

Supplemental Environmental Assessment

# Fire Mitigation

Chino Valley Independent Fire District

PDM-PJ-09-CA-2005-122

*March 2008*



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**Supplemental Environmental Assessment to the Programmatic Environmental Assessment for Typical Recurring Actions Resulting From Flood, Earthquake, Fire, Rain, and Wind Disasters in California (PEA) as Proposed by the Federal Emergency Management Agency**

Chino Valley Independent Fire District  
Chino Valley Vegetation Management Project

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## 1. INTRODUCTION

The Chino Valley Independent Fire District (The Fire District) has applied to the Federal Emergency Management Agency (FEMA) through the State of California Governor's Office of Emergency Services for a Pre-Disaster Mitigation (PDM) Program grant to implement a vegetation management project. The Fire District's PDM Program grant application seeks FEMA funding to reduce future wildfire risks to the buildings and residents of Carbon Canyon. The project area is located in the incorporated community of Chino Hills in the Carbon Canyon area of southwestern San Bernardino County, California, near the Los Angeles County and Orange County borders (Figure 1, Appendix A).

The Fire District provides fire and emergency response services to the incorporated cities of Chino and Chino Hills, which had a combined population of some 154,500 in 2006. The Fire District consists of over 100 professional fire fighters and maintains six fire stations in the Chino Valley area.

### 1.1 SCOPE OF DOCUMENT

FEMA has prepared the Final Programmatic Environmental Assessment for Typical Recurring Actions Resulting From Flood, Earthquake, Fire, Rain, and Wind Disasters in California (PEA), which assesses common impacts of the action alternatives that are under consideration at the proposed project area (FEMA 2003). The PEA adequately assesses impacts from the action alternatives for certain resource areas, but for the specific actions of this particular project, other resources are not fully assessed in the PEA. Therefore, for this specific project to comply with the National Environmental Policy Act (NEPA), this Supplemental Environmental Assessment (SEA) has been prepared to tier from the PEA and fully assess the additional impacts to resources that are not adequately addressed in the PEA. This SEA hereby incorporates the PEA by reference, in accordance with Title 40 Code of Federal Regulations Part 1508.28.

### 1.2 PURPOSE OF AND NEED FOR ACTION

The PDM Program was authorized by Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Title 42 United States Code Part 5133, as amended by Section 102 of the Disaster Mitigation Act of 2000, Public Law 106-390, 114 Statute 1552, to assist states and communities to implement a sustained, pre-disaster, natural-hazard

mitigation program to reduce overall risk to lives and structures, while also reducing reliance on funding from actual disaster declarations. Thus, the purpose of the action is to provide PDM Program funding to the Fire District.

The Carbon Canyon area of Chino Valley is an urban/wildland interface area that has experienced numerous destructive fires in recent history. Since 1978, Chino Valley has experienced 11 major fires, burning a total of 44,635 acres. The 1990 Carbon Canyon Fire destroyed 17 homes and one business, damaged 12 other properties, and resulted in \$4.8 million in damages and \$600,000 in emergency response costs.

According to the 2000 Census, 477 housing units were located in Carbon Canyon with 1,371 residents. In 2003, the City of Chino Hills Tax Base assessed the total value of these homes at over \$125 million, not including land value. Residential development has continued around the proposed project area in recent years, with new homes slated for construction within the project area. Furthermore, Carbon Canyon Road (State Route 142) serves as the main route for thousands of commuters traveling between Orange County and the San Bernardino metropolitan area daily, and it is the only ingress and egress route for Carbon Canyon area residents.

Historically, major fires have originated southwest of the project area in Los Angeles County or Orange County, spreading northeast through the Carbon Canyon area. The project area is characterized by residential development surrounded by dense flammable vegetation, including oak woodlands, chaparral, sage brush, and dry grasslands. This dense vegetation creates a high risk of wildfires originating in the project area or moving into the area from the southwest. Action is necessary to reduce the risk of wildfire for Carbon Canyon and the residents of Chino Hills.

## **2. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**

### **2.1 NO ACTION ALTERNATIVE**

NEPA requires the inclusion of a No Action Alternative in environmental analysis and documentation. The No Action Alternative is defined as maintaining the status quo with no FEMA funding for any action alternative. The No Action Alternative is used to evaluate the effects of not providing eligible assistance for the project, thus providing a benchmark against which action alternatives can be evaluated.

The No Action Alternative is in conflict with FEMA's mission and the purpose of the PDM Program. For the purpose of the No Action Alternative, it is assumed that the Fire District would be unable to implement vegetation management activities in Carbon Canyon for lack of federal assistance. The Fire District would thus be unable to reduce the speed at which a wildfire would spread, create a safer environment for firefighters, and lower fire risks to surrounding communities.

The existing fire hazard would remain under the No Action Alternative as described in Section 2.1 of the PEA. The community of Chino Hills could be severely impacted if it were subject to a wildfire. Threats to public health and safety would continue as would risks of economic losses resulting from wildfire. A wildfire in the vicinity of the project would result in property and infrastructure damage; risk to lives; and the loss of native flora and fauna and their associated habitats, loss of topsoil due to erosion, sedimentation of local streams, and loss of established hardwood overstory tree canopies.

## 2.2 PROPOSED ACTION

The Proposed Action falls under the Vegetation Management action alternative defined in the PEA in Section 2.5.1, Mechanical or Hand Clearing of Vegetation.

