 5 or more gross acres): This land use designation allows detached single family homes on lots of at least five gross acres. Multi-use trails should be integrated into all new projects in this designation, as appropriate. Also permitted are agricultural and ranching activities, animal keeping (both personal use and commercial) and

home occupations. May be appropriate for bed and breakfast and similar uses, and animalkeeping or agricultural-related commercial enterprises, such as feed stores, commercial stables and similar uses with approval of a conditional use permit.

Low Density Residential (R-LD; 1 dwelling unit per 2.5 to 5 gross acres): This land use designation allows detached single family homes on lots of two and a half to five gross acres. This designation provides for the rural and suburban environment. Multi-use trails should be integrated into all new projects in this designation, as appropriate. Also permitted are agricultural and ranching activities, animal keeping (both personal use and commercial) and home

occupations. May be appropriate for bed and breakfast and similar uses, with approval of a conditional use permit.

Estate Residential (R-E; 1 dwelling unit per 1 to 2.5 gross acres): This land use designation allows detached single family homes on lots of one to two and a half gross acres. Access on local roads in new subdivisions within this designation should be paved. Multi-use trails should be integrated into all new projects in this designation, as appropriate. Animal keeping for personal use, ranching activities and home occupations are appropriate land uses in this designation. May

be appropriate for bed and breakfast and similar uses, with approval of a conditional use permit.

Estate Residential . (R-E; 1 dwelling unit per 0.75 to 1.0 net acre): This land use designation is specifically designed for animal keeping. Multi-use trails should be integrated into all new projects in this designation, as appropriate. Animal keeping for personal use, ranching activities and home occupations are appropriate land uses in this designation. Centralized stables, corrals, show rings and similar facilities, available to all residents of a development project are

encouraged. May be appropriate for bed and breakfast and similar uses, with approval of a conditional use permit.

Single Family Residential (R-SF; 1 dwelling unit per 0.4 to 0.9 net acre): Lots in this designation must be a minimum of 18,000 square feet net, and may range to 39,200 square feet. This designation is intended to be composed of planned subdivisions with all utilities and public services. Animal keeping is permitted on lots zoned Equestrian Residential in the Development Code. Multi-use trails should be integrated into all new projects in this designation, as appropriate.

Medium Density Residential (R-M; 4 to 20 dwelling units per net acre): This designation is intended to promote a wide range of higher density residential units, including: single family attached; and multi-family units, including condominiums, townhomes and apartments. Projects restricted to senior citizens (age 55 and older) and providing various levels of care are also appropriate in this designation. Single family detached units are only permitted on lots of 18,000

square feet or greater in the Mountain Vista Estates area, as defined in Program 2.G.1. On all other lands designated Medium Density Residential within Town limits, single family detached units are prohibited. This land use designation should be a buffer between less intense residential designations and commercial or industrial designations, or major roadways. Future projects should be located in close proximity to commercial services, public transit and schools.

Mobile Home Park (MHP; 5-15 units per acre): This designation is applied to mobile home parks that existed upon adoption of the General Plan. New mobile home parks would be required to file

a General Plan Amendment and Change of Zone to assign this designation to the project. This designation applies to mobile home parks and mobile home subdivisions. Home occupations and recreational facilities and amenities associated with the mobile home use are also appropriate in this designation.

Mixed Use (M-U): The land use designation has been created to allow for the development of projects that include residential and retail and office commercial development in an integrated, master planned project. Residential development should occur over commercial development, or within a commercial complex (i.e. residential building abutting a commercial building). Residential development must occur at a density of 4 to 30 units per acre. Mixed Use projects are encouraged in The Village, on major roadways, and in close proximity to employment centers, such as the North Apple Valley Industrial Specific Plan area. Projects that propose residential parcels adjacent to commercial parcels, and do not truly integrate the land uses, will not qualify for this designation. The minimum size for a Mixed Use project is 1 acre.

Office Professional (O-P): This designation allows professional offices, and is intended to act as a buffer between General Commercial and residential land uses. This designation encourages high quality professional services with only ancillary retail commercial components. There is no minimum size for project sites in this designation, but assemblage of smaller parcels is encouraged.

General Commercial (C-G): This designation allows a broad range of retail uses, as well as office and service land uses. Typical uses will serve the needs of the Town's residents and businesses, in a shopping center setting. General retail stores, including all types of consumer goods, furniture and appliance sales, auto repair and sales are permitted in this designation. Restaurants, both sit-down and fast food, gasoline service stations and general office (secondary to retail uses) are also permitted in this designation. There is no minimum size for project sites in this designation, but assemblage of smaller parcels is encouraged.

Service Commercial (C-S): This designation is assigned to lands in The Village, and is intended as a transition designation allowing commercial and industrial land uses on a smaller scale. Its location in an established area of Town necessitates flexibility in development standards, due to existing development and infrastructure constraints. Land uses in this designation include vehicle

sales and service; lumber, home repair and building supply, general retail, warehousing and manufacturing uses completely contained within an enclosed structure. There is no minimum size for project sites in this designation, but assemblage of smaller parcels is encouraged.

Regional Commercial (C-R): This land use category allows retail uses that serve not only the residents and businesses of Apple Valley, but also of the surrounding region. Permitted uses in

this designation include auto malls, regional malls, business parks, factory stores and outlets, entertainment commercial, hotels and motels, restaurants, institutional and public uses. The minimum size for a Regional Commercial project site is 10 acres.

Planned Industrial (I-P): This land use designation allows high quality, non-polluting industrial land uses, either as free-standing uses or as part of master planned industrial parks. Uses permitted include warehousing, light manufacturing, research and development and administrative facilities. The minimum size for a Planned Industrial project site is 5 acres.

Public Facility (PF): This land use designation is assigned to public and quasi-public land uses, including Town Hall and other Town facilities, fire stations, schools, facilities of the County, State and federal government, water and sewer district, and utility substations and facilities. There is no minimum size in this land use designation.

Open Space (OS): This land use designation is applied to natural and active open space areas, including the knolls, Bell and Fairview mountains, the Mojave River, lands owned by Town, County, State and federal agencies for the purposes of recreation or conservation, and golf courses, parks or other recreational facilities.

Mineral Resources (MR): This land use designation is applied to lands in active mining operations. One such operation exists in theTown at the present time, located near Interstate 15. This land use designation allows mining operations permitted by the State for lands with significant deposits of concrete aggregate (please see the Mineral Resources Element).

Specific Plan: This designation is applied to lands on which a specific plan has been approved by the Town Council. The Specific Plan must conform to State law, and include maps and text that establish the land use designations; standards and guidelines for development; infrastructure requirements; and phasing for the specific plan area.

Figure 4 2009 Land Use Map, Exhibit II-2 – Source: Town of Apple Valley General Plan

Build Out Statistics

The Town consists of a total of 50,532 acres, of which 46,948.3 acres were within the Town limits prior to the addition of the two annexation areas. 3,583.2 acres were added as part of Annexations 2008-001 and 2008-002. The acreage, by land use designation, is shown in Tables II-1 and II-2, below.

Table II-1
Statistical Summary of Land Uses
(2008 Town Limits)

Land Use Designation	Town of Apple Valley		
	Developed Acres	Vacant Acres	Total Acres
Residential Land Uses			
Very Low Density Residential (1 du/5 or more gross ac)	212.0	1,749.5	1,961.5
Low Density Residential (1 du/2.5 - 5 gross ac)	450.7	3,071.7	3,522.4
Estate Residential (1du/1 – 2.5 gross ac)	3,308.2	3,308.0	6,616.3
Estate Residential ¾ (1 du/0.75 – 1 ac)	26.1	449.6	475.7
Single family Residential (1 du/0.4-0.9 ac)	8,811.2	3,770.7	12,581.9
Medium Density Residential (4- 20 du/ac)	826.2	1,057.0	1,883.1
Mobile Home Park (5-15 du/ac)	178.5	1.5	180.0
Mixed Use	90.8	229.7	320.5
Specific Plan	1,359.0	5,653.7	7,012.7
Total Residential Uses	**15,262.7**	**19,291.5**	**34,554.2**
Commercial Land Uses			
Mixed Use[1]	90.8	229.7	320.5
General Commercial	480.3	1,066.5	1,546.8
Regional Commercial	99.6	1,203.3	1,303.0
Service Commercial	152.4	179.2	331.6
Office Professional	64.7	546.7	611.3
Specific Plan/Commercial[1]	1,359.0	5,653.7	7,012.7
Total Commercial Uses[1]	**797.0**	**2,995.7**	**3,792.7**
Industrial Land Uses			
Planned Industrial	21.4	623.9	645.3
Specific Plan/Industrial[1]	1,359.0	5,653.7	7,012.7
Total Industrial Uses[1]	**21.4**	**623.9**	**645.3**
Other Land Uses			
Public Facility	330.2	132.0	462.2
Open Space	291.2	2,796.4	3,087.5
Mineral Resources	129.4	323.2	452.5
Street Rights-of-Way	2,771.1	1,182.8	3,953.9
Total Other Land Uses	**3,521.8**	**4,434.4**	**7,956.2**
Grand Total	**19,602.8**	**27,345.5**	**46,948.3**

[1] Specific Plan and Mixed Use acreage included under Residential, above.
Source: Aerial Information Systems, July 2008

Table II-2
Statistical Summary of Land Uses
Annexation No. 2008-001 and No. 2008-002

General Plan Land Use Designation	ANNEXATION NO. 2008-001 and 2008-002		
	Developed Acres	Vacant Acres	Total Acres
Residential Land Uses			
Estate Residential (1du/1 – 2.5 gross ac)	55.7	722.3	778.0
Medium Density Residential (4- 20 du/ac)	41.5	177.3	218.7
Mixed Use (4-30 du/ac)	0.0	94.8	94.9
Total Residential Uses	97.2	994.4	1,091.6
Commercial Land Uses			
Mixed Use[1]	0.0	94.9	94.9
General Commercial	12.3	50.5	62.8
Regional Commercial	7.2	435.7	442.9
Office Professional	0.0	183.1	183.1
Total Commercial Uses	19.5	669.3	688.8
Industrial Land Uses			
Planned Industrial	64.3	1,538.5	1,602.8
Other Land Uses			
Public Facility	0.0	5.1	5.1
Street Rights-of-Way	43.8	151.1	194.9
Grand Total All Land Uses	224.8	3,358.4	3,583.2

[1] Mixed Use Acreage included under Residential, above.

Source: Aerial Information Systems, July 24, 2008.

The build out potential of these lands is shown categorically in Table II-3, Residential Land Use Designation Build Out Summary; Table II-4, Commercial and Industrial Land Use Designation Build Out Summary; and Table II-5, Other Land Use Designation Build Out Summary.

Table II-3
Residential Land Use Designation Build Out Summary

Designation	Town Limits						Annexation Areas					
	AC Dev.	AC Vacant	AC Total	Exist. Units	Future Units	Total Units	AC Dev.	AC Vacant	AC Total	Exist. Units	Future Units	Total Units
Very Low Density Residential (1 du/5 or more gross ac)	212.0	1,749.5	1,961.5		350	350	–	–	–	–	–	–
Low Density Residential (1 du/2.5 - 5 gross ac)	450.7	3,071.7	3,522.4		1,229	1,229	–	–	–	–	–	–
Estate Residential (1du/1 – 2.5 gross ac)	3,308.2	3,308.0	6,616.3	20,107	3,308	23,415	55.7	722.3	778.0	–	722	722
Estate Residential % (1 du/0.75 – 1 ac)	26.1	449.6	475.7		599	599	–	–	–	–	–	–
Single family Residential (1 du/0.4- 0.9 ac)	8,811.2	3,770.7	12,581.9		5,656	5,656	–	–	–	–	–	–
Medium Density Residential (4- 20 du/ac)	826.2	1,057.0	1,883.1	3,775	15,854	19,629	41.4	177.3	218.7	–	2,659	2,659
Mobile Home Park (5- 15 du/ac)	178.5	1.5	180.0	1,043	23	1,066	–	–	–	–	–	–
Mixed Use	90.8	229.7	320.5		2,068	2,068	0.00	94.8	94.8	–	854	854
Specific Plan	1,068.6	5,959.0	7,027.6		2,629	2,629	–	–	–	–	–	–
Residential Total	15,262.7	19,291.5	34,554.2	24,925	31,716	56,641	97.2	994.4	1,091.6	–	4,236	4,236

Table II-4
Commercial and Industrial Land Use Designation Build Out Summary

Designation	Town Limits				Annexation Areas			
	Acres Dev.	Acres Vacant	Acres Total	Total Potential SF	Acres Dev.	Acres Vacant	Acres Total	Total Potential SF
Mixed Use[1]	90.8	229.7	320.5	1,541,035	0.0	94.9	94.9	636,612
General Commercial	480.3	1,066.5	1,546.8	14,823,253	12.3	50.5	62.8	601,824
Regional Commercial	99.6	1,203.3	1,303.0	12,486,485	7.2	435.7	442.9	4,244,469
Service Commercial	152.4	179.2	331.6	3,177,665	0.0	183.1	183.1	1,754,639
Office Professional	64.7	546.7	611.3	5,858,606	0.0	94.9	94.9	636,612
Specific Plan[1]	1,359.0	5,653.7	7,012.7	6,663,010	–	–	–	–
Commercial Sub Total	887.7	3,225.4	4,113.2	44,550,054	19.5	669.3	688.8	7,874,156
Planned Industrial	21.4	623.9	645.3	6,183,941	64.3	1,538.5	1,602.8	15,359,953
Specific Plan[1]	1,359.0	5,653.7	7,012.7	36,938,445	–	–	–	–
Industrial Sub Total	21.4	623.9	645.3	43,122,386	64.3	1,538.5	1,602.8	15,359,953
Grand Total Commercial & Industrial	909.1	3,849.4	4,758.5	87,672,440	83.9	2,302.7	2,386.5	23,234,109

[1] Mixed Use and Specific Plan acreage included under Residential in Table II-3.

Table II-5
Other Land Use Designation Build Out Summary

Designation	Town Limits			Annexation Areas		
	Acres Dev.	Acres Vacant	Acres Total	Acres Dev.	Acres Vacant	Acres Total
Public Facility	330.2	132.0	462.2	0.00	5.1	5.1
Open Space	291.2	2,796.4	3,087.5	–	–	–
Mineral Resources	129.4	323.2	452.5	–	–	–
Street Rights-of-Way	2,771.1	1,182.8	3,953.9	43.8	151.1	194.9
Grand Total Other Uses	3,521.8	4,434.4	7,956.2	43.8	156.2	200.0

Build Out Potential and Population

As indicated in the Tables above, the Land Use Map creates a potential for up to 60,877 housing units. Based on 2008 average household size, these units could support a build out population of 185,858 people.

The Land Use Map further establishes 4,791.3 acres of commercial land, which has a potential to generate 51,685,423 square feet of commercial space. There is also a potential for 58,629,920 square feet of industrial space, mostly to be located in the North Apple Valley Industrial Specific Plan area. This Land Use Element also provides 3,068.5 acres of Open Space, and 481.2 acres of Public Facilities, which include schools, parks, fire stations and government buildings.

1.3.5 Development Trends

The Town of Apple Valley has been diligently working on a bridge project (Yucca Loma bridge) for several years. The purpose of the Project is to establish an alternate route between the Town of Apple Valley, County of San Bernardino, and the City of Victorville, in California. This Project would provide a new arterial connection through these three jurisdictions which would provide better access to the existing local residential neighborhoods, to the local freeway system, and to the Mojave Narrows Regional Park. The Project is designed to reduce traffic volume and congestion on the existing routes connecting the City of Victorville and the Town of Apple Valley (Bear Valley Road to the south and State Route 18 to the north), as well as increase residential, commercial, and industrial development in both jurisdictions.

Construction of the proposed Project would be an implementation of the General Plans from the Town of Apple Valley, the City of Victorville, and the County of San Bernardino. The Project is approximately 3.3 miles long with logical termini at the existing signalized intersections of Yucca Loma Road and Apple Valley Road on the East and Green Tree Boulevard and Hesperia Road on the West. The Project would build a new four-lane transportation corridor, including a bridge over the Mojave River and BNSF railroad, extension of Green Tree Boulevard, and expansion of existing sections of Yucca Loma Road and Yates Road.

The proposed Project connects Apple Valley Road to Hesperia Road. Given the large scope of the proposed Project and its location in three jurisdictions, the proposed Project will be built under multiple construction contracts over multiple construction seasons. It is anticipated construction will begin in the year 2010 and that the first area of focus or phase will be the Yucca Loma Bridge over the Mojave River, sound walls along Yucca Loma Road and Yates Road and other improvements from Apple Valley to Ridgecrest Road that will allow opening the bridge while maintaining the existing two lane configuration. Constructing this phase first will allow the associated segments of the proposed Project to be utilized by the public while the other phases are implemented and constructed. This first component will take approximately two to three years to construct.

The proposed Project is consistent with applicable state, regional, and local planning documents and is anticipated as a part of an overall development strategy necessary to capture growth that has already occurred as well as anticipated growth projected by the San Bernardino Associated Governments. The proposed Project would comply with Federal (23 USC 109(h), NEPA, American Disability Act of 1990, Council on Environmental Quality Regulations Section 1508.14, Title VI of the Civil Rights Act of 1964, and Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970) and State (CEQA) Laws, Regulations, and Guidance.

The proposed Project will not have a direct impact on changing existing land use designations, and thus, will not have any substantial environmental consequences to Land Use in the Project area. The Project is consistent with state, regional, and local plans and does not cause adverse impacts with respect to any of these plans. The proposed Project is consistent with the Town of Apple Valley's General Plan, 1991, and the General Plan adopted updates 1998 and 2009. The plan recognizes that as the Town grows the expectation and need for increased service levels, including adequate streets, will grow. The proposed Project is consistent with existing and future land uses. The circulation element of the Town's General Plan addresses both the local transportation system within the Town, and those segments of the local transportation system that interface with, and serve as extensions of, the regional roadway system. This system works to connect the Town of Apple Valley with the broader Victor Valley region and other communities in Southern California. The circulation element notes that a major transportation program being worked on by the Town is the construction of an extension of Yucca Loma Road which will result in a four lane bridge and an additional crossing over the Mojave River into Victorville (Mojave River Bridge).

The Project area includes all areas of construction, new or existing right-of-way, temporary staging areas and temporary construction easements. In the town of Apple Valley approximately 39.4 acres of urban land and 6.7 acres of rural land will be affected by the Project. Future plans for land within the Project area are limited by existing development and natural features (including the Mojave River and Mojave Narrows Regional Park). Nearly all of the land in the Project area that is located in the Town of Apple Valley is currently developed.

The 2005 Hazard Mitigation Plan mentioned that the Town's Vision 2010 projected additional development activity in North Apple Valley and anticipated that significant industrial development will occur in the north one-third of the Town. However, this development has moved along much slower than anticipated due to the downturn of the economy. When this industrial development commences the construction process for each development will be regulated by local building codes. Building codes include regulations pertaining to flooding (grading and elevation), earthquake standards (seismic standards), and fire codes (regulated by Apple Valley Fire Protection District).

Pre-planning for fire and law enforcement agency response was completed prior to occupancy for both the major developments that are currently in that area (Law & Justice Center and the 1.34 million square foot Wal-Mart Distribution Center). The pre-planning methodology includes routine drills at each site. In addition, all future buildings in the Town of Apple Valley will adhere to future building codes.

SECTION 2 – PLAN ADOPTION

2.1 Adoption by local governing body

A (draft) Resolution of the Town Council of the Town of Apple Valley, California, adopting the Local Hazard Mitigation Plan as required by the Disaster Mitigation Act of 2000 is included in this Plan (located

before the Table of Contents). Upon receipt of an "approvable pending adoption" status from FEMA, the Town will formally adopt the Resolution and forward adopting documentation to FEMA.

The Resolution will include support for the (State of California) Enhanced State Multi-Hazard Plan, October 2007 and, once adopted by the State of California, the 2011 Enhanced State Multi-Hazard Plan Update. The Town of Apple Valley Annex is part of the San Bernardino Operational Area Multi-**Jurisdictional Hazard Mitigation Plan.**

2.2 Promulgation Authority

Curt Emick, Mayor
Description of involvement: Mayor Nassif represents the elected body governing the Town of Apple Valley and will sign as the official final approving authority.
Contact Information:
Town of Apple Valley
14955 Dale Evans Parkway,
Apple Valley, CA 92307
760-240-7000
cemick@applevalley.org

Frank Robinson, Town Manager
Description of Involvement: Frank Robinson represents the staff of the Town of Apple Valley and authorized the development and approval process.
Contact Information:
Town of Apple Valley
14955 Dale Evans Parkway,
Apple Valley, CA 92307
760-240-7000
frobinson@applevalley.org

The Apple Valley Town Council will review the Hazard Mitigation Plan prior to its approval.

2.3 Primary Point of Contact

Joseph A. Guarrera, **Emergency Services Officer**
Town of Apple Valley/Apple Valley Fire Protection District
22400 Headquarters Drive, Apple Valley, CA   92307
760-247-7618
jguarrera@applevalleyfd.com

SECTION 3 - PLANNING PROCESS

The planning process for the Town's Hazard Mitigation Plan included the creation of a Planning Team representing various agencies and organizations whose input was vital to the plan. The Planning Team reviewed, analyzed, revised, and updated each Section within this Plan as required. Pursuant to Section 4(F) of the Crosswalk, the process used to review and analyze each Section is included within that Section.

Public presentation and input was also delivered at various public meetings in the local community.

3.1 Preparing for the Plan

To update its 2011 Local Hazard Mitigation Plan, the Town of Apple Valley joined with the San Bernardino County Fire Department Office of Emergency Services (OES) which is the coordinating agency for the update of the *San Bernardino County Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan*. As required by the Department of Homeland Security's Federal Emergency Management Agency (DHS-FEMA), all Hazard Mitigation Plans (HMP) must be updated, adopted and approved every five (5) years. The purpose of the update is to validate and incorporate new information into the plan and identify progress that has been made since the last approval of the plan. In addition, an approved HMP is required to receive federal assistance under the Hazard Mitigation Grant Program (HMGP) or Pre-Disaster Mitigation (PDM) programs.

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.

San Bernardino County Fire OES hired a contractor (ICF International) to support the County, Cities and Towns, and Special Districts to update the 55 local HMPs and the *San Bernardino County Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan*. The ICF Team, which includes subcontractors MMI Engineering and Natural Hazards, offers experienced, field-tested Hazard Mitigation and planning professionals who have developed similar comprehensive HMPs. This support includes providing 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 are being maintained on a project portal (https://tmsprojects.icfi.com/sbhmpupdate/default.aspx) to ensure the same information is available to all participants.

Additionally, it was concluded that the Plan will include information and data supplied by supporting local agencies as listed in Section 3.2 "Coordination with Other Jurisdictions, Agencies, and Organizations", and 3.3 "Public Involvement", of this Plan, along with public surveys, public comments received during community-wide events and from other sources developed through discussions during Planning Team meetings.

The Town initiated its Plan Update by meeting the requirements of Title 44, Code of Federal Regulations, Part 201 (44 CFR 201.6) through the initial implementation of the 2005 Local Hazard Mitigation Plan.

- Why the update is necessary and how the update will build on the existing approved mitigation plan
- The process and data deficiencies/limitations that will be addressed
- The participatory planning process used to develop the plan to include how each section was reviewed and analyzed and how/why the decision was made to modify (or not) specific areas in the plan.
- The opportunities provided for public participation, modified as necessary, based on previous experience
- The contribution from other stakeholders
- The new/additional research conducted and data included in the plan;
- The modified risk assessment based on latest best available data;
- The prioritized mitigation action plan;
- The progress made in local mitigation efforts;
- The plan maintenance process to include: an evaluation of what was supposed to happen vs. what happened; a discussion of how the community was involved in the plan maintenance process; and a discussion of how the mitigation plan was incorporated into other planning mechanisms, and what worked/did not work.

The Town of Apple Valley completed a General Plan revision in 2009. Emphasis was placed on the importance of incorporating the Local Hazard Mitigation Plan as an extension of that revision, which will be done after the Plan is formally approved and adopted.

3.1.1 Planning Team

This Hazard Mitigation Planning team included members of various agencies, and organizations who were familiar with mitigation planning and have some type of emergency management responsibilities within their organizations. In addition, several private citizens who are Disaster Service Worker (DSW) volunteers were also chosen to give input on the Plan.

Name:	Organization:
Shelley Alfieri	Jess Ranch Community Disaster Response Program, Senior Center, DSW citizen
Art Bishop	Fire Chief, Apple Valley Fire Protection District
Chris Briggs	Desert Communities United Way, COAD
Mike Cook	Apple Valley Ranchos Water Company
Dennis Cron	Assistant Town Manager, Town of Apple Valley
Dawn Harrison	CERT Commander, DSW citizen

Pat Hayes	Sun City Safety Committee, DSW citizen
Brad Miller	Town of Apple Valley Engineer
Lance Miller	Public Works Manager, Town of Apple Valley
David Pinnecker	Risk Manager, Apple Valley Unified School District
Claude Stewart	Building Offical, Town of Apple Valley
Robert Suchomel	Director of Facilities, St. Mary Medical Center
Laura Whitehead	Emergency Services Officer, Town of Apple Valley and the Apple Valley Fire Protection District
Ralph Wright	Parks and Recreation Manager, Town of Apple Valley

Planning team meetings:

Date	Item	Location
12/14/2010	Planning Team Meeting Hazard Mitigation Plan Update	Fire Station 336
11/16/2010	Planning Team Meeting Hazard Mitigation Plan Update	Fire Station 336
10/12/2010	Planning Team Meeting Hazard Mitigation Plan Update	Fire Station 336
9/21/2010	Planning Team Meeting Hazard Mitigation Plan Update	Fire Station 336
8/17/2010	Planning Team Meeting Hazard Mitigation Plan Update	Fire Station 336
7/13/2010	Planning Team Meeting Kickoff Hazard Mitigation Plan Update	Fire Station 336

3.2 Coordination with other Jurisdictions, Agencies, and Organizations

The Town of Apple Valley Planning Team consulted members from adjacent jurisdictions as well as the County of San Bernardino, who is implementing the multi-jurisdictional approach. (See Section 3.1)

- Apple Valley Chamber of Commerce
- Apple Valley Unified School District
- California Department of Transportation (Cal Trans)
- California Emergency Management Agency (Cal EMA)
- California Highway Patrol
- Community Members
- Federal Emergency Management Agency (FEMA)
- Local Hospital (St. Mary Medical Center)
- Local Churches
- Local Mobile home Park Owners, Managers and Residents
- Local Non-Profit Agencies (American Red Cross, United Way)
- Local Utility Companies
- National Weather Service (NWS)
- Public and Private Business Sectors
- San Bernardino County (OES, Dept. of Public Health, Animal Control)

In addition, the Town of Apple Valley participated in the San Bernardino County Fire Department Office of Emergency Services (OES) Stakeholder meetings. San Bernardino County Fire OES hired a contractor (ICF International) to support the County, Cities and Towns, and Special Districts to update the 55 local Hazard Mitigation Plans and the San Bernardino County Operational Area Multi-Jurisdictional Multi-Hazard Mitigation Plan. The ICF Team, which included subcontractors MMI Engineering and Natural Hazards, offered experienced, field-tested Hazard Mitigation and planning professionals who have developed similar comprehensive Hazard Mitigation Plans. This support included providing technical expertise and resource material and tools to help ensure that the updates are in compliance with federal requirements of the program.

Stakeholder Meetings

Date	Item	Location
1/27/2011	Stakeholder Meeting Hazard Mitigation Planning	Virtual Meeting

Date	Item	Location
1/20/2011	Stakeholder Meeting Hazard Mitigation Planning	Virtual Meeting
1/11/2011	Stakeholder Meeting Hazard Mitigation Planning	Virtual Meeting
12/15/2010	Stakeholder Meeting Hazard Mitigation Planning	Virtual Meeting
10/28/2010	Stakeholder Meeting Hazard Mitigation Planning	Virtual Meeting
10/7/2010	Stakeholder Meeting Hazard Mitigation Planning	Virtual Meeting
9/23/2010	Stakeholder Meeting Hazard Mitigation Planning	Virtual Meeting
9/9/2010	Stakeholder Meeting Hazard Mitigation Planning	Virtual Meeting
8/26/10	Stakeholder Meeting Hazard Mitigation Planning	SB County OES
8/19/2010	Stakeholder Meeting Hazard Mitigation Planning	Virtual Meeting
8/12/2010	Stakeholder Meeting Hazard Mitigation Planning	Virtual Meeting
7/29/2010	Stakeholder Meeting Hazard Mitigation Planning	Virtual Meeting
7/15/2010	Stakeholder Meeting	Ontario Police Dept.

Date	Item	Location
	Hazard Mitigation Planning (Time Line, Next Steps)	
7/7/2010	Stakeholder Meeting Hazard Mitigation Planning – Portal Rollout 2	SB County OES
7/1/2010	Stakeholder Meeting Hazard Mitigation Planning – Portal Rollout	SB County OES
6/10/2010	Stakeholder Meeting Hazard Mitigation Planning – Project Kick Off Meeting	SB County OES

3.3 Public Involvement/Outreach

The Town of Apple Valley undertook a number of methods to inform the public of this effort to solicit their input on the Hazard Mitigation Plan and efforts of the town involving mitigation and emergency preparedness. On an ongoing basis the Town of Apple Valley and the Apple Valley Fire Protection District participate in public events and meetings to inform the public of emergency preparedness and mitigation and solicit comments and input from the citizens regarding their concerns and questions regarding mitigation planning efforts.

The 2010 Emergency Preparedness Fair sponsored by the Town of Apple Valley, Apple Valley Fire Protection District, Apple Valley Police, and St. Mary Medical Center was held on April 24, 2010, from 10:00 am - 1:00 pm. Exhibitors provided information pertaining to mitigation strategies and disaster preparedness. Exhibitors included the Town of Apple Valley, Apple Valley Fire Protection District, Apple Valley Police, St. Mary Medical Center, American Red Cross, Edison, Gas Company, Church of Jesus Christ of Latter day Saints, CERT (Community Emergency Response Team), FADD (Friends of Animals During Disasters, ECS (Emergency Communications Services), PAL Humane Society, Ultrastop, Simpler Life, and other vendors catering to community preparedness and mitigation information.

The event included informational sessions on CERT, (people in disasters) FADD/PAL (Animals in Disasters, ECS (Communications in Disasters) St. Mary Medical Center Responding the emergencies and HAZMAT decontamination procedures): SB County Animal Control (Disaster Preparedness for Pets), SB County Health Department (Responding to Epidemics and Natural Disasters), and Redlands Community Hospital (Responding to Emergencies). The event drew a crowd of approximately 1500 attendees. The event was advertised through local businesses, schools and public sectors.

Other public outreach efforts include providing literature and handouts pertaining to mitigation strategies and emergency and disaster preparedness during town-sponsored events, including: CERT, FADD, and ECS training classes and general meetings; July 4th Freedom Festival; September Fall Festival and Pet Fair; October Equine Event; and other Emergency Preparedness Fairs, Health Fairs, and Safety Fairs held through the town and the Apple Valley Fire Protection District.

