MILFORD COMMUNITY
WILDFIRE RISK ASSESSMENT REPORT

Adopted by Milford FIREWISE® Board:
August 21, 2014

Site Visit conducted:
March 21, 2014,
May 2, 2014,
May 30, 2014

Reviewed by Milford
Fire Chief: July 9, 2014

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Table of Contents

FIGURES

TABLES

Certificate of Completion

This certificate is presented to

Dan Douglas

who has satisfactorily completed the course

CONDUCTING A COMMUNITY ASSESSMENT IN THE WILDLAND/URBAN INTERFACE: BEGINNING THE PROCESS

September 2, 2013

FIREWISE COMMUNITIES

Firewise Principles & Community Risk Assessment Training

April 29 and 30, 2014

Is Awarded To

Dan Douglas

FIREWISE COMMUNITIES

U.S. DEPARTMENT OF THE INTERIOR 1824 BUREAU OF INDIAN AFFAIRS

David E. Hunn

Division Manager

1. INTRODUCTION and BACKGROUND

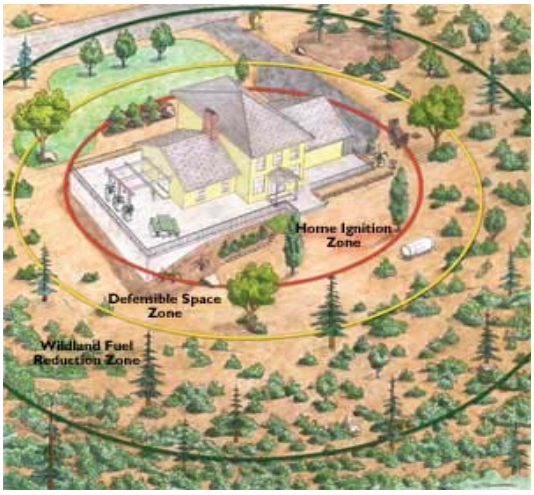
Introduction

The Firewise Communities/USA® recognition program is designed to provide an effective wildland fire management approach for preserving wildland living aesthetics. The program can be tailored for adoption by any community and/or neighborhood association that is committed to ensuring its citizens maximum protection from wildland fire. The following community assessment is intended as a resource to be used by the Milford residents for creating a wildfire safety action plan. The plan developed from the information in this assessment should be implemented in a collaborative manner, and updated and modified as needed.

In July of 2013, the Milford Community Association was approached by the :Lassen County Fire Safe Council, Inc. (LCFSC) to began the process of seeking "Firewise Communities/USA®" recognition for their community located in Lassen County. Milford lies within a wildland-urban interface (WUI), an area that figures prominently in wildland fire discussions. The Milford area consists of the community of Milford entirely. For purposes of this document, the Milford community consists of residences amongst tall trees and brush surrounded by undeveloped forest land, making this a good example of a WUI community.

The potential for catastrophic wildland fire has been recognized in the Milford Community. Various efforts have been made over the years to reduce hazards on residential lots and state laws are followed regarding the creation and maintenance of defensible space on all lots with structures. Nevertheless, fire remains a priority safety concern throughout the community.

2. Definition of the Home Ignition Zone



The community of Milford is located in a wildfire environment. Wildfires will happen—exclusion is not a choice. The variables in a fire scenario are when the fire will occur, and where. This assessment addresses the wildfire-related characteristics of the Milford community. It examines the area's exposure to wildfire as it relates to ignition potential. The assessment does not focus on specific homes, but examines the community as a whole.

A house burns because of its interrelationship with everything in its surrounding home ignition zone—the house and its immediate surroundings. To avoid a home ignition, a homeowner must eliminate the wildfire's potential relationship with his/her house. This can be accomplished by interrupting the natural path a fire takes. Changing a fire's path by clearing a home ignition zone is an easy-to-accomplish task that can result in avoiding home loss. To accomplish this, flammable items such as dead vegetation must be removed from the area immediately around the structures to prevent flames from contacting them. Also, reducing the volume of live and dead vegetation will affect the intensity of the wildfire as it enters the home ignition zone.

3. Scoping

Included in this assessment are observations made while visiting the area. The assessment is broken into sections to address two concerns: the fire dangers existing within the Milford community and the critical fire conditions in the surrounding area.

The assessment addresses the ease with which home ignitions can occur under severe wildfire conditions and how these ignitions might be avoided within the home ignition zones of affected residents. Milford residents can reduce their risk of destruction during a wildfire by taking actions within their home ignition zones. This zone principally determines the potential for home ignitions during a wildland fire; it includes the house and its immediate surroundings within 100 to 200 feet.

The result of the assessment is that wildfire behavior will be affected by the residential characteristics of this area. The good news is that by addressing community vulnerabilities, residents will be able to substantially reduce their exposure to loss. Relatively small investments of time and effort will reap great rewards in wildfire safety.

4. Wildland Fire Characteristics that Could Threaten the Area

Fire intensity and spread rate depend on the fuel type and condition *(live/dead)*, the weather conditions prior and during ignition, and the topography. Generally the following relationships hold between the fire behavior and the fuel, weather and topography.

- Fine fuels ignite more easily and spread faster with higher intensities than coarser fuels. For a given fuel, the more there is and the more continuous it is, the faster the fire spreads and the lighter the intensities. Fine fuels take a shorter time to burn out than coarser fuels.

- The weather conditions affect the moisture content of the dead and live vegetative fuels. Dead fine fuel moisture content is highly dependent on the relative humidity and the degree of sun exposure. The lower the relative humidity and the greater the sun exposure, the lower will be the fuel moisture content. Lower fuel moistures produce higher spread rates and fire intensities.

- Wind speed significantly influences the rate of fire spread and fire intensity. The higher the wind speed, the greater the spread rate and intensity.

- Topography influences fire behavior principally by the steepness of the slope. However, the configuration of the terrain such as narrow draws, saddles and so forth can influence fire spread and intensity. In general, the steeper the slope, the higher the uphill fire spread and intensity.

Fire behavior on the reviewed landscape would be mostly surface fire with some potential for significant torching. Torching trees both increase fire intensity and become excellent generators of embers for spotting. Embers or firebrands are produced from burning needles, leaves, bark, twigs and cones, when natural vegetation burns. Embers tend to be carried aloft by the superheated air of the blaze and can then be carried long distances in advance of the actual

flame front by even light winds. It is not uncommon to find glowing embers a mile ahead of the main fire.

If the conditions are right, embers can be produced in a relatively short time by even a modest wildland blaze. These tend to fly like incendiary snowflakes, eventually settling to the surface and even "drifting" to form small clumps. If they land on a combustible material, they can cause a new ignition even though the main fire is still a long distance away. This is the way that "spot fires" are ignited. This is also the primary threat to residences.

For purposes of this assessment, there are two viable scenarios for a severe wildland fire event, a) a major blaze in lands adjacent to the community, producing large quantities of windblown embers, and b) a lightning strike without precipitation and the rapid onset of downdrafts*. Subsequent spot fires, torching trees, ornamental shrubbery and burning structures in the interiors of developments could produce additional quantities of embers, contributing to further ignition potential.*

5. Site Description

This portion of the report describes certain elements of the community of Milford, as it relates to fire issues. The first map *(Figure 1)* shows the Milford WUI Treatments Project area as documented in the Lassen County Community Wildfire Protection Plan (CWPP) and current 2013 work plan. The Milford community location coordinates are: 40.167985N, 120.368223W.