Under the Proposed Action, the Fire District would conduct vegetation management activities in strategic locations around Carbon Canyon over a 3-year period, with about one-third of the work completed each year. The Proposed Action is designed to mitigate the risk of fires moving into the Chino Valley area from the southwest, thereby protecting lives, homes, and infrastructure in the area from fire loss or damage. Vegetation reduction would involve the thinning of fuel load in the identified Vegetation Reduction Zone (VRZ). The project area encompasses approximately 158.5 acres to be thinned by a combination of hand treatment and mastication. 33.3 acres would be treated using a masticator (a masticator is a piece of machinery that mows or flails woody vegetation). The remaining 125.2 acres would be thinned using hand treatment. Twelve staging areas would be used throughout implementation of the Proposed Action. A map of the project area including treatment zones and staging areas can be found in Appendix A, Figure 1.

Mastication would be applied to 33.3 acres of the project area using a crew of 3 people with a masticator mounted to a loader-type vehicle. In the areas proposed for mastication, brush and smaller vegetation would be cut down to the roots and short stems. The majority of the proposed mastication area is covered by brush, although stands of trees occur in some places. Islands or clumps of brush would be left remaining over approximately 20 percent of the mastication area to create a less dramatic change to the treatment area visually. Live trees would be left standing, and mastication would take place around them. Finally, the edges of the mastication area would be "feathered" to reduce the visibility of the treatment area boundaries. Masticated materials would be left in place as mulch.

Hand treatment would be used for 125.2 acres within the VRZ, using a crew of 15 to 17 people. In this area, the reduction of "ladder fuels" would be the priority, which would mitigate the risk of ground fires developing into more destructive canopy fires. Grasses would be cut to no less than 6 inches. For brush higher than 4 feet tall and small trees, all branches would be removed from the lower third of the plant. For trees with a greater than 5-inch trunk diameter, all branches would be removed up to 6 feet. All hand-cut limbs and brush would be chipped and left in the VRZ as mulch.

Throughout the VRZ, all dead trees, brush, and limbs would be removed. An estimated 5 percent of the total vegetation in the VRZ is dead and covers some 6 acres of the total project area. Within 10 feet of roadways, all brush would be removed and trees would be trimmed to allow for a minimum vertical clearance of 13.5 feet. All vehicles used during the Proposed Action would remain on paved roads or disturbed areas adjacent to the VRZ, and all vegetation reduction areas would be more than 150 feet from any known waterway or perennial stream.

## 2.3 OTHER ACTION ALTERNATIVES

Other alternatives to the proposed project are adequately addressed in Section 2 of the PEA.

## 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The PEA has adequately described the affected environment and the impacts of the Proposed Action for certain resource areas, except for geology and soils, air quality, biological resources, cultural resources, public services and recreation, noise, visual resources, and cumulative impacts. Therefore, the affected environment and environmental consequences for those resources are described in this section, which is intended to supplement the information contained in the PEA. Necessary avoidance and minimization measures, either stipulated in the PEA, or based on the results of the impact analysis in the SEA, that are appropriate for the Proposed Action, are discussed in Section 4. The No Action Alternative is adequately described in the PEA for all resource areas.

### 3.1 GEOLOGY AND SOILS

The project area lies within the eastern edge of the Peninsular Ranges Geomorphic Province. The Peninsular Ranges are one of four mountain ranges in California. The Peninsular Ranges are the southernmost of these ranges; they extend along the coast south from Los Angeles Basin to the tip of Baja Peninsula. The Peninsular Ranges include the San Jacinto, Santa Rosa, Agua Tibia, Laguna, and Santa Ana mountains (Norris and Webb 1990). The Peninsular Ranges Physiographic Province is bounded on the east by the Salton Sea (Trough), on the west by the Pacific Ocean, and on the north by the Transverse Ranges. The bedrock geology that dominates the lower elevations of the Peninsular Ranges still retains sedimentary formations, ranging from Jurassic through Recent rocks (Norris and Webb 1990).

Although peaks of over 10,000 feet can be found within this physiographic province, the typical landscape has rolling hills with mountains averaging some 3,000 feet in elevation (Norris and Webb 1990). The project area is located along ridgelines and some slopes in the Chino Hills area at elevations roughly between 900 and 1,400 feet.

Soils in the project area primarily consist of sandy loams. Cieneba-Friant sandy loams are found on some steep slopes. These soils consist of shallow (4- to 20-inch depth), excessively drained weathered granite, and typically have a chaparral cover. Fontana clay loams underlie

much of the grassy portions of the project area. These soils are well-drained and of medium depth (approximately 20- to 28-inch), with slopes ranging from 15 to 50 percent or more. In some areas, sandstone outcrops are found associated with Gaviota sandy loams, which are very shallow, well-drained weathered sandstone. Finally, some areas are made up of Chualar clay loams, which are a relatively deep (more than 50-inch) and well-drained alluvial material (NRCS 2007)

The Proposed Action would involve no soil-disturbing activities. No groundcover would be removed. All vegetation removal would be aboveground. Root structures would remain intact, preventing erosion. Grasses would be cut to no less than 6 inches from the ground. The vegetation removal, as proposed, would prevent the potential for erosion and sedimentation to occur. Soil loss would not occur directly from disturbance or indirectly via wind or water. Because ground-disturbing activities would not occur as part of the Proposed Action, potential for landslides would not increase. No adverse impacts to geology and soils would result from implementation of the Proposed Action.