The following is a list of public meetings and events that have taken place during the drafting stage:

Date	Item	Location
11/4/10	Operational Area Coordinating Council County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.	City of San Bernardino Public Library
10/30/2010	FADD Basic Training	Apple Valley
10/16/2010	Equine Festival	Apple Valley
10/12/2010	Town of Apple Valley Disaster Council/Citizen Corps Council	Apple Valley
10/9/2010	FADD General Meeting	Apple Valley
10/9/2010	Health and Safety Fair	Apple Valley
10/2/2010	CERT Basic Training	Apple Valley
9/25/2010	Fall Festival	Apple Valley
9/24/2010	Hospital Preparedness Committee meeting	Apple Valley
9/11/2010	Pet Fair	Apple Valley
9/4/2010	ECS general meeting	Apple Valley
8/27/2010	Rotary Club general meeting	Apple Valley
8/25/2010	Soroptimist Club general meeting	Apple Valley

Date	Item	Location
8/18/2010	Apple Valley Chamber of Commerce meeting	Apple Valley
8/20/2010	Kiwanis Club general meeting	Apple Valley
8/17/2010	Apple Valley Fire Board meeting	Apple Valley
8/7/2010	CERT general meeting	Apple Valley
8/5/2010	Operational Area Coordinating Council County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.	Rancho Cucamonga
7/17/2010	Safety/ Emergency Preparedness Fair	Apple Valley
7/13/2010	Town of Apple Valley Disaster Council/Citizen Corps Council	Apple Valley
7/4/2010	Freedom Festival	Apple Valley
5/6/2010	Operational Area Coordinating Council County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.	Chino
4/13/2010	Town of Apple Valley Disaster Council/Citizen Corps Council	Apple Valley
1/12/2010	Town of Apple Valley Disaster Council/Citizen Corps Council	Apple Valley
11/5/2009	Operational Area Coordinating Council County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.	SB County OES
8/6/2009	Operational Area Coordinating Council CalEMA presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County. David Montague, Senior VP of ABS Consulting and Hope Deligson, Assoc., MMI Engineering, Inc. presented an overview of FEMA's San Bernardino County Essential Facility Risk Assessment	Ontario Police Dept.

Date	Item	Location
	project using HAZUS.	
5/7/2009	Operational Area Coordinating Council County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.	Apple Valley
2/5/2009	Operational Area Coordinating Council County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.	Chino
11/13/2008	Great Southern CA Shakeout/Golden Guardian Exercise - Police, Fire, Town staff and community-wide participation in the Great Southern CA Shakeout. Police, Fire, Town participation with the Golden Guardian Exercise.	
9/1/2008	Emergency Operations Plan Presented the EOP to the public to solicit comment and feedback.	
8/8/2008	Operational Area Coordinating Council County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.	Big Bear
5/1/2008	Operational Area Coordinating Council County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.	Victorville
2/7/2008	Operational Area Coordinating Council County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.	Upland
8/9/2007	Operational Area Coordinating Council County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of	Fontana

Date	Item	Location
	the 24 cities in the County of San Bernardino.	
5/7/2007	Operational Area Coordinating Council County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.	
2/1/2007	Operational Area Coordinating Council - County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.	Upland
12/6/2006 11/22/2006 11/9/2006 9/6/2006	Pandemic Planning A series of meetings were held to educate the public on the hazard and the actions the public can take to mitigate and/or reduce the impact of pandemic influenza.	Redlands Rialto Yucaipa Redlands
8/3/2006	Operational Area Coordinating Council County presented a report regarding the Hazard Mitigation Program. The meeting was attended by representatives of the 24 cities in the County of San Bernardino.	Loma Linda

3.4   Assess the Hazard

Data collection and document review are important first steps in the identification and screening of hazards. The Planning Team identified new or emerging hazards, obtained updated hazard maps, hazard probability research studies and reports, reviewed data from new or updated local plans (i.e. safety element of the General Plan, threat assessments, disaster planning scenarios, community wildfire protection plans, etc.) and obtained information about emergencies or disasters that have occurred since the 2005 Hazard Mitigation Plan to provide insights into which parts of the risk assessment warrants updates.

The first step in this process was to identify which natural hazards are present in the community, augmenting the 2005 Hazard Mitigation Plan as necessary.

The intent of screening of hazards is to help prioritize which hazard creates the greatest concern in the community. Because the original 2005 process used to rank hazards (Critical Priority Risk Index (CPRI) software) was not utilized, the Planning Team screened hazards creating the greatest concern in the community.

The Planning Team utilized a non-numerical ranking system for the update process. This process consisted of generating a non numerical ranking (High, Medium, or Low) rating for the 1) probability and 2) impact from each screened hazard. The hazards were then placed in the appropriate/corresponding box/cell. The table below is an example of how the hazards were ranked.   In this example the "Red" boxes represent the higher priority hazards; and the "Orange" and "Yellow" boxes represent additional levels of priority.

The definition of "High", "Medium", and "Low" probability and impacts are as follows:

Probability

High- Highly Likely/Likely
Medium- Possible
Low- Unlikely

Impact

High- Catastrophic/Critical
Medium- Limited
Low- Negligible

		Impact		
		High	Medium	Low
Probability	High			
	Medium			
	Low			

3.5   Set Goals

Project and community hazard mitigation goals and objectives for the Town of Apple Valley were set by the Planning Team to guide the development of the Plan using FEMA National Mitigation Strategies and Goals to substantially increase public awareness of natural hazard risks so that the public demands safer communities in which to live and work; and to significantly reduce the risk of loss of life, injuries, economic costs, and destruction of natural and cultural resources that result from natural hazards.

These were then commented on by the community stakeholders to refine the goals, resulting in a consensus agreement.

3.6   Review and Propose Mitigation Measures

A wide variety of mitigation measures that can be identified to help reduce the impact of the hazards or the severity of damage from hazards was examined. The projects were identified to help ensure the implementation of the Planning Team's goals and objectives. The following categories were used in the review of possible mitigation measures:

1.   Public Information and Education- Outreach projects and technical assistance.

2.   Preventive Activities- Zoning, building codes, storm water ordinances

3.   Structural Projects- Detention basins, reservoirs, road and bridge improvements

4.   Property Protection- Acquisition, retrofitting

5.   Emergency Services- Warning, sandbagging, road signs/closures, evacuation

6.   Natural Resource Protection: Wetlands, protection, best management practices.

Once the projects were identified, the Planning Team utilized the STAPLEE methodology to assess and prioritize the projects.

STAPLEE stands for the following:

- **Social:** Social criteria are based on the idea that community consensus is a necessary precondition for successful implementation of mitigation measures (i.e., measures should be supported and accepted by the entire community). This also means that measures should not affect adversely a particular segment of the population or a particular neighborhood, or adversely impact local cultural values or resources.

- **Technical:** Technical criteria address the technical feasibility of the proposed measures, in terms of effectiveness, secondary impacts, and the technical capabilities of the community to implement and sustain these measures.

- **Administrative:** Administrative criteria address the administrative capabilities required to implement each mitigation measure. For example, does the City have the necessary organization, staff, and funding sources to implement and sustain the mitigation process?

- **Political:** Political criteria consider the need for political support for mitigation measures. This means that all stakeholders in the political process, especially political organizations and institutions both inside and outside of the community, should support the measure.

- **Legal:** Legal criteria are used to determine the appropriate legal authority necessary to implement each mitigation measure and whether such an authority can be delegated. The mitigation measure is

examined from the standpoint of current statutes, codes, ordinances, and other regulations, as well as the possible legal ramifications of the measure's implementation.

▪ **Economic:** Economic criteria address the cost-effectiveness of the proposed measure and its economic impact on the community. It is only reasonable to expect that the benefits of implementation will exceed the costs incurred. Economic considerations also consider the economic impact on the community's future development.

▪ **Environmental:** Environmental criteria have become an important consideration in examining mitigation options. Although most mitigation measures are usually beneficial for the environment, some measures may have adverse effects, which must be considered and addressed.

Based on STAPLEE, the Planning Team addressed the following questions to determine mitigation options:

Does the Action:

1. Solve the problem?
2. Address Vulnerability Assessment?
3. Reduce the exposure or vulnerability to the highest priority hazard?
4. Address multiple hazards?
5. Address more than one (1) Goal/Objective?
6. Benefits equal or exceed costs?

Can the Action:

1. Be implemented with existing funds?
2. Be implemented by existing state or federal grant programs?
3. Be completed within the 5-year life cycle of the LHMP?
4. Be implemented with currently available technologies?

Will the Action:

1. Be accepted by the community?
2. Be supported by community leaders?
3. Adversely impact segments of the population or neighborhoods?
4. Require a change in local ordinances or zoning laws?
5. Result in legal action such as a lawsuit?
6. Positively or negatively impact the environment?
7. Comply with all local, state and federal environmental laws and regulations?

Is there:

1. Sufficient staffing to undertake the project?
2. Existing authority to undertake the project?

3.7 Draft the Hazard Mitigation Plan

The Hazard Mitigation Plan was drafted by the Planning Team members following the 2005 Hazard Mitigation Plan, the guidance document and Hazard Mitigation Plan outline provided by the consultant, and input from all stakeholders and Town departments. The Planning Team provided opportunity for

public comment and input. FEMA Guidance documents for Hazard Mitigation were also used extensively as additional reference materials.

The results of the mitigation activities review are summarized in the Hazard Mitigation Plan update. The draft plan will be circulated for additional comment and review.

3.8   Adopt the Plan

After the public review, the draft plan will be submitted to Cal EMA/FEMA for review and approval. FEMA will provide the Town with an "Approval Pending Adoption" letter if the Hazard Mitigation Plan update meets all federal requirements. Upon receipt of this letter, the final plan will be submitted to the Apple Valley Town Council for consideration and adoption. Once adopted, the final Resolution will be submitted to FEMA for incorporation into the Hazard Mitigation Plan.

The Town of Apple Valley's adoption of the Hazard Mitigation Plan is only the beginning of this effort. Town offices, other agencies, and private partners will implement the Hazard Mitigation Plan activities. The Planning Team will monitor implementation progress, evaluate the effectiveness of the actions, and periodically recommend action items. Progress of the implementation of the Plan and the recommended action/mitigation strategies will be assessed annually. The Plan will be submitted and updated to FEMA every five years, which is required by FEMA in order to remain eligible for post-disaster mitigation funding

SECTION 4 – RISK ASSESSMENT

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. This section discusses the risk assessment approach for the Town of Apple Valley's Hazard Mitigation Plan. FEMA defines the risk assessment process as a

multi-step effort in "Understanding Your Risks: Identifying Hazards and Estimating Losses (FEMA 2001)". The steps include:

1. Identify and Screen your Hazards
2. Profile Hazard Events
3. Inventory Assets
4. Estimate Losses

The risk assessment approach for Apple Valley is composed of these four steps, and each step is organized in a separate subsection of Chapter 4. Section 4.1 (step 1) includes hazard identification and screening. During this process, all reasonably possible hazards affecting the Town are considered and ranked by the Town of Apple Valley Planning Team and stakeholders. Section 4.2 (step 2) provides a profile for each of the significant hazards identified during the screening process. In general, the hazard profiles are addressed on a regional level.

Figure 5 – 4-Step Risk Assessment-Source:FEMA

Wherever possible the profile includes a discussion of local characteristics and possible impacts on the community. Section 4.3 (step 3) discusses the process of creating an inventory of the Town's assets. This step includes the comprehensive information gathering and prioritization process essential to perform the vulnerability assessment and loss estimation. Section 4.4 (step 4) presents the methodologies and results of loss estimation for the key hazards identified in step 2.

4.1. Hazard Identification

4.1.1.   Hazard Screening Criteria

The Town of Apple Valley Planning Team determined that natural hazards would be the focus at this time, in order to become eligible for mitigation funds following any future declared disaster after November 1, 2004. Through selectively identified analysis following hazard-specific meetings, the Planning Team reviewed eight natural hazards (listed below). The Planning Team determined that although seven hazards were identified, some of these hazards were ranked low risk/low impact or medium risk/medium impact or could potentially be secondary to higher ranked hazards. As a result, it was the consensus of the Planning Team to focus on the three hazards that scored "High" in the Hazard Assessment Matrix (located on page 38 of this Plan):

   Earthquake, Flooding, and ***Wildfires***.

- Dam Failure
- Drought and Water Shortage
- ***Earthquake***
- Extreme Heat
- ***Flooding***
- High Winds/Straight Line Winds
- ***Wildfires***

The hazard data was analyzed in view of how it impacts public safety, health, buildings, transportation, infrastructure, critical facilities and the economy. The discussion of the problem and vulnerability assessment for each hazard is presented in the sections for each hazard.

The identification of each hazard was based upon the following sources:

1.   Historic Occurrence of the Hazard - Assessment is based on frequency, magnitude and potential impact of the hazard.

2.   Mitigation Potential for the Hazard - This criterion considers if there are mitigation or counter measures possible to prevent or alleviate the risk.

3.   Expert Opinion - Evaluation of threats includes a literature review and the expertise of the Planning Team.

4.   Published Data and Information - Assessment is based on data and/or information from credible publications or websites. (i.e., U.S. Geological Survey, California Geological Survey, National Weather Service - National Climatic Data Center, or academic publications)

4.1.2.   Hazard Assessment Matrix

Rankings used for the hazard screening were defined as follows:

<u>Probability</u>		<u>Impact</u>	
High:	Highly Likely/Likely	High:	Catastrophic/Critical
Medium:	Possible	Medium:	Limited
Low:	Unlikely	Low:	Negligible

High- There may or may not have been historic occurrences of the hazard in the community or region but experts feel that it is likely that the hazard will occur in the community and the risk is significant. Citizens feel that there is a likelihood of occurrence and the consequences will be significant in terms of building damage and loss of life.

Medium- There may or may not have been a historic occurrence of the hazard in the community or region but experts feel that it is possible that the hazard could occur in the community. Citizens may feel that there is a likelihood of occurrence but the consequences will be negligible in terms of building damage and loss of life.

Low- There has been no historic occurrences of the hazard in the community or region and experts feel that it is highly unlikely that the hazard will occur in the community. The citizens agree.

Hazards Identified
The Planning Team determined that although seven hazards were identified, some of these hazards were ranked low risk/low impact or medium risk/medium impact or could potentially be secondary to higher ranked hazards. As a result, it was the consensus of the Planning Team to focus on the three hazards that scored "High" in the Hazard Assessment Matrix (located on page 38 of this Plan):

Earthquake, Flooding, and ***Wildfires***. The following natural hazards were reviewed and analyzed by the Planning Team:

1. Dam Failure ranked low or insignificant disaster and may be secondary to earthquakes. A dam is defined as a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water. Dams typically are constructed of earth, rock, concrete, or mine tailings. A dam failure is the collapse, breach, or other failure resulting in downstream flooding or a severe natural occurrence, such as an earthquake.

A dam impounds water in the upstream area, referred to as the reservoir. The amount of water impounded is measured in acre-feet. An acre-foot is the volume of water that covers an acre of land to a depth of one foot. As a function of upstream topography, even a very small dam may impound or detain many acre-feet of water. Two factors influence the potential severity of a full or partial dam failure: the amount of water impounded, and the density, type, and value of development and infrastructure located downstream.

Of the approximately 80,000 dams identified in the National Inventory of Dams, the majority are privately owned, Federal agencies own 2,131; States own 3, 627; local agencies own 12,078; public utilities own 1,626; and private entities or individuals own 43,656. Ownership of over 15,000 is undetermined.

The Inventory categorizes the dams according to their primary function: Recreation (31.3 percent), Fire and farm ponds (17.0 percent), Flood control (14.6 percent), Irrigation (13.7 percent), Water supply (9.8 percent), Tailings and other (8.1 percent), Hydroelectric (2.9 percent), Undetermined (2.3 percent) and Navigation (0.3 percent).

Each dam in the inventory is assigned a downstream hazard classification based on the potential loss of life and damage to property should the dam fail. The three classifications are high, significant and low. With changing demographics and land development in downstream areas, hazard classifications are updated continually.

The hazard classification is not an indicator of the adequacy of a dam or its physical integrity. Dam failures typically occur when spillway capacity is inadequate and excess flow overtops the dam, or when internal erosion (piping) through the dam or foundation occurs.

Dam failure can result from any one or a combination of the following causes:

- Prolonged periods of rainfall and flooding, which causes most failures;
- Inadequate spillway capacity, resulting in excess overtopping flows;
- Internal erosion caused by embankment or foundation leakage or piping;
- Improper maintenance, including failure to remove trees, repair internal seepage problems, replace lost material from the cross section of the dam and abutments;
- Improper design, including the use of improper construction materials and construction practices;
- Negligent operation, including failure to remove or open gates or valves during high flow periods;
- Failure of upstream dams on the same waterway;
- Landslides into reservoirs, which cause surges that result in overtopping; and
- High winds, which can cause significant wave action and result in substantial erosion; and Earthquakes, which typically cause longitudinal cracks at the tops of embankments that weaken entire structures.

Description:

Two major dams -- Cedar Springs Dam and Mojave Dam -- could have a significant impact on the Town of Apple Valley in the event of dam failure. Both are located in the San Bernardino National Forest in the upper portion of the Mojave River Basin, southwest of Apple Valley. The Cedar Springs Dam and the Mojave Dam are both managed and operated by the State Department of Water Resources.

DATA OF LOCAL DAMS

	Cedar Springs Dam	**Mojave Dam**
DWR Number	1-063	9000-021
National ID	CA00049	CA10021
Dam Type	Rock	Earth
Crest Length	2,235 ft.	2,200 ft.
Height (measured above the dam crest)	236 ft.	204 ft.
Crest Width	42 ft.	20 ft.
Total Freeboard	23 ft.	21 ft.
Reservoir	Lake Silverwood	Mojave River Forks
Reservoir Storage Capacity	78,000 acre-ft.	89,700 acre-ft.
Reservoir Drainage Area	34.0 sq. miles	70.3 sq. miles

Fortunately, neither the Cedar Springs Dam nor the Mojave Dam have experienced dam failure. For Apple Valley to be affected by flood waters due to dam failure, both of these dams would need to fail simultaneously or the failure of the Cedar Springs Dam would need to occur at a time when rising flood waters were already a problem at the Mojave Dam. Failure of these dams during a catastrophic event, such as a severe earthquake, is considered to be an unlikely event. Both dams have performed well in past earthquakes due to the type and method of construction.

The area subject to extreme hazardous conditions due to dam failure is the area along the Mojave River.

Town of Apple Valley
Dam Inundation Areas

Dam inundation data source:
General Plan Dam Inundation Areas, developed by San Bernardino County Land Use Services, provided by San Bernardino County ISD-GIS
Map creation date: November 3, 2010

FIGURE 6 – TOWN OF APPLE VALLEY DAM INUNDATION AREAS (SOURCE: SAN BERNARDINO COUNTY LAND USE SERVICES)

2. Drought and Water Shortage ranked medium hazard. A drought is a period of drier-than-normal conditions that results in water-related problems. Precipitation (rain or snow) falls in uneven patterns across the country. When no rain or only a small amount of rain falls, soils can dry out and plants can die. If dry weather persists and water supply problems develop, the dry period can become a drought. Droughts differ from typical emergency events such as floods or forest fires, in that they occur slowly over a multiyear period. California has faced numerous challenges in recent years, including a nearly decade-long drought on the Colorado River, snowpacks that are below normal, and court-mandated reductions in the amount of water available for delivery by the State Water Project. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. Climate change, population growth, and the increasing instability of the water supplies in the delta formed by the confluence of the Sacramento and San Joaquin rivers threaten to exacerbate the crisis.

3. Earthquake ranked high hazard. A number of active and potentially active fault zones exist within the High Desert. The zones of greatest seismic hazard have been identified as Alquist-Priolo

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Special Studies Zones. The Alquist-Priolo Earthquake Fault Zoning Act was signed into California law in 1972, and was intended to mitigate the hazards of fault rupture by prohibiting the location of structures for human occupancy across active fault traces. As required by the Act, the State Geologist is required to delineate active (showing evidence of Holocene surface displacement along one or more of their segments) "earthquake fault zones", and are clearly detectable by a trained geologist as a physical feature at or just below the ground surface.

An earthquake fault zone boundary is generally about 500 feet from major active faults, and 200 to 300 feet from well defined minor faults. Counties and cities are also required to condition development permit approval for sites within earthquake fault zones to perform geologic investigation that demonstrate that the sites are safe from surface displacement associated with future faulting. Of the types of development that are regulated are defined by State law, however, local regulations may prove even more restrictive.

Currently (2008) there are no Alquist-Priolo Earthquake Fault Zones mapped within the Apple Valley corporate limits or the annexation areas. However, there are two zones extending across portions of the town's Sphere of Influence, and a third Alquist-Priolo zone approaches the Sphere of Influence from the east- southeast. It should be noted that the State Geologist periodically revises the Alquist-Priolo Earthquake Fault Zones based upon new scientific research or fault studies' data. Local agencies, either at the county or local level, can designate additional fault hazard study zone.

Figure 7 – Apple Valley Earthquake Fault Zones (Fault Zone Data Source: California Geological Survey)

4. Extreme Heat ranked medium hazard. Temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks are defined as extreme heat.

5. Flooding ranked high hazard. Most of the drainages from the surrounding hills and mountains in Apple Valley terminate in desert playas (dry lakes). The Apple Valley Dry Lake is the largest playa in the area, collecting runoff from most of Apple Valley. A smaller playa (Reeves Dry Lake) is present in the central part of Fairview Valley, where it receives runoff from the adjacent mountains. In the southeast corner of Apple Valley, drainages from the Ord Mountains, including the Juniper Flats, Arrastre Canyon, and Lovelace Canyon watersheds, lead to Rabbit Dry Lake in Fifteenmile Valley. Along the eastern edge of the Sphere of Influence, drainages from the Granite Mountains flow eastward to Lucerne Dry Lake in Lucerne Valley. Drainage channels in Apple Valley's local mountains are well carved, however they lose their strong definition upon reaching the valley floor, where sediment-laden water typically spreads out into braided ephemeral stream channels and as sheet flow. Drainages along the western side of Apple Valley eventually discharge into the Mojave River. The largest tributary to the Mojave River within Apple Valley is Bell Mountain Wash, a natural channel that collects runoff primarily in the area north and west of Bell Mountain. The area west of Catholic Hill is drained by the smaller, partially modified, Desert

Knolls Wash. In the southwest corner of Apple Valley, numerous small, unnamed drainages draining the western part of the Ord Mountains flow towards the Mojave River.

6. High Winds/Straight Line Winds ranked medium hazard. High winds can result from thunderstorm inflow and outflow, or downburst winds when the storm cloud collapses, and can result from strong frontal systems, gradient winds (high or low pressure systems), or foehn winds, such as the Santa Ana's. High winds are speeds reaching 50 miles per hour or greater, either sustaining or gusting.

7. Wildfires ranked high hazard. 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.

4.1.3 Hazard Prioritization

The results of the screening process described above are presented as a hazard assessment matrix in Table 2 (below). The matrix illustrates the nature and potential of threats from natural disasters to the Town of Apple Valley. The Planning Team reviewed the probability and impact for each screened hazard and the potential for implementing mitigation measures to reduce the risk. The results were reviewed and modified during stakeholder meetings and a prioritized ranking of the hazards was developed.

As shown in the table below, there are three hazards that were given a high priority: earthquake, flooding, and wildfires.

		Impact		
		High	**Medium**	**Low**
Probability	**High**	Earthquake Flooding Wildfires		
	Medium	Drought and Water Shortage	Extreme Heat High Winds Straight Line Winds	
	Low			Dam Failure

Red boxes represent the higher priority hazards; "Orange" and "Yellow" boxes represent additional levels of priority.

FIGURE 8 – HAZARD ASSESSMENT MATRIX

The following sections profile these three hazards (Section 4.2), inventories assets in the Town (Section 4.3), and estimates losses or assesses risk for significant events associated with these three hazards (Section 4.4). This Plan Update continues to describe occurrences of hazards included in the previously approved (2005) Plan and, where applicable, incorporates new occurrences of hazard events, historical records, and hazard data related to profiling hazards.

4.2 Hazard Profile

4.2.1. Earthquake

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, 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.

Much of southern California is located along the boundary between the North American and Pacific tectonic plate. This boundary, also known as the San Andreas Fault Zone, could generate strong seismic activities. The Pacific Plate is moving in a northwesterly direction, approximately 50 millimeters per year in relationship to the North American Plate. In southern California, the San Andreas Fault consists of three segments: the Mojave Desert segment, the San Bernardino Mountains segment, and the Coachella Valley segment.

The Town of Apple Valley's planning area is located near this boundary, and there are several active faults in the region. These include the Helendale fault, the San Andreas fault, the North Frontal fault, the Cleghorn fault, the Cucamonga fault, and the San Jacinto fault. Of these, the North Frontal fault has the potential to generate the strongest seismic shaking in Apple Valley.

Measuring Seismic Events

Classification of seismic events is based on their magnitude and intensity. The intensity of ground shaking is determined by several factors, such as the earthquake's magnitude, the distance from the epicenter, and the geologic composition of local soils and rocks. Seismic intensity is most commonly measured by the Modified Mercalli Intensity (MMI) scale, which includes twelve levels of damage. The MMI is derived from actual observations of damage to structures and human reactions to earthquakes. Based on this scale, an earthquake tremor at Level I earthquake tremor is generally not felt and is considered unlikely to result in damage, whereas a Level XII earthquake results in total destruction. Earthquake intensities may result in damage such as partial or complete collapse of masonry structures, severe damage to complete destruction of underground pipelines, rock and landslides, and massive damage or destruction of

bridges, overpasses and other improvements.

Earthquake magnitude is measured by the Richter Scale on a continuum of one to nine, with each level-of-magnitude increase representing a tenfold increase in the amplitude of the waves on a seismogram. The most notable historic earthquake in the Apple Valley region was the Landers earthquake of 1992, which had a magnitude of 7.3 on the Richter Scale. The Landers earthquake, so named for its epicenter near the small desert community of Landers, also ruptured five other separate faults.

The largest earthquake likely to occur on a fault or fault segment within a specified period of time is considered the Maximum Probable Earthquake (MPE). The MPE is useful during emergency and engineering planning. It provides a means to assess the potential seismic risk within a region, is referenced to establish safe construction and design parameters, and facilitates the preparation of policies and programs that are responsive to the potential impacts of an earthquake.

Defined as the largest earthquake a fault is estimated to be capable of generating, the Maximum Credible Earthquake (MCE) also provides a useful gauge for emergency and engineering planning efforts. In the Apple Valley area, the North Frontal fault (West) is expected to generate a magnitude 7.2 earthquake with a Peak Ground Acceleration (PGA) ranging from 1.13g to 0.38g, which is equivalent to a Level XI to X on the Modified Mercalli Intensity Scale (MMI). Table IV-1 shows a list of faults that could generate significant impacts within Apple Valley and the surrounding area.

Table IV-1
Estimated Horizontal Peak Ground Accelerations and
Seismic Intensities in the Apple Valley Area

Fault Name	Distance to Apple Valley (km)	Distance to Apple Valley (mi)	Magnitude of M_{max} *	PGA (g) from M_{max}	MMI from M_{max}
North Frontal Fault (West)	<0.5 – 16.2	0.5 – 26.1	7.2	1.13 – 0.38	XI - X
Helendale – South Lockhart	<0.5 – 13.9	0.5 – 22.4	7.3	0.75 – 0.33	XI - IX
San Andreas (Whole Southern)	14.4 – 31.4	23.1 – 50.6	8.0	0.48 – 0.25	X - IX
Lenwood – Lockhart – Old Woman Springs	12.1 – 28.7	19.4 – 46.2	7.5	0.42 – 0.19	IX - VIII
San Andreas (San Bernardino – Coachella)	14.4 – 31.4	23.1 – 50.6	7.7	0.41 – 0.20	X - VIII
San Andreas (1857 Rupture or Cholame – Mojave)	16.9 – 33.2	27.2 – 53.5	7.8	0.38 – 0.20	IX - VIII
San Andreas (San Bernardino)	14.4 – 31.4	23.1 – 50.6	7.5	0.36 – 0.17	IX – VIII
Cleghorn	8.1 – 24.4	13.1 – 39.2	6.5	0.33 – 0.11	IX - VII
San Andreas (Mojave)	16.9 – 32.2	27.2 – 53.5	7.4	0.30 – 0.15	IX - VIII
Cucamonga	18 – 34.4	29 – 55.3	6.9	0.28 – 0.15	IX - VIII
Landers	17.3 – 34.5	27.9 – 55.6	7.3	0.27 – 0.14	IX - VIII
North Frontal (East)	17.3 – 32.2	27.9 – 51.9	6.7	0.26 – 0.14	IX – VIII
Sierra Madre	29.6 – 45.1	47.7 – 72.6	7.2	0.21 – 0.14	VIII
Gravel Hills – Harper Lake	20.8 – 37.5	33.5 – 60.3	7.1	0.20 – 0.11	VIII - VII
Calico – Hidalgo	29.1 – 43.6	43.1 – 70.2	7.3	0.18 – 0.11	VIII - VII
San Jacinto (San Bernardino)	18.6 – 35.7	29.9 – 57.4	6.7	0.17 – 0.09	VIII - VII
Johnson Valley (Northern)	19.9 – 32.4	32 – 52.1	6.7	0.16 – 0.10	VIII – VII
Puente Hills Blind Thrust	42.7 – 58.9	68.7 – 94.8	7.1	0.14 – 0.10	VIII - VII
Blackwater	30 – 45.2	46.8 – 72.8	7.1	0.14 – 0.09	VIII - VII
San Jacinto (San Jacinto Valley)	26.2 – 42.8	42.2 – 68.8	6.9	0.14 – 0.09	VIII - VII
Pinto Mountain	31.5 – 48.8	50.7 – 78.5	7.2	0.14- 0.09	VIII - VII
Pisgah – Bullion Mtn. – Mesquite Lake	35.5 – 51.4	57.1 – 82.7	7.3	0.13 – 0.09	VIII - VII
Emerson South – Copper Mtn.	29 – 40.6	46.7 – 65.3	7.0	0.13 – 0.09	VIII - VII

Abbreviations: mi – miles; km – kilometer; M_{max} – maximum magnitude earthquake; PGA – peak ground acceleration as a percentage of "g", which is the acceleration of gravity; MMI – Modified Mercalli Intensity.
Source: Technical Background Report to the Safety Element for the Town of Apple Valley, prepared by Earth Consultants International, 2007.

Potential adverse effects from earthquakes may be substantial and range from property damage, to the loss of public services and facilities, to loss of life. Apple Valley and the surrounding area are most susceptible to severe impacts associated with strong ground shaking. Strong ground shaking can cause other geologic hazards, including landslides, ground lurching, structural damage or destruction, and liquefaction, which can further disrupt affected areas through fire, the interruption of essential services or damage to facilities and infrastructure, such as water, sewer, gas, electric, transportation, communications, drainage, as well as release of hazardous materials. Dam or water tank failure brought about by seismic activity can result in flood inundation.

There are no faults mapped by the State of California within the Town's corporate limits or within either of the proposed annexation areas; however two faults occur within portions of the Town's Sphere of Influence. The following discussion describes the faults in the region that are most likely to impact Apple Valley. Faults within the Apple Valley study area are illustrated in Exhibit IV-3, Faults in Apple Valley Area.

Figure 9 – Faults in Apple Valley

North Frontal Fault

The North Frontal fault is closest to and therefore has the potential to generate the strongest seismic shaking in the area. The North Frontal fault is a partially blind reverse fault zone comprised of several fault splays; it trends south along the eastern flank of the San Bernardino Mountains, and has a combined total length of approximately 40 miles. Several of the fault splays interact with other faults that traverse the region. The most significant fault with which the North Frontal relates is the Helendale fault, which offsets and divides the North Frontal into two main segments, referred to as the East and West segments. The West segment is approximately 22 miles long, and is less than 0.5 miles from Apple Valley at the closest point.

The North Frontal fault is considered an active fault, based on its having moved within the last 10,000 years. However, it has not been studied in detail, and while it is has been attributed a slip rate of approximately 0.5 mm per year, the parameters of this fault are not well understood. It is thought that movement on this fault causes an average uplift rate of the San Bernardino Mountains of about 1 mm per year. The West segment of the North Frontal fault zone is considered capable of generating a maximum magnitude 7.2 earthquake, based on its length. Such an earthquake on this fault would generate peak ground accelerations in the planning area of between about 1.1g and 0.4g, which converts to Modified Mercalli intensities as high as XI. Based on rupture of the East segment of the North Frontal fault zone in a 6.7 earthquake, ground shaking of about 0.26g to 0.14g would be felt in the planning area. This converts to Modified Mercalli intensities in the IX to VIII range.