5.1 Overview

The community of Milford is unincorporated. There is no formal legal or political structure beyond those provided by State and County governing bodies and the Milford Fire Protection District. The community lies between the west shore of Honey Lake and gains in elevation as it extends westward to the Plumas County line and the Diamond Mountains. Land ownership is a mixture of Federal and private. The Beckworth Ranger District of the Plumas National Forest (PNF) manages the Forest Service lands. The BLM and the State of California administer lands totaling approximately 200 acres. The Department of Defense Sierra Army Depot (SIAD) has a small continuous strip of land along the west shore of Honey Lake. The community and surrounding area lies within the State Responsibility Area (SRA). The Milford Fire Department is responsible for fire protection of the structures and CAL FIRE is responsible for fire protection of the wildland. *(See Figure 3 & 4 for Milford Fire District and SRA fire protection boundaries)* Many homes and properties within the community are considered "single family" and are occupied year round. The Milford Community Fire Safe Plan Area is defined as the area within the Milford Fire Protection District. The Janesville Fire Protection District serves as the north boundary and the Doyle Fire Protection District serves as the south boundary. The community is within the Milford Subarea of the Lassen Southeast Planning Area.

5.2 Topography

Milford sits at an elevation of 4,222 feet and encompasses a land area of 5.29 square miles. The topography of Milford, *(Figure 2)*, is mostly level to the east of US 395 but to the west it begins somewhat level terrain but then becomes steeper with slopes averaging

approximately 5 to 7%. Milford is surrounded by federal and private timberlands to the west, north and south and a band of brush/grassland along the eastern edge along US 395 between Honey Lake and the community.

FIGURE 1– Milford community Project Area Map

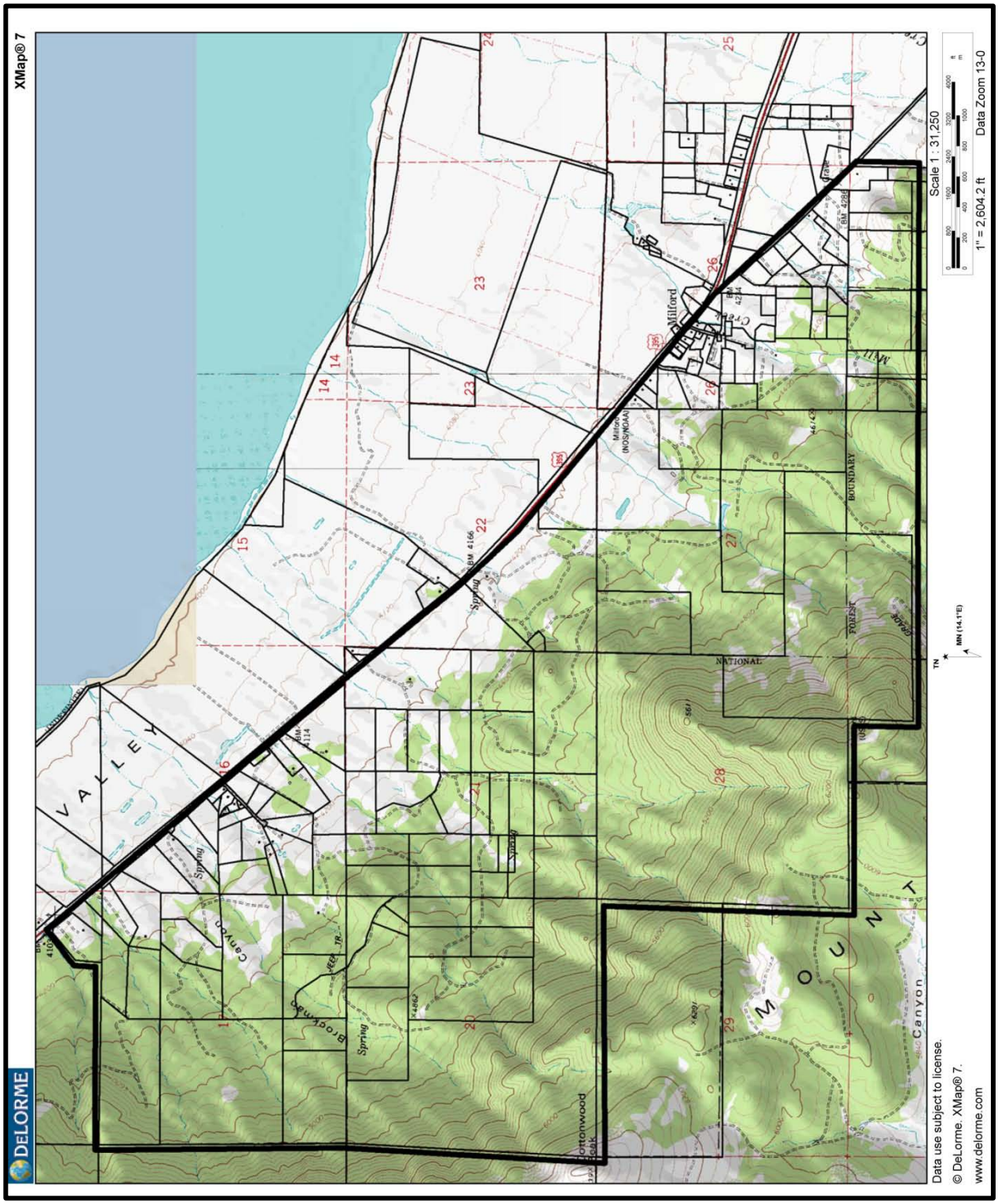
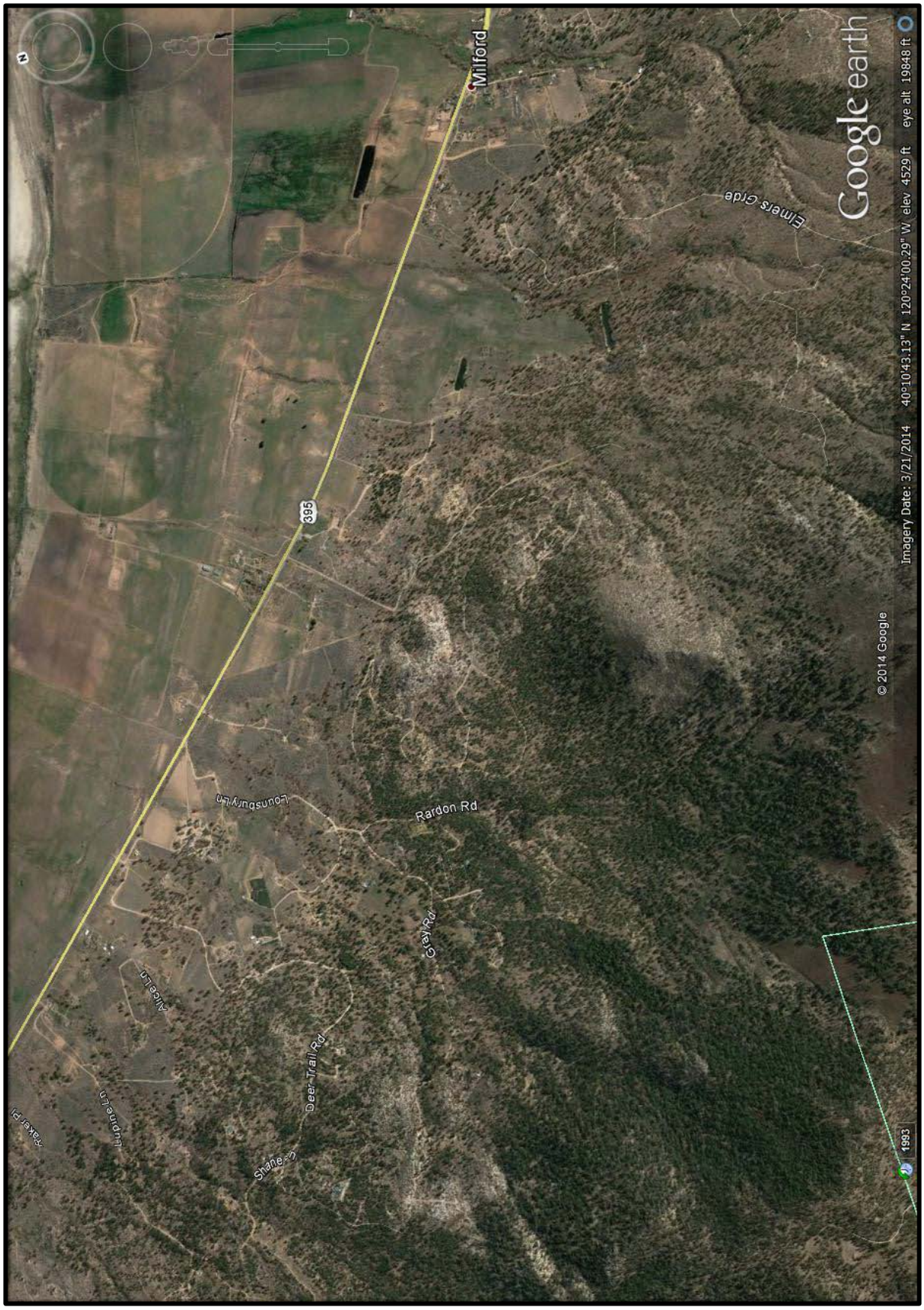


