

**TOWN OF PARADISE FIRE DEPARTMENT – Chief Jim Broshears And the Town of Paradise  
Fire Safe Council – Coordinator Jim Broshears**

***Problem Statement***

Fire History

The Town of Paradise Fire Department and its predecessor, the Paradise Fire Protection District, have experienced numerous wildland fires over the years. While none have resulted in the devastation of major fires such as the Oakland Hills Fire in 1991, the threat and possibility of such a fire is very real.

Present Fuel Load

The California Department of Forestry and Fire Protection has developed a Geographical Information System (GIS) to map the fuel types within the project area. Typical fuel types on the Paradise Ridge consist of fuel models 9 & 10 (light & medium mixed conifer while fuel model 6 is characteristic of the open slopes and drainages bordering the Town, Butte Creek to the west and the West Branch of the Feather River to the east. The BTU Fuel Hazard Ranking map (displayed in the fuel analysis section) ranks the fuel hazard as “very high” throughout the majority of the Paradise Area, and “extreme” on the eastern boarder along the Feather River drainage.

Fire Dynamics

The natural cycle of fire has been interrupted by fire suppression activities over the past 100 years. Projects which address the protection of people and home values on the Paradise Ridge **must** address fuel load reduction, particularly around or near structures.

Assets at Risk

The Town of Paradise is the largest incorporated city in the foothills of Sierra Nevada, with 27,000 residents. The Upper Ridge, which is immediately adjacent to Paradise, adds an additional 16,000 residents. During the analysis pertaining to Assets at Risk (see map displayed in the Assets at Risk section of this Plan), the Town of Paradise and surrounding area was scored as medium and high risk, as compared to the majority of the County at low and medium.

The assessed valuation of Property in the Town of Paradise is \$1,245,893,428. The combination of relatively high population density and assessed property valuation within a clearly defined area of urban interface where the Town of Paradise adjoins the wildland creates a rather unique fire protection planning dilemma.

The impact of a wildland fire on the watersheds surrounding the Town could also be significant. The west branch drainage basin terminates in Oroville Lake and the west and south side of Town all form watersheds that directly or indirectly impact Butte Creek, which drains into the Sacramento River.

Fire Cause Analysis

The problem has not changed. However, the 1999 lightning caused fire siege, the Concow Fire of 2000 and the Poe and "70" fires in 2001 have **reinforced** the need for increased wildland fire safety for Paradise and the Upper Ridge.

### **Significant Events**

- ❖ **Poe Fire – September 2001:** This fire posed a potential threat to the Town of Paradise. The Town initiated a partial activation its EOC.
- ❖ **"70" Fire – October 2001:** This fire posed a minor threat to the Town and was monitored by Town Emergency personnel.
- ❖ **Honey Run Fire – August 2001:** This fire started in the early morning hours on August 19, 2001 on Honey Run Rd near the Town limit. While only 3.5 acres in size, it posed an immediate threat to residents on Russell Drive in lower Paradise and resulted in evacuations and a limited activation of the Town EOC.

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A Town of Paradise Fire Safe Council, comprised of about 15 citizen volunteers, has been recently formed to assist with the planning, development, and implementation of pre-fire management projects within the town. Among the councils top priorities will be to work closely with homeowners assisting with firewise education and planning, as well as hazardous fuels reduction.

### **Alternative Solutions**

The solutions to the fuel load problem will have to be addressed with a variety of management alternatives. Because the area of *"Interface and Intermix"* between the wildland fuels and human values is so large, addressing the problem will require various fuel reduction prescriptions and the linking together of multiple projects.

The Paradise fuel reduction plan includes the fuel modification concepts defined below:

### **Definitions**

**Roadside Fuel Reduction Zone, (RSFRZ):** Areas along roadways, approximately 10 to 50', where fuels are thinned or removed. The primary purpose is to create safe access for fire equipment and egress for residents. This zone also provides potential control lines which can be easily improved during fire fighting operation or can be used for "firing out" operations.