### 3.2 AIR QUALITY

The project area is located within the South Coast air basin, which covers Los Angeles, San Bernardino, Riverside, and Orange counties. More specifically, the project area is located in western San Bernardino County, which is under the South Coast Air Quality Management District's jurisdiction. The project area is designated as nonattainment for the federal ozone (O<sub>3</sub>), particulate matter less than 10 micrometers in diameter (PM<sub>10</sub>), and particulate matter less than 2.5 micrometers in diameter (PM<sub>2.5</sub>) National Ambient Air Quality Standards (NAAQS) (EPA 2007). The western county is also designated as nonattainment for the O<sub>3</sub> (extreme), PM<sub>10</sub> (serious), and PM<sub>2.5</sub> California Ambient Air Quality Standards (CAAQS) (CARB 2007). The project area is in attainment or unclassified for all other California and federal criteria pollutants (CARB 2007; EPA 2007).

The climate in the project area is considered to be Mediterranean with an average annual precipitation of some 17 inches (primarily in the winter) and an average annual air temperature of approximately 66 degrees Fahrenheit.

The General Conformity Rule (GCR) is a federal regulation and provides emission threshold rates for federally designated nonattainment and maintenance areas. Expected project emissions are compared to these threshold rates to determine whether or not a conformity analysis is required.

Because the project would be located in an area federally designated as nonattainment for the aforementioned pollutants, a comparison must be made to demonstrate that the Proposed Action's emissions would be below the applicable emission threshold rates listed in the GCR (see Table 1).

**Table 1**  
**Applicable GCR Emission Threshold Rates**

	<b>GCR Guidance</b>
<b>Pollutant</b>	<b>Nonattainment (tons/yr)</b>
CO	100
NO <sub>x</sub>	10 (extreme, O <sub>3</sub> precursor)*
PM <sub>10</sub>	70 (serious)*
PM <sub>2.5</sub>	100
SO <sub>2</sub>	100
VOC	10 (extreme, O <sub>3</sub> precursor)*

\*Note: GCR determinations are based on federal attainment designations, not state.

Implementation of the Proposed Action would result in temporary impacts to the existing air quality in the area. These impacts include temporary increases of combustion emissions (carbon monoxide [CO], nitrous oxides [NO<sub>x</sub>], PM<sub>10</sub>, PM<sub>2.5</sub>, sulfur dioxides [SO<sub>2</sub>], and volatile organic compounds [VOCs]). Combustion emissions would be generated from the operation of land-clearing equipment during the vegetation management process. Wood particulate would also be generated from chipping and mastication efforts. However, the majority of particulate generated from these activities would be larger than PM<sub>10</sub> and would settle to the ground in a relatively short period. As such, it does not meet the definition of PM<sub>10</sub> or PM<sub>2.5</sub> and therefore has not been quantified.

It is important to note that no NAAQS or CAAQS exist for VOCs. However, VOCs are a precursor to O<sub>3</sub>, which has both a Federal and State ambient air quality standard. The formation of O<sub>3</sub> occurs in the troposphere as precursor pollutants react in the presence of sunlight. Therefore, the only way to regulate/reduce O<sub>3</sub> is through the control of its reactive precursors, one of which is VOC.

Unmitigated emission estimates were determined using the following guidance and assumptions:

- 125.2 acres of vegetation management with small gasoline-powered equipment
- 33.3 acres of vegetation management with a diesel-powered masticator
- Diesel-powered chipper operations equal to the total working hours of the work crew
- Emissions estimated using applicable California and federal guidance, specifically, EPA AP42: 3.3 Gasoline and Diesel Industrial Engines and South Coast Air Quality Management District (2007) off-road emission factors



Based on the above assumptions, the following unmitigated emissions are expected for this project (Table 2):

**Table 2**  
**Proposed Action Emission Rates**

	<b>Emission Rate</b>
<b>Pollutant</b>	<b>tons/yr</b>
CO	11.5
NO <sub>x</sub>	1.4
PM <sub>10</sub>	0.097
PM <sub>2.5</sub>	0.096
SO <sub>2</sub>	0.087
VOCs	0.642

Even without mitigation measures, the project emission estimates for CO, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and VOCs, are below the levels of the worst-case GCR threshold emission rates. Therefore, no further analysis is required to establish conformity with the State Implementation Plan; air quality impacts resulting from implementation of the Proposed Action would be temporary and minimal.

Section 4.2 of this SEA lists minimization measures to further reduce the Proposed Action's air quality impacts.

### 3.3 WATER RESOURCES

No surface water bodies are located within the project area. The only known waterway with year-round water near the project area is Carbon Creek. Vegetation management activities would be no closer than 161 feet to Carbon Creek. Several ephemeral drainages exist on extremely steep slopes. These drainages only have water for a short time immediately following a rain event. No riparian vegetation exists in the project area. The project area does not provide any ponds, seasonal wetlands, vernal pools, or artificial impoundments such as stock ponds. Further, the project area is not within the 100-year floodplain. Because no floodplains or wetlands would be affected by the Proposed Action, it complies with Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands). Wildfires are known contributors to deterioration of water quality by increased erosion, sedimentation, and ash input. Implementation of the Proposed Action would result in a long-term benefit to water quality by reducing the risk of a wildfire in the Carbon Canyon area.

With the implementation of avoidance and minimization measures, such as best management practices (BMPs) for erosion and sedimentation control, as described in Section 4.3 of the SEA, impacts to water resources would be minimal.

