

**Road data**

Whether private, dirt, rock or paved, there is agreement between stakeholders that proper mapping and identification of road systems throughout the counties is a high priority. Complete and accurate road mapping is vital during a wildland fire incident. Proper mapping allows emergency responders to locate and manage an incident. In many instances, out of county emergency responders do not know the local road systems in the vicinity of the wildfire. The Counties of San Mateo and Santa Cruz both have Geographic Information Systems (GIS) personnel who maintain county data. Although the county roads data is accurate, there are large areas where data is lacking. These omissions primarily occur in the more rural areas of the counties and on large private and public landholdings such as parks or preserves, and managed timberland. Over the past several years, CAL FIRE has begun compiling roads data, utilizing a variety of sources. These roads data were helpful during the large wildfires of 2008 and 2009.

- This process should continue into the future. Collaboration between stakeholders to prepare a comprehensive map and inter-operable system is a priority.

Road and Bridges and Water in the WUI – In terms of new construction within the WUI, there are many common standards in terms of access, road width, water supply, and bridge specifications. These standards take into consideration the risk of wildland fire and the needs of responding fire agencies. There was, however, considerable construction in the WUI prior to modern fire code. There are, throughout both counties, numerous residences accessed by narrow, unmaintained roads, sometimes by inadequate bridges. This coupled with a limited water supply can result in disaster during a wildfire. The following issues should be strategically addressed:

- Identifying inadequate bridges and plan for fixes.
- Identify existing water supplies in the wildland.
- Identify locations for additional wildland water supplies.
- Identify, prioritize, and mitigate high risk roads in the WUI

**Truck Trails/Fire Roads**

There are numerous “truck trails” or “fire roads” located throughout both counties, most of which are historic logging roads, referred to as truck trails for the purpose of this plan. The current conditions of truck trails are varied. Many are maintained at minimal levels, while others are neglected, often because of insufficient resources. Some have been abandoned due to poor initial location, improper construction, and failures due to landslides or washouts. Truck trails bisect a variety of properties of both public and private ownership. The importance of these roads in the event of a wildfire cannot be overstated. For example, the Warnella truck trail and shaded fuel break provided critical ingress and egress access to the Lockheed Fire in 2009. In northern Santa Cruz and most of San Mateo County, numerous truck trails

provide access to the primarily roadless areas between the coast and Hwy 35. When a wildland fire affects these parts of San Mateo and Santa Cruz Counties, the truck trails will be of vital importance. Accurate mapping, appropriate maintenance, relocation of problem areas, and consideration of abandoning failed sections is needed on all truck trails.

### **Structure Protection Planning**

One of the common difficulties during the wildfire season in California is when fire crews respond to regions they are unfamiliar with. This problem is compounded when responders have limited information on roads, number of structures, evacuation routes, water supply, and other hazards. The Santa Cruz County Fire Chiefs have begun a project identifying pre-determined protection planning zones. The zones will be identified by local fire officials and will include pre-packaged information, which will be provided to first responders in the event of an emergency. This is an ongoing project.

Fuel Breaks, Shaded Fuel Breaks and Roadside Fuel Breaks have been previously discussed in the plan. This plan has identified areas where fuel reduction projects should take place. There is a need to further investigate environmentally and socially acceptable landscape level fuel breaks. Part of the benefit of bringing multiple parties to the table, is that priority areas and assets at risk have become identified. This allows planners to consider not only community or neighborhood specific projects but also landscape level projects.

### **Eucalyptus**

Eucalyptus was introduced into California in the mid 1800's both as a windbreak and for fiber production. It has thrived in California's climate and has since spread throughout the state. Eucalyptus is responsible for the displacement of numerous native species. Because of its invasive nature and proclivity to burn rapidly and violently, eucalyptus has been identified as one of the highest priority tree species recommended for fuel modification or removal. Eucalyptus as a wildland fuel was observed in Santa Cruz County during the 2008 Trabing Fire and prior to that, the Oakland Hills Fire in 1991. Both fires resulted in losses of property and residential structures and in the case of Oakland, loss of life. Historically, there have been eucalyptus fires adjacent to the community of El Granada (Wicklow Property) which involved loss of life and property. Reports of embers observed falling 2 to five miles downwind illustrates the danger of a fully involved Eucalyptus stand.

Eucalyptus was imported into the local area in the early 1900's for several uses, including fuel for powering locomotives. Numerous windrows were planted in the area and this species was found to exhibit strong adaptation and rapid growth. What was planted over 100 years ago as single or double wide rows of trees, have expanded to extensive and dense forested areas. Recent estimates of expansion of Eucalyptus groves are 3 lineal feet per year. Eucalyptus is so successful in colonizing new ground to the exclusion of native species that a common comment during scoping sessions for this

CWPP have been to request that the species be declared a noxious weed or an invasive pest, and be eradicated.

Eucalyptus stands frequently grow in excess of 80' tall and have a propensity to generate copious amounts of ground litter. Vertical ground litter accumulations of 3' or more of dry leaves, branches, bark are not uncommon. Because of peeling bark, small branches and sprouts, many eucalyptus stands exhibit fuels from the ground to canopy. Fire behavior in these stands can become extreme.

Flame length 1 and a half times the height of the stand is frequent in large stand replacement fires. Other examples of these conditions can be found in southern Australia in the frequent large catastrophic fires. This becomes a huge factor in fire control when residential and other structures are built within and adjacent to these stands.

There are several locations throughout the counties, where residents live in close proximity to large eucalyptus stands. Consideration should be given to addressing the potential risk to lives and property where this situation exists. Several projects have been completed as pilot projects to thin or remove stands in the San Mateo County. Projects such as the Wicklow Project by POST and Coral Reef project by the RCD, CALFIRE and Cabrillo Unified School District. There are current plans to thin and remove eucalyptus in the area of the Trabing Fire of 2008.

Potential projects needed across the landscape include:

- Identifying and mapping eucalyptus stands in both Counties.
- Identify risks to lives and property;
- Mitigate risk to lives and property through appropriate vegetation management projects (thinning, removal, and pruning).