FIGURE 2– Aerial Map of the Milford Community



5.3 Vegetation

Vegetation in Milford consists of mixed stands of Ponderosa/Jeffery Pine and western juniper. Shrub understory consists of bitterbrush, mountain mahogany, rabbit brush and big leaf sage along with various annual grasses and forbs. The current fuel loadings and vegetation patterns tend to have a seasonal cycle, with fuel loadings of up to 10 tons per acre with a spread rate of 3 feet per minute with 3-foot flame lengths on average with no wind in the less managed timbered areas. Fine fuels under a ¼ inch *(twigs and grass)* compose approximately 200 lbs per acre. Fuel arrangement will not significantly affect fire behavior.

Areas with mostly brush have fuel loadings of up to 1.4 tons per acre with a spread rate of 3 feet per minute with 2-foot flame lengths on level ground with no wind. The fuel consists of small material which tends to be more receptive to fire brands and will react more readily during windy conditions.

5.4 Protective Zones

Honey Lake, currently a dry lakebed, runs north to south along the east side of Milford providing a natural protective zone to the east of the community with US 395 running north to south dissecting the community into approximately one-third east and two-thirds west of the highway.

5.5 Demographics

Milford has a population of 167, as noted in the 2010 United States Census.

According to the Lassen County Assessor's Office, Milford consists of 319 parcels of which 9 are government owned. Of the number stated, 207 of those parcels have been improved in some way *(meaning they have some type of structure)* with 210 improved with dwellings. The remaining 112 parcels are undeveloped.

5.6 Local Fire Department

The Milford Fire Department (MFD) is a volunteer fire department. The department has one small station adjacent to the Milford Community Center and provides local structure fire suppression and emergency medical services within their district boundaries *(Figure 3)*. There is an adjoining structure that provides for additional storage of equipment. Routine vehicle preventative maintenance is provided for and conducted internally when capabilities allow.

The community lies within the State Responsibility Area (SRA) where wildfire suppression efforts are provided by the California Department of Forestry or CalFIRE along with assistance from adjoining volunteer fire districts such as Janesville, Herlong, Doyle and Standish-Litchfield. The Plumas National Forest provides for fire suppression efforts on federal lands adjacent to the community to the east. Mutual aid agreements are in place with other nearby agencies to supplement the Milford Fire Department's force as required or as necessary. Such support in the event of a major wildland fire would typically come from CalFIRE as well as other neighboring agencies. The area to the west of US Highway 395 is within the SRA while the area to the east is the responsibility of the MFD *(Figure 4)*.

Regular firefighter training activities are conducted at a minimum annually but when the opportunity arises additional trainings are provided.

5.6.1 ***Personnel***

The Milford Fire Department Fire Chief states that there are 13 volunteer firefighters currently available for deployment if necessary.

5.6.2 ***Equipment at Station***

Equipment located at the fire station includes the following list of vehicles:

Table 1: Milford Volunteer Fire Department equipment List

Vehicle	Vehicle ID	Make	License	Year
Chief's Vehicle	1721	Ford F350 QwikAttack - 250 gpm	126537	2008
Wildland Pumper	1723	International, 4X4 - 500 gpm	704330	1976
Qwik Attack	1724	Chevrolet 250, 4X4, 250 gpm	1030685	1991
Wildland Pumper	1725	International, 4X4 - 250 gpm	1169374	1995
Wildland Pumper	1727	International, 4X4 - 500 gpm	1359069	1999
Water Tender	1733	KW, 3 axle, 4X4 - 4,000 gals. cap.	116932	1995

Station house is approximately 2,500 sq. ft. All equipment is housed at station with the exception of the Chief's vehicle which is housed at his residence on Lounsbury Road.

Department resources include up-to-date firefighter gear for all responders *(i.e., protective clothing, breathing apparatus, and radios)*, necessary firefighting tools and appropriate medical response equipment.

5.7 Fire Hydrant System

There is no substantial fire hydrant system in the community of Milford however there is a underground storage tank adjacent to the Milford Fire Station on the Milford Grade Road at the Milford Community Park entrance. Each home has its own domestic water supply.

5.8 Milford WUI Area Treatment History

The Plumas National Forest, the Lassen County Community Wildfire Protection Plan, and the Lassen County Fire Safe Council, Inc. identified Milford as a community at high risk from wildfire. Due to this designation and collaboration with the Council, there was a need to protect the community of Milford.