### 3.4 BIOLOGICAL RESOURCES

Biologists of URS Corporation, a contractor to FEMA, queried the California Natural Diversity Database, reviewed US Fish and Wildlife Service (USFWS) species list for San Bernardino County, and reviewed USFWS critical habitats using geographic information systems to determine which listed plant or wildlife species occurred within or near the project area. Although no known sensitive species were identified within 500 feet of the project area, biologists conducted vegetation mapping to determine the possibility of rare species in suitable locations throughout the project area.

Vegetation was surveyed by vehicle and on foot between May 23 and May 25, 2007, by URS biologist Glen Koshita. Vegetation communities were mapped in the field on 1 inch=250 feet aerial photos following the Holland Code (Holland 1986) of vegetation and transferred to geographic information system maps. Vegetation encountered during surveys included disturbed native grassland, mulefat scrub, scrub oak chaparral, disturbed bare ground, nonnative grassland, coast live oak woodland, chaparral, and coastal sage scrub.

The project area is located within designated critical habitat for the California gnatcatcher (*Poliophtila californica californica* [CAGN]). CAGN is a small, insectivorous bird that is federally protected under the Endangered Species Act (ESA) due to its “threatened” status. CAGN occurs almost exclusively in the coastal sage scrub plant community, but occasionally can also be found in chaparral. The habitat in the project area is fragmented and is only marginally suitable to support CAGN. Nonetheless, six USFWS-Protocol surveys for this species were conducted in the project area between June 15 and August 24, 2007. The CAGN was not detected during these surveys. No other federally protected species are expected to occur or were observed within the project area.

The Proposed Action would cause minimal impact to vegetation communities. The habitat throughout the project area was not found to be occupied by CAGN and the Proposed Action consists of thinning of vegetation but not CAGN habitat removal. Based on the above evaluation, FEMA has determined the Proposed Action is not likely to adversely affect the CAGN or its designated critical habitat.

In accordance with ESA Section 7, FEMA provided the USFWS with its determination in a letter report dated January 11, 2008. On January 23, 2008, FEMA received a letter from the USFWS concurring with its determination that the Proposed Action is not likely to adversely affect the CAGN or its designated critical habitat. A copy of this letter can be found in Appendix B. The Proposed Action is thus in compliance with the ESA.

Vegetation management projects can create the potential for invasive, nonnative species to become established in areas where vegetation has been trimmed or removed. Therefore, the Fire District would be responsible for monitoring and maintaining the project area and continuing to treat these areas as necessary to maintain appropriate vegetation densities and species composition, especially native species.

### 3.5 CULTURAL RESOURCES

Cultural resource investigations were undertaken to ensure identification of all archaeological sites within the project's Area of Potential Effects (APE). The efforts to identify both previously recorded sites and previously undiscovered sites within the APE were undertaken in compliance with Section 106 (Title 16 United States Code Section 470f) of the National Historic Preservation Act of 1966 and the 2005 First Amended Programmatic Agreement (PA) between FEMA, the California State Historic Preservation Officer (SHPO), the California Governor's Office of Emergency Services, and the Advisory Council on Historic Preservation.

URS contacted the California Native American Heritage Commission (NAHC) on May 8, 2007, to request a review of its Sacred Lands Files and a list of individuals or groups that the NAHC believes should be contacted regarding information or concerns related to the project area. The NAHC responded on May 21, 2007, with negative results for its search of the Sacred Lands File. On June 7, 2007, URS transmitted an informational letter to potentially interested parties identified by the NAHC. A sample of this informational letter from FEMA can be found in Appendix C.

To date, two responses to the informational letter have been received, both from the Juaneno Band of Mission Indians. FEMA responded to both inquiries and provided information regarding the records search and the pedestrian survey.

A URS archaeologist conducted a field survey of the APE on May 23, 24, and 25, 2007. The field survey was an intensive pedestrian survey that used 10- to 15-meter transect intervals in the areas that could be accessed. Some areas of the APE were covered by extremely dense chaparral and could not be physically accessed; a reconnaissance survey was performed at these locations wherever access could be gained. Other areas had extremely dense nonnative grasses that created a mat over the ground surface, providing poor visibility. No prehistoric sites were identified within the APE during the pedestrian survey.

One previously recorded historic archaeological site was reidentified during the field survey and an update to the California Department of Parks and Recreation 523A Primary Record form was completed. Though adjacent to the project area, this site is outside of the treatment zone and would thus be unaffected by the Proposed Action.

In accordance with the PA, FEMA transmitted a letter along with the cultural resources technical report to the SHPO on October 18, 2007. The letter analyzed the potential adverse effects to cultural resources, presented measures to reduce adverse effects, and made a determination of "no historic properties affected." The SHPO responded with a letter of concurrence with this determination in a letter dated November 26, 2007. (A copy of this letter can be found in Appendix D.) The Proposed Action is thus in compliance with Section 106 of the National Historic Preservation Act.

With implementation of the minimization and avoidance measures described in Section 4.4 of this SEA, the Proposed Action would result in no adverse impacts to cultural resources.

## 3.6 SOCIOECONOMICS AND PUBLIC SAFETY

### 3.6.1 Executive Order 12898: Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, directs federal agencies to ensure that their programs, policies, and activities do not have a disproportionately high and adverse human health and environmental effect on minority and low-income populations. This executive order also tasks federal agencies with ensuring that public notification regarding environmental issues is concise, understandable, and readily accessible.