Helendale Fault

There are several right-lateral strike-slip faults within what is known as the Eastern California Shear Zone, of which the Helendale fault is the westernmost. Approximately 9 to 23% of the total movement along the North American/Pacific plate boundary motion occurs along this zone. The Helendale fault itself is 56 miles long, but it also seems to form a continuous fault with the South Lockhart fault to the north. The southern end of the Helendale fault apparently offsets the North Frontal fault, as discussed above, forming the East and West segments. The Helendale fault extends to the northeast of the planning area, outside of Apple Valley's northeastern corporate limits and within the Sphere of Influence. The Helendale fault has an annual slip rate calculated at 0.8 mm/year; it has a recurrence interval for large surface-rupturing events of 3,000 to 5,000 years. Based on currently available data, the California Geological Survey estimates that a maximum earthquake of magnitude 7.3 along the combined Helendale-South Lockhart faults would generate horizontal peak ground accelerations in Apple Valley of between 0.75g and 0.3g, with Modified Mercalli Intensities of between XI

and IX.

San Andreas Fault

The San Andreas Fault zone is located approximately 23 miles southwest of Apple Valley. The longest fault in the State of California, it extends approximately 750 miles from Cape Mendocino in northern California to the Salton Sea in southern California. The San Andreas, a right-lateral transform fault, is regarded as a "Master Fault" that controls the seismic hazard for central and southern California. The magnitude 8.0 Fort Tejon earthquake, which occurred in 1857, is the last major earthquake to have occurred on the southern San Andreas. As previously discussed, at least one other fault occurs closer to Apple Valley and has the potential to cause stronger ground

shaking, and therefore more damage, than the San Andreas Fault. Nonetheless, the San Andreas Fault is considered to have a high probability of causing an earthquake in the near future and should therefore be considered in all seismic hazard assessment studies in southern California given its.

The Fort Tejon earthquake in 1857 ruptured the Cholame, Carrizo, and Mojave segments of the San Andreas fault, and displacements occurred along of as much as 27 feet of the rupture zone. It is estimated that peak ground accelerations in Apple Valley as a result of the 1857 earthquake may have been as high as 0.38g. Another similar earthquake that ruptured the entire southern San Andreas Fault, with its epicenter along the section of fault closest to Apple Valley, could generate even higher peak ground accelerations in Apple Valley, estimated at between 0.48g and 0.25g.

<u>Lenwood – Lockhart – Old Woman Springs Faults</u>

Another of the Eastern California Shear Zone faults is the Lenwood fault, a right-lateral strike slip fault approximately 47 miles long. It has a slip rate of about 0.8 mm/year. Based on trenching studies, this fault has ruptured at least three times and these ruptures have occurred as recently as approximately 200 to 400 years ago. Other ruptures are estimated as occurring between 5,000 and 6,000 years ago, and 8,300 years ago. Therefore a recurrence between major surface ruptures is estimated at between 4,000 to 5,000 years. Prior to the 1992 Landers earthquake the yearly slip rate on this fault had been recorded but not verified.

The Lockhart fault is approximately 44 miles long and is north of the Lenwood fault. The North Lockhart fault, a segment that evidences no activity within the last 11,000 years, is approximately 6 miles. The Lockhart fault is estimated to have an interval of between 3,000 and 5,000 years for major surface-rupture.

The Old Woman Springs segment is about 6 miles long and is the main trace in a complex fault system where the Eastern segment of the North Frontal Fault Zone and the Lenwood fault intersect. It is considered an active fault.

The Lenwood and Lockhart faults essentially form a continuous, 90-miles long system. While there is no evidence that both of these faults have ruptured together in the past, such an event may be possible, as evidenced by rupture of five separate fault segments during the Landers earthquake. The technical

background study assumes a scenario wherein the Lenwood and Lockhart faults, together with the Old Woman Springs fault, rupture together in a magnitude 7.5 maximum earthquake. Such an event would generate peak ground accelerations in Apple Valley of about 0.42g to 0.19g, with Modified Mercalli Intensities in the IX to VIII range. A smaller magnitude event involving rupture along only one of these faults ruptures would cause lesser ground motions in Apple Valley than those reported above.

Cleghorn Fault

The Cleghorn fault, also known as the Silverwood Lake fault due to its extension across the lake, is approximately 19-miles long. Studies suggest that the fault zone has had about 650 feet of motion in the last 50,000 to 100,000 years, which results in a slip rate of 2 to 4 mm/year. A magnitude 6.5 earthquake on this fault is considered capable of generating horizontal peak ground accelerations in the Apple Valley area of between about 0.33g and 0.11g, with Modified Mercalli Intensities in the IX to VII range.

Cucamonga Fault

The Cucamonga fault zone is approximately 16-miles long. As one element of the Transverse Ranges family of thrust faults, it runs along the southern front of the San Gabriel Mountains from San Antonio Canyon eastward to the Lytle Creek area. It has a slip rate of between approximately 5.0 and 2.0 mm/year with an estimated average recurrence interval of 625 years. The Cucamonga fault is thought capable of generating a maximum magnitude 6.9 earthquake, based on length, and such a scenario would result in peak horizontal ground acceleration in the Apple Valley area of between about 0.28g and 0.15g, with Modified Mercalli intensities in the IX to VIII range.

Landers (or Kickapoo) Fault

The group of faults that ruptured during the 1992 Landers earthquake, including the Homestead Valley, Kickapoo, and Johnson Valley faults, and segments of the Burnt Mountain and Eureka Peak faults, are known as the Landers fault. The Landers fault now refers to the Kickapoo fault. These faults are part of the Eastern Mojave Shear Zone and were discovered after they ruptured the surface during the 1992 Landers earthquake. It is estimated that intervals between major ruptures is in the thousands of years, The 1992 earthquake resulted in substantial lateral displacement along some of these faults, for instance nearly 9.5 feet in the case of the Kickapoo fault. Individually, these faults could rupture in smaller earthquakes. Their combined lengths allowed for the magnitude 7.3 earthquake that shook southern California on June 28, 1992.

Ground shaking in the Apple Valley area due to a Landers-type earthquake on these faults would cause horizontal ground accelerations of between 0.27g and 0.14g, with Modified Mercalli intensities in the IX to VIII range.

Sierra Madre Fault

The Sierra Madre fault zone or complex is approximately 47 miles long and extends along the base of the San Gabriel Mountains from the San Fernando Valley to San Antonio Canyon; from there it continues southeastward as the Cucamonga fault. The estimated slip rate of the Sierra Madre fault is estimated to be approximately 0.6 mm/year with a recurrence interval of about 8,000 years. Recent studies suggest that the last rupture event on the eastern segments of the fault occurred about 8,000 years ago, therefore, the Sierra Madre fault may be near the end of its cycle, and therefore it has potential generate an earthquake in the not too distant future. The Sierra

Madre fault is estimated to be capable of producing a magnitude 7.2 earthquake, resulting in peak horizontal ground accelerations in Apple Valley of between about 0.21g and 0.14g.

Gravel Hills – Harper Lake Fault

This fault zone is between 31 and 44 miles long, depending on how many fault segments are included and is considered active. The estimated annual slip rate on this fault zone is 0.9 mm/year; the recurrence interval between earthquakes is about 3,500 years. The combined fault segments are estimated to be capable of generating 7.1 magnitude earthquake, which would generate peak horizontal ground accelerations in the Apple Valley area of between 0.20g and 0.11g, with Modified Mercalli intensities in the VIII to VII range.

Previous Occurrences/Magnitude for Earthquake

The earthquakes of California are caused by the movement of huge blocks of the earth's crust- the Pacific and North American plates. The Pacific plate is moving northwest, scraping horizontally past North America at a rate of about 50 millimeters (2 inches) per year. About two-thirds of this movement occurs on the San Andreas fault and some parallel faults- the San Jacinto, Elsinore, and Imperial faults. Over time, these faults produce about half of the significant earthquakes of our region, as well as many minor earthquakes.

The last significant earthquake on the Southern California stretch of the San Andreas fault was in 1857, and there has not been a rupture of the fault along its southern end from San Bernardino to the Salton Sea since 1690. It is still storing energy for some future earthquake. Southern California has thousands of smaller earthquakes every year. A few may cause damage, but most are not even felt. And most of these are not on the major faults listed above. Earthquakes can occur almost everywhere in the region, on more than 300 additional faults that can cause damaging earthquakes, and countless other small faults.

This is mostly due to the "big bend" of the San Andreas fault, from the southern end of the San Joaquin Valley to the eastern end of the San Bernardino mountains (see Figure 10, "Big Bend" at left.) Where the fault bends, the Pacific and North American plates push into each other, compressing the earth's crust into the mountains of Southern California and creating hundreds of additional faults (many more than shown in the fault map). These faults produce thousands of small earthquakes each year, and the other half of our significant earthquakes. Examples

A schematic block model of Southern California showing the motion of the Pacific and North American plates, and the big bend of the San Andreas fault where the plates squeeze together.

include the 1994 Northridge and 1987 Whittier Narrows earthquakes.

FIGURE 10 - "BIG BEND"

Of the 119 California earthquakes cited in the list (below), the Town of Apple Valley is in the area of potential effect of 25 of them (***as indicated below ****). This means that 20 percent of these earthquakes either had the opportunity to produce some damage to Apple Valley or may have produced injuries, fatalities and damages to surrounding communities.

2010 04 05 - Sierra El Mayor Earthquake (Northern Baja California) - M 7.2
2010 03 16 - Near Pico Rivera, Los Angeles Basin - M 4.4
2010 01 10 - Gorda Plate Earthquake - M 6.5
2010 01 10 - Offshore Northern California - M 6.5
2009 06 08 - San Francisco Bay Area, California - M 3.5
2009 05 18 - Greater Los Angeles Area, California - M 4.7
2009 04 30 - Northern California - M 3.5
2009 03 30 - Northern California - M 4.3
2009 03 08 - San Francisco Bay area, California - M 3.5
2009 01 09 - Greater Los Angeles Area, California - M 4.5
2008 07 29 - Greater Los Angeles area, California - M 5.5
2008 04 30 - Northern California - M 5.4
2007 10 31 - San Francisco Bay Area, California - M 5.6
2007 08 09 - Greater Los Angeles area, California - M 4.4
2007 07 20 - San Francisco Bay area, California - M 4.2
2007 07 02 - Central California - M 4.3
2007 05 09 - Offshore Northern California - M 5.2
2006 10 20 - Northern California - M 4.5
2005 09 22 - Central California - M 4.7
2005 06 17 - Off the Coast of Northern California - M 6.6
2005 06 16 - Greater Los Angeles Area, California - M 4.9
2005 06 15 - Off the Coast of Northern California - M 7.2
2005 06 12 - Southern California - M 5.2
2005 05 06 - Central California - M 4.1
2004 09 28 - Central California - M 6.0
2004 05 30 - Pine Mountain Club, California - M 3.0
2003 12 22 - San Simeon, California - M 6.6 Fatalities 2
2003 10 19 - near Orinda, California - M 3.5
2003 10 07 - near Imperial Beach, California - M 3.6
2003 09 13 - near Simi Valley, California - M 3.4
2003 09 05 - near Piedmont, California - M 4.0
2003 08 27 - Val Verde, California - M 3.9
2003 08 15 - Humboldt Hill, California - M 5.3
2003 05 26 - Seven Trees, California - M 3.8
2003 05 26 - Muir Beach, California - M 3.4
2003 05 25 - Santa Rosa, California - M 4.2
2003 05 24 - Brawley, California - M 4.0
2003 03 11 - Twentynine Palms Base, California - M 4.6
2003 02 22 - Big Bear City, California - M 5.2
2003 02 02 - Dublin, CA, Swarm - M 4.1
2003 01 25 - Keene, California - M 4.7
2002 12 24 - Pacifica, California - M 3.6
2002 11 24 - Swarm near San Ramon, California - M 3.9
2002 09 03 - Yorba Linda, California - M 4.8
2002 06 17 - Bayview, California - M 5.3
2002 05 14 - Gilroy, California - M 4.9

2002 03 16 - near Channel Islands Beach, California - M 4.6
2000 09 03 - Napa, California - M 5.0
1999 10 16 - Hector Mine, California - M 7.1
1994 09 01 - Cape Mendocino, California - M 7.0
1994 01 17 - Northridge, California - M 6.7 Fatalities 60
1992 06 28 - Landers, California - M 7.3 Fatalities 3
1992 06 28 - Big Bear, California - M 6.5
1992 04 25 - Cape Mendocino, California - M 7.2
1992 04 23 - Joshua Tree - M 6.2
1991 08 17 - Honeydew, California - M 7.0
1991 06 28 - Sierra Madre, California - M 5.6 Fatalities 2
1989 10 18 - Loma Prieta, California - M 6.9 Fatalities 63
1989 08 08 - Santa Cruz County, California - M 5.4 Fatalities 1
1987 11 24 - Superstition Hills, California - M 6.7
1987 11 24 - Superstition Hills, California - M 6.5 Fatalities 2
1987 10 04 - Whittier Narrows, California - M 5.6 Fatalities 1
1987 10 01 - Whittier Narrows, California - M 5.9 Fatalities 8
1986 07 21 - Chalfant Valley, California - M 6.2
1986 07 08 - North Palm Springs, California - M 6.1
1984 11 23 - Round Valley, California - M 5.8
1984 04 24 - Morgan Hill, California - M 6.2
1983 05 02 - Coalinga, California - M 6.4
1980 11 08 - Humboldt County, California - M 7.2
1980 05 27 - Mammoth Lakes, California - M 6.0
1980 05 25 - Mammoth Lakes, California - M 6.2
1980 01 27 - Livermore, California - M 5.8
1980 01 24 - Livermore Valley, California - M 5.8
1979 10 15 - Imperial Valley, Mexico - California Border - M 6.4
1979 08 06 - Coyote Lake, California - M 5.7
1975 08 01 - Oroville, California - M 5.8
1971 02 09 - San Fernando, California - M 6.6 Fatalities 65
1969 10 02 - Santa Rosa, California - M 5.7 Fatalities 1
1966 09 12 - Truckee, California - M 5.9
1966 06 28 - Parkfield, California - M 6.1
1957 03 22 - Daly City, California - M 5.3 Fatalities 1
1955 10 24 - Concord, California - M 5.4 Fatalities 1
1954 12 21 - Eureka, California - M 6.5 Fatalities 1
1952 08 22 - Kern County, California - M 5.8 Fatalities 2
1952 07 21 - Kern County, California - M 7.3 Fatalities 12
1940 05 19 - Imperial Valley, California - M 7.1 Fatalities 9
1934 06 08 - Parkfield, California - M 6.1
1933 03 11 - Long Beach, California - M 6.4 Fatalities 115
1932 06 06 - Eureka, California - M 6.4 Fatalities 1
1927 11 04 - Lompoc, California - M 7.1
1926 10 22 - Monterey Bay, California - M 6.1
1926 06 29 - Santa Barbara, California - M 5.5 Fatalities 1
1925 06 29 - Santa Barbara, California - M 6.8 Fatalities 13
1923 01 22 - Humbolt County, California - M 7.2
1922 03 10 - Parkfield, California - M 6.1
1922 01 31 - Eureka, California - M 7.3
1918 04 21 - San Jacinto, California - M 6.8 Fatalities 1
1915 06 23 - Imperial Valley, California - M 6.3 Fatalities 6
1911 07 01 - Calaveras fault, California - M 6.5
1906 04 18 - San Francisco, California - M 7.8 Fatalities 3000
1901 03 03 - Parkfield, California - M 6.4

1899 12 25 - San Jacinto, California - M 6.7 Fatalities 6
1899 04 16 - Eureka, California - M 7.0
1898 04 15 - Mendocino County, California - M 6.8
1898 03 31 - Mare Island, California - M 6.3
1897 06 20 - Calaveras fault, California - M 6.3
1892 04 21 - Winters, California - M 6.4
1892 04 19 - Vacaville, California - M 6.4 Fatalities 1
1892 02 24 - Imperial Valley, California - M 7.8
1890 02 24 - Corralitos, California - M 6.3
1873 11 23 - California - Oregon Coast - M 7.3
1872 03 26 - Owens Valley, California - M 7.4 Fatalities 27
1868 10 21 - Hayward, California - M 6.8 Fatalities 30
1865 10 08 - Santa Cruz Mountains, California - M 6.5
1857 01 09 - Fort Tejon, California - M 7.9 Fatalities 1
1838 06 - San Francisco area, California - M 6.8
1836 06 10 - South San Francisco Bay region, California - M 6.5
1812 12 21 - West of Ventura, California - M 7.1 Fatalities 1
1812 12 08 - Southwest of San Bernardino County, California - M 6.9 Fatalities 40

TABLE 1 - CALIFORNIA EARTHQUAKES

The following provides information on the probability of future events. In addition, the data provides an overall summary of the Town's vulnerability and impact of each hazard.

The entire geographic area of California is prone to the effects of an earthquake. Figure 11 represents the UCERF probabilities of having a nearby earthquake rupture (within 3 or 4 miles) of magnitude 6.7 or larger in the next 30 years. As shown in the table, the chance of having such an event somewhere in California exceeds 99%. The 30-year probability of an even more powerful quake of magnitude 7.5 or larger is about 46%.

CALIFORNIA AREA EARTHQUAKE PROBABILITIES

Magnitude	30-Year Probability *
6.7	>99%
7.0	94%
7.5	46%
8.0	4%

* Probabilities do not include the Cascadia Subduction Zone.

Apple Valley is located approximately 75 miles east of Los Angeles.

FIGURE 11 - **UCERF** EARTHQUAKE PROBABILITY MAPPING

Liquefaction

Where loose, saturated, sandy sediments are subjected to ground vibrations greater than 0.2 g, liquefaction may occur. causing the total or substantial loss of shear strength in the affected sediments. During this process, wherein soils behave like a liquid or semi-viscous substance, structural distress or failure due to ground settlement can occur. These conditions may cause foundation soils to lose load-bearing capacity in foundation soils and the buoyant rise of buried structures.

Liquefaction is induced by three general conditions: 1) strong ground shaking over a relatively long period; 2) the presence of unconsolidated granular sediments; and 3) the occurrence of water-saturated sediments within 50 feet of the ground surface. These general conditions appear to occur in the planning area, thereby allowing the potential for liquefaction. There are a number of active faults in the region that could potentially generate earthquake characterized by strong ground shaking of long durations. Along major drainages in the planning area and vicinity, granular loose sediments occur. The alluvium underlying Apple Valley is coarsely granular and percolates well; the water table is below 50 feet of the ground surface throughout most of the area, with the exception of locally within the Mojave River floodplain, where water-saturated sediments occur within about 50 feet of the surface. These areas are likely vulnerable to liquefaction during an earthquake.

Town of Apple Valley
USGS Liquefaction Susceptibility Zones

Liquefaction Susceptibility data source:
Liquefaction susceptibility data developed for the "ShakeOut" Scenario,
USGS Open File Report 2008-1150, Chap. 3C (p. 48-87)
Map creation date: October 26, 2010

	Liquefaction Susceptibility
Town of Apple Valley	Water Features
Rivers and Streams	None
Major Highways	Very Low
EOCs	Low
Police Stations & Jails	Moderate
Fire Stations	High
Schools	Very High
Sewage Treatment Plants	

4.2.2 Flooding

Floods are the most common and widespread of all natural disasters--except fire. Most communities in the United States have experienced some kind of flooding, after spring rains, heavy thunderstorms, or winter snow thaws.

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. Investing in mitigation steps now, such as engaging in floodplain management activities, constructing barriers such as levees, and purchasing flood insurance will help reduce the amount of structural damage to your home and financial loss from building and crop damage should a flood or flash flood occur.

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.) Rod Bolin, The Ponca City News, July 18, 2002. Page 5-A

While not considered a "high risk area", the Town does have areas that are considered "flood potential". *The most crucial areas pertaining to flooding are the dry lake bed (consisting of limited residential) and Desert Knolls. Flooding is expected to occur within the general location of these risk areas, and not expected to threaten or endanger the safety or well being of the entire community. It is noted that flooding in the risk areas can occur rapidly depending on the heaviness and severity of rainfall and run-off. However, since the installation of dry wells in low-lying areas, severe flooding occurrences have become less frequent.*

Since incorporation in 1988, the Emergency Operations Center has activated more often due to flooding than any other type disaster. The Town's emergency responders continue to rely on the National Weather Service for weather advisories, storm watch conditions, and storm warnings.

National Flood Insurance Program (NFIP)

The Town joined the National Flood Insurance Program (NFIP) on June 16, 1995. The federal government administers the NFIP with communities that have been identified as flood prone. The Federal Emergency Management Agency (FEMA), through the Federal Insurance Administration, makes flood insurance available to the residents of Apple Valley provided the Town adopts and enforces adequate floodplain management regulations that meet the minimum NFIP requirements.

Previous Occurrences/Severity of Flooding

Winter storms in the past have caused waters in one or more of the natural drainage channels to overflow onto Town streets, parks and private property. Street embankments adjacent to the storm

channels have been damaged and required road closure. Normal traffic flow is significantly affected by water and silt deposits in the low water crossings.

Flash Flooding

Historical Events: The following describes the historical events associated with this hazard:

1. **Series of Rainstorms; 1/22/10 (FEMA-1844-DR)**

   A series of severe rainstorms occurred in southern California on or about January 17, 2010 to February 6, 2010. A local declaration was issued by the Town Manager on January 21, 2010 (Resolution #2010-08). Governor Schwarzenegger proclaimed a State of Emergency for San Bernardino County on January 22, 2010, and President Bush declared a major for public assistance. The local Emergency Operations Center was activated to a level 1.

   The series of rainstorms caused 0.43 inches of rainfall in Apple Valley over one 24-hour period. About 6,000 sandbags were issued throughout the week. A Sewer Lift Station suffered major damage to the facility, sewer pipes, and manhole. Other work throughout the community included:

   - Debris removal
   - Sandbagging and road closures
   - Remove/replace asphalt and curbing
   - Repair severe road edge erosion
   - Base fill, grade, and recompact

   Source: Town of Apple Valley records; Daily Press newspaper

   Hazard: Flooding
   Deaths: 0
   Injuries: 0
   Displaced People: unknown

2. **Series of Rainstorms; 1/8/2005 (FEMA-1577-DR)**

   A series of severe rainstorms occurred in southern California on or about December 27, 2004 to January 11, 2005. A local declaration was issued by the Town Manager on January 21, 2005 (Resolution #2005-06), and ratified by the Town Council on January 25, 2005 (Resolution #2005-07). Governor Schwarzenegger proclaimed a State of Emergency for San Bernardino County on January 15, 2005, and President Bush declared a major disaster on February 4, 2005 for public assistance. The local Emergency Operations Center was not activated.

   The series of rainstorms caused 0.43 inches of rainfall in Apple Valley over one 24-hour period. About 3,000 sandbags were issued throughout the week. The rainstorms caused the release of up to 5,500 CFS of water from Silverwood Lake reservoir over a 3-4 day period. At one point the water in the Mojave River measured at 6-feet, and caused minor damage to rear yard properties along the west side of Riverside Drive. Sewer Lift Station 3-A suffered major damage (approximately $500,000) to the facility, sewer pipes, and manhole. Other work throughout the community included:

- Debris removal
- Sandbagging and road closures
- Remove/replace asphalt and curbing
- Repair severe road edge erosion
- Base fill, grade, and recompact

Source: Town of Apple Valley records; Daily Press newspaper

Hazard: Flooding
Deaths: 0
Injuries: 0
Displaced People: 0

3. **7/11/1999** (NDAA 99-04; OES #99-04-010)

On or about 4:00 p.m. on July 11, 1999, local flooding due to heavy rains occurred at various locations throughout the community. Resolution #99-27 confirming existence of a local emergency was signed by the Mayor. The Emergency Operations Center was partially activated.

Flooding led to multiple road closures, including the major arterial of Highway 18 and Tao Road. Approximately 29 other areas of road damage were noted. Water and mud damage destroyed three apartment units forcing the evacuation of residents. Apple Valley Fire Protection District conducted numerous rescues from stranded motorists. Apple Valley Chamber of Commerce went door-to-door to businesses in the Desert Knolls area (hardest hit area) to assist as necessary with storm damage. Approximately 14 businesses suffered moderate damage, as well as 34 single family residences.

Activities included:

- Sandbagging and road closures
- Remove/replace asphalt and curbing
- Repair severe road edge erosion
- Base fill, grade, and recompact

Source: Town of Apple Valley records; Daily Press newspaper

Hazard: Flash Flooding
Deaths: 0
Injuries: Unknown
Displaced People: Unknown

4. **El Nino Conditions; 2/23/1998** (FEMA-1203-DR; NDAA-OES #98-01-285)

On or about 10:00 p.m. on February 23, 1998, local flooding due to heavy rains occurred at various locations. Resolution #98-13 confirming existence of a local emergency was issued, and the Emergency Operations Center was activated.

A total of 2.87-inches of rain poured on the High Desert in a 24-hour period. It was thought to be the third wettest month in Apple Valley since 1938 as the rain total for the month was 5.03-inches! Major damage occurred to 6 businesses and 21 apartment units and minor damage to another 35 apartment units, for a total of $8.9 million in damages.

Activities included:

- Sandbagging and road closures
- Debris removal; barricade placement
- Road shoulder erosion protection
- Repair to concrete casing for sewer line crossing at the wash
- Clean manholes and repair potholes
- Remove/replace asphalt

Source: Town of Apple Valley records, Daily Press Newspaper, Apple Valley News

> Hazard: Flash Flooding
> Deaths: 0
> Injuries: 0
> Displaced People: Unknown

5. **1/12/1993**

On or about midnight on January 12, 1993, local flooding due to heavy rains occurred at various locations throughout the community. Resolution #93-05 confirming existence of a local emergency was signed by the Mayor.

The rainstorm dumped nearly 9-inches of water in two days, with a constant rain lasting 11 days. The conditions worsened when there was a release of water from the Lake Silverwood reservoir.

Activities included:

- Sandbagging and road closures
- Debris removal
- Rescue of two rafters in the Mojave River (AVFPD)
- Construction of embankment to redirect flow of the Mojave River (San Bernardino County Flood Control)

Source: Town of Apple Valley records and Daily Press Newspaper

> Hazard: Flash Flooding
> Deaths: 0
> Injuries: Unknown
> Displaced People: Unknown

6. **12/7/1992**

On or about 8:00 a.m. on December 7, 1992, local flooding due to heavy rains occurred at various locations throughout the community. Town of Apple Valley Resolution #92-80 confirming existence of a local emergency was signed by the Mayor. In fact, all four cities in the High Desert proclaimed a local emergency.

A total of 2.4-inches of rain poured down in the High Desert in an 18-hour period. It was thought to be the most rain to drop in the High Desert in the past ten years.

Activities included:

- Evacuation of residents (6 apartment units)

- Sandbagging and road closures
- Debris removal

Source: Town of Apple Valley records; Daily Press Newspaper

Hazard: Flash Flooding
Deaths: 0
Injuries: 0
Displaced People: Unknown

7. **El Nino Conditions; 2/12/1992**

On or about 7:30 p.m. on February 12, 1992, local flooding due to heavy rains occurred at various locations throughout the community. A resolution proclaiming existence of a local emergency was signed by the Assistant Director of Emergency Services and the Deputy Town Manager.

Activities included:

- Sandbagging and road closures
- Debris removal
- Barricade placement and placement of cold mix asphalt into potholes
- Remove/replace asphalt, repaint stop bars/legends; replace striping
- Asphalt overlay and asphalt berms

Source: Town of Apple Valley records and Daily Press Newspaper

Hazard: Flash Flooding
Deaths: 0
Injuries: Unknown
Displaced People: Unknown

The following table summarizes the occurrences, impact and costs of this hazard. "Other" is costs associated with the Apple Valley Fire Protection District.

Hazard: Flash Flooding	Response and Recovery Costs (dollar amounts in thousands)						
Name	Date	Town	County	State	Federal	Other	Total
Series of Severe Rainstorms	12/27/04-1/11/05	$684	Unk	Unk	Unk	$2	$686
N/A	7/11/1999	$60	$0	$0	$0	$98	$158
El Nino Conditions	2/23/1998	$2,027	$0	$0	$0	$0	$2,027
N/A	1/12/1993	$0	$0	$0	$0	$0	$0
N/A	12/7/1992	$150	$0	$0	$0	$160	$310
El Nino Conditions	2/12/1992	$423	$0	$0	$0	$149	$572

Totals:	$3,344	$0	$0	$0	$409	$3,753

The following map illustrates FEMA Flood Hazards located within the Town of Apple Valley.

Town of Apple Valley
FEMA Flood Hazard Areas

Flood data source
FEMA's National Flood Hazard Layer, April 19, 2010
Map creation date: November 15, 2010

FIGURE 3- TOWN OF APPLE VALLEY FEMA FLOOD HAZARD AREAS

4.2.3 Wildfires

A wildland fire is a type of fire that spreads through all types of vegetation. It often begins unnoticed, spreads quickly, and is usually signaled by dense smoke that may be visible from miles around. Wildland fires can be caused by human activities (such as arson or campfires) or by natural events such as lightning. Wildland fires often occur in forests or other areas with ample vegetation. In addition to wildland fires, wildfires can be classified as urban fires, interface or intermix fires, and prescribed burns.

The following three factors contribute significantly to wildland fire behavior and can be used to identify wildland fire hazard areas:

▪ Topography: As slope increases, the rate of wildland fire spread typically increases. South facing slopes are also subject to more solar radiation, making them drier and thereby intensifying wildland fire behavior. However, ridge tops may mark the end of wildland fire spread, since fire spreads more slowly or may even be unable to spread downhill.

▪ Fuel: The type and condition of vegetation plays a significant role in the occurrence and spread of wildland fires. Certain types of plants are more susceptible to burning or will burn with greater intensity. Dense or overgrown vegetation increases the amount of combustible material available to fuel

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the fire (referred to as the "fuel load"). The ratio of living to dead plant matter is also important. The risk of fire is increased significantly during periods of prolonged drought as the moisture content of both living and dead plant matter decreases. The fuel's continuity, both horizontally and vertically, is also an important factor.

▪ Weather: The most variable factor affecting wildland fire behavior is weather. Temperature, humidity, wind, and lightning can affect chances for ignition and spread of fire. Extreme weather, such as high temperatures and low humidity, can lead to extreme wildland fire activity. By contrast, cooling and higher humidity often signals reduced wildland fire occurrence and easier containment.

Fire Hazard Severity

Wildfires present a significant threat in the unincorporated area of Apple Valley, particularly in the summer months when temperatures are high and precipitation is rare. The period between June and September is typically considered "fire season".

The area known as the Marianas in the southern foothill area of Apple Valley is a fire hazard area due to the abundance of brush and mountainous terrain, which makes it difficult to gain access to fight fire. This area is primarily in the unincorporated region of Apple Valley with homes scattered throughout the vegetation.

The Mojave Riverbed is the second significant threat of wildland fire in the Apple Valley area. Because of its significant slope to the bottom of the riverbed and the soft soil, it is difficult to gain access to this area to fight fire. The Mojave River is the Town's western boundary with residential properties along Riverside Drive. Schools are located on the southernmost and northernmost ends of the natural extension of Riverside Drive.

The CPRI and wildfire statistics in this plan pertain to a potential fire in the Marianas.

Previous Occurrences of Wildfires

Historical Events: The following section lists and describes the historical events associated with this hazard in Town of Apple Valley.

1. **Old Fire; 10/27/2003** (FEMA-1498-DR)

   On or about 2:00 p.m. on October 27, 2003, the Old Fire started threatening the mountain communities near Big Bear Lake forcing the evacuation of the entire community. The only passageway off the mountain at this point was through the High Desert and Apple Valley. The Emergency Operations Center was activated to accommodate the evacuated residents.