FIGURE 3 – Milford Fire Protection District Boundary map

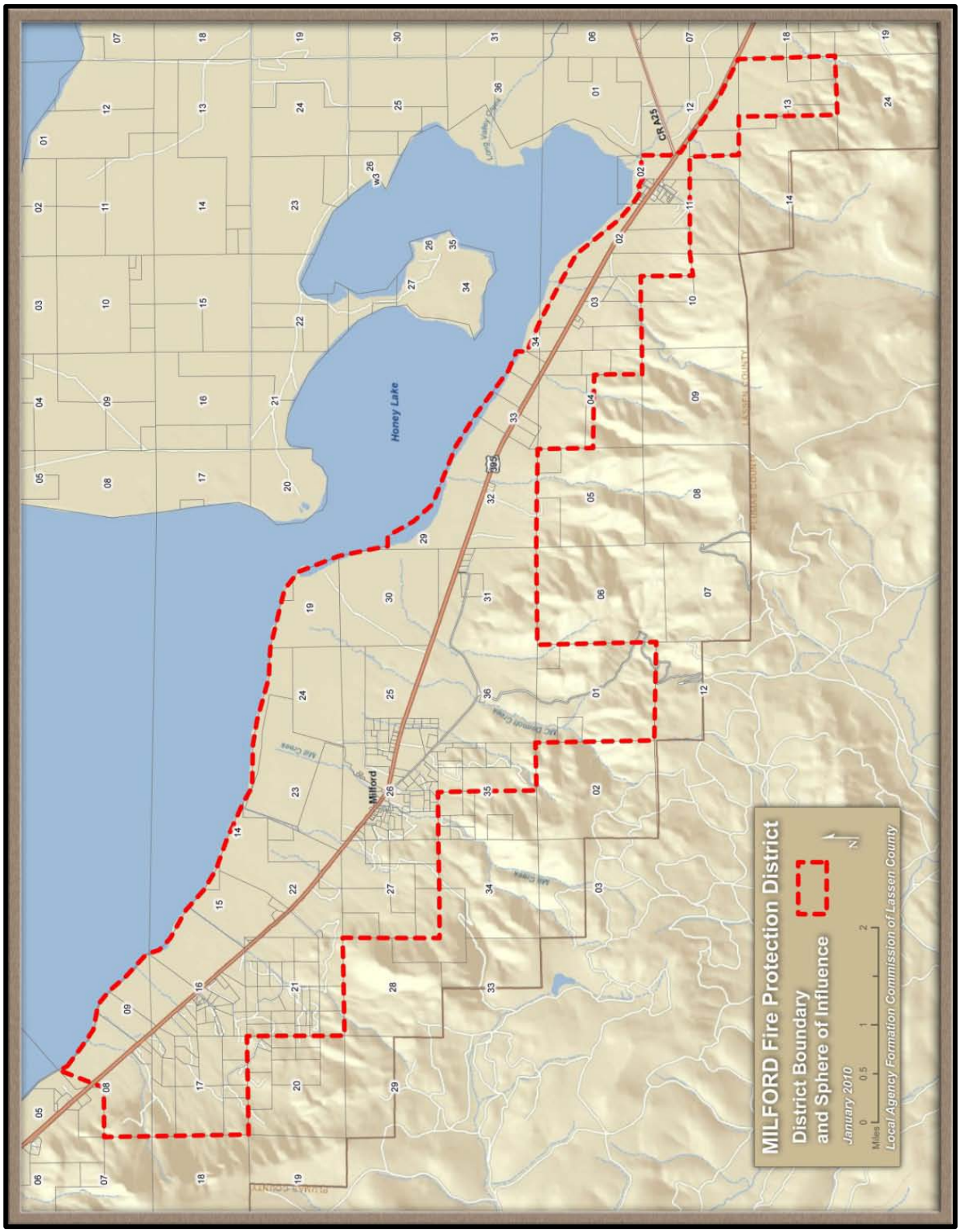
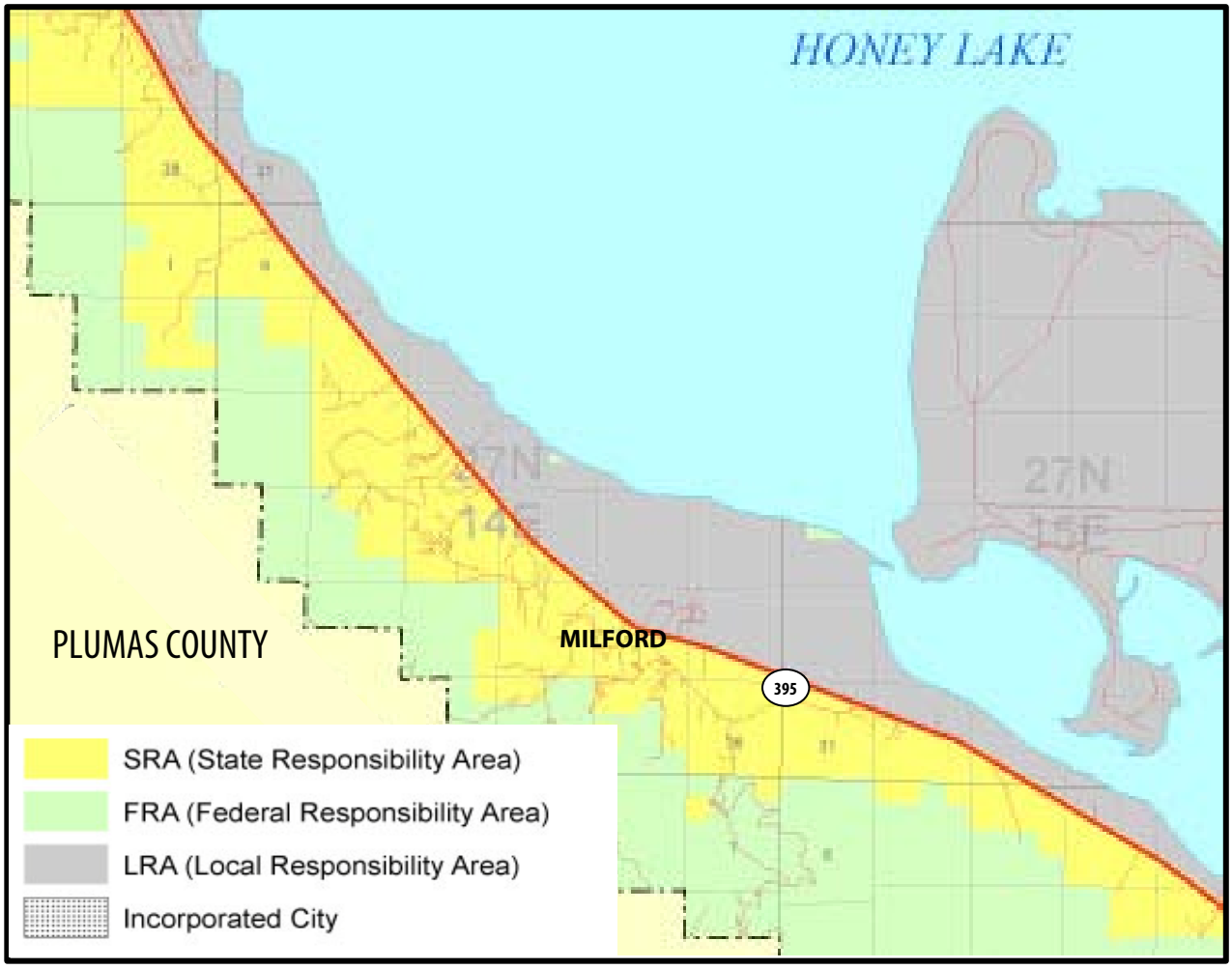


FIGURE 4 – Milford Fire Resource and Assessment Program (FRAP) Map



1988-Salvage Logging- After the Clark Fire in 1987 salvage logging was done over approximately 3500 acres with approximately 1000 acres done within the Milford WUI.