Socioeconomic and demographic data for residents in the project vicinity were studied to determine if a disproportionate number (defined as greater than 50 percent) of minority or low-income persons have the potential to be affected by the Proposed Action. A comparison of relevant environmental justice indicators is shown in Table 3. Review of these indicators was based on countywide information and census tract information from the 2000 Census. The project area is contained within Census Tracts 1.06 and 1.11 of San Bernardino County.

**Table 3**  
**Comparison of Environmental Justice Indicators**

Indicator	San Bernardino County	Census Tract 1.06	Census Tract 1.11
Total Population	1,709,434	11,898	2,801
Nonwhite Persons	41.1%	51.2%	22.4%
Persons of Hispanic Origin	39.1%	17.8%	15.8%
Persons Aged 65 Years and Over	8.6%	4.7%	4.9%
Disabled Persons*	31.8%	15.5%	15.1%
Persons in Households with Public Assistance Income	6.5%	0.9%	3.4%
Families with Income Below the Poverty Level in 1999	12.6%	2.4%	0.0%
Median Home Values	\$131,500	\$298,100	\$262,900

\*Civilian noninstitutionalized persons aged 5 years and over

Source: U.S. Bureau of the Census, 2000 Census

Table 3 indicated that the project area does not have a majority of low income persons, elderly persons, or disabled persons. Both Census Tracts 1.06 and 1.11 have median home values over \$100,000 greater than the median home value for all of San Bernardino County. Census Tract 1.06 does have a majority nonwhite population. However, most impacts of the Proposed Action would be beneficial to Chino Hills and neighboring communities. No long-term adverse impacts are expected to result from implementation of the Proposed Action. Reduction of fire hazard would minimize the potential damage to homes and loss of lives in the event of a fire. Therefore, the Proposed Action complies with Executive Order 12898 and

its implementation would result in no disproportionately high and adverse human health effects upon minority or low-income populations.

### 3.6.2 Public Safety

No adverse impacts to public safety are expected to result from implementation of the Proposed Action. Project implementation would improve public safety by lowering the risk of wildfire in the Chino Hills area.

## 3.7 LAND USE AND PLANNING

The Proposed Action would be implemented entirely on private land. Land use classifications within the project area consist of the following: agriculture/ranches, commercial recreational, low-density residential, rural residential, and institutional. Implementation of the Proposed Action would result in no changes to zoning or land use.

One of the parcels in the project area has been subdivided for future single-family home construction. However, not all necessary permits have been acquired and no construction dates have been set.

All property owners holding land in the project area have granted the Fire District written permission to conduct the vegetation management activities prescribed by the Proposed Action.

## 3.8 NOISE

Noises in the area consist primarily of natural sounds (e.g., bird calls, wind rustling leaves in trees), vehicular traffic noise, and activities occurring within private residences. Private residences are the primary noise-sensitive receptors near or adjacent to the Proposed Action. Noise associated with the Proposed Action would include tractor and masticator operation, motorized hand tool operation (chainsaws, weed whips, etc.), wood chipper operation, and human voices.

Chino Valley's noise ordinance does not list specific decibel levels regulating noise, but does prohibit private construction activities at any time other than between 7:00 am and 7:00 pm on weekdays, and between 8:00 am and 6:00 pm on Saturdays, excluding federal holidays. Vegetation management activities would occur only during these times.

The evaluation of noise impacts is based on typical noise emission levels from chainsaws, a chipper, and a tractor-mounted masticator. The effects of large-scale terrain features and propagation through foliage were neglected in the noise analysis. Noise levels at receptors farther than approximately 1,000 feet from project activities are expected to be below 65 A-weighted decibels (dBA). Receptors less than approximately 1000 feet from project activities may experience temporary sound levels between 65 and 75 dBA. Noise associated with project activities would move throughout the project area, and no single noise-sensitive receptor would be subject to project-related noise levels above 75 dBA for more than a few hours at a time for a few days. Therefore, with the implementation of the avoidance and

minimization measures described in Section 4.8 of this SEA, impacts to noise-sensitive receptors would be temporary and minimal.

### 3.9 VISUAL RESOURCES

The visual character of the landscape within the project area consists mainly of vegetated areas including grasses, shrubs and chaparral, and oak trees. The project area is adjacent to single-family residential neighborhoods. Primary viewers of the project area include residents of the areas and drivers along Carbon Canyon Road.

The Proposed Action does not include the removal of any established living trees. Only in areas proposed for mastication—approximately one-fifth of the treatment area—would brush and other small vegetation be cut to the roots and short stems. Even in these areas, islands of brush would be left on approximately 20 percent of these areas. The edges of the mastication area would be "feathered" to reduce the visibility of the treatment area boundaries. Hand treatment in the majority of the project area would be limited to cutting grasses and limbing brushes and trees to 4 and 6 feet, respectively. The visual context and visual quality of the treatment areas would change only minimally. No new viewsheds would be created and existing views of the project area would not be deteriorated.

Short-term impacts to views within the project area would occur during vegetation clearing when crews are working within the project area. Implementation of the Proposed Action would create a more beneficial viewshed than what may result if Carbon Canyon was to sustain a wildfire that removed most of the existing vegetation.

With the Fire District's long-term maintenance of the treatment areas and with the implementation of the avoidance and minimization measures describe in Section 4.9 of this SEA, no substantial adverse impacts to visual resources would result from implementation of the Proposed Action.

