The objectives of this section are to:

- Identify mitigation measures that focus on public safety, firefighter safety, reduce structure ignitability, and reduce damage to assets and natural resources.
- Identify areas where collaborative efforts of local, state, federal agencies and private landowners can mitigate risks of structure ignitability, reduce hazardous fuels, and wildfire threats to communities and watersheds.
- Support efforts of Butte County, the County Fire Chief, County Fire Chiefs Association, Butte County and community Fire Safe Councils, Butte County Natural Resource Conservation Service (NRCS), California Department of Forestry & Fire Protection (CAL FIRE), United States Forest Service (USFS), Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA), and other agencies and organizations to collaboratively implement mitigation measures and obtain funding assistance.

MITIGATION MEASURES BY FOCUS AREAS:

Focus areas are broken down into elements, which contribute to the risk of homes and communities being lost to wildfire. A statement of the situation or issue will be presented, followed with a mitigation recommendation(s).

Information, Education and Planning

Risk:

Any information that is presented and is otherwise false or inaccurate poses a great threat to successful implementation of emergency circumvention. There are a number of Fire Safe Councils that are made up of volunteers or staff that receive funding sources through grants and other endowments. Should those resources not be available, the fuels reduction projects and educational program displays that are currently being produced could be severely impacted.

Mitigation:

Continue to expand and circulate the information currently being offered to the community. Ensure that the local fire chiefs and contributing agencies are in agreement with the message being presented. Expand the safety messages to include developers, realtors, contractors, home builders, and building inspectors and others on methods and building construction to improve the chance for structural survivability. Programs should address: home site location, safe access, signage, importance of available water, adequate fire protection and the critical role vegetation plays in wildland fire including landscape implementation.

These programs need to have evacuation planning prior to emergency incidents to improve orderly evacuation of civilians and the ingress and emergency crews. Community evacuation plans will be developed and maintained through a

coordinated effort involving law enforcement, fire, EMS, County OES and the American Red Cross with the assistance of area fire safe councils. Many of the County's communities have evacuation plans with identified evacuation routes and public assembly areas. Communities without plans should be identified by County OES as part of the County's Disaster Mitigation planning. Evacuation plans need to be tested with simulated emergency drills to improve effectiveness

CWPP Updates – Completion of the Community Wildfire Protection Plan is the first step in planning and implementing mitigation activities that will protect homes and communities from wildland fire. The CWPP serves for the unincorporated communities within the County of Butte, and the incorporated communities of Biggs, Chico, Gridley, Oroville and Paradise The plan will be updated annually with specific consideration give to the areas designated as CAR and the elements of the fire risk mitigation strategies by area of focus.

Reducing Structural Ignitability

Risk:

Homes that 1; do not maintain a defensible space reducing flammable material around their homes to keep direct flames and heat away from the side of their buildings, and 2; construct buildings that do not adhere to State Fire Marshal approved products and construction methods, stand a greater chance of losing their home in a wildfire.

Mitigation:

The State Fire Marshal has adopted new building codes for California's Wildland Urban Interface. http://osfm.fie.ca.gov

On September 20, 2005, the California Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the California Code of Regulations (CCR), Title 24, Part 2, known as the 2007 California Building Code (CBC).

"701A.3.2 New Buildings Located in Any Fire Hazard Severity Zone. New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter. New buildings located in any Fire Hazard Severity Zone shall comply with one of the following:

1. State Responsibility Areas.

New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.

2. Local Agency Very-High Fire Hazard Severity Zone.

New buildings located in any Local Agency Very High Fire Hazard Severity Zone for which an application for a building permit is submitted on or after July 1, 2008, shall comply with all sections of this chapter.

3. Wildland-Urban Interface Fire Area designated by the enforcing agency.

New buildings located in any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.

OBJECTIVE

The broad objective of the Wildland-Urban Interface Fire Area Building Standards is to establish minimum standards for materials and material assemblies and provide a reasonable level of exterior wildfire exposure protection for buildings in Wildland-Urban Interface Fire Areas. The use of ignition resistant materials and design to resist the intrusion of flame or burning embers projected by a vegetation fire (wildfire exposure) will prove to be the most prudent effort California has made to try and mitigate the losses resulting from our repeating cycle of interface fire disasters. The California Department of Forestry and Fire Protection (CAL FIRE) and the Office of the State Fire Marshal (OSFM) revised the mandatory effective date for those areas where local government has responsibility for wildland fire protection (LRA) to July 1, 2008, to enable local government agencies more time to review and accept the fire hazard severity zone maps that wer presented to them.