2001 – Last Chance DFPZ and Poison DFPZ - Fuels reduction treatments occurred on over 3000 acres adjacent to the community of Milford between the two projects. The resource objectives of these projects were to reduce the risk of damage or loss of property and life during a wildfire incident. These projects occur in the footprint of the Milford WUI area as well as beyond the designated WUI boundary.

Project objectives included:

- Protect the community of Milford and create a safer more effective fire suppression environment in the Wildland Urban Interface.
- Reduce natural fuel accumulations, both vertical and horizontal, while enhancing forage opportunities for many species of wildlife by stimulating understory species such as: forbs, shrubs, and grasses.

Within the project area, approximately 900 acres of vegetation was treated around the community of Milford (designated WUI). The treatments were designed to reduce fire behavior by reducing surface, ladder, and canopy fuels.

Table 2: Last Chance and Poison Treatments

Treatment Summary	Acres (Approx.)
Mechanical Treatment: Reduction of ladder and canopy fuels.	1900
Hand Thinning: Reduction of ladder and canopy fuels up to 8".	1000
Prescribed Burning (some areas were treated only with fire while some areas had also been treated by mechanical thinning/hand thinning prior to burning): Reduction of surface and ladder fuels.	1000

The contracts for the projects were awarded in 2001 and the mechanical treatments were completed in 2002. Prescribed fire treatments occurred between 2002 and 2006. The silviculture prescription was a "thin from below" prescription. This treatment left the largest and healthiest trees, while removing the smaller suppressed trees (ladder fuels), or diseased trees. The mechanical and hand treated areas were thinned to approximately 40 percent canopy cover. Tree spacing within the treatment area varied, favoring the retention of clumps of trees in the larger diameter sizes. No trees over 30" diameter were removed. The post-harvest treatment in some units was prescribed fire. Prescribed fire treatments further reduced the surface fuel loading in the project area.

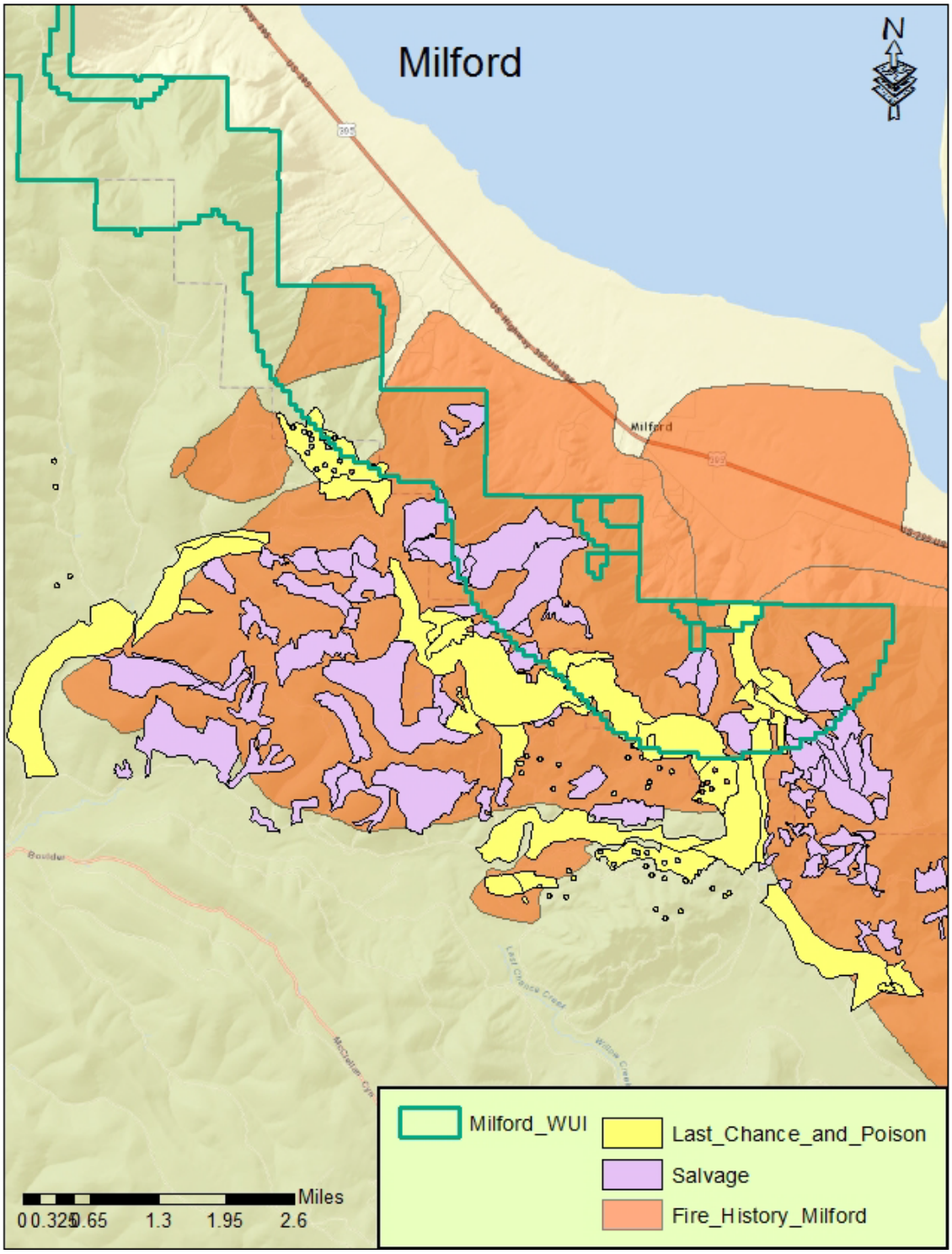
5.9 Milford WUI Area Fire History

The vegetative composition and structure within Milford WUI and surrounding area has undergone dramatic changes within the last century. These changes include increased tree density, canopy cover, and surface and ladder fuel loadings, as well as decreased canopy base height (CBH). These changes have been thoroughly documented in scientific literature (Norman 2002, Dolph et al. 1995, Youngblood et al. 2004 and Taylor 1998). This research indicates that current vegetative conditions within eastside landscapes on the Plumas National Forest are outside their range of historical variability in terms of vegetative pattern, structure, tree density and species composition. The movement of ecosystems outside their historical condition is a result, at least in part, of approximately 140 years of grazing, 100 years of fire suppression and 80 years of timber harvest.

Eastside pine ecosystems are adapted to frequent, low intensity fires. Historically, eastside pine-dominated stands would be expected to burn with a high frequency, low severity fire regime (Agee 2002). A fire history study conducted in eastside pine and mixed conifer forests in the Sierra Nevada (Norman 2002) determined that the eastside pine ecosystem burned on average every 13.7 years, with a minimum return interval of 2 years and a maximum of 37 year *(Figures 7 & 8)*s. These fires started burning in the spring/early summer and continued to burn until changes in weather conditions, or lack of available fuels, extinguished them.

According to Taylor (1998), fire history data from eastside pine and pine savannas show that the lack of fire the last century is unprecedented in the fire record over the last 250 years. This indicates that the disturbance regime, of frequent low-severity fires, is now

Figure 5 - Historical Milford WUI Project Treatment Areas



outside the historical range of variability. The lack of fire in the area has contributed to the changes in the vegetative structure and composition discussed above. These changes have resulted in the area having a much higher fire hazard than was present under historical conditions.