### 3.10 CUMULATIVE IMPACTS

The Fire District requires weed abatement on private property between March and June of each year. These activities could occur simultaneously with the implementation of the Proposed Action; however, any potential adverse cumulative impacts would be short term in duration and minor in magnitude.

One of the parcels in the project area has been subdivided for the future construction of the proposed Canyon Hills development. The development would consist of 76 single-family detached homes on a 141-acre property. The project is located on the west side of Canyon Hills Road and north of Carbon Canyon Road. Approximately 100 acres of the project site is reserved for open space. The developer of the project, D.R. Horton, is processing grading plans through the City of Chino Hills. At this time, no time frame is estimated for when actual construction will take place and no adverse cumulative impacts are expected to result from construction of the Canyon Hills development and implementation of the Proposed Action.

## **4. MINIMIZATION AND AVOIDANCE MEASURES**

The following minimization and avoidance measures have been extracted from PEA Section 4, or from measures developed for this SEA based on site-specific impacts, and are applicable for the Proposed Action.

### **4.1 GEOLOGY, GEOHAZARDS, AND SOILS**

The Fire District would be responsible for implementing erosion protection measures BMPs to minimize soil loss and sedimentation including chipping and scattering cut vegetation on site to the maximum extent possible.

### **4.2 AIR QUALITY**

The Fire District would be responsible for reducing potential air quality impacts from vegetation-clearing activities and employing minimization measures to limit fugitive dust and emissions. These measures include but are not limited to:

- Scheduling the siting of staging areas to minimize fugitive dust
- Keeping vehicles and motorized tools properly tuned

### **4.3 WATER RESOURCES**

The Fire District would be responsible for implementing erosion protection measures BMPs to minimize soil loss and sedimentation including chipping and scattering cut vegetation on site to the maximum extent possible. The Fire District would also be responsible for maintaining 10-foot buffers adjacent to ephemeral drainages to reduce sediment entering waterways, reduce erosion along banks, and provide for infiltration during precipitation events that would reduce peak flows.

### **4.4 BIOLOGICAL RESOURCES**

The Fire District would be responsible for monitoring and maintaining the project area and continuing to treat it as necessary to maintain appropriate vegetation densities and species composition, especially native species.

### **4.5 CULTURAL RESOURCES**

FEMA would require the Fire District to stop work in the event of an unexpected discovery of previously unidentified archaeological resources, notify FEMA, and fully comply with the steps outlined in Stipulation X of the PA.

### **4.6 SOCIOECONOMICS AND PUBLIC SAFETY**

No minimization or avoidance measures are required.

#### 4.7 LAND USE AND PLANING

No minimization or avoidance measures are required.

#### 4.8 NOISE

The Fire District would be responsible for ensuring that vegetation management activities do not occur between 7:00 pm and 7:00 am on weekdays; between 8:00 am and 6:00 pm on Saturdays; and not on Sundays or federal holidays.

All noise-producing project equipment and vehicles using internal combustion engines would be equipped with properly operating mufflers and air inlet silencers, where appropriate, that meet or exceed original factory specification.

#### 4.9 VISUAL RESOURCES

The Fire District would implement BMPs that would include site and staging area cleanup following the completion of work activities at each particular work site and staging location.

#### 4.10 CUMULATIVE IMPACTS

No minimization or avoidance measures are required.