Risk:

While **over fifty percent of** new construction and remodels are generally covered by these provisions, previous construction not meeting these new standards could increase risk of intrusion from flames and embers. These risks include but are not limited to *roofing, attic ventilation, exterior walls, decking and ancillary buildings and structures.*

Mitigation:

2001 California Building Code, Chapter 7, Section 704A – Materials, Systems and Methods of Construction, provides category explanations for the risks and detailed subheadings for each risk. Within this section, fire resistant ratings, wood thickness, vent opening allowances and other construction and building code requirements are covered to resist flame ember and flame intrusion where a wildfire burning in vegetative fuels may readily transmit fire to buildings and threaten to destroy life, overwhelm fire suppression capabilities, or result in large property losses.

Enhancing Suppression Capabilities and Public Safety

Risks:

Butte County presents a unique challenge for fire protection with a blend of urban and rural fire and rescue needs. These needs are not only spread by geographic boundaries, but political and jurisdictional as well. Changes in modern society such as terrorism, hazardous materials, and urban search and rescue to name a few, along with expanding rural populations present increasing challenges for emergency providers**.**

Mitigation:

Support the implementation of Butte County Fire Department's Master Plan, developed by the County Fire Chiefs Association. This plan includes maintaining the existing fire and rescue capabilities and re-establishing fire protection elements that have been recently cut such as the staffing of local hand crews and fire lookouts. Continue to work with adjoining fire departments to share critical and scarce resources across jurisdictional boundaries.

Risks:

Emergency response that is hindered by unidentifiable roads and addresses, poorly maintained drives and private roads, inaccessible residences due to bridge construction, locked gates and slopes restricting vehicle access and the inability to access copious amounts of water for fire suppression.

Mitigation:

New construction standards have provisions in place to require all new construction developments to be PRC 4291 compliant. City and county inspectors must have the resources to perform inspections and be able to carry out code enforcement. For existing structures, measures should be explored that will offer *incentives* to bring existing residences and communities up to state and local standards for emergency access. Identify, map and sign existing water sources using GIS. Enhance and improve water storage, access, and development for firefighting on public and private lands.

Risks:

Emergency evacuations for communities within the wildland urban interface currently have one way in and out of their community.

Mitigation:

Agencies working with County OES will identify communities with inadequate escape routes. This process shall be included in the County General Plan Process. Communities, industrial landowners, along with local, state, and federal agencies should work collaboratively to identify and pursue funding to improve emergency

evacuation routes for communities with one way in and out. Develop MOU between private landowners and public pertaining to road maintenance and liability during evacuation. Support efforts to improve local and state road systems for emergency access.

Hazardous Fuel Reduction

Risks:

Homes and properties that do not comply with (PRC 4291) fuels reduction standards stand a greater risk to propagate the spread of a wildland fire and reduce fire suppression capabilities. This risk is increased when homeowners use non-native plants or arrange the landscaping in a fashion that increases wildland fire spread. Vacant lots with excessive fuel loads near structures create hazards when there is no legal basis to enforce clearance.

Mitigation:

Educational efforts are being made to educate residents on the risks due to inadequate defensible space and the need to comply with state and local laws requiring the removal of vegetation for defensible space around their residence. Continue with Fire Prevention programs that send inspectors to target communities to enforce PRC 4291 compliance. “Defensible Space Landscaping in the Wildland Urban Interface” completed by the University of California Forest products lab is an excellent source for fire performance ratings for various plants. (http://ucce.ucdavis.edu/fileslibrary/616/4017.pdf) Look to modify county and city codes to require vacant lots to conform to a fire safe standard requiring property owners of vacant properties to clear a minimum of 30’ along property lines, and in areas where neighboring properties have a structure the clearance should be in 4291 compliance.