   While monitoring the direction and rate of spread of the Old Fire, the Town was never in a real or direct threat. However, the EOC supported many activities for the evacuees from Big Bear.

   Activities included:

   • Emergency shelter for livestock-type animals at Horseman's Center; secured 24-hours a day; opportunity for the first time to test the Town's new animal evacuation plan; over 100 animals were sheltered over a 6 day period

- Coordination with American Red Cross to open a shelter at Apple Valley High School for six days averaging a daily attendance of 160 evacuees and 10 staff
- Apple Valley Unified School District closed its schools for 2.5 days because of the inability of the possible threat of fire, disruption to transportation services throughout the High Desert (as neighboring cities were sheltering Crestline and Running Springs residents), and due to the severe unhealthful smokey conditions in the area
- Public information -- press releases, web site updates, telephone recording updates, shelter flyers, evacuation flyers
- Voluntary evacuation notice for the southern portion of unincorporated and incorporated Apple Valley with preparation for large volume evacuation operations, non-ambulatory evacuations, and animal evacuations

Source: Town of Apple Valley records; Apple Valley Fire Protection District records

Hazard: Wildfires
Deaths: 0
Injuries: 0
Displaced People: 0

2. Willow Fire; 8/29/1999

On or about 3:30 p.m. on August 29, 1999, the Willow Fire that had been burning in the San Bernardino National Mountains near Lake Arrowhead was threatening the Town of Apple Valley. The Emergency Operations Center was partially activated at that time.

While the Willow Fire did not make its way into the Town boundaries, it did affect the unincorporated area south of Apple Valley. Ultimately, a few homes were lost in this area.

Activities included:

- Coordinating requests for information
- Coordination with the American Red Cross to open a shelter at Apple Valley High School
- Evacuations by Apple Valley Police Department and Town of Apple Valley Animal Control
- Fire response by Apple Valley Fire Protection District
- Activation of Apple Valley Radio Amateur Civil Emergency Services

Source: Town of Apple Valley records; AVFPD records

Hazard: Wildfires
Deaths: Unknown
Injuries: Unknown
Displaced People: Unknown

The following table summarizes the occurrences, impact and costs of this hazard. "Other" is cost associated with the Apple Valley Fire Protection District.

Hazard: Wildfires		Response and Recovery Costs (dollar amounts in thousands)					
Name	Date	City Town	County	State	Federal	Other	Total
Old Fire	10/27/2003	$4	$0	$0	$0	$97	$101
Willow Fire	8/29/1999	$0	$0	$0	$0	$0	$0
Totals:		$4	$0	$0	$0	$97	$101

Hazard Summary for Wildfires

Fire prevention strategies concentrate on educating the public and enforcement of fire codes. Fire suppression strategies focus around containment and control while protecting structures in the threatened areas. Suppression activities may utilize natural firebreaks; direct suppression of the fire by hose lines, aircraft, bulldozers and hand crews; increasing defensible spaces around homes; utilizing fire suppression foams; and mop up and total extinguishment of the fire.

The following map illustrates the Fire Hazard Severity Zones for the Town of Apple Valley.

Town of Apple Valley

CAL FIRE Fire Hazard Severity Zones

Fire hazard data source:
CAL FIRE Fire Resource and Assessment Program (FRAP) Data,
Recommended County Maps of Very High Fire Hazard Severity Zones in Local
  Responsibility Areas (LRA) 5/2008
Draft Fire Hazard Severity Zones in Local Responsibilty Areas (LRA) 9/2007
Adopted Fire Hazard Severty Zones for State Responsibility Areas (SRA) 11/2007
Map creation date: November 3, 2010

4.3   Inventory Assets

Step three in the risk assessment process involves inventorying assets located in the community. Section 4.1 profiled the hazards in Apple Valley. This information was used to identify the assets at risk from those hazards. Some hazards (such as earthquakes) may affect the entire community while some affect limited areas (flooding incidents). This section provides a description of the inventory development and prioritization process.

4.3.1   Population

The population statistics for the Town of Apple Valley are based on US Census data.

	Town of Apple Valley, California

Total Population	
July 1, 2009	70,109
July 1, 2008	69,731
July 1, 2007	69,594
July 1, 2006	67,791
July 1, 2005	64,338
July 1, 2004	61,872
July 1, 2003	59,555
July 1, 2002	57,516
July 1, 2001	55,967
July 1, 2000	54,597
April 1, 2000 (Estimates Base)	54,254
April 1, 2000 (Census 2000)	54,239

Source: US Census Bureau, Population Estimates Program

4.3.2   Buildings

HAZUS default building inventory indicates there are about 21,396 buildings in the Town of Apple Valley and a total estimated replacement value of buildings of $13.8 billion, excluding building contents. Approximately 96% of the buildings are residential, and 28% of the building value is associated with residential housing. More than 90% of the structures are wood. Figure 16 provides the building counts by occupancy and structure type for the Town of Apple Valley (HAZUS).

Building Inventory Information by General Occupancy	Building Replacement Value ($1,000)	Contents Replacement Value ($1,000)	Building Square Footage (1,000 Sq. Ft.)	Building Count
Residential	$3,845,815	$1,922,862	38,863	20,559
Commercial	$9,694,660	$9,702,272	86,145	313
Industrial	$27,624	$41,432	367	40
Other	$259,945	$123,505	1,625	484
TOTAL	**$13,828,044**	**$11,790,071**	**127,000**	**21,396**

Selected Building Inventory Data by General Building Type	Building Replacement Value ($1,000)	Building Replacement Value (%)	Estimated Building Count	% of Building Count
Concrete	$1,065,909	7.7%	77	0%
Manufactured Housing	$53,502	0.4%	1,186	6%
Precast Concrete	$904,295	6.5%	64	0%
Reinforced Masonry	$3,036,080	22.0%	293	1%
Steel	$506,147	3.7%	48	0%
Unreinforced Masonry	$155,132	1.1%	5	0%
Wood Frame (Other)	$4,503,771	32.6%	487	2%
Wood Frame (Single-family)	$3,603,208	26.1%	19,236	90%
TOTAL	**$13,828,044**		**21,396**	

Figure 4 - HAZUS Building Counts by Occupancy and Structure Type (Earthquake)

4.3.3   Critical Facility List

The Apple Valley Emergency Operations Plan lists critical facilities as "essential facilities". They are defined as structures, areas, or systems that significantly or directly affect the public health and safety of the community, i.e., police and fire stations, hospitals, utilities, and shelters/schools. A list of critical facilities with their respective organizations includes:

- Fire Stations (7) - Apple Valley Fire Protection District
- Hospital (1) - St. Mary Regional Medical Center
- Police Station (1) - San Bernardino County Sheriff's Department
- Shelter/Community Center (1) - Town of Apple Valley
- Shelter/Schools (14) - Apple Valley Unified School District
- Utility/Electrical (2) - Southern California Edison
- Utility/Natural Gas (2) - Southwest Gas Corporation
- Utility/Sewer (8) - Town of Apple Valley
- Utility/Telephone (6) – Verizon
- Utility/Water (7) - Southern California Water Company
- Utility/Water (30) - Apple Valley Ranchos Water Company
- Utility/Water (3) - Rancheritos Mutual Water Company

Name	Facility Type	Critical Rank
St. Mary Medical Center	Medical Facilities	Critical
Apple Valley Fire District – Station #331	Fire Stations	Critical

Apple Valley Fire District – Station #332	Fire Stations	Critical
Apple Valley Fire District – Station #333	Fire Stations	Critical
Apple Valley Fire District – Station #334	Fire Stations	Critical
Apple Valley Fire District – Station #335	Fire Stations	Critical
Apple Valley Fire District – Station #336	Fire Stations	Critical
Apple Valley Fire District – Station #337	Fire Stations	Critical
Apple Valley Police Department	Police Stations	Critical
James A. Woody Community Center	Government Facilities	Critical
Southwest Gas Corporation	Other	Critical
Apple Valley Ranchos Water Co.	Water and Sewer	Critical
Rancheritos Mutual Water Company	Water and Sewer	Critical
Southern California Water Company	Water and Sewer	Critical
TAV Sewer Lift Station – Jess Ranch #1	Water and Sewer	Critical
TAV Sewer Lift Station – Jess Ranch #2	Water and Sewer	Critical
TAV Sewer Lift Station - Kissell	Water and Sewer	Critical
TAV Sewer Lift Station 2-A-1	Water and Sewer	Critical
TAV Sewer Lift Station 2-A-2	Water and Sewer	Critical
TAV Sewer Lift Station 2-B	Water and Sewer	Critical
TAV Sewer Lift Station 3-A-1	Water and Sewer	Critical
TAV Sewer Lift Station 3-A-2	Water and Sewer	Critical
Apple Valley High School	Child Care Facilities	Critical
Desert Knolls Elementary School	Child Care Facilities	Critical
Granite Hills High School	Child Care Facilities	Critical
High Desert Premier Academy	Child Care Facilities	Critical
Lewis Center	Child Care Facilities	Critical
Mariana Elementary School	Child Care Facilities	Critical
Mojave Mesa Elementary School	Child Care Facilities	Critical
Phoenix Academy	Child Care Facilities	Critical
Rancho Verde Elementary School	Child Care Facilities	Critical
Rio Vista Elementary School	Child Care Facilities	Critical
Sandia Elementary School	Child Care Facilities	Critical
Sitting Bull Elementary	Child Care Facilities	Critical
Sitting Bull Middle	Child Care Facilities	Critical
Sycamore Rocks Elementary School	Child Care Facilities	Critical
Vanguard Preparatory	Child Care Facilities	Critical
Vista Campana Middle School	Child Care Facilities	Critical
Willow Park High School	Child Care Facilities	Critical
Yucca Loma Elementary School	Child Care Facilities	Critical
Apple Valley Animal Control Facility	Other	Critical
Apple Valley Public Works	Other	Critical
Apple Valley Town Hall	High Economic Importance	Critical

Apple Valley Unified School Dist	High Economic Importance	Critical

St. Mary Medical Center
Medical Facilities
Size: 250000
Facility Description: St. Mary Medical Center is a 186-bed acute care hospital serving residents of Apple Valley, Adelanto, Hesperia, Lucerne Valley, and Victorville. The hospital was constructed prior to 1973 and is non-conforming to California seismic requirements enacted with Senate Bill 1953. The building consists of two separate additions to the original main hospital that are joined together. The building is extremely irregular in plan with several wings and re-entrant corners. Estimated square feet of main building and related campus buildings (MOB, Finance, Education/IS, and Marketing/Communications buildings) is 250,000 square feet.
Primary Contact:
Robert Suchomel, Director of Facilities
18300 Highway 18, Apple Valley, CA 92307
Phone: 760-242-2311 Ext. 8139
E-mail: Robert.suchomel@stjoe.org
Lon: 117.26
Lat: 34.5427

Apple Valley Fire Protection District
Fire Stations:

Apple Valley Fire Station 331 & Headquarters
Fire Station
Size: 10,060
Facility Description: Station 331 and the adjoining headquarters facility are of wood frame construction with a 6-unit bay area. The station side is a typical fire station with office, kitchen, sleeping, and restroom facilities. The 6-unit bay has six bay doors and meets California safety guidelines for fire stations. The headquarters side of the building contains various office space and restrooms, and also includes a large training room and small conference room. The training room serves as the Town's Emergency Operations Center upon its activation.
Primary Contact:
Joseph A. Guarrera Emergency Services Officer
22400 Headquarters Drive, Apple Valley, CA 92307
Phone: 760-247-7618
E-mail:jguarrera@applevalleyfd.com

Apple Valley Fire Station 332
Fire Station
Size: 3,250
Facility Description: Station 332 is of wood frame construction with a 4-unit bay area. The station includes a small office, kitchen, sleeping, and restroom facilities. The 4-unit bay has two bay doors and meets California safety guidelines for fire stations. Station 335 was constructed over 40 years ago.
Primary Contact:
Joseph A. Guarrera Emergency Services Officer
22400 Headquarters Drive, Apple Valley, CA 92307

Phone: 760-247-7618
E-mail: jguarrera@applevalleyfd.com

Apple Valley Fire Station 333
Fire Station
Size: 10,060
Facility Description: Station 333 is of wood frame construction with a 4-unit bay area. The station includes a small office, kitchen, sleeping, and restroom facilities. The 4-unit bay has two bay doors and meets California safety guidelines for fire stations. Station 335 was constructed over 50 years ago.
Primary Contact:
Joseph A. Guarrera Emergency Services Officer
22400 Headquarters Drive, Apple Valley, CA 92307
Phone: 760-247-7618
E-mail: jguarrera@applevalleyfd.com

Apple Valley Fire Station 334
Fire Station
Size: 5,615
Facility Description: Station 334 is of wood frame construction with a 4-unit bay area. The station includes a small office, kitchen, sleeping, and restroom facilities. The 4-unit bay has two bay doors and meets California safety guidelines for fire stations.
Primary Contact:
Joseph A. Guarrera Emergency Services Officer
22400 Headquarters Drive, Apple Valley, CA 92307
Phone: 760-247-7618
E-mail: jguarrera@applevalleyfd.com

Apple Valley Fire Station 335
Fire Station
Size: 4,100
Facility Description: Station 335 is of metal construction with a 4-unit bay area. The station includes a small office, training room, kitchen, sleeping, and restroom facilities. The 4-unit bay has four bay doors and meets California safety guidelines for fire stations. Station 335 was constructed over 40 years ago.
Primary Contact:
Joseph A. Guarrera Emergency Services Officer
22400 Headquarters Drive, Apple Valley, CA 92307
Phone: 760-247-7618
E-mail:jguarrera@applevalleyfd.com

Apple Valley Fire Station 336
Fire Station
Size: 9,762
Facility Description: Station 336 is of wood frame construction and was built in 2003. The station includes an office area with kitchen, sleeping, and restroom facilities. The station also has a large training/community room that serves as the Town's alternate Emergency Operations Center upon its activation. The 6-unit bay has six bay doors and meets California safety guidelines for fire stations.

Primary Contact:
Joseph A. Guarrera Emergency Services Officer
22400 Headquarters Drive, Apple Valley, CA 92307
Phone: 760-247-7618
E-mail:jguarrera@applevalleyfd.com

Apple Valley Fire Station 336
Fire Station
Size: 9,762
Facility Description: Station 336 is of wood frame construction and was built in 2007. The station includes an office area with kitchen, sleeping, and restroom facilities. The 6-unit bay has six bay doors and meets California safety guidelines for fire stations.
Primary Contact:
Joseph A. Guarrera Emergency Services Officer
22400 Headquarters Drive, Apple Valley, CA 92307
Phone: 760-247-7618
E-mail:jguarrera@applevalleyfd.com

Apple Valley Police Department
Police Stations
Size: 13,000 square feet
Facility Description: The Apple Valley Police Department facility consists of 13,000 square feet.
Primary Contact:
Susan Ward
14931 Dale Evans Parkway, Apple Valley, CA 92307
Phone: 760-240-7000 Ext. 7601
Fax: 760-961-6240
E-mail: sward@applevalley.org
Lon: 117.12
Lat: 34.31

James A. Woody Community Center
Government Facilities
Size: 8,500
Facility Description: The James A. Woody Community Center includes an auditorium with stage, kitchen, two meeting rooms, second floor conference room, storage area, and office space. The original facility was constructed over 50 years ago, but has since undergone improvements. The facility is also an approved shelter site for the American Red Cross.
Primary Contact:
Ralph Wright, Parks/Rec Manager
13467 Navajo Road, Apple Valley, CA 92307
Phone: 760-240-7884
Fax: 760-240-7887
E-mail: rwright@applevalley.org
Lon: 117.11
Lat: 34.29

Southwest Gas Corporation
Utility
Facility Description: Southwest Gas Corporation, a private utility, owns a natural gas high pressure system within the Town of Apple Valley, consisting of approximately 120 miles of underground pipelines. The system also includes some aboveground facilities.

Primary Contact:
Roy Meyers, Superintendent/Construction
13471 Mariposa Road, PO Box 1498, Victorville, CA 92393-1498
Phone: 760-951-4023

Apple Valley Ranchos Water Company
Water and Sewer
Facility Description: Apple Valley Ranchos Water Company, a private utility, is the largest water purveyor in the Town of Apple Valley with the following facilities:
- Active Deep Wells (22)
- Reservoirs (11)
- Booster Pump Sites (5)

Primary Contact:
Jeff Kinnard, production Supervisor
21760 Ottawa Road, PO Box 7005, Apple Valley, CA 92307
Phone: 760-240-8323
E-mail: jeff@avrwater.com

Rancheritos Mutual Water Company
Water and Sewer
Facility Description: Rancheritos Mutual Water Company owns three deep wells in southwest Apple Valley that provides water to 238 customers.
Primary Contact:
Frank Aubel, Jr., General Manager
10382 Caribou Road, PO Box 348, Apple Valley, CA 92307
Phone: 760-247-3730
Fax: 760-247-3730
E-mail: Waterboy7F8@msn.com

Southern California Water Company
Water and Sewer
Facility Description: Southern California Water Company, a private water utility, owns a number of water facilities in the Town of Apple Valley:
- Anoka Plant (well, booster pumps, and reservoir)
- Bear Valley Plant (well and chlorine building)
- Mesquite Plant (well and pressure tank)
- Mohawk Plant (well, booster pumps, reservoir, and chlorine buildings)
- Central Plant (wells and chlorine buildings)
- Central Tanks (reservoirs)
- Papago Plant (well and chlorine building)
- Yucca Booster (booster pumps)

Primary Contact:
Daniel Juare
13608 Hitt Road, Apple Valley, CA 92308
Phone: 760-247-3391 Ext. 710

Town of Apple Valley Sewer Lift Station - Jess Ranch #1
Water and Sewer
Size: 1,500
Facility Description: Contains duplex, submersible pumps.
Primary Contact:
Mike Cady, Supervisor
18878 Town Center Drive, Apple Valley, CA 92308
Phone: 760-240-7500

Fax: 760-240-7599
E-mail: mcady@applevalley.org
Lon: 117.15
Lat: 34.28

Town of Apple Valley Sewer Lift Station - Jess Ranch #2
Water and Sewer
Facility Description: Contains duplex, submersible pumps.
Primary Contact:
Mike Cady, Supervisor
10900 Apple Valley Road, Apple Valley, CA 92308
Phone: 760-240-7500
Fax: 760-240-7599
E-mail: mcady@applevalley.org
Lon: 117.14
Lat: 34.27

Town of Apple Valley Sewer Lift Station - Kissell
Water and Sewer
Size: 2,500
*Facility Description: Contains d*uplex, submersible pumps.
Primary Contact:
Mike Cady, Supervisor
22484 Hurons Road, Apple Valley, CA 92307
Phone: 760-240-7500
Fax: 760-240-7599
E-mail: mcady@applevalley.org
Lon: 11.1
Lat: 34.31

Town of Apple Valley Sewer Lift Station 2-A-1
Water and Sewer
Size: 600
Facility Description: Contains a duplex, submersible pump.
Primary Contact:
Mike Cady, Supervisor
Valley Drive, Apple Valley, CA 92307
Phone: 760-240-7500
Fax: 760-240-7599
E-mail: mcady@applevalley.org
Lon: 117.89
Lat: 34.3

Town of Apple Valley Sewer Lift Station 2-A-2
Water and Sewer
Size: 625
Facility Description: Contains a duplex, submersible pump.
Primary Contact:
Mike Cady, Supervisor
22458 Ottawa Road, Apple Valley, CA 92308
Phone: 760-240-7500
Fax: 760-240-7599
E-mail: mcady@applevalley.org
Lon: 117.1
Lat: 34.29

Town of Apple Valley Sewer Lift Station 2-B
Water and Sewer
Size: 2,500
Facility Description: Concrete block building.
Primary Contact:
Mike Cady, Supervisor
21012 Otoe Road, Apple Valley, CA 92307
Phone: 760-240-7500
Fax: 760-240-7599
E-mail: mcady@applevalley.org
Lon: 117.1
Lat: 34.31

Town of Apple Valley Sewer Lift Station 3-A-1
Water and Sewer
Size: 6,300 square feet
Facility Description: Concrete block building.
Primary Contact:
Mike Cady, Supervisor
13980 Riverside Drive, Apple Valley, CA 92307
Phone: 760-240-7500
Fax: 760-240-7599
E-mail: mcady@applevalley.org
Lon: 117.15
Lat: 34.3

Town of Apple Valley Sewer Lift Station 3-A-2
Water and Sewer
Size: 5,000
Facility Description: Concrete block building.
Primary Contact:
Mike Cady, Supervisor
15036 Riverside Drive, Apple Valley, CA 92307
Phone: 760-240-7500
Fax: 760-240-7599
E-mail: mcady@applevalley.org
Lon: 117.16
Lat: 34.3

Apple Valley High School
Child Care Facility/School
Size: 199,266
Facility Description: Apple Valley High School (AVHS) is a 9-12th grade school with a student population of approximately 1,900. AVHS is also an approved shelter site for the American Red Cross.
Primary Contact:
Pat Schlosser
11837 Navajo Road, Apple Valley, CA 92308
Phone: 760-247-7206
Fax: 760-247-2092
E-mail: Pat_schlosser@avusd.org

High Desert Premier Academy

Educational Support Services Complex/Police Department
Child Care Facility/School
Size: 93,600
Facility Description: High Desert Premier Academy is a K-12 grade school with a student population of approximately 500. HDPA is also an approved shelter site for the American Red Cross.
Primary Contact:
Dale Folkens- Principal
12555 Navajo Road, Apple Valley, CA 92308
Phone: 760-247-7267
Fax: 760-247-1226
E-mail: dale_folkens@avusd.org

Desert Knolls Elementary School
Child Care Facility/School
Size: 43,337
Facility Description: Desert Knolls Elementary school is a K-6 school with a student population of approximately 700. Desert Knolls is also an approved shelter site for the American Red Cross.
Primary Contact:
Claudia Schmitt, Principal
18213 Symeron Road, Apple Valley, CA 92307
Phone: 760-242-3441
Fax: 760-242-7274
E-mail: claudia_schmidt@avusd.org

Granite Hills High School
Child Care Facility/School
Size: 186,357
Facility Description: Granite Hills High School is a 9-12th grade school with a student population of approximately 1,975. Granite Hills is also an approved shelter site for the American Red Cross.
Primary Contact:
Michael Kincaid, Principal
22900 Esaws Road, Apple Valley, CA 92307
Phone: 760-961-2290
Fax: 760-961-7555
E-mail: michael_kincaid@avusd.org

Mariana Elementary School
Child Care Facility/School
Size: 47,984
Facility Description: Mariana Elementary School is a K-6th grade school with a student population of 675. Mariana is also an approved shelter site for the American Red Cross. The school was originally constructed about 50 years ago.
Primary Contact:
Viola Sims, Principal
10601 Manhasset Road, Apple Valley, CA 92308
Phone: 760-247-7258
Fax: 760-247-4406
E-mail: viola_sims@avusd.org

Rancho Verde Elementary School
Child Care Facility/School

Size: 47,360
Facility Description: Rancho Verde Elementary School is a K-6 grade school with a student population of approximately 650. Rancho Verde is also an approved shelter site for the American Red Cross.
Primary Contact:
Claudia Dimit, Principal
14334 Pioneer Road, Apple Valley, CA 92307
Phone: 760-247-2663
Fax: 760-247-4947
E-mail: claudia_dimit@avusd.org

Rio Vista Elementary School
Child Care Facility/School
Size: 51,703
Facility Description: Rio Vista Elementary School is a K-6 grade school with a student population of approximately 725. Rio Vista is also an approved shelter for the American Red Cross.
Primary Contact:
Theda Smith, Principal
13590 Havasu Road, Apple Valley, CA 92307
Phone: 760-240-0280
Fax: 760-240-0899
E-mail: theda_smith@avusd.org

Sandia Elementary School
Child Care Facility/School
Size: 49,933
Facility Description: Sandia Elementary School is a K-6 grade school with a student population of approximately 525. Sandia is also an approved shelter site for the American Red Cross.
Primary Contact:
Pat Shelby, Principal
21331 Sandia Road, Apple Valley, CA 92308
Phone: 760-240-5125
Fax: 760-240-0515
E-mail: pat_shelby@avusd.org

Sycamore Rocks Elementary School
Child Care Facility/School
Size: 55,972
Facility Description: Sycamore Rocks Elementary School is a K-6 grade school with a student population of approximately 725. Sycamore Rocks is also an approved shelter site for the American Red Cross.
Primary Contact:
Jane Beckman, Principal
23450 South Road, Apple Valley, CA 92307
Phone: 760-240-3332
Fax: 760-240-3440
E-mail: jane_beckman@avusd.org

Phoenix Academy (Upper and Lower Campus)
Family Preschool Center
Child Care Facility/School
Size: 100,850

Facility Description: Phoenix Academy is a K-8th grade school with a student population of approximately 2,100. PA is also an approved shelter site for the American Red Cross.
Primary Contact:
Daryl Bell, Principal
20700 Thunderbird Road, Apple Valley, CA 92307
Phone: 760-242-7011
Fax: 760-242-7005
E-mail: daryl_bell@avusd.org

Sitting Bull Academy (Upper and Lower Campus)
Child Care Facility/School
Size: 100,850
Facility Description: Phoenix Academy is a K-8th grade school with a student population of approximately 2,100. PA is also an approved shelter site for the American Red Cross.
Primary Contact:
Phyllis Carnahan, Principal
19445 Sitting Bull Rd., Apple Valley, CA 92308
Phone: 760-961-8479
Fax: 760-2408763
E-mail: phyllis_carnahan@avusd.org

Vanguard Preparatory
Child Care Facility/School
Size: 47,863
Facility Description: Vanguard Preparatory is a K-8 grade school with a student population of approximately 625. The school is also an approved shelter site for the American Red Cross.
Primary Contact:
Brian Goodrow, Principal
12951 Mesquite Road, Apple Valley, CA 92308
Phone: 760-961-1066
Fax: 760-961-1069
E-mail: brian_goodrow@avusd.org

Willow Park High School
Child Care Facility/School
Size: 33,409
Facility Description: Willow Park High School is a 9-12th grade school with a student population of approximately 175 students. Willow Park is also an approved shelter site for the American Red Cross. These statistics take into consideration the Alternative Education Center located on campus.
Primary Contact:
Dale Folkens
21950 Nisqually Road, Apple Valley, CA 92308
Phone: 760-240-4252
Fax: 760-240-1261
E-mail: dale_folkens@avusd.org

Yucca Loma Elementary School
Child Care Facility/School
Size: 55,294
Facility Description: Yucca Loma Elementary School is a K-6 grade school with a student population of approximately 850. Yucca Loma is also an approved shelter site for the American Red Cross. The school was originally constructed over 50 years ago.
Primary Contact:
Rey Rodriguez, Principal
21351 Yucca Loma Road, Apple Valley, CA 92307
Phone: 760-247-2623
Fax: 760-247-4300
E-mail: rey_rodriguez@avusd.org

Apple Valley Municipal Animal Shelter

Other – Government Building
Size: 36,000

Facility Description: The Animal Services facility includes office space for field and shelter services, including indoor/outdoor runs for animals, cat adoption colonies, exotic habitats, livestock holding space and a public education room.
Primary Contact:
Gina Schwin-Whiteside, Animal Services Manager
22131 Powhatan Road, Apple Valley, CA 92308
Phone: 760-240-7000 Ext. 7060
E-mail: gwhiteside@applevalley.org

Apple Valley Public Works
Other – Government Building
Size: 24,073
Facility Description: Apple Valley Public Works facility includes office and warehouse space.
Primary Contact:
Mike Cady, Supervisor
13450 Nomwakett Rd, Apple Valley, CA 92307
Phone: 7602407542
E-mail: mcady@applevalley.org

Apple Valley Town Hall & Development Services buildings
High Economic Importance
Size: 61,115
Facility Description: Apple Valley Town Hall houses the daily activities of a municipality. The building is a 25,000 square foot single-story facility. Apple Valley Development Services building is a new facility that houses the daily activities of a municipality to serve the community. This building is also a conference center and is equipped with a kitchen facility. The building is a 26,115 square foot single-story facility.
Primary Contact:
Susan Ward
14955 Dale Evans Parkway, Apple Valley, CA 92307

Phone: 760-240-7000 Ext. 7601
Fax: 760-961-6241
E-mail: sward@applevalley.org
Lon: 117.12
Lat: 34.31

Apple Valley Unified School District
High Economic Importance
Size: 54,500
Facility Description: The administration buildings for the Apple Valley Unified School District include offices, warehousing, and the bus transportation terminal
Primary Contact:
Lynette Kachelmeyer, Director of Facilities
22974 Bear Valley Road, Apple Valley, CA 92308
Phone: 760-247-8001
Fax: 760-247-8907
E-mail: lynette_kachelmeyer@avusd.org

James A. Woody Gymnasium
Other – Sports/Government Facility
Size: 8,811
Facility Description: The James A. Woody Gymnasium consists of hardwood floors, office space, weight room, storage, and restrooms. The facility is used by the general public on a daily basis.
Primary Contact:
Ralph Wright, Parks/Recreation Manager
13413 Navajo Road, Apple Valley, CA 92308
Phone: 760-240-7884
Fax: 760-240-7887
E-mail: rwright@applevalley.org
Lon: 117.11
Lat: 34.29

4.4   Vulnerability Assessment

This section provides an assessment of vulnerability for the three hazards (earthquake, flooding, and wildfires) that pose significant threats to the Town of Apple Valley. This is the final step in the four-step risk assessment process and utilizes data and information collected from the Town and various external agencies. It provides loss estimates and vulnerability of general buildings, key facilities with critical functions and governance relationships, and people living and working in the Town of Apple Valley. The vulnerability assessment provides a solid basis for analyzing the risk, the potential exposure, and consequences to Town operations and safety.

The following were taken into account when assessing the vulnerability:

- Updates to inventories of existing structures in hazard areas, including new development, redeveloped areas or structures located in annexed areas
- Potential impacts of future land development, including areas that may be annexed in the future
- New buildings that house special high-risk populations (i.e., elderly, low-income, disabled)
- Completed mitigation actions that reduced overall vulnerability

4.4.1.   Methodology

To conduct the vulnerability assessment, a combination of quantitative and qualitative approaches was used. A quantitative assessment of earthquake risk was performed with Town provided data and FEMA's HAZUS software. For flooding, the Town used reports available from the Town and various other public sources.

4.4.2.   Methodology and Results for Earthquakes

Regional earthquake loss estimates and critical facility damage and functionality have been estimated using the latest version of HAZUS (HAZUS-MH MR-4), with the improved regional building and essential facility inventory databases developed under FEMA funding for the San Bernardino County Essential Facilities Risk Assessment (SBEFRA) Project. The risk assessment of critical facilities considers those essential facilities (fire stations, police facilities, EOC's and schools) for which HAZUS-compatible databases have been developed.

Given an earthquake fault or epicenter, magnitude, and location as input, the HAZUS earthquake module produces quantitative estimates of losses to buildings and lifeline infrastructure, estimates of impact on the functionality of facilities, and casualty and other population impacts. Alternatively, the users may import "user-supplied" hazard data, such as a ShakeMap generated by the USGS. Output from HAZUS includes several items. Losses are presented as direct economic losses from building and lifeline damage, as well as selected indirect economic losses. Functionality estimates are calculated in terms of restoration time for critical facilities, such as highway bridges, water treatment plants, and electric power substations, and system restoration assessments for potable water and electrical power networks.
Casualty estimates are provided as various levels of injury severity and death. The model also estimates losses due to fire-following earthquake and the quantity of earthquake-related debris generated.

FIGURE 5 - HAZUS METHODOLOGY

Damage to Vital Public Services, Systems & Facilities

Medical

Emergency Management, upon proclamation of local emergency, will notify the San Bernardino County Director of Public Health through designated channels, and participate in evacuation and treatment of victims and casualties in accordance with his directives.