### **Fuel Reduction Projects, (FRP):**

- ❑ **Fire Breaks** - Complete, or nearly complete, removal of fuel in strategic locations which serve a control line that can be easily improved in a fire situation. Fuel breaks are usually located along power line right-of-ways or on other private lands.
- ❑ **Shaded Fuel Reduction Projects, (SFR):** Removal or reduction of vegetation in areas adjacent to structures in the interface between wildland and structures. In fire fighting

terminology, this is known as the "I-Zone". This area is included in the Town of Paradise Hazard Abatement Ordinance and is normally considered to be the first 30' to 150' feet from the structure.

However, the Shaded Fuel Reduction actually includes up to 300' from the structures depending on the type and size of the vegetation in a specific area and the slope or topography of the area.

The goal in this zone is to remove, reduce or replace the highly flammable surface vegetation, limb up trees and thin out small flammable trees to make the structures defensible in a wildland fire. Shading reduces the surface fuel temperature, increases humidity, and discourages re-growth of sun tolerant shrub species.

The difference between the Hazard Abatement Ordinance and the Shaded Fuel Breaks is the identification of entire areas that abut drainage basins or open wildland areas and can serve as a first line of defense for fire fighting efforts while creating "defensible space" for individual structures.

These projects would be achieved by the following methods:

- 1) **Hand Crews:** Including Private Contractors, California Conservation Corp. (CCC), California Department of Corrections Inmate Crews, Sheriff Work Assistance Program (SWAP), Private Industry Council (PIC), Youth Groups, and other organized groups.
- 2) **Mechanical Deloading:** This would include:
  - a) Dozer pile and burn operations
  - b) Mechanical mastication
  - c) Dozer/excavator clearing, combined with biomass fuel removal
- 3) **Livestock Grazing:**
  - a) Goats used in spot applications
  - b) Commercial grazing used in light fuels where practical

#### ***Current Fuel Reduction Projects***

- ❖ **West Branch Fuel Reduction Project:** This project was completed in 2004. The WBFRP is 3.3 miles in length along the West Branch of the Feather River Canyon, following the Town boarder from roughly Feather River Hospital to Dean Road. This project created up to 150' fuel reduction, primarily Shaded Fuel Breaks on parcels that interface with the wildland within the West Branch of the North Fork of the Feather River canyon.

This project was a top priority for the Town in its fuel reduction efforts. The area along the West Branch of the Feather River is extremely overgrown with wildland vegetation, steep and borders the Concow and Yankee Hill communities that have a history of large and damaging fires.

- **Top of Paradise Fuel Reduction Project:** This 6 mile long project is currently being completed. The TOPFRP runs north from the completed West Branch FRP to the top of Paradise, then runs southwest along the rim of Little Butte Creek Canyon to Bille Park.

- **Dry Creek Fuel Reduction Project East Phase & West Phase** These are is two parallel projects that form a “U” shape in the Dry Creek drainage as just south of Pearson Road. These shaded fuel breaks will total a combined two miles and will tie into fuel reduction work completed in adjoining subdivisions as conditions of approval. These projects have been funded and are slated for completion in 2005/2006.

### ***Additional Projects***

- ❖ Clear Creek Fuel Reduction Project
- ❖ Morgan Ridge Roadside Fuel Reduction Project
- ❖ South Paradise Fuel Reduction Project
- ❖ Old Clark Road Fuel Reduction Project
- ❖ Eden Road Fuel reduction Project
- ❖ Wayland Roadside Fuel Reduction Project
- ❖ Paradise Vegetative Management Project
- ❖ West Paradise Fuel Reduction Project

### ***Goals for 2005/2006***

- Complete the 6 mile “Top of Paradise” Fuel Reduction Project.
- Complete Dry Creek Fuel Reduction Project West & East Phase
- Develop severity zones for the Town of Paradise to be used to increase requirements for defensible space and fire resistive building construction..
- Complete 500 defensible space inspections
- Acquire a grant for 2006 to continue fuel reduction projects around Paradise.
- Conduct a major Wildland Urban Interface training exercise.