Risk

Post Forest Practice activity (slash) fuel treatment – Forest practice activities including pre-commercial thinning and harvesting creates “activity fuels,” slash which under the forest practice act must be treated to carrying standards based upon the circumstances. Reference the California Forest Practice Rules Article 7, Hazard Reduction, Section 937.2 treatment of Slash to Reduce Fire Hazard

Non-Compliance with post treatment fuel conditions can create additional risks to catastrophic fire losses.

Vegetation Treatments: Essentially states that tree removal targets under story trees, with a maximum tree sized to be removed of less then 30” inside bark stump diameter, post harvest canopy closure of 40-60% varying by forest type, with stocking meeting the commercial thinning requirement, under story and surface fuels to be removed to achieve a distance of 8’ height to the base of the live crown,

and surface fuels to be treated within 120 days from start of operations to achieve a maximum 4 foot flame length.

Mitigation

Educate non-industrial and industrial forest landowners about the added fire hazard created by remaining activity fuels. Work with non-industrial and industrial forest landowners to treat activities fuels within the designated Wildland Urban Interface area beyond the requirements of the forest practice act. Explore incentives, such as tax credits, for landowner, who treat activity fuels within the WUI to a 2-4' flame length. Work with the Board of Forestry to establish forest practice standards for the treatment of activity fuels, particularly those generated during pre-commercial thinning, within the WUI similar to the "vegetation treatment" standards within the CAL FIRE "Notice of Emergency Timber Operation Fuel Hazard Reduction."

Risk

Many proposed subdivisions in Butte County have hazardous fuel conditions that place the development and surrounding homes and communities at risk. Moreover, with the addition of structures and people in areas will bring an increased risk of fire starts.

Mitigation

Modify county codes to require hazardous fuel treatment on proposed developments prior to recordation of final map. To expedite fuel reduction countywide, manage fuels in an economy of scale, and insure completion. It may be prudent to require hazardous fuel reduction prior to recordation of the final subdivision map. Require a maintenance plan to maintain the investment, desired fuel condition, and provide for community safety, in upcoming developments. Require a hazardous fuel reduction maintenance plan that can assign either the Homeowners Association or Communities Service District the responsibility to provide for future fiscal and enforcement responsibilities to maintain fuels in a fire resistant condition. Hazardous fuel reduction and subsequent maintenance should create a fire resilient condition, a condition which would not contribute to initiating or sustaining a crown fire, and potential surface fuel flame lengths would be 3' or less.

Risk

Fuel treatment within communities at risk has begun to develop hazardous fuel reduction projects on much untreated land between structures and in common areas throughout the county. This is an area that includes private and public lands that fall within the WUI, to include the Communities at Risk, Adjacent Area and the Extended Area of Risk. Maintenance is a key component to the successful implementation of any project.

Mitigation

Encourage property owners, homeowner associations, community services districts, communities, and agencies to work collaboratively to reduce the risk of fire. Implement fuel treatment measures within and around communities as stated in this document. County efforts should continue to be made in the pursuit of funding for community hazardous fuel reduction activities. Explore incentives for existing large landowners to meet hazardous fuel reduction standards on their properties. Through collaborative efforts, all public lands within communities at risk should be assessed for treatment. Public lands should be treated to a standard which will create a fire-resilient stand, which would not contribute to initiating or sustaining a crown fire, and potential surface fuel flame lengths would be 4’ or less. Complete Butte Counties Strategy for Fuel Reduction including private, local, state and federal hazardous fuel reduction projects. Explore incentives for existing landowners to meet HFR standards on their properties. Continue to pursue projects that establish fuels reduction measures within the WUI focusing on CAR as the projects extend into the WUI.

Educate homeowners and other agencies involved in fuel reduction about the dynamic plant communities and the need to complete periodic fuel reduction maintenance in order to prevent re-growth. Require that fuel reduction project within developments, communities at risk, and the adjacent and extended WUI area identify and plan for the needs for future maintenance, including frequency, type and anticipated cost. Work with governing boards, agencies and lawmakers to develop, approve and regulate alternative methods for fuel reduction maintenance. Explore incentives for existing landowners to maintain hazardous fuel reduction standards on their properties.