5.10 Fire Record

The Milford WUI area has experienced fire caused by various activities. According to the Plumas National Forest fire history records, there have been 6 significant (over 10 acres in size) wildland fires between 1919 and 2014 for a total of 50,488 acres. Lightning started 2 of the fires and the remaining 4 were listed as miscellaneous/unclassified starts in the fire history database *(Table 3)*. These fires ranged in size from 27 to 39,920 acres. The expected fire behavior in the area has changed dramatically since pre-settlement times.

Table 3. Historical Fires Recorded in the Vicinity of the Milford WUI Area (1919-2014).

	Size Class Distribution (Acres)							
	A 0 – 0.25 Acres	B 0.26 - 9.9 Acres	C 10 – 99.9 Acres	D 100 – 299.9 Acres	E 300 – 999.9 Acres	F 1000 – 4999.9 Acres	G 5000+ Acres	Total
Lightning Caused	0	0	1	1	0	0	0	2
Unclassified	0	0	0	0	2	0	2	4
Total Fires	0	0	1	1	2	0	2	6
Total Acres	0	0	27	326	1,030	0	49,105	50,488

Source: USDA Forest Service 2013. Plumas National Forest fire history database.

The frequent low intensity, widespread fires that burned historically no longer occur and as a result a wildland fire occurring during 90th percentile fire weather can now be expected to burn with greater intensity and cause much more damage to vegetation and habitats than occurred in the area historically.

Figure 6 - Milford area Fire History 2003 - 2013

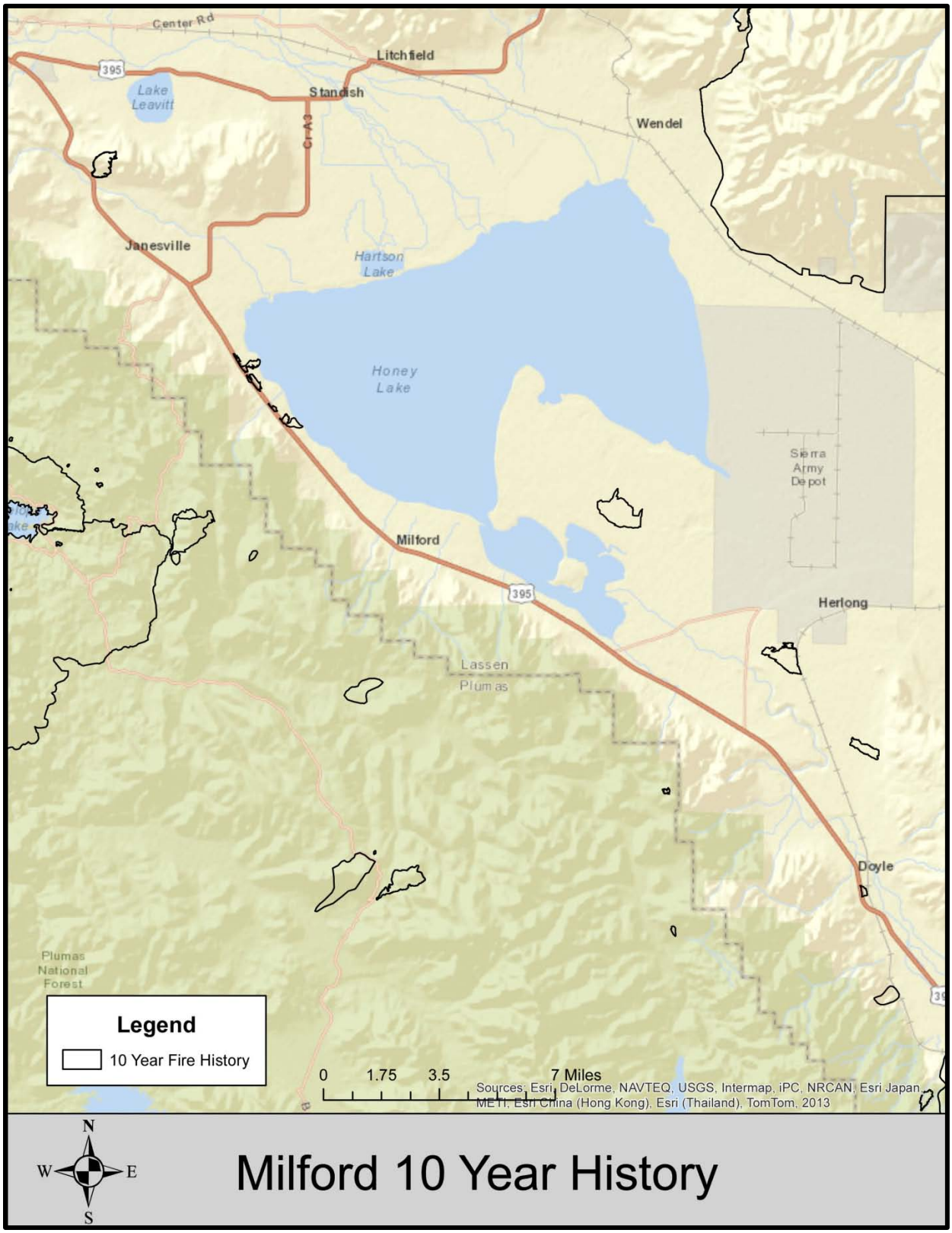
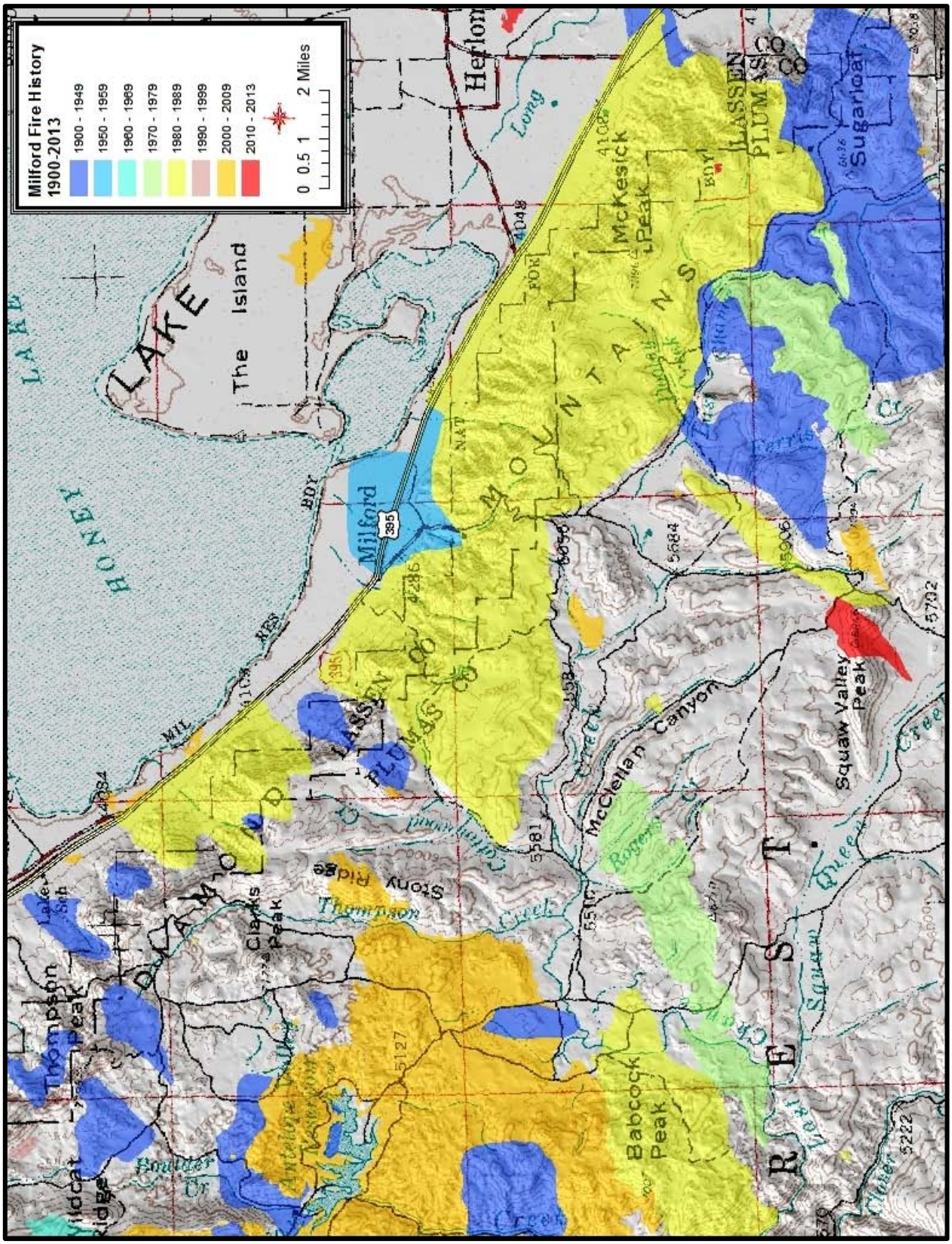