Medical communications will be established and coordinated through the San Bernardino County Communications Center. Emergency medical management on a local level will be coordinated through the local EOC communications system.

It is anticipated that transportation resources normally utilized in medical movement will be unable to readily respond due to highway damage and requirements of hospital facilities. Therefore, utilization of public and private vehicle resources will be required. Medical supplies should be consumed at a rapid rate and requests will be made, through the local EOC, to county level Emergency Management.

Local emergency management will establish tactical divisions of operation based upon severity of the event and assessed needs. These divisions will include a designated local Casualty Collection Point (CCP). Divisional commanders shall appoint a divisional medical officer for purposes of medical coordination and management.

Communications

Communications effected by a major earthquake would include telephone systems and governmental radio systems, primarily. Loss to the telephone system would be through damages to utility poles, vaults and microwave repeaters. It is virtually certain that telephone systems will fail with the onset of the event. Repair to the system in this area will attain 25% effectiveness three days after the event, with first service being returned to emergency and governmental facilities. A major element in post-event effectiveness deals with the amount of overload by non-essential usage. Usage should be limited to life-threatening or emergency situations.

Governmental and emergency radio systems will be primarily impacted by loss of repeater stations and power failures. While the impact of power failure can be somewhat mitigated by use of portable and permanent electrical generators, the loss of repeater stations will have a more lasting effect and will require mitigation through planning procedures.

Electric Power

Major power plants are expected to sustain some damage due to liquefaction and the intensity of the earthquake. Up to 60% of the system load may be interrupted immediately following the initial shock. According to representatives of Southern California Edison Company, the electrical power will not be rerouted and will be lost for an undefined period of time. Much of the imported power is expected to be lost. In some areas of greatest shaking it should be anticipated that some of the distribution lines, both underground and surface, will be damaged.   Much of the affected area may have service restored in days; damaged area with underground distribution may require a longer time.   Loss of Edison transmission lines is possible.

Natural Gas Pipelines

Damage to pipeline facilities will consist primarily of (a) some isolated breaks in major transmission lines, and (b) innumerable breaks in mains and individual service connections within the distribution systems, particularly in the areas of intense ground shaking. These many leaks in the distribution system will affect a major portion of the community, resulting in a loss of service for extended periods. Fires should be expected at the sites of a small percentage of ruptures both in the transmission lines and the distribution system.

Fire Operations

Although total collapse of fire stations is not expected, possible disruption of utilities, twisted doors and loss of power can create major problems. Numerous fires due to disruption of power and natural gas networks can be expected. The area's water supply may be greatly impacted. Connections to major water sources, water mains and storage facilities may be damaged resulting in an unstable water supply for fire and rescue operations. Fire and rescue personnel will need to complete a preliminary assessment to determine and establish response and recovery needs. In addition, Fire and rescue operations may take days because of the disruption to the transportation corridors.

Secondary response by the fire service after assessment will be to accomplish search and rescue of trapped persons. Major problems the fire service should expect are loss of power and water, jammed doors, restricted mobility due to debris, possible loss of primary dispatch capability and delays in reaching maximum effectiveness due to personnel shortages.

Highways and Bridges

Damage to freeway systems and bridges is expected to be major. Inner surface transportation routes could be subject to delays and detours. A major portion of surface streets in the vicinity of freeways will be blocked due to collapsed overpasses.

4.4.3   Methodology and Results for Wildfires

Fire Hazard Severity Zone Model (***Adapted from California Department of Forestry and Fire Protection May 2007 "FACT SHEET: Fire Hazard Severity Zone Model - A Non-technical Primer)***

Most of the highest wildfire losses take place during hot, windy days or nights when flames spread so fast that many buildings catch fire and overwhelm available firefighting forces. Many buildings ignite when burning embers land on wood roofs, blow in through vents, pile up in cracks, or become lodged under boards. By constructing buildings in a way that reduces the ability of embers to intrude, a major cause of structure ignition is reduced.

Recently adopted building codes reduce the risk of burning embers igniting buildings. Standards are already in effect for roofs and attic vents. Application of roofing standards depends on the Fire Hazard Severity Zone of a property. New building codes for California, will require siding, exterior doors, decking, windows, eaves, wall vents and enclosed overhanging decks, to meet new test standards. These standards apply throughout areas where the State has financial responsibility for wildland fire protection and for local responsibility areas zoned as very high fire hazard severity.

While all of California is subject to some degree of fire hazard, there are specific features that make some areas more hazardous. California law requires CAL FIRE to identify the severity of fire hazard statewide. These fire zones, called Fire Hazard Severity Zones are based on factors such as fuel, slope of the land and fire weather. There are three zones, based on increasing fire hazard: medium, high and very high.

Model Behind Fire Hazard Severity Zone Mapping
The zone designation for each specific parcel is initially assigned by a computer model. The model is based both on existing fire behavior modeling techniques used by fire scientists throughout the United States and on new methodologies and data developed by the Fire Center at the University of California in Berkeley. The model evaluates land area using characteristics that affect the probability that the area will burn and the potential fire behavior that is expected should the area burn in a wildfire. Many factors are considered such as fire history, existing and potential fuel, flame length, blowing embers, terrain, and typical weather for the area.

Hazard versus Risk
As required by law, the model evaluates "hazard" not "risk". Hazard refers to physical conditions that cause damage. "Hazard" as calculated in the model is based on the physical conditions that give a likelihood that an area will burn in the future, the heat produced when it does burn, and a prediction of the embers that spread the fire. It is based on the potential vegetation that will grow in the area over the next 30 – 50 years.

Risk, on the other hand, is the potential damage a fire can do to values at risk in the area under existing and future conditions. Risk does consider modifications that affect susceptibility of property to damage, such as defensible space, irrigation and sprinklers, and building construction that reduces the risk of burning embers igniting buildings. Hazard does not equal risk, but is an important factor in determining risk.

Zones and Parcels

Mapping an area as large as California requires the creation of spatial units called zones. Zones are areas that form the spatial building blocks for constructing a map. They are akin to the pieces in a jig-saw puzzle. Zones are created by computer from areas of similar terrain, vegetation, and fuel types. They are areas that have relatively similar burn probabilities and fire behavior characteristics. The zone size varies from 20 acres and larger in urbanized areas to 200 acres and larger in wildland areas. Urban areas are treated differently in mapping due to the significant changes in both fuel conditions and burn probability that happen as areas become urbanized.

Wildland zones are areas of similar terrain and fuel conditions created by using computer techniques to build the boundaries. Areas dominated by brush lands on steep slopes will generally occur in different zones than flat grassland areas.

Urban zones are delineated based on minimum area and average parcel size. They must be at least 20 acres in size, and contain average parcel sizes that are less than two acres per parcel. In most counties, urban zones were developed using parcel data. Where such data was not available parcel density was interpreted using 2000 census data and statewide vegetation map data. In practice, the majority of areas mapped as urban zones have parcel sizes less than one acre, with highly developed infrastructure and ornamental vegetation.

Fundamental to understanding the map is that hazard zones do not exist at scales smaller than those used to create the zones. Thus when looking at the map, one needs to know how information is averaged across the zone to derive the final hazard ranking. The zones will have smaller areas within them of different hazard characteristics. This detail is lost when scores are averaged over the entire area of the zone to obtain a zone-wide description of hazard.

Focus on Characterizing Fire Behavior and Fire Hazard to Buildings

Since new building standards seek to reduce the chance that buildings will ignite in a wildfire, the model focuses on those descriptions of fire behavior that influence structure ignition. The model uses fire behavior characteristics that describe the intensity of both radiation and convection from nearby flame sources (using flame length as a measure) and mass transport of firebrands due to convection lifting and wind).

Intrinsic to hazard, consequently, is the estimation of probability, or chance. Further, the conditions that give rise to hazard for an area are not solely a function of conditions in that particular area. Firebrands landing in an area may be produced some distance away, and hence the hazard for an area is influenced by hazards off-site.

Terms Used

Fire Hazard Severity has two key components: probability of burning and expected fire behavior. The factors considered in determining hazard are: 1) how often an area will burn; and 2) when it does burn, what characteristics might lead to buildings being ignited?

Fire behavior refers to the physical characteristics of the fire – examples include rate of spread, length of flames, and the ability to produce firebrands or embers.
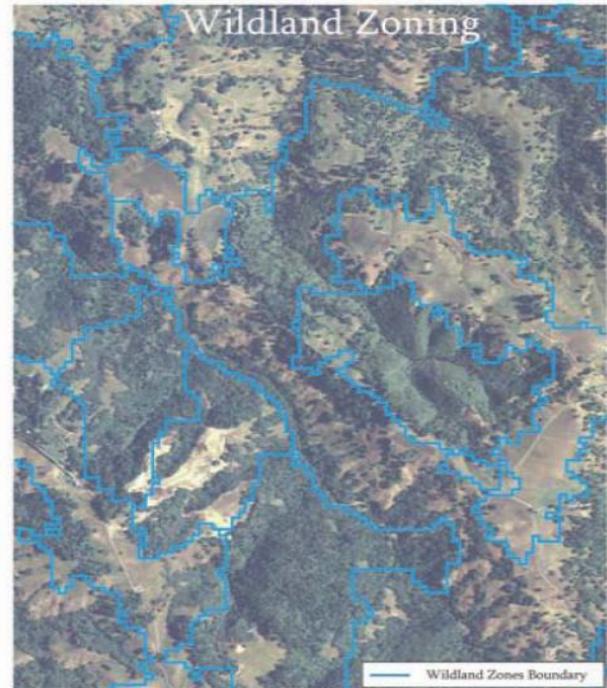
Burn probability describes the average chance of a fire burning an area in any given year. It is based on the fire records spanning the last 55 years. Some areas of the state have much higher chances of burning, and this is reflected in the hazard zones.

Zoning and Scoring

The model uses building blocks to derive FHSZ classes based on a two-step process:

Zoning and Scoring (See Figure 24). Urban areas are treated differently from wildlands due to the significant changes in both fuel conditions and burn probability that happen as areas become urbanized. Each wildland zone gets scores that tie together the burn probability with the expected flame sizes predicted by fuels, slope, and expected fire weather. Since it describes potential hazard to buildings, the model characterizes the fuel potential of the area over a 30-50 year period and the maximum expected hazard value is used.

Figure 12 - Wildland Zoning

While some areas may have recently been treated and currently have only moderate hazard, buildings in that area will be exposed to increasing hazards as these vegetation fuels develop, hence the use of "climax" or fuel potential in the model. As with the chance of fire, expected flame size varies significantly from one fuel type to the next.

Areas also receive a score for the amount of firebrands (burning embers transported by the wind) that are expected to land on an area. In the model, firebrands are produced based on fuel types and a model describing the distribution of firebrands transported from the source area. The firebrand score is a function of the number of brands that are expected to land on a given area, and are consequently influenced by areas around them where the embers are produced.

Each wildland zone gets an area-averaged classification for flaming and firebrands, which together determine the final hazard ranking for the zone: moderate, high or very high.

Urban zones are scored based on their proximity to wildland zones and the flame score for that wildland zone, the number of firebrands being produced in the wildlands and received in the urban area, and the amount of vegetation fuels present in the urban zone. Urban areas immediately next to wildland zones typically have the highest hazard, and areas more removed from the wildlands have lower hazards.

The influence of wildland fire hazard into urban areas can range from only about 200 feet in low hazard conditions, to nearly a mile in very high hazard areas. The nature and depth of the zones are a function of both how likely a flame front will penetrate, and how many firebrands are expected to land in the urbanized areas.

Results of the Model

Results of the model lead to revised maps of fire hazard severity. To summarize, classification of a zone as moderate, high or very high fire hazard is based on the severity of fire behavior that leads to building ignition. Each area of the map gets a score for flame length, embers, and the likelihood of the area burning. Scores are averaged over the zone areas. Final FHSZ class (moderate, high and very high) is determined based on the averaged scores for the zone. Model results were tested and validated in four counties with very different conditions: Butte, Calaveras, Sonoma, and San Diego. Further, draft maps have been reviewed by the 21 CAL FIRE units and six contract counties; their recommendations for changes were evaluated and incorporated when appropriate. Updated

information and support documents for FHSZ are available on CAL FIRE's Fire and Resource Assessment Program's website at http://frap.cdf.ca.gov/fhsz/review.html."

FIGURE 12 - FHSZ STRUCTURE

Water Supply and Distribution
In some areas of the community, water supply can become marginal during time of heavy emergency usage. Residents wetting their roof and properties during times of fire activity heavily impact water stored in hilltop reservoirs. Many times this practice takes place when the fire activity is a long distance from the property. Widespread use of this practice robs emergency fire equipment of needed water reserves in the fire area.

Some rural canyon structures and residences are built at a considerable distance from roadways and water distribution systems. This requires the laying of supply lines by fire companies, or the use of fire department water tenders to physically transport water to the area requiring protection. These practices become extremely dangerous when faced with the crowded street and driveways mentioned previously.

Some water may be obtained from private swimming pools in the area, through the use of portable pumps. These sources are relatively few, and should not be considered a reliable water source.

Roadways
Naturally occurring topographic restrictions lead to severe restrictions and congestion. Residents trying to evacuate the area, sightseers, and emergency equipment trying to enter have the potential of creating complete blockages on the roadways. Rapid response of law enforcement is crucial to the management of adequate traffic flow.

Evacuation and Shelter Needs

In most cases, wildfires are fast moving and present momentary dangers of intense proportions. When this situation exists, the need for evacuation takes a high priority, but the need for shelter areas is usually minimal. This is contingent on the ability of fire forces to adequately protect the homes of those residents evacuated. When the danger has subsided, the area can usually be re-entered. Should these residences be destroyed, then the need for shelters becomes evident.

SECTION 5 – COMMUNITY CAPABILITY ASSESSMENT

The Town of Apple Valley strives to protect and maintain the health, safety and welfare of the community on a day-to-day basis, and takes extra measures to reduce the impacts of natural or technological hazards. The Town can use a variety of different tools, assets, and authorities to effectively prepare for, mitigate toward, respond to and recover from emergencies and disasters. These include voluntary and mandatory measures; individual and community efforts; private and public actions; and preventive as well as responsive approaches. Mitigation activities include educating citizens, enforcing building and development codes, constructing capital improvement projects, adopting plans, establishing incentive programs, and improving emergency preparedness and response.

The capabilities available to the Town of Apple Valley fall into the following broad categories: Agencies and People; Existing Plans; Regulations, Codes, Policies, and Ordinances; Mitigation Programs and Fiscal Resources. Identifying and documenting these capabilities provides the basis for developing future mitigation opportunities and how they can be implemented within existing Town programs.

Town of Apple Valley Capability Assessment

- Storm Water Management Ordinances: Yes
- Stream Management Ordinances: No
- Zoning Management Ordinances: Yes
- Subdivision Management Ordinances: Yes
- Erosion Management Ordinances: Yes
- Floodplain Management Ordinances: Yes
- Floodplain Management Plan Published Date: 10/2008
- Floodplain Management Last Delineation Date: 10/2008
- Elevation Certificates Maintained: Yes
- National Flood Insurance Program Community: Yes
- National Flood Insurance Join Date: 06/19/95
- NFIP Number: TAV 060752
- NFIP Rating: None
- NFIP Rating Date: 10/2008
- Land Use Plan: Yes
- Land Use Plan Last Update: 2009
- Community Zoned: Yes
- Zoned Date: 4/27/10
- Established Building Codes: Yes
- Building Codes Last Updated: 11/13/07
- Type of Building Codes: California Building Code
- Local Electric Utilities: Southern California Edison
- Local Water Utilities:

- Apple Valley Ranchos Water Company
- Mariana Ranchos County Water District
- Rancheritos Mutual Water Company
- Southern California Water Company
- Spring Valley Lake CSA 64
- Local Sewage Treatment Utilities: Victor Valley Wastewater Reclamation Authority
- Local Natural Gas Utilities: Southwest Gas Corporation
- Local Telephone Utilities: Verizon
- Fire Insurance Rating: Apple Valley Fire Protection District, a self-governing special district, provides fire-related services to the Town of Apple Valley and its sphere of influence. The District's fire insurance rating for the suburban area is 4, and the rural area received a rating of 9.
- Fire Insurance Rating Date: 06/01/03
- Previous Mitigation Plans: 2005
- Flood Insurance Claims: The Town has never made private claims to its insurance company. Reimbursement for hazardous occurrences has always been received via State OES and/or FEMA.

5.1 Agencies and People

Key Personnel
The Town's departments have specific responsibilities and related activities/actions assigned to them for each identified hazard and threat. Each department is responsible for ensuring coordination with the other departments. In an emergency, all employees are disaster service workers. "Subject to such disaster service activities as may be assigned to them by their supervisors, or by law." (CA CG §3100)

The Town Manager of Apple Valley is responsible for identifying key management personnel, with alternates, and alternative facilities to conduct government operations, based on the hazard analysis. Each department will be responsible for identifying key departmental personnel with backups and alternates for each position in the Town's organization.

Alert List
The Town's Emergency Services Officer is responsible for developing and maintaining an emergency alert list, which will be used to notify the key Town personnel. Each department will develop their own departmental alert list, which will be used by the departments to alert departmental personnel.   Special rules related to disaster service workers are outlined in California Labor Codes Sections 3211.9, 3352.94, 4351, 4381, 4453, and 4702.

Special Districts
Special Districts with responsibilities under this plan will coordinate all planning efforts with the Town's Emergency Services Officer.

Town EOC
The Town Manager of Apple Valley has overall responsibility for coordinating the Town's response to each emergency.

MANAGEMENT SECTION

EOC DIRECTOR

Town Manager

FIRE SERVICES DIRECTOR

Fore Chief

POLICY GROUP

TAV Town

Council

AVFPD

EOC

COORDINATOR

Emergency

Liaison Officer — **Public Information Officer**

Town PIO

Safety/Security Officer

To Be Assigned

OPERATIONS

SECTION

PLANNING & INTEL SECTION

LOGISTICS

SECTION

FINANCE & ADMIN

SECTION

Fire & Rescue Branch

Law Enforcement Branch

Public Works   and

Building & Safety Branch

Bldg/Safety Unit

Public Works Unit

Utilities Unit

Health & Welfare Branch

Animal Control Unit

Care/Shelter Unit

Amer. Red Cross

Recreation Staff

Communications Branch

Communications

E.C.S.

Personnel Unit

Donations Management Unit

C.O.A.D.

FIGURE 13 - TOWN DEPARTMENTS AND STAFF INVOLVED IN DISASTER MANAGEMENT

5.2   Existing Plans

The Town of Apple Valley has adopted the philosophy that Plan integration is an essential element to future and long-term community sustainability. The Town's long-term goal is to integrate all aspects of comprehensive planning and development to correlate with a continuum of adopted codes and standards to support this philosophy. Current and future Plans will define important Town policies and support the ordinances and activities described below. For example, the goal is to enhance the objectives of hazard mitigation, including the Health and Safety Element of the General Plan. Other Plans focus on different aspects of disaster management such as emergency response. Other Plans have implications that are relevant to hazard mitigation, such as plans related to spending on public facilities and storage of hazardous materials. This section lists the existing plans, policies, and ordinances for the Town of Apple Valley.

Existing Community Plans/Documents:

- U.S. Department of Housing & Urban Development (HUD) Consolidated Plan
- Apple Valley/Victorville Consortium Consolidated Plan 2002-2006
- Apple Valley Annual Action Plan
- Apple Valley Development Code
- Apple Valley Municipal Code
- Apple Valley Master Plan
- Apple Valley General Plan
- Apple Valley Emergency Operations Plan (including annexes pertaining to Animal Evacuations/Sheltering, Citizen Corps, Disaster Service Workers, and Terrorism)

5.3   Regulations, Codes, Policies, and Ordinances

The Town has adopted codes and regulations to govern development, construction and land use activities. They include construction standards, siting requirements, use limitations, study requirements and mitigation requirements which help directly or indirectly minimize the exposure of people and property to loss or injury resulting from disasters. As such, they are an effective tool and capability which the Town may continue to use to reduce the amount of damage or harm arising from disasters. This plan provides an opportunity to review existing regulations to determine if they are effective or whether they need to be revised in certain areas to more adequately prevent loss or injury from disasters.

Zoning Regulations

The Development Code regulates the use of land and buildings, the height, bulk, location of structures, the amount of open space and the density of population by establishing zone classifications.

Subdivision Regulations

The Town's subdivision regulations are outlined in section 9.28.050 of the Development Code, which establishes standards to regulate the division and merger of land and defines minimum lot sizes, densities and development standards.

Building Code

Chapter 8.12.010 of the Apple Valley Municipal Code adopted the California Building Code Volumes 1 and 2, 2007 Edition (Part 2, Title 24, California Code of Regulations) by reference, and amending part 2 of Title 24 of the California Code of Regulations, comprising the California Building Code, Volumes 1 & 2, 2007 Edition.

Flood Hazards Regulations

The Legislature of the State of California has in Government Code Sections 65302, 65560, and 65800 conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the Town of Apple Valley has adopted flood hazard regulations in Chapter 9.62 of the Development Code. The purpose of this regulation is to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

A. To protect human life and health;

B. To minimize expenditure of public money for costly flood control projects;

C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

D. To minimize prolonged business interruptions;

E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;

F. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future blighted areas caused by flood damage;

G. To insure that potential buyers are notified that property is in an area of special flood hazard; and

H. To insure that those who occupy the areas of special flood hazard assume responsibility for their actions.

In order to accomplish its purposes, this District includes methods and provisions for:

A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;

B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

C. Controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

D. Controlling filling, grading, dredging, and other development which may increase flood damage; and,

E. Preventing or regulating the construction of flood barriers

5.4. Mitigation Programs

Fire Hazard Abatement

The Town Council adopted an Ordinance pertaining to the regulation of refuse abatement and approved a contract with the Apple Valley Fire Protection District (AVFPD) to provide administrative services associated with that regulation. Pursuant to the contract, the AVFPD provides the following services to the City:

1. Conduct initial property survey twice per year, in early fall and spring to locate and identify fire hazards.
2. Prepare and mail abatement notices to the owners of the properties in violation.
3. Conduct follow-up inspections to determine owner compliance.
4. Conduct enforcement operations for properties that have not been brought into compliance, including but not limited to, issuance of administrative citations that subject the owners to civil, monetary penalties and conducting court-authorized abatement of the properties at the owner's expense.
5. Respond to "calls for service" consisting generally of complaints received from the public concerning properties with fire hazards.
6. All town-owned parcels will be treated in the same manner as private property and billed separately from the contract.
7. Abatement of weeds along roadsides or alleys within the town boundaries will be performed at the discretion of the AVFPD and only when determined by the ABFPD to be a fire hazard.

"California Winter Storms 2010"

State announces tax break for 2010 winter-impacted residents:

State announces tax break for winter-impacted residents - San Bernardino County Sun   Page 1 of 1

sbsun.com

State announces tax break for winter-impacted residents

Joe Nelson, Staff Writer

Posted: 03/09/2010 02:11:55 PM PST
The state Franchise Tax Board (FTB) on Tuesday announced special tax relief for California taxpayers, including those residing in San Bernardino and Riverside counties, impacted by recent winter storms.

It came a day after the Federal Emergency Management Agency issued a federal disaster declaration for the counties of San Bernardino, Riverside, Siskiyou, Los Angeles, Calaveras and Imperial. They can now apply for reimbursement by the federal government to offset costs for damage caused by flooding, debris and mud flows.

San Bernardino County suffered about $30 million in damage from winter storms that hammered the region from Jan. 17 through Feb. 6. The Big Bear Valley and High Desert cities of Hesperia, Victorville and Apple Valley received the brunt of the damage, said Denise Benson, division manager for the county Office of Emergency Services.

Now, property owners can write off flood damage on their 2009 or 2010 tax returns.

"California families who suffered property damage can find quick relief through their tax returns, state Controller and FTB Chairman John Chiang said in a statement.

Claiming losses on 2009 tax returns will allow the FTB to issue refunds quickly. Taxpayers who have already filed their returns for 2009 can file an amended return.

Those claiming losses on their returns should write "California Winter Storms 2010" in red ink at the top of their returns to alert the FTB to expedite the refund. If e-filing, taxpayers should follow the software instructions to enter the disaster information.

Forms are available on the FTB Web site: ftb.ca. gov

Taxpayer needing copies of lost or damaged state returns should complete the Form FTB 3516, "Request for Copy of Tax Return," which is available online.

Anyone who has questions about their accounts can call the FTB at 800-852-5711 from 8 a.m. to 5 p.m. Monday through Friday.

For more information, go to taxes.ca.gov

DISASTER NEWS

SBA
U.S. Small Business Administration

Loans for Homeowners, Renters and Businesses of All Sizes

Release Date: February 17, 2010
Release Number: CA 12038-01

Media Contact: Richard Jenkins
Phone: (916) 735-1500

SBA Offers Disaster Assistance to California Residents and Businesses Affected by Flooding, Debris Flows, Mudslides and Heavy Snow

Sacramento, CA – Low-interest federal disaster loans are now available in California for residents and business owners affected by the severe winter storms which generated heavy rain, snow and high winds causing flooding, debris flows and mudslides beginning January 17, U. S. Small Business Administration (SBA) Administrator Karen G. Mills said today. SBA acted under its own authority to declare a disaster in response to a request received from Governor Arnold Schwarzenegger on February 11.

The disaster declaration makes SBA assistance available in the counties of **Kern, Los Angeles, Orange, San Bernardino and Ventura.**

"The U. S. Small Business Administration is strongly committed to providing the most effective and customer-focused response possible to assist California residents and businesses with federal disaster loans," said Mills. "Getting our businesses and communities up and running after a disaster is our highest priority at SBA."

"Low-interest federal disaster loans are available to homeowners, renters, businesses of all sizes and private, non-profit organizations whose property was damaged or destroyed by the disaster," said Alberto G. Alvarado, SBA's Acting Regional Administrator. "Beginning Thursday, February 18, SBA customer service representatives will be on hand at the following SBA Disaster Loan Outreach Centers to issue loan applications, answer questions about SBA's disaster loan program, explain the application process and help each individual complete their application," Alvarado continued. The centers will be open on the days and times indicated. No appointment is necessary. Additional centers will be announced to serve disaster victims in Los Angeles County.

San Bernardino County	San Bernardino County
SBA Disaster Loan Outreach Center	SBA Disaster Loan Outreach Center
City of Big Bear Lake City Hall	Hesperia City Hall
39707 Big Bear Boulevard	9700 7th Avenue
Big Bear Lake, CA	Hesperia, CA
Opens Thursday, February 18 at 8:30 am	**Opens Thursday, February 18 at 9:00 am**
Mondays through Fridays,	Mondays through Thursdays,
From 8:30 am to 4:30 pm	From 9:00 am to 5:00 pm
	Fridays, From 8:00 am to 4:00 pm
Open Until further notice	*Open Until further notice*

Disaster loans up to $200,000 are available to homeowners to repair or replace damaged or destroyed real estate. Homeowners and renters are eligible for up to $40,000 to repair or replace damaged or destroyed personal property.

Businesses of any size and private, non-profit organizations may borrow up to $2 million to repair or replace damaged or destroyed real estate, machinery and equipment, inventory, and other business assets. SBA can also lend additional funds to homeowners and businesses to help with the cost of making improvements that protect, prevent or minimize the same type of disaster damage from occurring in the future.

For small businesses and most private, non-profit organizations of any size, SBA offers Economic Injury Disaster Loans (EIDLs) to help meet working capital needs caused by the disaster. EIDL assistance is available regardless of whether the business suffered any property damage.

Interest rates can be as low as 2.562 percent for homeowners and 4 percent for business with terms up to 30 years. Loan amounts and terms are set by SBA and are based on each applicant's financial condition.

Disaster loan information and application forms are also available from SBA's Customer Service Center by calling SBA toll-free at (800) 659-2955, emailing disastercustomerservice@sba.gov, or visiting SBA's Web site at www.sba.gov/services/disasterassistance. Hearing impaired individuals may call (800) 877-8339. Applicants may apply online using the Electronic Loan Application (ELA) via SBA's secure Web site at https://disasterloan.sba.gov/ela.

The filing deadline to return applications for property damage is **April 19, 2010**. The deadline to return economic injury applications is **November 16, 2010**.

Below is a partial listing of mitigation programs that may be available to property owners and small business owners through other agencies:

Agency	Program	Details
FEMA	National Flood Insurance Program (NFIP)	Enables property owners to purchase insurance as a protection against flood losses in exchange for state and community floodplain management regulations that reduce future flood damages. http://www.fema.gov/business/nfip/
HUD	Community Development Block Grants (CDBG)	Grants to develop viable communities, principally for low and moderate income persons. CDBG funds available through Disaster Recovery Initiative. http://www.hud.gov/offices/cpd/communitydevelopment/programs/
HUD	Disaster Recovery Assistance	Disaster relief and recovery assistance in the form of special mortgage financing for rehabilitation of impacted homes.

		http://www.hud.gov/offices/cpd/communitydevelopment/programs/dri/assistance.cfm
HUD	Neighborhood Stabilization Program	Funding for the purchase and rehabilitation of foreclosed and vacant property in order to renew neighborhoods devastated by the economic crisis. http://www.hud.gov/offices/cpd/communitydevelopment/programs/neighborhoodspg/
U.S. Small Business Administration	Small Business Administration Loan Program	Low-interest, fixed rate loans to small businesses for the purpose of implementing mitigation measures. Also available for disaster damaged property. http://www.sba.gov/services/financialassistance/index.html

Additional Programs

The following programs are sponsored by the Town of Apple Valley to mitigate the potential effects of excess materials that could impact waste disposal and landfill capabilities following a major catastrophic event:

- Annual Household Hazardous Waste Events
- Residential Recycling Program
- Household Hazardous Waste Collection Centers
- Curbside-Residential Bulky Item Service
- Curbside Waste Oil/Recycling Program
- Free Mulch and Compost Program
- Reuse and Recycle Guide
- How to Reduce Junk Mail
- Tire Disposal

5.5 Fiscal Resources

General Fund Sources

Town of Apple Valley - Budgeted Revenues & Expenditures
Fiscal Year 2010/11 - Summary of General Fund

Revenues:	Estimated Revenue	Expenditures:	Estimated Expenditures
Local Taxes	14,755,000	General Government	2,675,042
Motor Vehicle In-Lieu	250,000	Public Safety	10,520,750
Fines & Fees	285,000	Public/Community Services	2,631,491
Public Services/Events	829,500	Planning, B & S, Engineering	1,699,480
Planning, B & S, Engineering	524,000		
Other Revenues	600,100	Total Expenditures	$ 17,526,763
Total Revenues	$ 17,243,600		

One of the key analytical tools used during the budget process is a comprehensive seven-year financial forecast for the General Fund. This forecast considers key revenue and expenditure projection factors such as population, increases in the consumer price index (CPI) and other growth factors. The trending of these key factors and their effect on revenues and expenditures for the past ten years provides a historical basis for the seven-year financial forecast.

As part of the mid-year budget review process, the revenue assumptions included in the forecast are comprehensively reexamined based on actuals for the prior year, as well as emerging trends at the mid-point of the year. Accordingly, with a few notable exceptions, the revenue projections reflected in the Budget rely heavily on the projections made as part of the seven-year forecast.

Sources used in developing these revised projections include economic trends as reported in the national media, forecast data for San Bernardino County, economic and fiscal information developed by the State Legislative Analyst and the State Department of Finance, and materials prepared by the League of California Cities and State Controller's Office. Ultimately, however, the revenue projections reflect the staff's best judgment about the performance of the local economy over the next two years and how it will affect Town revenues.

The following provides a brief description of the Town's top general revenue sources along with the general assumptions used in preparing revenue projections. These sources account for over 80% of total general revenues.

General Property Taxes

Under Proposition 13 (adopted in June of 1978) property taxes for general purposes may not exceed 1% of market value. Property tax assessment, collection and apportionment are performed by the County. The Town receives approximately 20%-25% of the levy within its limits. Assessment increases to reflect current market value are allowed when property ownership changes or when improvements are made; otherwise, increases in assessed value are limited to 2% annually.

