



MENDOCINO COUNTY – REDWOOD VALLEY FIRE

INITIAL DAMAGE ASSESSMENT

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FOR: CAL-OES

DATE: OCTOBER 27, 2017

MENDOCINO COUNTY – REDWOOD VALLEY FIRE

OVERVIEW

Damage Assessment:	Redwood Valley Fire, Mendocino County
Requesting Agency:	Cal-OEA
Assisting Agency:	CalRecycle
Subject Matter Expert:	Todd Thalhamer, P.E.
Incident:	The Redwood Valley Fire started on October 8, 2017 at 11:59 pm in Mendocino County north of Hwy 20, west of Mendocino National Forest, south of Black Bart. A total of 36,532 acres were burned and 300 residential, 4 commercial, and 215 outbuildings were destroyed.

OBJECTIVE

Assess the structural debris impacts from Redwood Fire to the watershed from the Russian River and tributaries.

THREAT

Past studies of burned residential homes and structures from large scale wildland fires, the resulting ash and debris from residential structures burned by fires can contain toxic concentrated amounts of heavy metals, such as antimony, arsenic, cadmium, copper, lead, and zinc. Additionally, the ash and debris may contain higher concentrations of lead if the home was built prior 1978 when lead was banned in the United States from household paint. These heavy metals as discussed in the "Assessment of Burn Debris - 2007 Wildfires San Bernardino and San Diego Counties, California" (DTSC 2007), (<http://www.calepa.ca.gov/Disaster/Fire/>) and Assessment of Burned Debris- 2015 Wildfires Lake and Calaveras County, California (DTSC 2015), <https://etp.ca.gov/wp-content/uploads/sites/34/2016/10/Disaster-Documents-2015yr-FireSample.pdf> can have significant impact to individual properties, local communities, and watersheds if the ash and debris is not removed promptly.

The residual materials such as stucco, roofing, floor tile, linoleum, fireplaces, furnaces, vinyl tiles and mastic, sheetrock and joint compound, cement pipe, exterior home siding, thermal system insulation, concrete and mortar, and other building materials commonly used in homes built before 1984 may also contain other chemicals of concern such as asbestos.

DISCUSSION

Based on my site visit on October 26, 2017, the structural debris from this wildland fire poses a substantial threat to the watershed of the Redwood Valley and Russian River and tributaries. For my site visit, I used Google Maps, which already has posted new satellite imagery of the destroyed

structures on my Android viewer, and a map and watershed parcel list provided by the County of Mendocino (See Appendix A). Not all properties listed as potential watershed hazards were visited on my initial site visit; however, more than 75% of the structural disaster area was reviewed.

While more than 300 properties were destroyed by the Redwood Fire, there are approximately 50+ properties that are in within 250 feet of a tributary of the Russian River. These 50+ parcels contain ash, debris, and other wastes that if not mitigated in the next 60 days will begin to impact the watershed. Some sites off East Road (Lat 39.289226/Long -123.203809) and Jenkins Road (Lat 39.340719/Long -123.222503) are within feet of a drainage course while other sites are within the required flood setbacks of 50 to 250 feet. Based on debris removal of 2500 properties for past five years in Lake, Calaveras, and Siskiyou Counties, the debris should be removed before a total of 4 to 7 inches occurs. *- rain*
This observation is based on past rainfall intensity, duration, and days between storms.

As with all the wildfire disasters in northern California, resources are in short supplies and debris removal operations should occur in order of priorities set by an incident management team (IMT). Typical wildfire debris priorities include 1) schools, preschools, daycares, and hospitals; 2) debris zones with high population density; 3) high hazard sites with population density; 4) community resources such as fire stations, commercial centers; 5) interface zones between burned homes and non-burned homes; 6) environmentally sensitive areas such as reservoirs, creeks, wetlands; 7) other areas identified by the IMT.

Given the remoteness of some of the properties in the Redwood Valley, I am recommending these sites as well as others within 50 feet be sprayed with a concrete-fiber bonding agent. Recently CalRecycle tested a product on a few homes on the Detwiler Incident in Mariposa. The product created a water repellent and dust suppression cover that reduced ash movement.

SCOPE OF WORK

To abate the hazards the following scope of work is suggested:

1. Establish an IMT for the incident and immediately identify the priorities
2. Add erosion control to sites within 50 feet of a current low flow line
3. Examine the use of products that will create a water repellent and dust suppression cover that will restrict ash movement

COST

Using CalRecycle wildfire disaster cleanups in Lake County, the preliminary cost to remove the 50 parcels along with the erosion control is \$2,500,00 million dollars. In the interim, I am recommending a contract be issued for the placement of erosion control and the spraying of a concrete fiber product such as Posi-Shell to control the potential run off.

MISSION TASK RECOMMENDATIONS

The following mission tasks are recommended to abate the hazard:

1. Hire and contractor to place erosion control devices at debris sites within 50 feet of low water levels as identified by an IMT.
2. Hire a contractor to spray a bonding agent on the fifty sites within the watershed in the Redwood Valley Fire.
3. Task Department of Fish and Wildlife (DFW) for warden to oversee regulatory compliance

4. Optional – California Conservation Corps hazmat crews to assist with installing erosion control as identified by an ITM.

PHOTOS