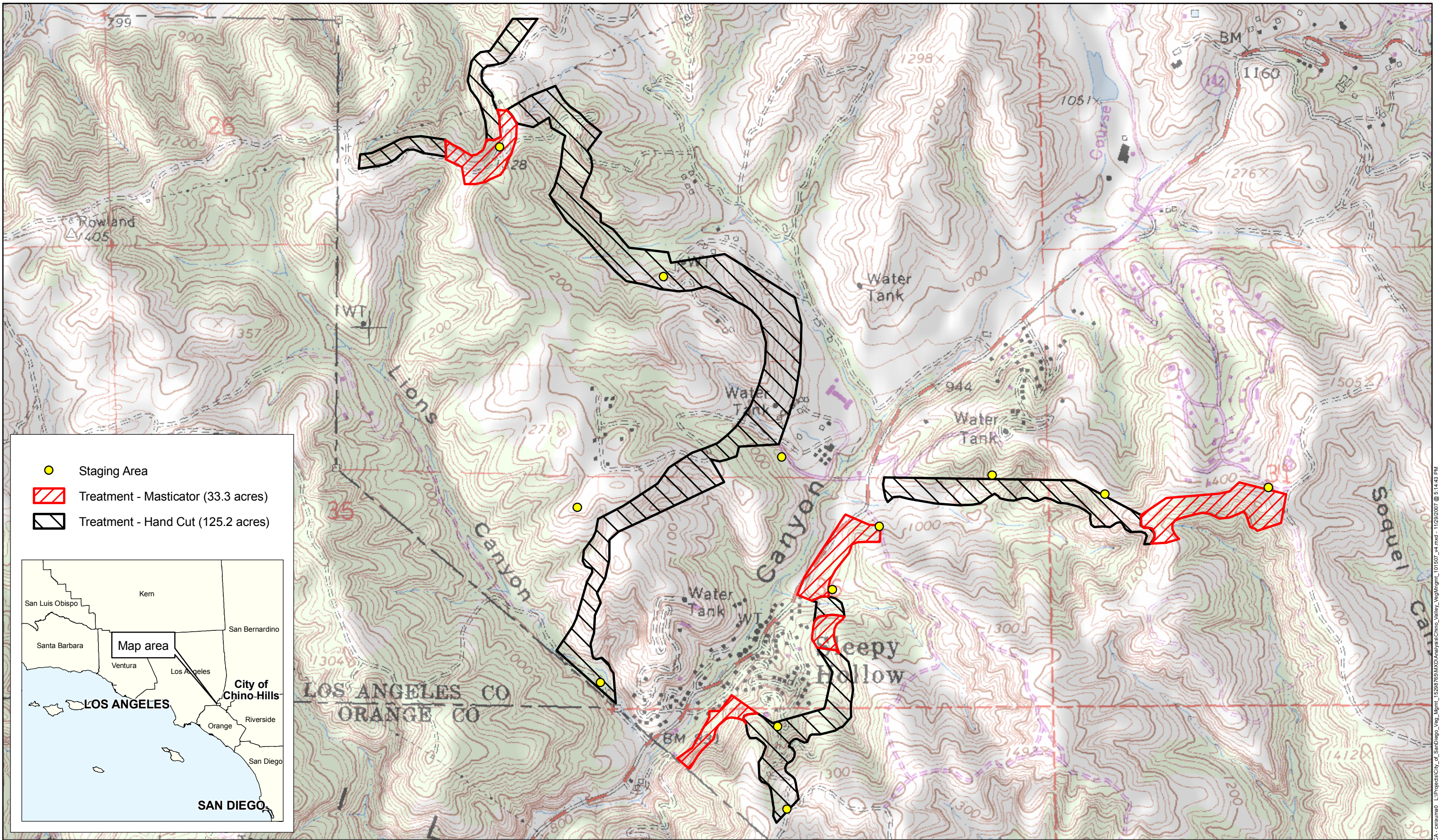
### 5. REFERENCES

- Federal Emergency Management Agency (FEMA). 2003. Programmatic Environmental Assessment (PEA) for Typical Recurring Actions, Flood, Earthquake, Fire, Rain, and Wind Disasters in California. U.S. Department of Homeland Security, FEMA Region IX Environmental Offices. 1111 Broadway, Suite 1200, Oakland, California 94607.
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- Norris, Robert M., and Robert W. Webb. 1990. *Geology of California*. New York: John Wiley & Sons, Inc.
- South Coast Air Quality Management District. 2007. Off-Road Mobile Source Emission Factors. <http://www.aqmd.gov/ceqa/handbook/offroad/offroad.html> accessed on December 12, 2007.
- U.S. Census Bureau, 2000 Census. Summary File 1, Tables P1, P7, P11, P12; Summary File 3, Tables P41, P64, P90, H76.



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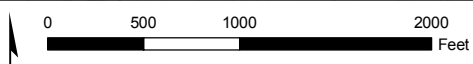
**Appendix A – Figure 1 – Action Areas**



- Staging Area
- Treatment - Masticator (33.3 acres)
- Treatment - Hand Cut (125.2 acres)

Map area

San Luis Obispo Kern San Bernardino  
 Santa Barbara Ventura Los Angeles  
**LOS ANGELES** City of Chino-Hills  
 Orange Riverside San Diego  
**SAN DIEGO**



Base map source: USGS 7.5-minute topographic quadrangle for Yorba Linda



Chino Valley  
Fire District  
15702306

Action Areas

**Figure 1**  
March 2008

URS Corporation - Oakland CA - c:\rauna\15702306\Analysis\Chino\_Valley\_Veg\Map\15702306\Map\15702306\_Veg\Map\15702306\_Veg.mxd - 1/23/2007 @ 5:14:43 PM

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**Appendix B – USFWS Concurrence**



# United States Department of the Interior

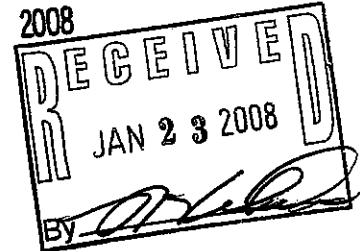


## FISH AND WILDLIFE SERVICE

Ecological Services  
Carlsbad Fish and Wildlife Office  
6010 Hidden Valley Road  
Carlsbad, California 92011

In Reply Refer To:  
FWS-SB-08B0265-08I0265

JAN 16 2008



Allesandro Amaglio  
Environmental Officer  
U.S. Department of Homeland Security  
1111 Broadway, Suite 1200  
Oakland, California 94607-4052

Subj: Chino Valley Independent Fire District, Hazard Management Project, City of Chino Hills, San Bernardino County, California (PDMC-PJ-09-CA-2005-122)

Dear Mr. Amaglio:

On January 14, 2008, we received your letter dated January 11, 2008, regarding the above-referenced project with site maps and the results of 2007 protocol surveys for the federally threatened coastal California gnatcatcher (*Poliophtila californica californica*, "gnatcatcher"). You have requested our concurrence with your agency's determination that the fuel modification project is not likely to adversely affect the gnatcatcher or its designated critical habitat.

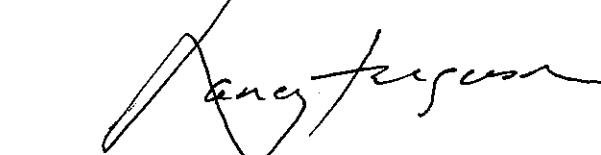
This determination is based upon the following: 1) gnatcatchers were not detected within the proposed treatment area during 2007 protocol surveys; and 2) the proposed fuel modification would be done mechanically rather than through prescribed burning, ensuring that impacts to the primary constituent elements of critical habitat for gnatcatcher will be of a short-term, temporary nature. Impacts to federally-listed riparian bird species are not anticipated as fuel modification will not be done within 150 feet of any streams.