### ***Objectives***

The objectives have not changed. However, the method of achieving the fuel reduction has gone through an evolution. The current plan identifies eleven fuel reduction areas. The new concept builds on the original fuel reduction areas but identifies over fifty project areas that encircle the entire Town and follow drainage basins up in to the Town.

The concept of developing many projects is designed to utilize the existing geographical access and neighborhoods defined areas where a project could logically start and end. Examples of these areas would include:

- Large parcels where development is planned, fuel reduction would be a mitigation measure.
- Areas accessed by a single street, i.e., Feather River Place.
- Neighborhoods where contiguous homes present an interface between the wildland and the Paradise Urban Area, particularly on canyon edges and in drainage basins.
- Large parcels not slated for development where the property owner wants to improve fire safety.

These areas constitute a fire defense area that serves the entire community. By improving defensible space for the homeowner, better community fire safety is achieved. These fuel reduction zones would be achieved through the following principles.

- Public/private partnerships.

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- ❑ Cooperation with public land agencies (BLM, USFS).
- ❑ Formation and support of neighborhood groups (i.e. neighborhood watch).
- ❑ Maintaining aesthetic and environmental values.
- ❑ Cost effectiveness through cooperation.
- ❑ Best practices approach. (Utilize the best tool for the job based on cost, aesthetics, fuel type, terrain and environmental conditions).

***New Opportunities for Implementing Solutions***

The solutions for improving wildland fire safety on the Ridge include the following elements:

- ❖ Emergency Response and Infrastructure
- ❖ Public Education and Awareness
- ❖ Fuel Reduction
- ❖ Evacuation Planning
- ❖ Community Disaster Planning

***Accomplishments and Continued Solutions***

Each area has been addressed in some way during the past two years. Examples in Paradise include:

- ❑ Increased the minimum defensible space distance required within Paradise from 30 to 50 feet.
- ❑ Completed a cooperative water main project with the Paradise Irrigation District in critical areas of the Town: Bennett Road/Storybook Phase II & Woodland Drive.
- ❑ West Branch Fuel Reduction project was completed, 3 miles and 127 acres.
- ❑ Completed the 3<sup>rd</sup> edition of the Paradise/Upper Ridge/Magalina/Paradise Pines/Stirling City Wildland Fire Evacuation Plan and mailed out 20,000 copies.
- ❑ Top of Paradise Fuel Reduction Project is 30% complete.
- ❑ Defensible Space Inspection Program has completed 600 inspections.
- ❑ Awarded "Fire Safe Home of the Month" awards within Paradise.
- ❑ Started the Town of Paradise Youth Wildland Fire Council
- ❑ Participation in the Butte County Fire Safe Council Chipper Program, over fifty homes have been served in the Town of Paradise.
- ❑ Distribution of the wildland fire Landscaping brochures created by the Butte County Fire Safe Council

***Resource Needs***

- ❑ Reduce roadblocks to large scale planning or projects due to CEQA requirements and NEPA requirements.
- ❑ Increased engine company staffing.
- ❑ Improved water delivery in very high-risk wildland areas. A primary fire- fighting issue in the perimeter areas involves a lack of water supply to areas with large concentrations of people. This problem has resulted from a combination of difficult terrain and the slow change in demographic from rural to semi-urban. This problem can be addressed by the installation of new water mains, which are capable of delivering adequate water for fire fighting purposes as defined in the California Fire Code, Appendix III (a). Currently the Town of Paradise water service is provided by the Paradise Irrigation District (PID). According to PID records,