Sales and Use Tax

The Town receives 1% from all taxable retail sales occurring in its limits. This is collected for the City by the State of California, along with their component of the sales tax (6.75% for the State General Fund and 1% for local transportation purposes, for a total sales tax rate in San Bernardino County of 8.75%).

Franchise Fees

Franchise Fees are levied by the Town on a variety of utilities at various rates. The State sets franchise fees for utilities regulated by them (most notably gas and electricity): 1% of gross sales or 2% of revenues attributable to their investment in infrastructure, whichever is greater.

Motor Vehicle In-Lieu

The State Revenue and Taxation code imposes an annual license fee of 2% of the market value of motor vehicles in lieu of a local motor vehicle property tax. Cities and counties equally share 81.25% of the total tax collected statewide; the State then distributes this revenue to cities and counties on a per capita basis. Motor Vehicle In-Lieu taxes have increased over the last several years, but were reduced during 2000/01 due to the calculation method imposed by the State to utilize actual population estimates.

Development Related Fees

Development related fees recover costs for planning, building and safety, engineering, and fire plan check services. Cost recovery for these services is generally set at 100% of total costs.

Hazard Mitigation Grant Program (HMGP)

Hazard Mitigation Grant Program (HMGP): This FEMA administered program provides grants to states and local governments following a presidential disaster declaration. The funds can be used to implement long-term hazard mitigation measures. According to the Disaster Mitigation Act of 2000, communities must have a Local Hazard Mitigation Plan (LHMP) approved to receive HMGP funds after May 1, 2005. Funds will be granted only to projects that conform to local and state mitigation plans. Federal grant funds can provide 75% of a project's total cost; other sources must provide 25% matching funds. After any federally declared disaster, up to 20% of the amount spent by FEMA on disaster response and relief costs is made available in the form of HMGP grants to communities in the affected state.

Flood Mitigation Assistance Program (FMA)

FMA provides funding to assist states and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the National Flood Insurance Program.

Pre-Disaster Mitigation Program (PDM)

FEMA developed the PDM program to coincide with the requirements of the Disaster Mitigation Act of 2000 that requires communities to prepare local hazard mitigation plans, such as this plan. Funds are authorized by Congress on an annual basis for PDM competitive grants, technical assistance and program support. FEMA grants can fund 75 percent of a project; other non-federal sources must provide 25 percent matching funds. Funds are only granted to communities with an approved LHMP, and supported projects must be identified in those plans.

Severe Repetitive Loss (SRL)

According to the National Flood Insurance Program, the Town of Apple Valley has six repetitive loss properties within its jurisdiction.

Community Development Block Grants

Block grants are administered by the Department of Housing and Urban Development to fund housing, economic development, public works, community facilities and public service activities serving lower income people. These funds can be used for mitigation works. CDBG funds are considered local funds once they are received, and thereby are eligible to provide the 25 percent local match required for receipt of the HMGP funds.

There are other federal programs that support emergency and rebuilding costs in communities, such as FEMA's Public and Individual Assistance Programs which are activated following federally declared

disasters. These funds primarily support repair projects, but may also include the cost of code upgrades or other mitigation measures as part of the repair if they are cost effective.

SECTION 6 - MITIGATION STRATEGIES

6.1 Overview

The Town of Apple Valley's mitigation strategy is derived from the in-depth review of the existing vulnerabilities and capabilities outlined in previous sections of this plan, combined with a vision for creating a disaster resistant and sustainable community for the future. This vision is based on informed assumptions, recognizes both mitigation challenges and opportunities, and is demonstrated by the goals and objectives outlined below. The mitigation measures identified under each objective include an implementation plan for each measure. The measures were individually evaluated during discussions of mitigation alternatives and the conclusions used as input when priorities were decided. All priorities are based on consensus of the Planning Team.

Mitigation measures are categorized generally for all hazards and specifically for the three high risk hazards facing the Town that were extensively examined in the risk assessment section: earthquakes, floods, and wildfires.

6.2 5-Year Progress Report

The following identifies the completed, deleted, or deferred actions or activities from the previously approved 2005 plan.

Mitigation Action	Completed	Deferred	Ongoing	Comments
Seismic retrofit on the Bear Valley Road bridge at the Mojave River	X			
Asphalt berm project at various locations throughout the community, especially those areas in the dry lake bed prone to flooding	X			
Installation of dry wells at various locations in the dry lake bed area as well as on Navajo	X			

Mitigation Action	Completed	Deferred	Ongoing	Comments
Road and Yucca Loma/Kiowa Road				
Asphalt berm project at various locations in Desert Knolls susceptible to flash flooding;	X			
Construction of a retention basin on Sitting Bull Road to mitigate new residential development in the area	X			
Continue working with the California Department of Water Resources to ensure proper notification of water release from the dams.			X	Ongoing process
Continue working with the Army Corps of Engineers and the County of San Bernardino Flood Control regarding grading operations in the Mojave Riverbed.			X	Channeling the river water away from adjacent properties can be improved with strategic grading. Grading operations need to continue after each release of water into the river or after severe rains.
Continue maintaining and enforcing the building code regulations pertaining to seismic and earthquake standards.			X	By maintaining and enforcing building code regulations pertaining to seismic and earthquake standards, new development will be seismically safer. Up-to-date building codes are also applied to existing structures for tenant improvements
Install dry wells in areas that are susceptible to flooding due to heavy rains.			X	Ongoing process

Mitigation Action	Completed	Deferred	Ongoing	Comments
Construct a bridge or mitigate the area in another area on Rock Springs Road where it crosses the Mojave River.		X		
Construct concrete water channels in areas that are susceptible to flooding due to heavy rains.		X		
Extend the current Desert Knolls concrete wash east to Tao Road and west to the Mojave River.		X		

6.3   Mitigation Goals, Objectives, Actions, and Projects

The 2005 Mitigation Goals included overall mitigation goals established by the Town (contained within the Town's General Plan, adopted in 2004) to guide the establishment and priorities of specific goals, objectives, and mitigation measures for each high risk hazard. In reviewing and updating mitigation objectives and actions, it was the Planning Team's consensus that these goals remain in this Plan update.

The Town of Apple Valley's General Plan is on file at Town Hall, 14955 Dale Evans Parkway, Apple Valley, CA 92307, and is available for inspection during normal business hours. The General Plan is also available online at www.applevalley.org.

6.3.1 Emergency Preparedness Goals

(Tables and exhibits referenced in this section are contained in the Town's General Plan)

Goal 1:   Support and expand disaster response programs, and initiate a program for post-disaster planning.

Objectives: Policies

A. The Town shall encourage involvement in the emergency preparedness programs already in place in the region, as well as emergency preparedness education in the schools and in the media.

B. Establish comprehensive procedures for post-disaster planning in affected areas.

C. Because emergency preparedness is crucial to the protection of the public in case of disaster, the following actions shall be implemented:

1. Coordinate with the County Office of Emergency Services, and maintain and update the Emergency Preparedness Management Plan for use by the Town to protect the citizens of Apple Valley.

2. Coordinate with public and private agencies, and initiate coordination in residential areas through Neighborhood Watch, homeowners associations and other neighborhood groups.

3. Provide for the needs of dependent and immobile populations in emergency response and recovery operations through identification and prioritization of rescue needs.

4. Require disaster plans and provisions in the design, location and management of all public facilities.

5. Plan, design and use public facilities according to the requirements of the Emergency Management Plan.

6. Assure adequate access routes to and from potential devastation areas as required by the Emergency Management Plan.

Because the Town's ultimate post-disaster survival will depend not only on the effectiveness of hazard mitigation and disaster response programs, but also on how quickly and how well the Town is rebuilt after a major disaster, the Town shall initiate a program for post-disaster planning. All options, from redevelopment to opportunities for upgrading, shall be included. Such measures as revised street and traffic patterns, parking, architectural and landscape design, and general land use compatibility, as well as building code improvements, shall be addressed.

1. Establish a standing committee for disaster recovery to plan for a disaster by providing contingency planning for the rapid and effective reconstruction of affected areas. The committee shall include representatives of Planning, Engineering, Flood Control, Community Services and Building and Safety, as well as liaisons to the local utilities and any State and Federal redevelopment, housing and reconstruction programs.

2. Develop guidelines through the committee for the exercise of emergency authorities for such purposes as the following.

a. Rapid designation of redevelopment areas through pre-preparation of emergency ordinances

b. Possible revision of land use, circulation and parking requirements, and institution of other programs for improving the community environment

c. Adaptation and institution of special programs for disaster recovery

d. Funding of disaster recovery measures.

e. Moratoria on reconstruction in any high-hazard areas where damage could be

repeated

f. Upgrading of the building code

g. Establishment of Geologic Hazard Abatement Districts, as appropriate

h. Designation of sites for temporary housing (e.g., travel trailers and pre-fabricated construction) of households made homeless in the disaster, in cooperation with the Disaster Housing Program of the Federal Emergency Management Agency.

6.3.2   Earthquake

Goal 1:   Continuously integrate new data on natural and manmade hazards into overlay mapping and the review of land use proposals and applications and the enforcement of development standards through the use of mapping overlays, policies and land use designations.

Objectives: Because strong technical input is needed to refine, enlarge and improve the knowledge of geologic hazards in Apple Valley, the Town shall implement the following actions.

1. Establish a geotechnical information collection, storage and retrieval system. Coordinate with the countywide information gathering effort, and ensure that the Town's system will accomplish the following tasks.
   a. Solicit and coordinate geological studies by the United States Geological Survey (USGS), the California Division of Mines and Geology (DMG), the County and other local agencies, and make the resultant data available to the public and other agencies.
   b. Incorporate all new research for the prediction and mitigation of geologic hazards.
   c. File and coordinate with the County Geologist.
   d. Maintain clear and comprehensive mapping of all geological hazards.
2. Utilize the County Geologist, the Geotechnical Advisory Committee or professional consultants to establish criteria, standards, guidelines and format for required geologic reports, and formulate standardized mitigation measures. A professional Geologist shall review and approve all required geologic reports.
3. Incorporate newly acquired data and technology into the mapping, policies and procedures of this General Plan.

Because of the potential for liquefaction impacts to certain areas in the Town, an inventory and analysis of such areas with liquefaction potential shall be undertaken.

Because of the potential relationship between seismic activity and landsliding effects, the Town shall require that a seismic analysis be included as a part of landslide stability studies when required by the City Engineer.

Because individual developments may be subject to spot flooding from all streams or unmapped areas adjacent to mapped flood areas, the Town shall require specific hydrology and hydraulic studies to be prepared at the time developments are proposed, as follows.

1. Identify existing drainage conditions, upstream and downstream drainage conditions at build out of the General Plan, and measures which must be taken within the development project or downstream from the project to preclude impacts on the proposed development or increased impacts to downstream development. These studies should be submitted and reviewed by the Engineering Department.
2. Fully account for all planned flood-control facilities within or adjacent to the project site. Where sections of flood-control facilities cannot be constructed, provision should be made for their ultimate construction, that is, right-of-way reserved and construction funds secured. Additionally, interim facilities must be provided which will be able to handle the additional runoff from the proposed development until the planned flood control facilities are constructed.

Goal 2:   Minimize the potential risks resulting from the exposure of Town residents to manmade and natural hazards.

Objectives: Because the risks from many geologic hazards can be successfully mitigated through a combination of engineering, construction, land use and developmental standards, the Town shall implement the following actions:

1. Require the formation of geologic hazard abatement districts as authorized by Public Resources Code Section 26500 et seq. where existing or proposed development is threatened by such hazards, and prevention, mitigation, abatement or control of a geologic hazard is deemed feasible.
2. Require sites to be developed and all structures designed in accordance with recommendations contained in any required geotechnical or geologic reports, through conditions, construction plans and field inspections.
3. Require that all recommended mitigation measures be clearly indicated and described on all grading and construction plans.
4. Require that clearances around structures and road widths in geologic hazard areas, as shown on the Hazard Overlay Map, meet the requirements found in Policy Y, Action 1 for this Goal, S-1.
5. Require all facilities to meet appropriate geologic hazard specifications as determined by the Town Engineer for discretionary and ministerial authorizations.

Because increased public awareness of geologic hazards can reduce the risk of those hazards, the Town shall implement the following actions:

1. Develop a geologic educational program for use by schools, developers and the public at large, covering hazards, abatements, and emergency plans and procedures as part of the Town's Emergency Preparedness Management Plan.
2. Make geotechnical data and mapping readily available to the public through the County-wide Geotechnical Information System coordinated by the County Geologist as described in the General Plan Policy C for Goal S-2.

Because the County is traversed by many major active faults resulting in a relatively high level of risk, the Town shall implement the following actions:

1. Adopt all future upgrading of the seismic design section of the Uniform Building Code.
2. Require new structures and facilities to be designed and constructed to meet seismic safety and related design requirements of the most recent Uniform Building Code, or more stringent requirements if indicated by site investigations.
3. Require all new critical, essential or high occupancy facilities to be designed and operated in such a manner as to remain standing and functional during and after a disaster as determined by the Division of Building and Safety.

Because of the potential for displacement along faults not classified as active, the Town shall reserve the right to require site-specific geotechnical analysis and mitigation for development located contiguous to potentially active faults, if deemed necessary by the Town Engineer.

Because some structures were built prior to both 1933 and 1971 seismic standards, they are considered unlikely to withstand a seismic event of the predicted intensity. The Town shall undertake studies and develop programs to minimize the risk of potential seismic disaster in areas where inadequate structures exist in the following ways:

1. Initiate a structural hazards identification and abatement program through the Division of Building and Safety, with priority given to the identification and abatement of hazards in critical, essential and high occupancy structures, in structures located within areas of severe geologic hazard and in structures built prior to the enactment of applicable local or state earthquake design standards. This program shall be in accordance with SB 547, enacted in Chapter 250, statutes of 1986, requiring local jurisdictions to develop structural hazard reduction programs for such buildings by January 1, 1990.
2. Require periodic inspection by the Office of Building and Safety of all critical, essential and high occupancy buildings to identify potential hazards in the event of a major earthquake. When hazards are identified, require mitigation by the owner.
3. Bring all existing critical, essential, and high occupancy structures found to be hazardous into conformance with applicable seismic and related safety (fire, toxic materials storage and uses, etc.) standards through rehabilitation, reconstruction, demolition, reduction of occupancy levels, or change in use.
4. Require rehabilitation of private unfit structures through implementation of the Uniform Building Code and Hazardous Building Ordinance. Priorities for critical, essential or high occupancy buildings shall be based on hazard to life, type of occupancy, method of construction, physical condition and location.
5. Require the upgrading of buildings and facilities to achieve compliance with the latest earthquake standards as a condition of granting building permits for major additions and repairs.
6. Establish and administer incentives for seismic retrofitting, including but not limited to the following.

    a. Area-wide revitalization programs
    b. Community Development Block Grants
    c. US Small Business Administration loans
    d. Public Purpose Bonds
    e. Marks History Bonds
    f. Local-General Funds

g. Local-General Obligation Bonds

h. Making seismic safety a major factor in selecting future areas for redevelopment

i. Tax reductions for building rehabilitation to minimize personal economic costs

j. Providing relocation assistance to persons and businesses temporarily or permanently dislocated from hazardous old buildings

k. Requesting Federal and/or State financial assistance to implement corrective measures

Support regional or statewide programs providing funding or technical assistance to local governments to allow accurate identification of existing structural hazards in private development and providing assistance to public and private sectors to facilitate and to minimize the social and economic costs of abatement.

Because many structures with important functions and potentially severe consequences of failure do not fall under Town control (i.e., dams, utility installations, transportation structures) the Town shall implement the following actions:

1. Continue to work with public utilities, school districts, the State Department of Transportation (Caltrans) and other agencies supplying critical public services to ensure that they have incorporated structural safety and other measures to be adequately protected from seismic hazards for both existing and proposed facilities.
2. Encourage Caltrans and all utilities to review all their facilities within the Town to assess potential impacts of seismic hazards; comments based on this review should be forwarded to the Town.
3. Encourage utility companies to institute orderly programs of installing cut-off devices on utility lines, starting with the lines that appear to be most vulnerable and those which serve the most people. Adequate emergency water supplies shall be established

   and maintained in areas dependent upon water lines which cross active fault zones.

Because the ground in close proximity to a fault is subject to rupture during an earthquake, exposing occupants and structures to high levels of risk, those areas identified by the Alquist/Priolo Special Studies Zone Act (Public Resources Code, Division 2, Chapter 7.5) shall be designated on the Hazards Overlay Map, and the following actions shall be implemented:

1. Apply definitions, provisions and mapping of the Alquist/Priolo Special Studies Zone Act.
2. Apply the Land Use Compatibility Chart for Special Studies Zones when reviewing all discretionary and ministerial actions (Table X-2).
3. Maintain a minimum 50-foot setback from an identified fault for all new structures. For an inferred fault area, a 250-foot setback shall be maintained. However, critical, essential or high occupancy structures and facilities shall not be located in Special Studies Zones unless there is no feasible alternative, as determined by staff review, in which case these facilities shall maintain a 150-foot setback from an identified fault. (A 200-foot setback shall be maintained if the fault is inferred.)

4. Withhold public financing from buildings within the Studies Zone where there is a confirmed fault trace unless it can be established that there is no potential for surface fault displacement or ground rupture which would injure the public investment or fulfillment of its purpose.
5. Do not create new lots within the Studies Zone unless an appropriate geologic investigation establishes sufficient and suitable land area for development according to existing zoning and other applicable Town ordinances.
6. Plan transportation facilities (i.e., roads, freeways, rail, rapid transit) and utility systems to cross active fault traces a minimum number of times and to be designed to accommodate fault displacement without major damage that would cause long term and unacceptable disruption of service. Utility lines shall be equipped with such mechanisms as flexible units, valving, redundant lines or auto valves to shut off flows in the event of fault rupture.

Because the purpose of the Alquist/Priolo Special Studies Zone Act is only applicable to fault rupture areas (in close proximity to faults) and because the entire San Bernardino Valley area is subject to severe hazard from the effects of shaking due to an earthquake, the Town shall implement the following actions:

1. Require special studies, including dynamic analysis for all major structures (critical, essential and high occupancy land uses) within areas determined by the Town Engineer to be subject to significant seismic shaking.
2. Design and construct all structures in areas determined by the Town Engineer to be subject to significant seismic shaking to withstand ground shaking forces of a minor earthquake without damage, of a moderate earthquake without structural damage, and of a major earthquake without collapse. Critical, essential, and high occupancy structures shall be designed and constructed to remain standing and functional following a major earthquake and shall be so engineered as to withstand maximum probable ground motion accelerations.
3. Require all new construction to meet the most current and applicable lateral force requirements.
4. Strengthen earthquake resistance standards for non- structural components of structures including exterior veneers, internal partitions, lighting fixtures, elevators and equipment.

Because liquefaction can cause devastating structural damage and because there is a high potential for saturation when the groundwater level is within the upper 50 feet of alluvial material, the Town shall implement the following actions:

1. Require that each site located within the Liquefaction Hazard Overlay shall be evaluated by a licensed geologist prior to design, land disturbance or construction for soil type, history of the water table's fluctuation and adequacy of the structural engineering to withstand the effects of liquefaction.
2. Apply the Land Use Compatibility Chart for Liquefaction Areas (Table X-3) when reviewing all discretionary and ministerial actions.

Because portions of the Town have moderate landslide potential, posing measurable risk to life and property, and because once landslides are recognized, many can be safely mitigated, the Town shall implement the following actions:

1. Require that a stability analysis be required in Landslide Hazard areas designated "Generally Susceptible" and "Mostly Susceptible" on the Hazards Overlay Maps and where required by the Geologist.
2. Require site development and construction in compliance with soil and geologic investigation report recommendations.
3. Apply the Land Use Compatibility Chart for Landslides (General Plan Table X-4) when reviewing all discretionary and ministerial actions.
4. Fund and prepare a land use plan that is in conformance with the Land Use Compatibility Chart for landslides in designated high landslide hazard areas as they are identified.
5. Restrict avoidable alteration of the land which is likely to increase the hazard within areas of demonstrated or potential landslide hazard, including concentrations of water through drainage or septic systems, removal of vegetative cover, steepening of slopes and undercutting the base of a slope.
6. Restrict grading to minimal amounts necessary to provide access, and require grading permits to have an approved site plan which minimizes grading and conforms to the recommendations of any required geologic investigation.
7. Require development on hillsides to be sited in the least obtrusive fashion, thereby minimizing the extent of topographic alteration required.
8. Restrict development in areas of known landslides or landslide-prone deposits on steep slopes, except where engineering and geologic site investigations indicate such sites are stable or can be made stable by the application of appropriate mitigating measures. In such cases, it must be shown to the satisfaction of the Town that the risk to persons, property and public liability can be reduced to an acceptable degree.
9. Require that foundation and earth work be supervised and certified by a geotechnical engineer and, where deemed necessary, an engineering geologist, in projects where evaluations indicate that state-of-the-art measures can correct instability.
10. The Town shall generate ma-specific (where appropriate) hillside development plans on the basis of baseline inventory and geotechnical analysis related to landsliding potential.

Because of limited specific information on the extent of subsidence in the Town, the Town shall implement the following actions:

1. Undertake a program of subsidence hazard identification that will outline the extent of the hazard in the Town and propose mitigation measures through the office of the Town Engineer.
2. Restrict the construction of any facility which is needed for public safety or for the provision of needed emergency services where an interruption in service could result from structural failure due to settlement or subsidence unless the only alternative sites would be so distant as to thereby jeopardize the safety of the community served.
3. Require that all site-specific geotechnical investigations conducted for proposed development include an assessment of potential impacts and mitigation measures related to expansive reactive soils and erosion.

Projects: To coordinate and support the State of California Multi-Hazard Mitigation Plan Strategies to reduce risks, the Town of Apple Valley proposes the following projects:

- **Mobile Home Seismic Retrofit Program**

☐ Develop and sponsor projects and programs to brace new or relocated mobile homes to resist earthquakes

- **General Earthquake Mitigation Projects**

  ☐ Develop projects and programs to install automatic gas shut-off valves in residential, commercial, and public buildings
  ☐ Develop and construct seismic retrofit of critical facilities
  ☐ Develop residential and commercial seismic retrofit programs
  ☐ Develop earthquake mitigation public outreach education programs
  ☐ Develop and construct seismic retrofit of Town-owned transportation and utilities infrastructure

6.3.3   Flood

Goal 1:   Minimize the potential risks resulting from the exposure of Town residents to manmade and natural hazards.

Objective: Because the Town has entered into an agreement to participate in the National Flood Insurance Program (NFIP) which provides flood insurance within designated floodplains, the following actions shall be implemented by the Town:

1. Floodway and Floodplain areas as identified by the Federal Emergency Management Agency (FEMA) on Flood Insurance Rate Maps and Flood Boundary Maps shall be designated as Floodway (FW) on the Land Use Maps and Floodplain Overlays on the Hazards Overlay Maps.
2. Designated floodway areas shall be preserved for non- structural uses through restrictions of the FW land use district.
3. All new development, including filling, grading and construction, proposed within designated floodplains shall require submission of a written assessment prepared by a qualified hydrologist or engineer, in accordance with the latest "San Bernardino County Hydrology Manual" and the various detention basin policies (General Plan Policy X for this Goal, S-1) to determine whether the development will significantly increase flood hazard and to show that all new structures will be adequately protected.   Development shall be conditioned on receiving approval of this assessment by the Town Engineer.
4. All new construction in the Floodplain Overlay areas shall be required to be flood-proofed and shall be located and designed to allow unrestricted flow of floodwaters.
5. The Land Use Compatibility Chart for the 100-Year Flood Plains (General Plan Table X-5) shall apply when reviewing all discretionary and ministerial actions in the designated floodplain.
6. Lands within floodplain areas may be developed with non- critical and non-essential uses if mitigation measures are incorporated so as to ensure that the proposed development will not be hazardous, increase flood depths or velocities downstream, or degrade water quality.
7. Known flood hazard information shall be provided with every

discretionary ministerial action application.

8. When no mapped data exists, existing topographical, watershed, and drainage course data shall be evaluated for a determination of potential flood hazard for every discretionary and ministerial action.

Because the FEMA mapping and studies do not yet identify all flood hazard areas in the entire Town, the following shall actions shall be implemented:

1. As new overflow studies and mapping are completed and approved by either the Town Engineer or the San Bernardino County Flood Control District, they shall supplement the FEMA mapping and shall be incorporated into Flood Hazard Overlay mapping.
2. Programs for the continuous elevation and designation of floodway, floodplain and drainage areas shall be initiated and financed.
3. Timely application for FEMA mapping changes shall be initiated to reflect any additions to or alterations in identified Floodways or Floodplains by the Town's Floodplain Management Administrator.
4. The siting of residential and other types of development requiring substantial structures shall be prohibited on playas or dry lake beds as shown on the Floodplain Overlay Map. Industrial, commercial, recreational, or transportation and other uses which utilize the playa or dry lake as a resource may be permitted.
5. All Town areas shall be continuously evaluated through the application of development conditions in the pre- construction flood hazard inspection process.
6. Site studies shall be performed in areas where development is proposed which have been tentatively identified as subject to flooding.
7. Construction shall take place in compliance with study recommendations as described in site study required under action item #6 above.

Because dam failure as a result of earthquake or other causes results in severe risk to downstream properties, the Town shall implement the following actions:

1. Require an engineering geology report for all new or proposed public and private reservoirs. This report shall be completed by a registered engineering geologist, conform to Town standards, and be approved by the Town Engineer.
2. Include reservoirs as Dam Inundation areas on the Hazard Overlay Map as required by the State of California.
3. Prohibit new dams and reservoirs in areas designated as Geologic Hazards on the Hazard Overlay Map.
4. Seek elimination of potentially hazardous dams and reservoirs.
5. Initiate programs to increase the earthquake resistance of dams and reduce the potential impacts of seismically- induced dam failures.
6. Prohibit critical, essential and high-risk land uses from Dam Inundation areas as shown on the General Plan Hazard Overlay Map and Table X-5.

Because substantial development has already occurred in floodways and floodplains, the Town shall implement the following actions:

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1. Continue to identify natural drainage courses and designate Town of Apple Valley Drainage Easements as a means to preserve natural drainage flow paths and/or constructed drainage facilities.
2. Require identification, improvement and upgrading of critical facilities in flood hazard areas through such measures as anchorage to prevent flotation, water tight barriers over openings, reinforcement of walls to resist water pressures, use of materials to reduce wall seepage and installation of pumping facilities for internal and subsurface drainage.
3. Require implementation of flood protection measures when any additions to the original structure are proposed.
4. Establish funding mechanisms when flood control facilities are warranted.

Because drainage from adjacent development contributes to fire hazards, the following actions shall be implemented:

1. The run-off provisions of the Erosion and Sediment Control Ordinance shall apply Town-wide.
2. Surface run-off from new development shall be controlled by on-site measures including but not limited to the following.

   a. Structural controls
   b. Restrictions regarding changes in topography, removal of vegetation, creation of impervious surfaces, and periods of construction such that the need for off-site flood and drainage control improvements is minimized and such that run-off from the development will not result in downstream flood hazards

Because public education plays a vital role in minimizing flood hazards, the Town shall implement the following actions:

1. Establish a public information system through the Office of Emergency Services outlining emergency operations plans and measures to reduce personal losses in the event of a flood disaster.
2. Develop a flood warning system, where possible, through the County Flood Control District.
3. Develop dam failure and flood plain inundation evacuation plans through the County Office of Emergency Services.

Because flood protection is both local and regional in nature, the Town shall implement the following actions:

1. Continue the development of intergovernmental coordination with cities, adjacent counties, the Army Corps of Engineers, and other agencies which have an interest in flood control projects that cross-jurisdictional boundaries.
2. Coordinate land use and flood control planning through staff contacts between the County Flood Control District, Special Districts and cities within the County, and through the annual review of the

Capital Improvements Program.

Because the funding of necessary flood control and drainage facilities is a major concern, the Town shall coordinate with the County in the preparation of local area drainage plans and establish funding mechanisms to provide the backbone drainage system for watershed areas within and affecting the Town.

Because the proliferation of private detention basins is not desirable, safe or economical, the following policies and criteria shall be supported by the Town:

- San Bernardino County Detention Basin Policy
- San Bernardino County Detention Basin Maintenance Financing Policy
- San Bernardino County Detention Basin Submittal Procedures
- Detention Basin Design Criteria for San Bernardino County
- Town of Apple Valley Master Plan of Drainage

Goal 2: Continuously integrate new data on natural and manmade hazards into overlay mapping and the review of land use proposals and applications and the enforcement of development standards through the use of mapping overlays, policies and land use designations.

Objectives: Because of the need for additional flood control measures in the Town and the opportunity presented by existing floodway areas as open space for human recreation and wildlife use, the Town shall initiate a study for a revised Town of Apple Valley Master Plan of Drainage. This study shall include an investigation into the feasibility of combining flood control and open space use and a cost comparison with the existing plan.

1. Based on the findings of the proposed flood control study, the Town shall initiate an effort to fund the construction of a system approved by the Town Council.

Projects: **Detention Basins**

To provide a 100-year (or greater) level of flood protection through adoption and support of the Town of Apple Valley Master Plan of Drainage.

- ☐ Vicinity of Navajo and Ottawa Roads
- ☐ Vicinity of Huasna Road and Chippewa Roads
- ☐ Vicinity of Bear Valley and Mohawk Roads

Dry Wells

A proposed Dry Well Installation Project that includes installation of Apple Valley Standard Dry Well Structures at various locations in the vicinity of:

    ☐   Quapaw Road near Eyota Road
    ☐   Seneca Road near Rancherias Road
    ☐   Pocomoke Road near Minnetonka Road
    ☐   Algonquin Road near Lone Eagle Road
    ☐   Mohawk Road near Laguna Road
    ☐   Little Beaver Road near Mesquite Road
    ☐   Entire neighborhood bordered by Dale Evans Parkway, Otoe
Road, Thunderbird Road, and Rancherias Road

- **Community Rating System (CRS) and the National Flood Insurance Program (NFIP)**
  Attain and maintain Community Rating System (CRS) Status including, but not limited to, development of the Town of Apple Valley's on-line Geographic Information System (GIS) as a public education tool and develop and sponsor programs and projects in support of the CRS.

    ☐   Maintain participation in the National Flood Insurance
Program

6.3.4   Wildfire

Goals: Support and expand disaster response programs and education, and initiate a program for post-disaster planning.

Objectives: 1) Because an integrated approach is needed to coordinate the Town's present and future needs in fire protection services in response to fire hazards and risks and to serve as a basis for program budgeting, identification and implementation of optimum cost- effective solutions, the Town shall implement the following actions.

a. Participate in the creation of a County-Wide Fire Protection Master Plan based upon land use districts.

b. Develop, adopt, and implement a recommended schedule of fees to finance the fire protection infrastructure that is tied to land use categories and specific community needs as prescribed by the County-Wide Fire Protection Master Plan.

c. Continue to coordinate fire protection services for the City, with the County, the California Department of Forestry and Fire Protection, (CAL FIRE), the United States Forest Service, the Bureau of Land Management, and all City and special districts with fire protection powers.

d. Require development applicants, in areas of identified fire risk, to prepare a site-specific fire protection plan.

e. Require applicants to fund expansion of local fire protection services by payment of appropriate impact fees.

f. Implement monitoring of fire-prevention measures (such as fuels reduction) to prevent damage to biological habitats in chaparral areas.

2) Because public education is a vital part of fire hazard abatement, prevention and mitigation, the Town shall implement the following action:

a. Continue to support existing Apple Valley Fire Protection District education programs in the areas of vegetation modification and management, fire-safe site design techniques and fire prevention, including smoke detector distribution.