Base upon the above information, we will concur with your determination. In view of this determination, we believe that the interagency consultation requirements of section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), have been satisfied. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

TAKE PRIDE  
IN AMERICA 

We appreciate this opportunity to work cooperatively with your agency. If you have any questions regarding this letter, please contact Nancy Ferguson of this office at (760) 431-9440, extension 224.

Sincerely,



Karen A. Goebel  
Assistant Field Supervisor

cc:

Marcia Rentschler and Dennis Castrillo, Governor's Office of Emergency Services  
Kevin Smith, Chino Valley Independent Fire District  
Theresa Miller, URS

**Citation:**

Grishaver, M., P. Mock, and K. Preston. 1998. Breeding behavior of the California gnatcatcher in southwestern San Diego County, California. *Western Birds* 29:299-322

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**Appendix C – Sample Native American Notification**



U.S. Department of Homeland Security  
1111 Broadway, Suite 1200  
Oakland, CA 94607-4052

**FEMA**

June 5, 2007

Ms. Cindi Alvitre  
Ti'At Society  
6602 Zelzah Avenue  
Reseda, CA 91335

Re: Chino Valley Independent Fire District, Fire Mitigation Project, PDMC-PJ-09-CA-2005-122

Dear Ms. Alvitre:

The purpose of this letter is to apprise you of a proposed project in San Bernardino County, California, that is under consideration for funding by the Federal Emergency Management Agency (FEMA). A map of the proposed project area has been included for your reference.

The proposed project involves the reduction of vegetation and ladder fuels on 191 acres in Carbon Canyon, within the City of Chino Hills at the urban/wildland interface.

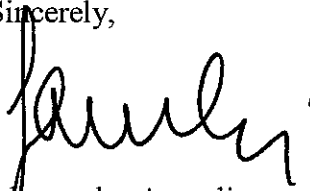
The vegetation management will be performed using a masticator and chain saws, machetes, and other handheld cutting tools. Approximately 16.1% or 31 acres, of the total area will be treated with masticators. Vehicles will remain on paved roads or developed areas adjacent to the lands being treated. Equipment will be staged, fueled, and maintained at twelve landings within or adjacent to the project area. No ground-disturbing activities will occur within the project area.

FEMA, through its consultant, URS, conducted archaeological surveys of the project areas in May 2007. These surveys were negative for archaeological resources. URS also contacted the California Native American Heritage Commission (NAHC) for a review of its Sacred Lands Files. The NAHC's review was negative. However, the NAHC also provided a list of groups or individuals that may have specific knowledge of cultural resources or have other concerns in the specific project area. Your name was on this list. Should you have any knowledge of cultural resources in the specific project area, know of other contacts who may have such specific knowledge, or have other concerns in the specific project area, please telephone me at (510) 627-7027 or write to me at the letterhead address.

Cindi Alvitre  
June 5, 2007  
Page 2

If I do not hear from you within 2 weeks of receipt of this letter, FEMA will assume you have no comments regarding this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Amaglio". The signature is written in a cursive style with a large initial "A".

Alessandro Amaglio  
Environmental Officer

Enclosure



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**Appendix D – SHPO Concurrence**

**OFFICE OF HISTORIC PRESERVATION  
DEPARTMENT OF PARKS AND RECREATION**

P.O. BOX 942896  
SACRAMENTO, CA 94296-0001  
(916) 653-6624 Fax: (916) 653-9824  
calshpo@ohp.parks.ca.gov  
www.ohp.parks.ca.gov



26 November 2007

Reply To: FEMA070904A

Alessandro Amaglio, AIA  
Environmental Officer  
Federal Emergency Management Administration  
US Department of Homeland Security  
1111 Broadway, Suite 1200  
Oakland, CA 94607-4052

Re: Section 106 Consultation for Chino Valley Independent Fire District, Hazard Mitigation Project, PDMC-PJ-CA-2005-122, San Bernardino County, CA

Dear Mr. Amaglio:

Thank you for initiating consultation with me pursuant to the *2005 First Amended Programmatic Agreement Among the Federal Emergency Management Agency, The California State Historic Preservation Officer, The California Governor's Office of Emergency Services, and the Advisory Council on Historic Preservation*. Your 18 October 2007 letter provides me with information to conduct the Standard Review pursuant to Stipulation VI for the undertaking. At this time FEMA is requesting I concur with the determination of the APE and the determination of "No Historic Properties Affected."

As I understand it, the undertaking consists of FEMA funding to implement a vegetation management project in the Carbon Canyon area of southwestern San Bernardino County.

The APE for the project consists of all areas where vegetation will be removed as shown in Figure 1, Appendix A in the technical report attached to your letter. I find this sufficient pursuant to Stipulation VII A of the PA.

FEMA had determined that there are no historic properties present within the APE and thus no historic properties will be affected by this undertaking. I concur.

Thank you again for considering historic properties in your planning process. If you have any questions or concerns, please contact Amanda Blosser of my staff at (916) 653-9010 or at [ablosser@parks.ca.gov](mailto:ablosser@parks.ca.gov).

Sincerely,

A handwritten signature in cursive script that reads "Susan K. Stutton for".

Milford Wayne Donaldson, FAIA  
State Historic Preservation Officer  
MWD:ab