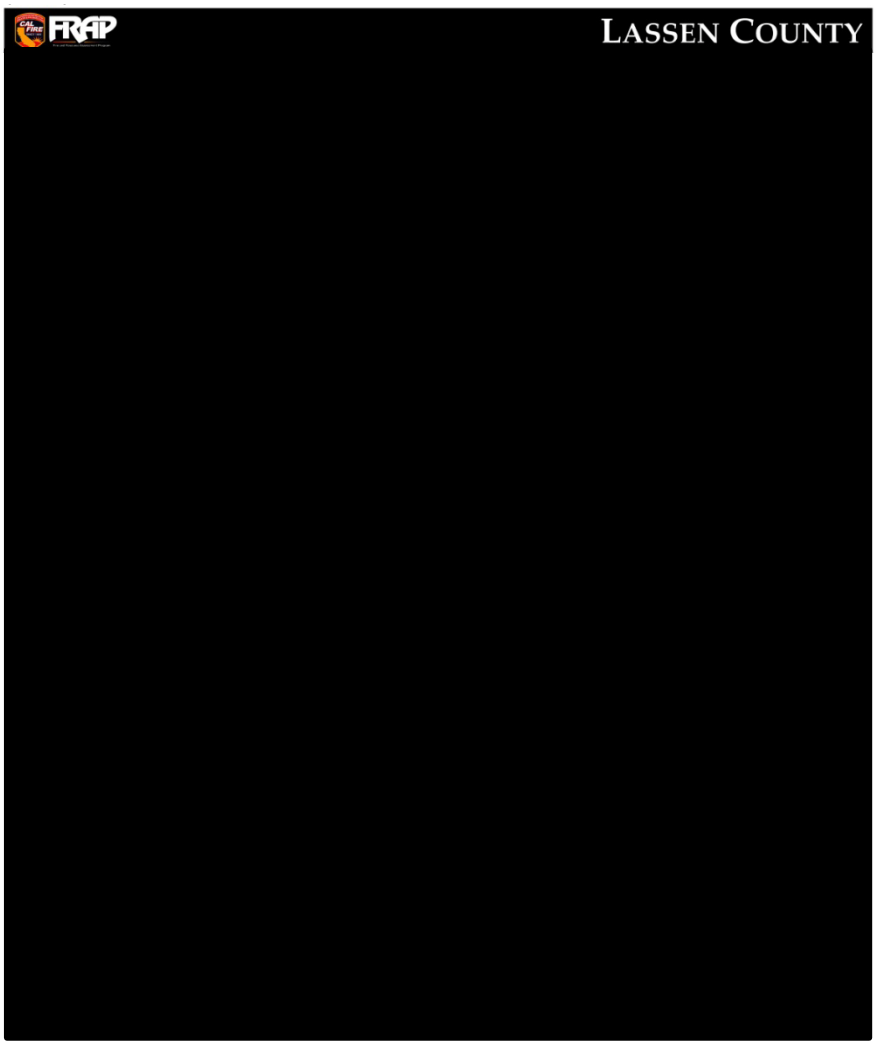
Figure 7 - Milford area Fire History 1900 - 2013



5.11 CAL FIRE, FIRE HAZARD SEVERITY ZONE RATING

Periodically, Cal FIRE reviews and updates its statewide assessment of general fire hazards within and near the State Responsibility Areas (SRAs). This assessment generates fire hazard severity zone ratings (FHSZ). The 2007 CAL FIRE Fire Hazard Severity Zone (FHSZ) ratings for the Milford and surrounding areas from "Moderate" to "Very High" fire hazard zones *(Figure 9)*.

FIGURE 8 – Milford Fire Hazard Severity Rating Map



5.12 FIRE DISTRICT ISO RATING

The Insurance Services Office, Inc. (ISO) is the principal supplier of statistical, actuarial and underwriting information for the property insurance industry. ISO fire insurance ratings serve as an industry standard, a foundation upon which most insurers build their coverage programs. Their ratings are based on several factors including:

- The quality of the fire department
- The water supply and hydrant system
- Communication systems
- Building codes
- Property inspection programs.
- Community fire prevention programs.

ISO ratings range from 1 to 10, with 1 being perfect. Since the ISO ratings are used by insurance companies to set insurance premium rates, the lower the ISO fire rating, the lower the premium.
ISO has updated the Fire Suppression Rating Schedule to include "extra credit" for fire departments who conduct community fire prevention programs. The Firewise® program will help with this effort.

- Milford Volunteer Fire Department currently does not have an ISO rating.

6. Assessment Process

A team approach was taken in preparing this assessment of fire hazards and risks in Milford. Relevant background data was initially collected by several team members identified in the Introduction to this document.