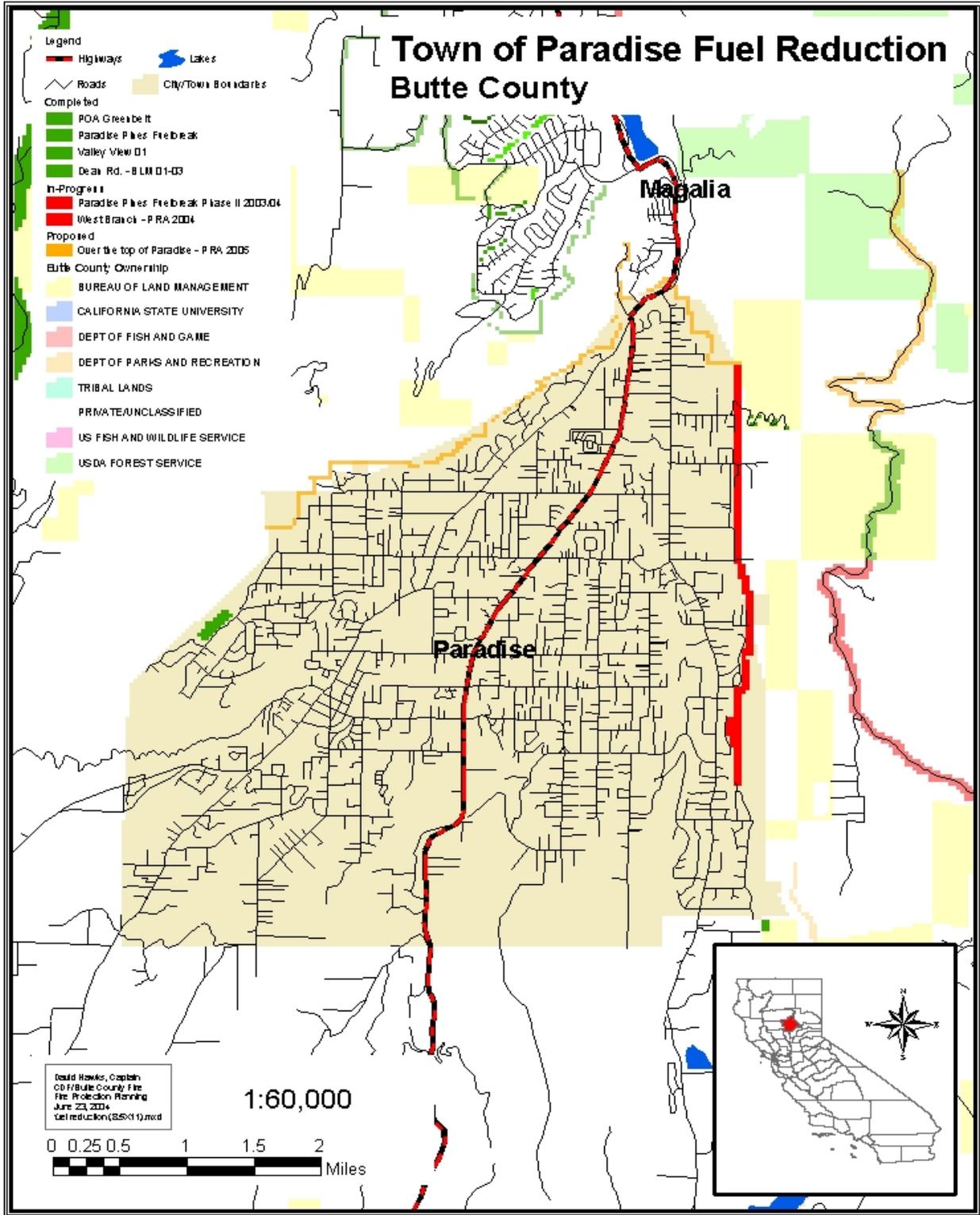
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there is over 151,000 feet of 4" or less water pipe incapable of delivering the required fire flow.

- Personnel assigned to the development of CEQA requirements, writing and administration of grants and to oversee projects.
- Increased citizen participation, particularly in the zones identified on the updated map.
- Funding for fuel reduction projects. The concepts applied and lessons learned from completed projects can be exported to other neighborhoods, and the most successful aspects applied to future efforts.
- Incentives provided to participating landowners such as cost sharing or joint public private projects.
- A method to improve the utilization of the large volume of biomass that is a byproduct of the fuel reduction and homeowner green waste cleanup needs to be refined.

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