3) Because fire exists as a hazard Town-wide, the following requirements shall apply Town-wide unless superseded by the Apple Valley Fire Protection District.

a. The Peak load Water Supply System guidelines contained in Table X-1 shall be met for all new development or be adequately served by water supplies for domestic use and community fire protection in accordance with standards as determined by the Town and the Apple Valley Fire Protection District.

b. Provide adequate fire protection facilities and services in accordance with standards of the Town and the Apple Valley Fire Protection District for all development, existing and proposed.

c. Require structures, features of structures or activities determined to be hazardous in terms of fire potential to be brought into conformance with current applicable fire and safety standards.

d. Limit or prohibit development or activities in areas lacking water and fire fighting facilities.

e. Approve high intensity uses such as theaters, motels, restaurants, and schools, and uses requiring the handling or storage of large amounts of flammable materials only in areas with adequate water systems with hydrants.
f. Continue to evaluate and amend as necessary development standards for location, building separations, structural design and detection hardware.
g. Require adequate visible designation of all streets, roads and buildings, to the standards of the Apple Valley Fire Protection District.
h. The Town shall ensure that successive uses of individual buildings comply with appropriate building and fire standards.
i. Adopt common standards for building safety and construction.

Projects	☐ Partner with Victor Valley Community and the Apple Valley Fire Protection District to design, develop and construct mitigation programs and facilities that provide training opportunities in support of multihazard/multijurisdictional emergency incidents
	☐ Develop and sponsor an enhanced public education program based on targeted needs that encourages the public to take responsibility for wildfire protection
	☐ Develop and support land use policies and standards that protect life, property, and natural resources.

6.4   Mitigation Priorities

During the development of the risk assessment for the Town of Apple Valley, the Planning Team proposed and discussed alternative mitigation goals, objectives, and specific mitigation measures that the Town should undertake to reduce the risk from the three high risk hazards facing the Town.

Multiple factors were considered to establish the mitigation priorities included in this plan. The Planning Team utilized the STAPLEE system (identified in Section 3.6) to help assess mitigation priorities and determined that the highest priority rankings would be assigned to those mitigation measures that met three primary criteria:

1. Greatest potential for protecting life and property

2. Greatest potential for maintaining critical Town functions and operability following a disaster; and

3. Achievability in terms of community support and cost effectiveness

All rankings were determined by the consensus of the Planning Team. As described in the previous section on hazard and risk assessment, clearly earthquakes have the potential to affect the largest number of people, critical facilities, and buildings and to cause the greatest economic losses. This fact, combined with the relatively high probability of an earthquake occurrence in the next several decades, makes increasing disaster resistance and readiness to earthquakes a high priority. Given the extreme importance of maintaining critical government functions in times of disaster and the large number of the

population who depend and rely on government services and infrastructure, those mitigation measures that improve government disaster resistance, readiness, or recovery capacity are generally given higher priority than mitigation of privately owned buildings in which the loss or damage affects relatively few.

Earthquake, flooding, and wildfire mitigation actions are identified and assigned a priority according to their importance, cost, funding availability, to what degree project planning has been completed, and the anticipated time to implement the measures.

Using the above rationale for establishing mitigation priorities, each mitigation measure is assigned a priority ranking as follows:

▪ High – Projects that will be the primary focus of implementation over the next five years

▪ Medium – Projects that may be implemented over the next five years

▪ Low – Projects that will not be implemented over the next five years unless conditions change (new program/funding source)

The Team discussed alternative mitigation strategies and mitigation measures during workshops, provided their preferences, and also suggested additional mitigation measures that the City should consider. National literature and sources were researched to identify best practices measures for each hazard considered by the Town. The Planning Team reviewed the list of possible objectives and mitigation measures, made a final selection, and then prioritized the individual mitigation measures considered the most appropriate for Apple Valley.

6.5   Implementation Strategy

An implementation strategy is the key to any successful planning effort. The implementation strategy identifies who has lead responsibility for the action, the estimated timeframe for completion, and potential funding source(s) to support implementation, and the priority ranking, defined as follows:

▪ Lead Agency: Town of Apple Valley and/or other agency assigned lead responsibility
▪ Timeframe: Short-term (less than 2 years); long-term (more than 2 years)
▪ Funding source(s): Potential internal and external funding source(s)
▪ Priority Ranking: High, Medium or Low

Action	Lead Agency	Hazard	Funding Source	Timeline	Priority Ranking
Develop projects and programs to install automatic gas shut-off valves in residential, commercial, and public buildings	Apple Valley	Earthquake	PDM HMGP HUD	Long Term	Low
Develop and construct seismic retrofit of critical facilities	Apple Valley	Earthquake	PDM HMGP DIF	Long Term	Low
Develop residential and commercial seismic retrofit programs	Apple Valley	Earthquake	PDM HMGP	Long Term	Low
Develop earthquake mitigation public outreach education programs	Apple Valley	Earthquake	EMPG	Long Term	High
Develop and construct seismic retrofit of city-owned transportation and utilities infrastructure	Apple Valley	Earthquake	PDM HMGP DOT ARRA	Long Term	Low
Develop and sponsor projects and programs to brace new or relocated mobile homes to resist earthquakes	Apple Valley	Earthquake	PDM HMGP	Long Term	Low
Install detention basins Navajo and Ottawa Roads	Apple Valley	Flood	PDM	Long Term	Low
Install detention basins Huasna Road and Chippewa Rd	Apple Valley	Flood	PDM	Long Term	Low
Install detention basins Bear Valley and Mohawk Roads	Apple Valley	Flood	PDM	Long Term	Low
Install Dry Wells Quapaw Rd / Eyota Rd	Apple Valley	Flood	PDM	Long Term	Low
Install Dry Wells Seneca Rd / Rancherias Road	Apple Valley	Flood	PDM	Long Term	Low
Install Dry wells Pocomoke Rd / Minnetonka Rd	Apple Valley	Flood	PDM	Long Term	Low

Action	Lead Agency	Hazard	Funding Source	Timeline	Priority Ranking
Install Dry Wells Algonquin Rd / Lone Eagle Rd	Apple Valley	Flood	PDM	Long Term	Low
Install Dry wells Mohawk Rd / Laguna Rd.	Apple Valley	Flood	PDM	Long Term	Low
Install Dry Wells Little Beaver / Mesquite Rd	Apple Valley	Flood	PDM	Long Term	Low
Install Dry wells Dale Evans/Otoe/Thunderbird/ Rancherias neighborhood area	Apple Valley	Flood	PDM	Long Term	Low

SECTION 7 – PLAN MAINTENANCE

7.1 Monitoring, Evaluating and Updating the Plan

The Town of Apple Valley's Hazard Mitigation Plan was last updated on February 7, 2011. This timeframe allows the Town to meet eligibility requirements for the 2011 Pre-Disaster Mitigation Grant opportunity.

The effectiveness of the Town's Hazard Mitigation Plan depends on the implementation of the Plan and incorporation of the proposed mitigation measures into existing Town plans, policies, and programs. The Plan includes a range of mitigation measures that, if implemented, would reduce loss from high risk hazard events in the Town of Apple Valley. Together, the mitigation measures in the Plan provide the framework for activities that the Town can choose to implement over the next 5 years. The Planning Team has prioritized the Plan's goals and has identified measures to be implemented. Integration with on-going Town programs and processes is essential to the success of the implementation. For example, appending this Plan to the General Plan ensures consistency between policies and programs designed to reduce future exposure to the hazards and risks identified in this mitigation plan. Additional mechanisms to support plan implementation include the annual budget process, the Capital Improvement Plan, Redevelopment Projects, and the zoning and building code update process.

The Town of Apple Valley's Emergency Services Officer will be responsible for overseeing the Plan's implementation and maintenance and will be supported by the Police Captain and the Fire Chief for emergency response, and by the existing Planning Team. The Emergency Services Officer will assume

lead responsibility for facilitating plan implementation and the maintenance meetings of the Planning Team. The Planning Team will be tasked with oversight, review, evaluation, and update of the Plan.

The Town of Apple Valley's Planning Team will review the Plan at least annually and update project status and other Plan elements as applicable. Departments with projects (i.e., Administrative Services, Community Development, Community Services, Fire Services, General Services, Police Services, and Public Works) track the status of the projects through the entire life cycle from concept to completion. Each year proposed projects are reviewed by their respective Department Heads and the Town Manager during budget development and selected projects are submitted for funding to the appropriate funding source.

To facilitate the hazard mitigation planning process, the Hazard Mitigation Plan will be reviewed annually by the Planning Team and revisions will be provided to FEMA in a five-year cycle, as required. The cycle may be accelerated to less than 5 years based on one of the following triggers:

- A Presidential Disaster Declaration that impacts the Town of Apple Valley
- A hazard event that causes loss of life
- A comprehensive update of the Town of Apple Valley's General Plan

It will not be the intent of this update process to start from scratch and develop a new complete hazard mitigation plan for the Town of Apple Valley. The update will be based on needs identified by the Planning Team and will lead to a draft update that will be made available for Town, citizen, and stakeholder review before being submitted to the Town Council for adoption.

The following depicts the Town's proposed list of major milestones (from the time of initiation to completion of the proposed activity) to be utilized in the development of the next Plan update:

Activity Period in Months	Major Milestones
Month 1	Assignment of Existing Professional Staff to Prepare Plan
Month 2	Prepare and Send Letter of Invitation to Potential Stakeholders
Month 3	Establish Public Involvement Process, e.g. Website Announcement, Newspaper Articles, General Public Announcements
Month 3	Coordinate with Other Jurisdictions, Agencies and Organizations

Activity Period in Months	Major Milestones
Month 4	Establish Planning Team
Month 4	Provide Pertinent Documents to Planning Team
Month 4	Selection of Proposed Meeting Dates
Months 1-12	Conduct Monthly Meetings
Months 1-12	Assess and Identify additional Hazards to Town of Apple Valley
Months 1-12	Review and Propose Possible Mitigation Measures
Months 1-12	Establish Continuing Goals and Objectives
Months 1-24	Ongoing Recordation of Activities
Month 14 - 16	Prepare Draft Plan
Month 16-17	Publish Draft Plan to Town of Apple Valley's Website for 30-day Review and Comment
Month 18	Insert Comments into Draft Plan
Month 19	Submit Draft Plan to Cal EMA for Review
Months 20-22	Make Potential Modifications to Meet Cal EMA Recommendations
Month 22	Return Draft Plan with Modifications, if any, to Cal EMA for Review
Months 22-25	Cal EMA Forwards Plan to FEMA for Review and Approval
Month 26	FEMA Returns Plan to Town of Apple Valley for Adoption by City Council
Months 27-29	Submit Recommended Approved Plan to Community Development Department for Review and General Plan Amendment Process
Month 30	Submittal of Final Claim Form, Accomplishments and Results Report, and Budget Summary

FIGURE 14 PROPOSED MAJOR MILESTONES (PLAN UPDATE)

7.2 Implementation through Existing Programs

The 2011 Hazard Mitigation Plan update process was followed by inclusion of mitigation measures in the Town of Apple Valley's General Plan. The Town of Apple Valley addresses statewide planning goals and

legislative requirements through its General Plan, Capital Improvement Projects, and City Building and Safety Codes. The Hazard Mitigation Plan will implement a series of recommendations, many of which are closely related to the goals and objectives of existing planning programs. The Town of Apple Valley will have the opportunity to implement recommended mitigation action items through existing programs and procedures.

The Hazard Mitigation Plan goals and actions will be incorporated into various general operations of government. For example, the Local Hazard Mitigation Plan was recently adopted into the Safety Element of the General Plan and much of the information from the Hazard Mitigation Plan will be included in the Town of Apple Valley's Emergency Operations Plan (EOP). As any future Town plans are developed, the Hazard Mitigation Plan will be a great asset in any plan development efforts. As noted earlier, much of the information contained in this Hazard Mitigation Plan is from the Town's General Plan and is already part of the planning process.

7.3   Continued Public Involvement

A critical part of maintaining an effective and relevant Hazards Mitigation Plan is ongoing public review and comment. Consequently, the Town is dedicated to the direct involvement of its citizens in providing feedback and comments on the plan on a continued basis. The public will continue to be apprised of Local Hazard Mitigation Plan actions through the Town's website and through the local media.

The Town of Apple Valley will continue to promote and secure hazard mitigation, preparedness, response, and recovery actions via:

- Regular quarterly meetings of the Apple Valley Disaster Council
- Continued participation in the Emergency Resource Group
- Regular revision of the Emergency Operations Plan and the Hazard Mitigation Plan as outlined respectively
- Annual drills and training with Emergency Operations Center staff
- Support of the full-time Emergency Preparedness Program
- Promotion at community events whenever possible

All proposed changes to the plan will be subject to citizen review prior to Town Council action. The Town will follow its standard public input process, consistent with the process used in the initial plan development, which is described in Section 3 of this Plan.

Town of Apple Valley

Disaster Service Worker Program

ANNEX 1: ATTACHMENT #2

OF THE

TOWN OF APPLE VALLEY

EMERGENCY OPERATIONS PLAN

AUGUST 1, 2013

(REVISED)

1.0   DISASTER SERVICE WORKERS

The Town of Apple Valley, as does the State of California, recognizes the need for an organized and trained group of volunteers that can respond to a disaster or the imminent threat of a disaster in the community. Known as Disaster Service Workers, these volunteers are:

"… any natural person who is registered with an accredited disaster council or a state agency for the purpose of engaging in disaster service pursuant to the California Emergency Services Act without pay or other consideration …" *(California Labor Code Section 3211.92).*

Designated Disaster Service Worker (DSW) volunteers are persons who have chosen to volunteer their time to assist an emergency services agency in carrying out the responsibilities of that agency. Disaster Service Workers primarily aid in disaster events; this does not include day-to-day emergency response activities typically associated with the fire service, emergency medical service, or law enforcement.

2.0   PROGRAM MANAGEMENT

The Apple Valley DSW program is managed by the Town of Apple Valley Emergency Preparedness Program under the guidance of the State of California Disaster Service Worker Volunteer Program and California Disaster Corps.

3.0   REGISTRATION

3.1   <u>Background Check – See attachment</u>

All volunteers who wish to be Disaster Service Workers will be fingerprinted using LiveScan at the Apple Valley Police Department. A criminal background check will be done by the Department of Justice Bureau of Criminal Identification and Information. The Town of Apple Valley will pay for all costs associated with this procedure. Should the volunteer not pass the DOJ check he/she will be denied acceptance as a Disaster Service Worker.

3.2   <u>Oath</u>

The Governor's Office of Emergency Services requires that all Disaster Service Workers be registered with a certified local Disaster Council. The Town of Apple Valley Disaster Council was accredited by the California Emergency Council on January 28, 1992.

Prior to such designation as a Disaster Service Worker, volunteers must:

- Be officially registered with the Town of Apple Valley Disaster Council; and
- Not receive any pay, monetary or otherwise, for the service being provided.

The Town Clerk of the Town of Apple Valley, or the Fire Chief, may issue the oath and register volunteers as Disaster Service Workers using the appropriate registration form from the Governor's Office of Emergency Services. Registration remains in effect for the period the person remains a member with the Apple Valley DSW program.

3.3   Identification Cards

Volunteers registered as Apple Valley Disaster Service Workers will be issued a photo identification card indicating such designation, to include name, identification number, and classification.. DSW identification cards must be visible at all times during the implementation of duties as a Disaster Service Worker.

4.0   WORKERS' COMPENSATION

Disaster Service Workers provide valuable services during emergencies. State Workers' Compensation benefits are provided to registered volunteers who contribute their services to protect health and safety and preserve lives and property of the State of California. Currently, State law protects volunteers from financial loss resulting from injury, as well as providing them limited immunity from liability in the course of their disaster service duties.

Note that workers' compensation coverage is not provided for participating in parades, public exhibitions, physical fitness training, or other activities not related to disaster service. There are exceptions to this, however, for example emergency communications services (ECS) may schedule an authorized DSW volunteer training for crowd control communications and will use a public parade event as a tool for that specific type of training. In this example, crowd control communications is not the day-to-day activity

of the ECS volunteer and the parade acts as an exercise to develop volunteer skills that can be used in a disaster.

The Emergency Services Act (§8657) provides DSW volunteers with limited immunity from liability while providing disaster services as it is defined in §2570.2 and §2572.2 of the <u>Disaster Service Worker Volunteer Program Regulation</u> (Cal. Code of Reg., Title 19).

5.0   CONVERGENT VOLUNTEERS

Convergent volunteers are not pre-registered volunteers. They are volunteers who come forward spontaneously during the time of a disaster or emergency event (or post-disaster) to assist without pay or compensation. However, convergent volunteers can be registered as DSW volunteers for the duration of a single event only. (To be covered for workers' compensation benefits, these volunteers must meet all of the requirements of a registered DSW, including proper registration, appropriate training and working under official supervision).

6.0   DSW CLASSIFICATIONS

The California Emergency Council has approved the following DSW volunteer classifications:

Animal Rescue, Care & Shelter	Law Enforcement
Communications	Logistics
Community Emergency Response Team	Medical & Environmental Health
Finance & Administrative Staff	Safety Assessment Inspector
Human Services	Search & Rescue
Fire	Utilities
Laborer	

6.1   Town of Apple Valley Classifications: Currently the Town's Emergency Preparedness Program is working with three classifications:

6.1.1 **Friends of Animals During Disasters (FADD):** Registered under the "Animal Rescue, Care & Shelter" classification, FADD volunteers are responsible for assisting with animal evacuations and emergency shelter operations as outlined in the Town of Apple Valley Animal Evacuation Plan (Annex 1 of the Town of Apple Valley Emergency Operations Plan).

6.1.2 **Emergency Communications Services (ECS):** Registered under the "Communications" classification, ECS volunteers are responsible for providing emergency communications and operate under Standardized Operating Procedures of the Apple Valley Fire Protection District.

6.1.3 **Community Emergency Response Team (CERT):** Registered under the CERT classification, CERT volunteers are responsible for a variety of tasks during a disaster situation and operate using the guidelines outlined in this document, as well as instruction provided during CERT training.

7.0 TRAINING

While some classifications require very basic training, others require extensive and specialized training. The level of training will depend on the level of classification as established by Disaster Service Worker Coordinator (DSWC). At a minimum, registered Disaster Service Workers will be provided an orientation session, as well as basic safety instruction commensurate with the environment in which they may be providing services. Additional instruction includes:

- FADD: Must be CERT trained, , Orientation of the Animal Evacuation Plan, ICS 100 & 700
- ECS: ICS 100 & 700, CERT training is highly recommended.
- CERT: A 20 hour FEMA certified CERT course, ICS 100 & 700

Training shall be provided and supervised the Town of Apple Valley and/or Apple Valley Fire Protection District DSWC. . Each classification group shall be provided some level of training (lecture, skills, drills, and/or exercises) on at least an annual basis.

8.0 ACTIVATION

At no time is a volunteer obligated or required to activate, even at the request of the DSWC Not reporting to an assignment will not negatively affect the volunteer's status

as a Disaster Service Worker. It must be emphasized that the Disaster Service Worker's first obligation is to himself and his family.

Once a DSW is activated, he/she must carry the official DSW Identification Card issued by the Apple Valley Disaster Council. DSW's must also wear identification vests, if issued, as well as have safety tools and supplies to carefully achieve their jobs.

8.1 **Planned Activation:** A planned activation is a situation where the DSW is activated by the DSWC , his designee, or the Emergency Operations Center. This would be primarily during a disaster or threat of disaster that is not readily evident to the entire population of the community (for instance, localized flooding).

In this type situation, Disaster Service Workers will be called via the telephone or emailed and officially requested to activate. In this manner, official activation ensures the DSW volunteer of the benefits and protection of the California Disaster Service Worker Volunteer Program. The following information shall be provided:

- Date and time of assignment
- Estimated length of assignment
- Location of assignment
- Name of whom to report (and reminder to sign-in)
- General description of responsibilities
- Special supplies, equipment, or tools required for the assignment

The DSW then informs the caller or representative sending the email, if he can and will report to the assignment. If the DSW believes that he is more apt for a different assignment and/or a different time frame, then this information must be relayed to the caller for reconsideration.

8.2 **Activation Due to a Major Earthquake:** Earthquakes pose the biggest risk to the Town of Apple Valley. A major earthquake could destroy the local communications system and make it unusable. Therefore, once a major earthquake is evident, DSW's may automatically activate and report to a pre-assigned designation:

- FADD: Volunteer Staging Area or the Emergency Operations Center

- ECS: Emergency Operations Center or Incident Command Post
- CERT: Closest Fire station to the DSW's residence or the CERT command post (if one has been pre-designated)

Emergency Operations Center (EOC)

Apple Valley Unified School District Administrative Office

12555 Navajo Road

Apple Valley.

Alternate EOC

Apple Valley Fire Protection District Station #336

19235 Yucca Loma Road

Apple Valley.

Volunteer Staging Area

A location will be established as soon as possible depending on the size and scope of the incident. Volunteers should listen to the local radio stations for the location.

8.2.1   Community Emergency Response Teams (CERT)

CERT is designed to operate independently for a given period of time when normal emergency response services are overwhelmed. CERT members should be prepared to respond within their own neighborhood for any time period from two hours to several days.

Once a CERT member self-activates in response to a major earthquake, he is required to respond in accordance to the CERT training provided by the Apple Valley Fire Protection District. First and foremost, CERT members are required to immediately contact the Emergency Operations Center to advise of the self-activation, as well as:

- Location and boundaries of their neighborhood
- Status of the neighborhood (damage, injuries, etc.)
- Return contact means and number (telephone, ham radio, etc.)
- Immediate needs of the area
- Plan of operation
- Number of non-DSW volunteers

If notification cannot be made via the telephone, a runner shall be sent to the EOC if it is safe to do so. CERT members are required to update the EOC of their operations once every hour. At that time, the EOC will decide if they should continue operations, cease operations, or report elsewhere. If CERT is to continue operations, the EOC will make an attempt to assign RCS (ham radio operators), fire and/or law enforcement crew, or additional CERT teams and resources.

Reminder: CERT members shall use appropriate forms for documentation.

9.0   Deactivation

The EOC or the DSWC may issue the order to deactivate or demobilize operations. At such time, DSW's are required to complete any paperwork and submit to their official supervisor or the EOC, if an official supervisor was not assigned. All equipment and supplies used during the operation shall be returned to its original location.

10.0   After the Disaster

Soon after the disaster, the EOC is responsible for scheduling a critical stress debriefing session, if warranted.

Town of Apple Valley

Animal Emergency Evacuation & Shelter Plan

Revised: July 2014

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I.   INTRODUCTION

The Town of Apple Valley Animal Emergency Evacuation & Shelter Plan establishes a coordinated and effective response to the needs of animals impacted by an emergency or disaster in the Town of Apple Valley and surrounding areas within the Apple Valley Fire Protection District's response area. This plan was developed in recognition that the Town is a rural area with between 15 and 20-percent of its population owners of livestock-type animals and almost
15,000 licensed dogs.

A.   Purpose

The purpose of this Plan is to provide animals with a means of safe evacuation and temporary care and housing at such time that their normal location is a hazard or is in threat of a hazard. The procedures outlined in this plan will reunite animals with their rightful owners after conditions are deemed safe to do so.

B.   Relationship to the Emergency Operations Plan

This Plan is Attachment #1 of Annex #1 of the Town of Apple Valley Emergency Operations Plan, dated 10/1/08.   The Emergency Operations Plan outlines the procedures and guidelines pertaining to the Standardized Emergency Management System, Emergency Operations Center, Direction and Control operations, and other emergency management issues. As a component of the Emergency Operations Plan, the Animal Emergency Evacuation & Shelter Plan obligates and supports the same planning and procedural directives.

II.   ADMINISTRATIVE RESPONSIBILITIES

A.   Activation/Demobilization of the plan

1.   With EOC Activation

This Plan may be activated upon the request of the Emergency Operations Center (EOC) either because of a local hazard or to support another jurisdiction. At such time, the Animal Services Manager will be advised and requested to respond to the EOC as the Animal Operations Coordinator (*see Section 2, Positions*). The EOC shall provide the Animal Operations Coordinator with the following information:

- Type of incident and current/potential conditions
- Location of incident
- Level of operation needed depending on the size and scope of the incident, i.e., evacuations only, shelter operations only, or both evacuation and shelter operations

- Expected duration of incident
- Likelihood for reimbursement of costs (based on the size and scope of the incident)

Once a decision is made by the EOC to activate this Plan, all animal operations will be coordinated by the Animal Operations Coordinator who reports directly to the Operations Section Chief or the Health & Welfare Branch Coordinator, if filled.

2. Without EOC Activation

There are two situations whereupon the Town of Apple Valley Animal Control Manager may self-activate this plan.

- A minor incident occurs within the Town that does not require activation of the local EOC but still necessitates animal operations, such as a single incident fire. In this situation, the request for assistance will be made by either the Apple Valley Police Department or Apple Valley Fire Protection District. If needed, the Animal Services Manager may activate Apple Valley Animal Services Volunteers with FADD certification to support operations (*see Section 2, Volunteers).*

- A neighboring jurisdiction may also request assistance for an incident within their jurisdiction. The request shall be made by the Fire Chief, Police Chief, or Animal Services Manager of the requesting jurisdiction. (NOTE: Prior to activating Apple Valley-assigned volunteers to another jurisdiction, the Animal Services Manager shall obtain direct permission from the Disaster Service Worker Coordinator, Assistant Town Manager of Finance and Administration, or Risk Manager).

In either situation, the Animal Services Manager shall advise the Disaster Service Worker Coordinator that the Plan was activated and the use of local volunteers, if any.

3. Demobilization of the Plan

Demobilization of the Plan will occur upon order of the EOC Director (during activation of the EOC) or the Animal Services Manager (during non-activation of the EOC). Demobilization procedures are outlined in the Emergency Operations Plan and apply regardless of EOC activation (*see EOP, page II-10, " Generic Responsi bil it ies").*

B.   Financial Responsibilities

1.   Fees for Service

At no time will this plan recommend or endorse fees for service. As a component of the Town of Apple Valley Emergency Operations Plan, this Plan addresses the Town's responsibility to its residents, businesses, and visitors during a disaster or threat of disaster.

2.   Donations

During any emergency, in-kind contributions or cash donations will be offered by well-meaning citizens either to support response efforts or for the victims that suffered a direct impact from the disaster. If necessary, the EOC will assign a Donations Coordinator to be responsible for the collection, management, and disbursement of such donations. At no time will anyone (staff and/or volunteers) affiliated with the activation of this Plan request or seek donations on behalf of the Town of Apple Valley.

C.   Coordination of Media & Public Information

1.   Media Contacts

Media contacts and public information is managed and operated by the Public Information Officer (PIO) Team. Any media arriving at a staging location or shelter site shall be escorted by a member of the PIO Team. If not, then the PIO Team shall be contacted by the site manager to report and meet with the media regardless of whether it means the media may have to wait for arrival of the PIO. At no time should supervisory or non-supervisory positions request or seek media attention on behalf of the Town of Apple Valley.

2.   Public Information

One of the primary functions of the EOC is to provide accurate and timely information to the public about the status of the incident and the activities provided in support of the incident. The EOC PIO Team is responsible for notifying the general public what needs to be done with their animals and the services that are being provided through this Plan, i.e., locations, accessibility, assistance, etc.   Therefore, it is imperative that the PIO Team be made aware of the decisions and activities in response to this Plan immediately. This is done via communication with the Operations Section Chief, Health & Safety Branch Coordinator, if filled, and/or directly from the Animal Operations Coordinator.

Because it is recognized that staff and volunteers must be continually updated throughout the course of the incident, the PIO Team shall post copies of all press

releases on message boards at the shelter site and staging locations. These postings will be in a place accessible to workers and the general public. Only information posted by the Town of Apple Valley and/or affected public agencies shall be deemed credible and accurate.

D.   Staffing Requirements

In general, the organizational chart for activation of this Plan is as follows:

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                    │     ANIMAL      │
                    │   OPERATIONS    │
                    │   COORDINATOR   │
                    └─────────────────┘
                            │
          ┌─────────────────┴─────────────────┐
┌──────────────────┐              ┌──────────────────┐
│    EVACUATION    │              │     SHELTER      │
│     MANAGER      │              │     MANAGER      │
└──────────────────┘              └──────────────────┘
          │                                 │
┌──────────────────┐              ┌──────────────────┐
│   SUPERVISORY    │              │   SUPERVISORY    │
│    POSITIONS     │              │    POSITIONS     │
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│      NON-        │              │      NON-        │
│   SUPERVISORY    │              │   SUPERVISORY    │
│    POSITIONS     │              │    POSITIONS     │
└──────────────────┘              └──────────────────┘
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1.   Town of Apple Valley Animal Services Staff

Town of Apple Valley Animal Services staff will be responsible for filling the three management positions, if needed (*see Section 2, Positions*):

- Animal Operations Coordinator
- Evacuation Manager
- Shelter Manager

Town staff will take into consideration staffing needs throughout the course of the incident, as well as fulfilling the staffing needs for normal day-to-day animal control and shelter operations. Additional staffing may be obtained through the use of AVAS Volunteers, which includes FADD certified- CERT members, convergent volunteers, or personnel from other jurisdictions.

2.   Volunteers

Town staff will provide for the recruitment and training of an adequate network of animal care volunteers who can be called into immediate action in the event of an incident requiring animal evacuation and sheltering. Volunteers working directly with evacuated or sheltered animals must be trained in maintenance and care of on-site and off-site sheltering premises and animals. Training will provide qualified volunteers to ensure that evacuated animals are kept in sanitary sheltering conditions, provided adequate nutrition, humane care and any needed medical treatment. Adequate training helps minimize the spread of contagious, infectious, or communicable diseases among sheltered animals.

a.   Apple Valley Animal Services Volunteers (AVAS Volunteers)

AVAS Volunteers are individuals 18 years of age and older that are specifically trained by the Town of Apple Valley Animal Services Department to work with sheltered animals and in the Town's Municipal Animal Shelter. Volunteers must register with the Town of Apple Valley and submit to a LiveScan fingerprinting process through the Apple Valley Police Department for the purpose of a criminal background check.   Once the participant has cleared the background check, he/she may participate in the AVAS Volunteer Orientation and Training Program. After completing the AVAS orientation and training, volunteers proceed to the next two training levels to become registered Disaster Service Workers and Community Emergency Response Team (CERT) Members. This training is required to receive a "Friends of Animals During Disasters" (FADD) Certification.

b.   Registered Disaster Service Worker

AVAS Volunteers wanting to assist during a disaster must complete ICS 100 & 700 training to become registered as a Disaster Service Worker.

c.   Community Emergency Response Team (CERT) Member

AVAS Volunteers wanting to assist during a disaster must attend a 20-hour Community Emergency Response Teams (CERT). CERT training educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Using the training learned in the classroom and during exercises, CERT members can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help. CERT members also are encouraged to support emergency response agencies by taking a more active role in emergency preparedness projects in their community. *[Source FEMA]*

d.   Friends of Animals During Disasters (FADD) Certification

FADD is a certification specific to the Town of Apple Valley under the AVAS Volunteer program.   Registered under the "Animal Rescue, Care & Shelter" classification of the State of California Disaster Service Worker Program, FADD certified volunteers are responsible for assisting with animal evacuations and emergency shelter operations when activated.   FADD certification requires an individual to be an AVAS Volunteer, successful completion of the Registered Disaster Service Worker and Community Emergency Response Team Member training, and attendance at mandatory safety training provided by the Apple Valley Animal Services Department on a quarterly basis.

e. Convergent Volunteers

Convergent volunteers are well-meaning residents who step forward to volunteer assistance during a disaster. These volunteers have not had any formal training and are not part of the organized disaster volunteer program with the Town of Apple Valley. Therefore, it is required that prior to helping in any capacity, they must first be registered as a temporary convergent volunteer under the Disaster Service Worker program for that incident only. Registration shall be coordinated with the EOC prior to allowing them to work on site.

f. Activation

Activation for volunteers is per the Town of Apple Valley Disaster Service Worker Program procedures, dated July 1, 2009. (*Attachment 2 of Annex 1 of the* <u>*Town*</u> *of Apple Valley* <u>*Emergency Operations Plan*</u>).

g. Photo Identification Card

Once an AVAS Volunteer completes the mandatory training and certification requirements, he or she will be issued a photo identification card. The photo identification card must be displayed on their person at all times while working as a volunteer for the Town of Apple Valley.

3. Job Descriptions

The following positions may be required depending on the level of operations activated during the emergency:

a. Animal Operations Coordinator

This position shall be filled by the Town of Apple Valley Animal Services Manager or his/her designee. It is imperative that this position be filled by a Town employee who has had NIMS training. Responsibilities include, but are not limited to:

Adhere to the responsibility checklist for the Animal Care & Welfare Unit as outlined in the Town of Apple Valley Emergency Operations Plan (*Unit II, Section 3)*;

Ensure the procedures outlined in this document are in effect and maintained;

Establish continuous communication with the EOC (primarily the Operations Section Chief or the Health & Welfare Branch Coordinator, if filled), Evacuations Manager, and Shelter Manager;

Ensure that public information is accurate and timely by constant communication with the EOC PIO Team;

Establish a staging area and evacuation procedures, if needed;

Establish field animal shelters, if needed;

Respond to requests from the EOC and field units;

Determine staffing needs and activate volunteers or request assistance from other jurisdictions, if needed;

Approve purchases for supplies/equipment in coordination with the EOC Finance/Administration Section, if activated;

Coordinate the call for donations with the EOC, if needed;

Attend EOC briefings during each operational period (every 12 hours);

Routinely schedule and coordinate briefings with the Evacuation Manager and Shelter Manager, at least once each operational period (every 12 hours); and

Act as the single point of contact for management decisions relating to the needs of animals during a disaster.

b. Animal Evacuation Manager

This position shall be filled by a staff member of the Town of Apple Valley Animal Care & Control Division or a registered AVAS Volunteer with FADD certification. Appointment will be made by the Animal Operations Coordinator. Responsibilities include, but are not limited to:

Ensure the evacuation, staging, and routing procedures outlined in this document are in effect and maintained;

Ensure that the staging area remains safe and risk-free;

Determine staffing needs and request the Animal Operations Coordinator to activate
volunteers or request assistance from other jurisdictions, if needed;

Ensure that all workers (staff and volunteers) have checked-in at the beginning of each shift and have checked-out at the end of their shift;

Ensure that all volunteers are registered Disaster Service Workers and display their photo identification card;

Ensure that all convergent volunteers have been registered as such by the EOC;

Conduct periodic briefings with staff/volunteers;

Ensure that public information (press releases, bulletins, etc.) are posted in a manner accessible to all workers and the public;

Ensure that all workers have the proper forms, maps, routes, etc., of the evacuation area;

Provide periodic status reports and requests for supplies/equipment and staffing to the Animal Operations Coordinator; and

Maintain continuous communication with the Animal Operations Coordinator and the Shelter Manager.

Ensure that direct communication between the Staging Area and the EOC is maintained (request an E.C.S. volunteer via the EOC); and

Ensure that the Staging Area is clean of any trash and debris upon demobilization.

c. <u>Animal Shelter Manager</u>

This position shall be filled by a staff member of the Town of Apple Valley Animal Services Department or a registered AVAS Volunteer with FADD certification. Appointment will be made by the Animal Operations Coordinator. Responsibilities include, but are not limited to:

Ensure the shelter operation procedures outlined in this document are in effect and maintained;

Determine staffing needs and request the Animal Operations Coordinator to activate volunteers or request assistance from other jurisdictions, if needed;

Ensure that a registration system is in place and that each animal is identified upon arrival to the shelter using the proper forms;

Ensure that proper forms are being used and completed appropriately;

Ensure that an evaluation of each animal's immediate needs is completed upon check-in,
i.e., medical attention, muzzle, food, water, etc.;

Track and determine proper coordination of animal placement and movement;

Ensure the shelter is secured on a 24-hour basis;

Ensure that the shelter is clean and orderly;

Ensure that all workers (staff and volunteers) have checked-in at the beginning of each shift and have checked-out at the end of their shift;

Ensure that all volunteers are registered Disaster Service Workers and display their photo identification card;

Ensure that all convergent volunteers have been registered as such by the EOC

Conduct periodic briefings with staff/volunteers;

Ensure that no animal is euthanized without permission from a licensed

veterinarian, the Animal Operations Coordinator, and the animal's owner, if possible;

Provide status reports and requests for supplies/equipment and staffing to the

Animal Operations Coordinator; and

Maintain continuous communication with the Animal Operations Coordinator and

the Evacuation Manager;

Ensure that direct communication between the Shelter site and the EOC is

Maintained (request an E.C.S. volunteer via the EOC); and

Ensure that the entire Shelter area is clean of any trash and debris upon demobilization.

d.   <u>Supervisory Positions</u>

The number and type of supervisory positions needed would be determined by the size and scope of the disaster. Depending on the size and scope of the incident and/or the number of staff and volunteers, one person may be responsible for more than one position.   In each case, supervisors need to consider additional staffing needs throughout the duration of the activation. Upon arrival to the site, each volunteer/staff person shall receive a
briefing of instructions, procedures, and reporting structure. The following supervisory positions support and report to either the Evacuation Manager or the Shelter Manager depending upon
their site location:

Dispatch Supervisor: Using maps and intelligence information from the EOC and/or Incident Command Post, conduct dispatch tasks at the evacuation staging location, using cell phones, walkie-talkies, or face-to-face.

Facilities Supervisor: Especially of use when more than one shelter site is

operational. This position ensures the coordination among shelter sites, i.e., animal

identification, supplies, feed, equipment/tools, staffing, etc.

Foster Care Supervisor: Especially of use when long-term care will be necessary for animals after the shelter is demobilized. This position is responsible for coordinating with the animal owner to locate long-term care for animals, if necessary, using the list of resources included in this document.

Intake Supervisor: Ensures that animal registration at the shelter site is properly handled with sufficient staffing and use and completion of proper forms. Maintains these
records in an organized manner throughout the duration of the disaster.

Kennel/Livestock Supervisor: Ensure that the kennel/livestock area at the shelter is clean and sanitized. Ensure that staffing is sufficient to provide for feeding, cleaning, and exercise of animals in the kennel/livestock area. Maintain records for the time of each animal's feeding and exercise.

Office Supervisor: Ensure that coordination is in place with the office at Town Hall who will be receiving animal inquiries. May also be stationed at Town Hall or the Town of Apple Valley Animal Shelter to help answer phones, organize paperwork, copy forms, etc.

Supply Supervisor: Ensure that supplies required to operate a staging area and/or shelter is available. This may necessitate the need to pick up and deliver supplies upon request (or this can be tasked to a non-supervisory role). This position does not have the responsibility to make purchases or seek donations.

Volunteer Supervisor: Coordinates volunteers to ensure that positions are filled timely and appropriately at either the staging area or shelter. This position will be responsible for maintaining a volunteer schedule and contact information (AVAS Volunteers, including level of training, i.e., Disaster Service Worker, CERT Member, FADD Certification.) Updated contact information should be provided and available at the
EOC.

e. <u>Non-Supervisory Positions</u>

Many of the non-supervisory positions require multiple people to fill them, such as Kennel Attendant. Upon arrival to the site, each shall receive a briefing of instructions, procedures, and reporting structure. The following non-supervisory positions support and report to a Supervisor, or either the Evacuation Manager or the Shelter Manager depending upon their site location:

Animal Attendant

Animal Food Attendant

Animal Intake Registrant

Animal Search Attendant (to locate animals who escape from the shelter)

Animal Supply Attendant

Animal Transporter (from one area of the shelter to another)

Communications Volunteer E.C.S. (Emergency Communications Services)

Dog Walker

Errand Runner

Handy Person (electrician, carpenter, plumber, etc.)

Information Table Attendants

Kennel/Livestock Cleaner

Lost & Found Information Recorder

Office/File Clerk

Security Personnel

III.   EVACUATIONS

During emergency operations, one of the priorities will be to evacuate animals from the danger zone to a safe zone. To do this efficiently, an orderly, organized system must be in place. The Evacuation Manager will be responsible to activate the following procedures.

A.   <u>Staging Locations</u>

For large scale evacuations, a Staging Location shall be established whereby staff and volunteers capable of evacuating animals will meet and be dispatched. The Animal

Operations Coordinator and/or the Evacuations Manager shall determine the staging location with the following considerations:

The location should be established as quickly as possible to initiate evacuation procedures – the first step of emergency animal operations;

The location can either be a large vacant lot or paved parking area large enough to accommodate a variety of trucks/trailers, and free of hazards to these vehicles;

The staging location shall be within general proximity to the hazard or disaster, but yet safe from its affects (if appropriate, uphill and upwind);

If known, the property owner of the site shall be contacted for approval to use the property; and

Suggested sites include:

- **Apple Valley Municipal Animal Shelter** (Primary Location unless in danger zone)
- **Horseman's Center** (Town owned property has running Water, Restrooms, Corrals and Perimeter Fencing; No indoor sheltering)
- **Virginia Park on Central Road** (Town owned property has running Water, Port-a- Potties and Perimeter Fencing; No indoor sheltering)
- **Lions Park on Outer Highway 18** (Town controlled property has running Water/Grass & Dirt Lot; No Restrooms/Perimeter Fencing/Indoor Sheltering)
- **20159 Wisconsin Street, Apple Valley** (Privately Owned Mixed Use Zoned Property with a Residence; Has access to Running Water/Perimeter Fencing; No Indoor Sheltering) *Property Owner Provided Verbal Approval 7/7/2014. Would Need to get an MOU*
- **19773 Bear Valley Road, Apple Valley** (Privately Owned Commercial/Mixed Use Zoned Property; Has access to Running Water/Perimeter Fencing; No Indoor Sheltering) *Would Need to get an MOU*

Secondary Locations (If none of the above options are available)

- **Corwin Road and Dale Evans Parkway** (Privately Owned Vacant Lot; No Running Water/Structures/Perimeter Fencing) *Would Need to get an MOU*
- **Central Road and Highway 18** (Privately Owned Vacant Lot; No Running Water/Structures/Perimeter Fencing) *Would Need to get an MOU*
- **Quinnault Road & Ottawa** (Privately Owned Triple J Ranch near existing Municipal Shelter) *Property Owner Provided Verbal Approval 9/11/04. Would Need to get an MOU*
- **Bear Valley Road and Central Road** (Privately Owned Vacant Lot; No Running Water/Structures/Fencing) *Would Need to get an MOU*

- Unpaved accessory lots with access to running water, indoor structures for small animals, and perimeter fencing to offer containment of animals that may get out of temporary kennels.

B.   Routing

The EOC will determine the evacuation routes as well as prioritize evacuation areas based on the location, size, and scope of the incident.   This information will be communicated to the Evacuation Manager as soon as it is determined.

Evacuation areas will be prioritized to provide for the evacuation of animals in such a manner that the most threatened area will be evacuated first;

Routing will be based on the safest course available for the Rescue Teams;

Routing will also be based on the course that provides the best route of travel so as not to impede emergency operations of fire and/or law enforcement; and

Routes shall be mapped out on a large map and posted at the staging location (each driver shall also be given a map if available).

C.   <u>Dispatching Rescue Teams</u>

The Evacuations Manager may assign a Dispatch Supervisor if necessary, to coordinate the following activities.

Using the check-in form, assign Evacuation Rescue Teams of four (1 driver, 2 rescuers, and 1 recorder), and assign each team a number;

Rescue Teams must be made aware of their responsibility upon dispatch – using the recommended route, report to the dispatched area, complete paperwork for each rescued animal, take animals to the shelter site, and return to the staging location to be dispatched again;

Using Impound Cards, the Rescue Teams will record as much information as possible of the location from where the animal(s) is taken, i.e., street address, identifying marks of the animal, etc. If the animal owner is still on the property while evacuation is occurring, the animal owner will be asked to complete the paperwork.

Owners who can transport their own animals are encouraged to do so in an attempt to free up the Rescue Teams for those who cannot self-transport.

Animals that are difficult to manage or require technical rescue operations will be reported to the Evacuation Manager who will make a determination on a case-by-case basis of how best to evacuate these type animals.

D.   Supplies and Equipment Required

Some of the supplies and equipment will be provided by the Town of Apple Valley Animal Services Department. Any other supplies should be requested through the EOC. Equipment and supplies needed may include:

FORMS: Worker Sign-in forms, Animal Impound Cards

Pens/pencils, tape, stapler, paperclips, message pads, paper tablets

Tables, chairs, shading, lighting

Maps, easels

Bullhorn

Portable restrooms

Food/water troughs

2-way radios

Water, food, etc.

Temporary fencing, if needed

First aid kit

Animal leashes

Lead ropes/ halters for horses

Camera

Fire extinguisher / shovel

Directional signs

Public information "board"

IV.   SHELTER OPERATIONS

A.   Establishing an Animal Shelter

Once the need is determined for an animal shelter, the first order of business will be to determine the location based on the type of animals the shelter will be accepting:

- Small animals – dogs, cats, birds, etc.
- Livestock-type animals – horses, cattle, llamas, ostriches, etc.
- All animals

Possible locations can be found on the list of resources (*Section V of this Plan*). The primary location and first choice for all animal evacuations will be the Apple Valley Municipal Animal Shelter. This location will be used unless it is in the danger zone and until it has reached capacity. If this site or an alternative location within Apple Valley is selected, the Town of Apple Valley Animal Services Manager and/or the Animal Operations Coordinator will be in charge of all operations. If the evacuation site is outside of the Town of Apple Valley jurisdiction, coordination of activities and responsibilities must be addressed with that jurisdiction's Animal Services staff. If the evacuation site is on private property, written permission must be obtained from the property owner.

Once this decision is made, the Animal Operations Coordinator shall advise the EOC PIO Team so that the public can be updated with animal evacuation information.

1.   American Red Cross Policy

As a means of clarification, the TOAV EOP establishes that human shelters be managed and operated by the American Red Cross. The Red Cross national guidelines prohibit evacuees from bringing pets or animals into shelters (except service dogs). However, under certain circumstances, small animals may be allowed to stay if the owner has a

kennel or muzzle. Therefore, during a period of evacuation, it is necessary to establish animal shelters for the safety of animals – large and small.

B.   Arrangement of an Animal Shelter

The following is a list of "areas" that when created, develops into an efficient, organized animal shelter for emergency purposes. While not all of the areas may be needed for every activation, the Shelter Manager should consider preparing for each as the incident progresses. Areas which may be utilized include:

Animal Intake Area: Location for registering animals arriving to the shelter regardless if they arrive with the animal owner or the Evacuation Rescue Teams. (*See "Animal Intake Process" below*).

Communications Area: The communications area is the location where all incoming and outgoing business calls take place. With some disasters or at some shelter locations, phone service may not be operating or accessible. Cellular phones may work, but the cellular system can be extremely busy during a disaster. Texting may be a viable option. In such cases, a volunteer ham radio operator (E.C.S.) will be assigned to maintain communication with the EOC and other shelter/staging sites. The communications area should be at the Animal Operations Coordinator's work site

Dead Animal Disposal: There must be an area designated for dead animals until the animal disposal service arrives. The ideal use will be in a freezer or refrigeration. If these types of resources are not available, the animals must be securely tied in several thicknesses of plastic bags and kept at a distance to not pose a health risk or odor problem. The bags should be labeled with the owner's information, if known. Fly spray should be sprayed in this area. The area should not be in public view.

Food Storage & Distribution: Location where feed is stored and distributed at feeding time. Again, should be an area easily accessible for delivery trucks as well as an area large enough to separate the types of feed.

Information Table: First stopping point for anyone entering the Shelter. From here citizens will be directed to either the Animal Intake Area or to the Volunteer Check-In Area. This is the location where the Public Information Board will be displayed as citizens may also have questions regarding additional services, i.e., human shelters, incident status, etc.

Kennels: Location where all animals are housed until they are reclaimed, placed in foster homes, or adopted. A number of different kennel areas may be established depending on the types of animals sheltered, i.e., dogs, cats, horses, pigs, etc. Kennels should be numbered with signage to avoid confusion.

Medical Clinic: Location where animals are treated for minor injuries or given vaccinations by volunteer veterinarians. Seriously injured animals may be treated elsewhere depending on available resources. The Animal Operations Coordinator shall be immediately notified of an animal with serious injuries occurring on site or brought to the shelter. Any animal suspected of having contagious diseases shall be kept in a separate area from the rest of the animal population.

Supply/Equipment Storage & Distribution: Location where animal supplies are stored and distributed. Should be an area easily accessible for delivery trucks.

Volunteer/Staff Rest Area: Because some workers will stay for a 12-hour period, it is necessary to provide them a break area for rest and meals. This is also the area where portable restroom facilities can be set-up.

Volunteer/Staff Sign-In Area: Location where all staff and volunteers report to when they arrive for their shift. After sign in, they read that day's information board and briefing material. The board will provide them with updated information, any procedural changes, and other announcements. Staff and volunteers sign out in this same area when they complete a shift.

Water Storage: Location where water is stored for the animals; should be out of the direct sunlight.

1. Animal Intake Process

Animals will arrive either with its owner or an Evacuation Rescue Team (or neighbor, friend, etc.). In either case, it is important to adhere to the following procedures in order to reunite the animal with its rightful owner upon completion of the incident:

Complete animal impound card
- Animal Intake Registrants shall complete the impound card for residents.
- If the animal is brought in by an Evacuation Rescue Team, the card should have already been completed by the recorder.
- If the animal is brought by anyone else, obtain as much information as possible, i.e., where the animal was found, identifying marks, gender, etc., as well as contact information for the person bringing the animal.

Write intake number on the ID Band (collar tag).

Put the ID Band (collar tag) on the animal.

Place the animal in a temporary holding kennel and attach the Kennel Card OR place the animal in an appropriately sized airline carrier and attach the Kennel Card to the carrier.

Call an Animal Attendant to retrieve the animal if the animal was placed in a temporary holding kennel or carrier.

If the animal owner is present, give the owner a copy of the Kennel Card (Impound Card).

Keep a copy of the Kennel Card (Impound Card) and file accordingly. If impound information is being stored in a computer database, only two copies need to be made. One for the owner and one that stays with the animal.

C.   Supplies and Equipment Required

Some of the supplies and equipment will be provided by the Town of Apple Valley Animal Services Department. Any other supplies should be requested through the EOC. Supplies required may include:

FORMS: Worker Sign-in forms, Animal Kennel Cards (Impound Cards)

Pens/pencils, tape, stapler, paperclips, paper tablets, message pads

File folders and file boxes

Tables, chairs, shading,

Lighting, flashlights with
batteries, lanterns

Maps, easels

Bullhorn

Portable restrooms

Water, food, etc.

Temporary fencing, if needed

First aid kit

Directional signs

Public information "board"

Volunteer information "board"

5-gallon water buckets

Water and food troughs

Garbage cans and garbage bags

2-way radios, bull horn

Feed, shovels, gloves, antibacterial wipes hand sanitizers

Knock-down dog cages, other cages/pens

White duct tape, cage tags, collar tags, animal harnesses, leashes

Water bowls, pooper-scooper

Disinfectant, paper towels, newspaper (for lining cages)

D. Reuniting Animals with Owners

When owners arrive to reunite with their animals, they must have identification showing that they own the animal – kennel card (impound card), driver's license or other picture identification showing the same address as listed on the impound card. Animals which were found running loose or residents without identification must see the Animal Shelter Manager or designated staff prior to the release of the animal. Owner information (driver's license number, address) if known, shall be written on the kennel card (impound card) of those animals which were brought in by someone other than the owner.

For unclaimed animals with unknown owners, all attempts shall be made to determine where the animal came from to return the pet home. The Animal Operations Coordinator and the Shelter Manager shall make a determination of how best to locate the rightful owners, i.e., public service announcements in coordination with the PIO Team, posters, etc.

E. Locating Long-Term Sheltering Needs

Long-term shelter care may be needed for animals whose owners cannot be identified and/or located after demobilization of the temporary animal shelter. In this instance, the Animal Operations Coordinator will attempt to locate long-term care facilities. However, the Town is not responsible for supporting the animal and its care after demobilization of the temporary animal shelter. Animals abandoned at the evacuation site should be held in accordance with stray animal laws before placed up for adoption.

Long-term shelter care may also be needed for animals who cannot return home immediately after the incident due to property damage. In this instance it is up to the animal owner to locate and finance long-term sheltering needs.

V. RESCUE OPERATIONS

Technical rescue operations for animals trapped, unable to move, or in a hazardous position will be considered on a case-by-case basis depending on the resources available and the size and scope of the rescue operation. This will be determined by the Animal Operations Coordinator.

VI. RESOURCES

The following pages contain contact information for local:

- Animal Services Agencies
- Feed, Supplies & Equipment
- Holding Facilities, Temporary

- Medical Care/Veterinarians
- Rescue Operations, Emergency
- Shelters, Kennels, and Boarding & Holding Facilities
- Transportation Services

ANIMAL CONTROL AGENCIES

City of Adelanto
Adelanto Police Dept.
11613 Bartlett Avenue
Adelanto
(760) 246-1050

Town of Apple Valley
Animal Care & Control
22131 Powhatan Road
14955 Dale Evans Pkwy
Apple Valley
(760) 240-7000 Ext. 7555

City of Barstow
United Humane Society
31339 E. Main Street
Barstow
(760) 252-4800

California Veterinary Medical Assn (CVMA) Command Center
(800) 655-2862
Area Coordinator:
Linda Khachatoorian, RVT (714) 963-0909

City of Hesperia
Hesperia Animal Control
11011 Santa Fe Avenue
Hesperia
(760) 947-1700

San Bernardino County Animal Control Services (800) 472-5609

City of Victorville
Victorville Animal Control
14343 Civic Drive
Victorville
(760) 955-5089

FEED, SUPPLIES, & EQUIPMENT

All American Fence
Erectors
Hesperia
(760) 948-2428
Corral Builders

Apple Valley Feed Bin
21942 Bear Valley Road
Apple Valley
(760) 247-9595
Feed/Supplies

Desert Feed Store
22166 Highway 18
Apple Valley
(760) 247-4591
Feed/Supplies

Feed Barn, The
Phelan
(760) 868-4840
Feed/Supplies

General Feed Store
Lucerne Valley
(760) 248-2455
Feed/Supplies

Hesperia Feed Bin
Hesperia
(760) 948-2598
Feed/Supplies

Hesperia Veterinary Supply
11960 Hesperia Road
Hesperia
(760) 244-4818

Hooves & Paws
22749 Highway 18
Apple Valley
(760) 247-5523
Feed/Supplies

Horseshoe Corral Co.
Lucerne Valley
(760) 248-6975
Corral Builders

Hydrokist Feed Bin
Hesperia
(760) 948-2598
Feed/Supplies

McCoy's
Barstow
(760) 253-7323
Feed/Supplies

Petsmart Apple Valley (760) 240-8119

Petsmart
Victorville
(760) 955-1030

J & K Feed & Vet Supplies
Hesperia
(760) 244-6312
Feed/Supplies

RESCUE OPERATIONS, EMERGENCY

Mojave Desert Animal
Rescue Apple Valley (760) 247-0786

SHELTERS, KENNELS, BOARDING & HOLDING FACILITIES

Apple Valley High School
11837 Navajo Road
Apple Valley
(760) 247-7206
Holding Facility

Barstow Animal Shelter
(Humane Society)
31339 E. Main Street
Barstow
(760) 252-4800
Animal Shelter

Big Bear Animal Shelter Northshore Rd/Stanfield Cutoff
Big Bear City
(909) 866-4943
Animal Shelter

Dog's Day Inn
19575 Bear Valley Road
Apple Valley
(760) 247-2363
Kennel

Graham, Earl
9233 Deep Creek Road
Apple Valley
(760) 245-7695

Hesperia Animal Hospital
9540 "I" Avenue
Hesperia
(760) 948-1553
Kennel

Hesperia Animal Shelter
11011 Santa Fe Avenue
Hesperia

(760) 947-1700
Animal Shelter

Hi-Desert Pet Motel
Barstow
(760) 252-8200
Boarding

Horseman's Center

24320 Highway 18
Apple Valley
Holding Facility/Livestock

Jadestone Boarding
Kennels
Wrightwood (760)
249-9030
Boarding

Lime Street Park
16292 Lime Street
Hesperia
(760) 244-5488
Holding Facility/Livestock

Love'm Kennels
14139 Lynn Road
Apple Valley
(760) 240-4321
Kennels/Boarding

Mojave Narrows Regional Park
18000 Yates Road
Victorville
(760) 245-2226
Holding Facility

Oak Springs Ranch Riding Stables
182 Fawnskin Road
Apple Valley
(760) 953-9299
Boarding

Pollard's Motel for Dogs & Cats
23430 Highway 18
Apple Valley
(760) 247-7916
Boarding

San Bernardino County Fairgrounds
14800 Seventh Street
Victorville
(760) 951-2200
Holding Facility

Victor Valley Animal Protective League
21770 Zuni Road
Apple   Valley
(760) 247-2102
Animal Shelter

Windhaven Kennels
19150 Willow Avenue
Hesperia
(760) 244-3317
Kennel

**TRANSPORTATION/
HAULING SERVICES**

Graham, Earl
9233 Deep Creek Road
Apple Valley
(760) 240-4449
Stock Hauler

**VETERINARIANS/
MEDICAL CARE**

ABC Animal Clinic
Barstow
(760) 256-3330
Medical Care

Animal Care Hospital
21544 Highway 18
Apple Valley
(760) 247-0292
Veterinarian – Dr. Cannarella

Animal Emergency Clinic
15532 Bear Valley Road
Victorville
(760) 962-1122
Medical Care
Animal Medical Center
Hesperia
(760) 948-2497
Medical Care

Apple Valley Animal Hospital
18107 Highway 18
Apple Valley
(760) 242-5400
Veterinarian – Dr. Jessen

Apple Valley Equine Hospital
10083 Deep Creek Road
Apple Valley
(760) 247-4226
Veterinarian – Dr. Lenhert

Bear Valley Bird & Animal Hospital
20915 Bear Valley Road
Apple Valley
(760) 240-5228
Veterinarian – Dr. Velasco

Country Animal Care
4525 Phelan Road
Phelan
(760) 868-2188
Veterinarian – Dr. Mickelson

Desert Care Animal Hospital
Hesperia
(760) 949-7387
Medical Care

Hesperia Animal Hospital
Hesperia
(760) 948-1553
Medical Care

Mobile Veterinary Clinic
16385 Walnut Road
Hesperia
(760) 244-7722
Veterinarian – Dr. Porter

VETERINARIANS/
MEDICAL CARE Co

Mojave River Equine Vet
Apple Valley
(760) 247-4024
Veterinarian – Dr. Johnson

New Animal Hospital
Barstow
(760) 252-1239
Medical Care

VCA Mesa Animal Hospital
14643 Palmdale Rd
Victorville
(760) 245-0109
Medical Care

Petsmart
Bear Valley Road
Apple Valley
(760) 240-8119
Medical Care

Petsmart
12624 Amargosa Road
Victorville
(760) 955-1030
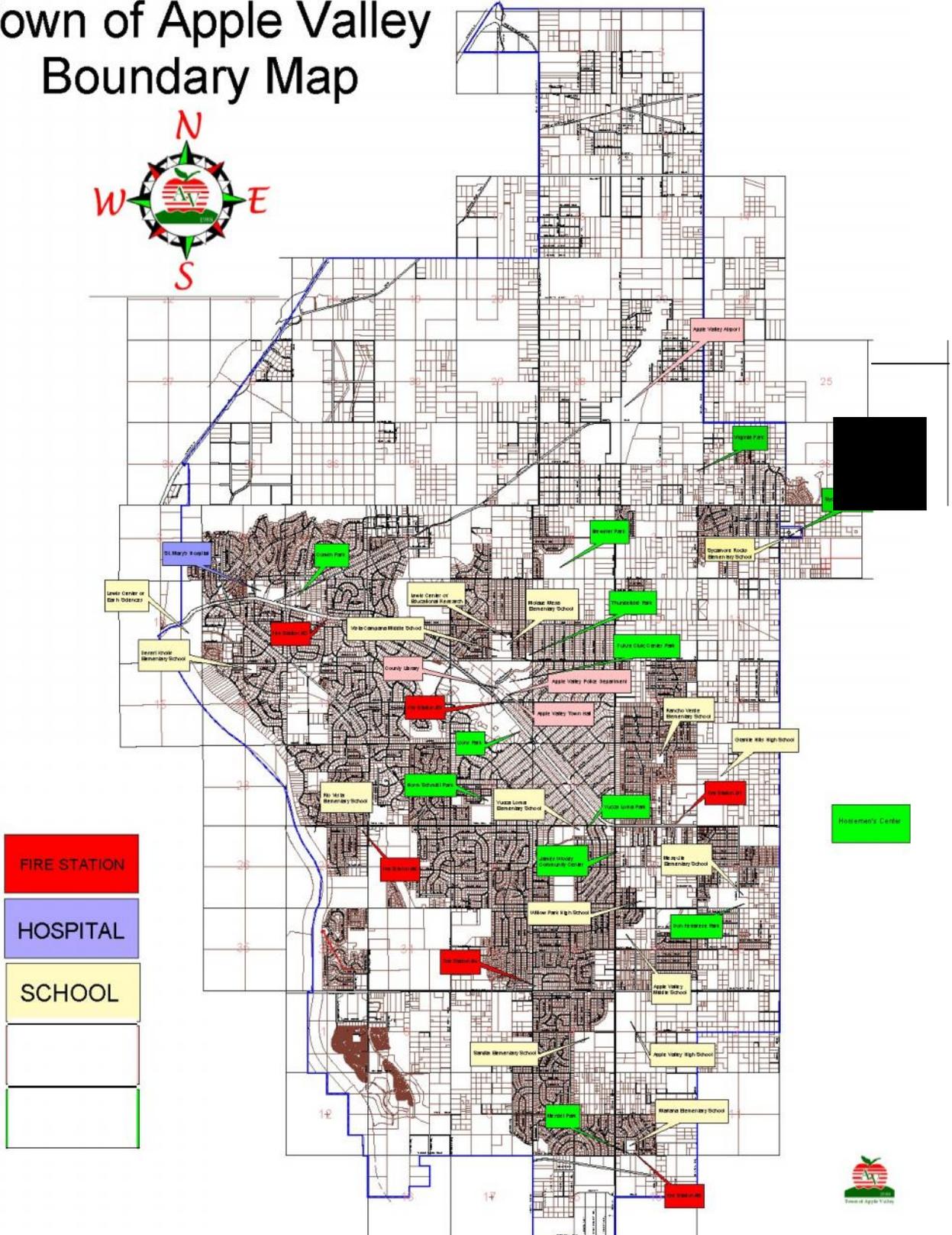Medical Care

VCA Victor Valley Animal Hospital
11696 Hesperia Road
Hesperia
(760) 244-8022
Veterinarian –
Dr. Bachman

Victor Valley Animal Protective League
21779   Zuni
Road   Apple
Valley   (760)
247-2102
Medical Care

Town of Apple Valley Boundary Map

Policy Map HZ-5 Fire Hazard Severity Zones

North Desert

East Desert

Mountain

Valley

Legend

☐ County Region
☐ Community Planning Area

▨ County Fire Safety Overlay
Fire Hazard Severity Zone
■ Very High
■ High
■ Moderate
■ Non-Wildland/Non-Urban
☐ Urban Unzoned

Note: All white areas are Urban Unzoned

Miles
0 4 8 12 16

Date: 7/2/2020   Created by PlaceWorks | Source: Calfire 2016
Related map: Policy Map HZ-6 Fire Responsibility Areas

SAN BERNARDINO COUNTY | **COUNTYWIDE PLAN**
POLICY PLAN