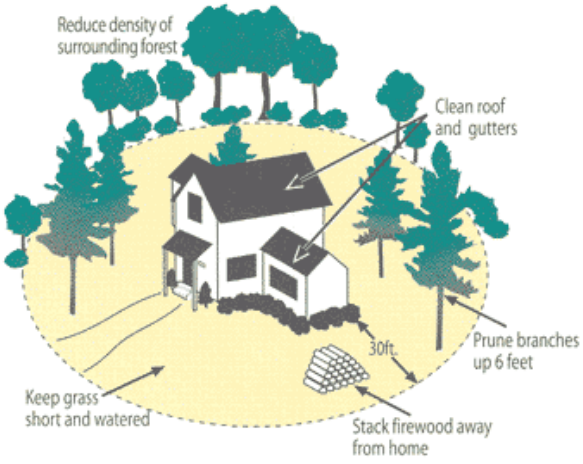
On March 21, team members conducted a visual review of the community from a roadside perspective. Observations were noted of both favorable and unfavorable conditions, and are found in subsequent sections. Conducting the inspection were:

- Dan Douglas, Education Director / Assessment Specialist, Lassen County Fire Safe Council, Inc., and,
- Leah Sandberg, Fire Prevention Specialist, CAL FIRE

Additional site visits were conducted by Dan Douglas on May 2, 2014 and again on May 28th. On the May 28th visit the Milford Fire Chief provided assistance with the visit.

7. Important Considerations

The Firewise Communities/USA® program seeks to create a sustainable balance that will allow communities to live safely while maintaining environmental harmony in a WUI setting. Homeowners already balance their decisions about fire protection measures against their desire for certain flammable components on their properties. It is important for them to understand the implications of the choices they are making. These choices directly relate to the ignitability of their home ignition zones during a wildfire.

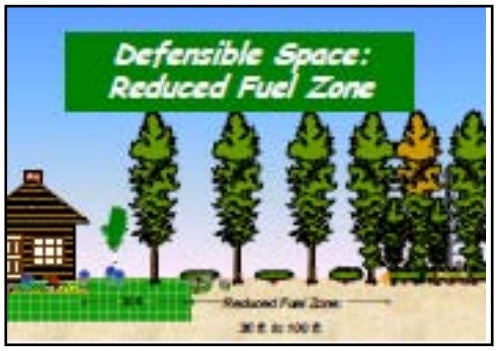


7.1 Recognizing Fuels

Fuel is anything combustible. It can be trees and other natural vegetation, wood products of all kinds (lumber, siding, shakes, plywood, furniture, paper), carpeting, drapes, fabrics, most synthetics and plastics, rubber products, motor vehicle and heating fuels, and on and on. Fuels are everywhere around us in our daily lives, but we seldom view them as such. When it comes time to review our vulnerability to fire, we need to adopt a firefighter's perspective as we look over our homes and yards. If the material is combustible, it is fuel.

It may be part of something we consider to be essential to our lives, but it is still fuel to a fire. Lack of recognition of fuels, or denial of their existence, simply puts us at greater risk. It's what we choose to do about the fuels around us that will ultimately make a difference.

7.2 Reducing Fuel Volume



When large, uninterrupted quantities of natural fuels exist, a serious fire danger exists. For example, a dense, overstocked forest is generally recognized as a serious fire concern. The sheer volume of fuel that is available in a large, heavy stand of trees with a continuous fire ladder has the potential not only for intense heat at that location but also the production of huge quantities of embers from torching trees.

Reducing the volume of fuel in an area is a recognized technique for reducing fire hazards. This is part of the thinning process used in creating shaded fuel breaks to offer greater protection to communities in forested areas.

7.3 Separating Fuels

Closely associated with the reduction of overall fuel volume is the practice of separating or interrupting fuels. Aside from its application in fuel breaks, this technique is perhaps the single most important step a property owner can take in reducing vegetation fire hazards on residential parcels. The basic principal behind separation is quite simple, create gaps between fuels such that a fire burning one piece of fuel cannot easily ignite an adjacent combustible object. If a gap exists between one stand of trees and the next, there is less chance of a fire progressing from stand to stand. The same thing is true of flammable brush or shrubs; interrupting the growth inhibits the progression of fire. A fuel gap around the perimeter of the structure is even more important, since it separates the structure from combustible materials that might otherwise be ignition sources. This is called horizontal separation, because a gap exists horizontally between fuels.

Vertical separation is also important. This is accomplished by removing the lower limbs of trees and smaller trees and brush under a tree to create a gap between the surface and ladder fuels that would be carrying the fire into the tree crown to prevent torching. If there are flammable shrubs or brush specimens in the same area as the trees, the gap between the lower tree limbs and the top of the surface vegetation needs to be adjusted

so that lower flames do not ignite the tree branches. Avoid planting flammable shrubs directly beneath trees. Avoid planting flammable shrubs under or adjacent to raised decks for the same reason.

8. Observations and Recommendations

This report groups the issues into physical zones, starting at the structure and working outward from there. No attempt has been made to quantify the number of instances that such problematic issues were observed. Recommended remedial action is shown in *italic type.*

8.1 Fire Hazards

- Pine Needles on Roofs or in Gutters

  Most homes in Milford are excellent examples of keeping roofs and gutters clear of pine needles and leaf debris. Some homes, however, had some accumulations of pine needles. Such accumulations serve as an ignition bed for flying embers and they can also promote the growth of mold at the roofing interface. When pine needles, leaves, etc. fill gutters, they not only interrupt the flow of rainwater, they too become ignition beds right at the vulnerable edge of the roof.

  - *Regular removal of needles from both roofs and gutters will solve these issues.*
  - *Removal of pine needle litter from roadways would resolve this issue.*

- Wood Piles Next to or Under Structures

  The desire to have a handy supply of firewood causes some residents to stack their wood supply right up next to their home. Firewood stacks are excellent "ember magnets," allowing embers to drift into small openings and eventually ignite the wood. If the stack is in close proximity to the residence or any flammable portion of it, the fire can rapidly progress to the structure.

  - *A more prudent practice is to keep firewood piles a safe distance from structures (a thirty foot gap is recommended). Another alternative is to screen firewood stacks with hardware cloth (openings no larger than 1/8 inch) such that embers cannot reach the wood; make sure that the screening completely encloses the stack, with no gaps at the bottom and with the metal screen spaced about an inch away from the wood so that embers that land on the screen cannot ignite the outer surfaces of the wood.*
  - *If wood is stored inside or next to attached or adjacent structures of the home move to a safer location with at least a 30 foot gap as recommended above.*

- Flammable Materials Next to or Under Structures

  Flammable material stacked up against or right next to a structure poses a fire hazard. Storing such material under a deck is also a concern. This applies to wood products, cardboard, fabrics, plastics or any other kind of combustible material. Pine needles

up against the base of wood siding or under decks create similar ignition vulnerability.

- *Regular attention to accumulated or stored materials is required to avoid this common issue. Pine needles that accumulate under decks and within 30 feet of a structure increase its risk during a wildfire. Removing pine needles from these areas greatly increases the chance of your home surviving.*
- *Enclosing the underside of decks completely or with ⅛" hardware cloth helps keep pine needles from accumulating there.*

- <u>Flammable Materials on Decks</u>

  Many items commonly found on decks are made of or contain flammable materials. Chairs, umbrellas, tables, door mats, bar-b-ques propane bottles, etc., all fall into this category.

  - *It is probably not realistic to expect everyone to store such things in a safe area until they are needed on the deck, but it is good practice to remove them to a safe area if there is an approaching fire or when you will be away from home for an extended period.*

- <u>Hazardous parcels</u>

There are multiple parcels within the community that are not properly maintained or have other issues that require attention. Some have an accumulation of significant hazardous fuel loads upon their properties that could threaten the survivability of not only their property but adjacent property as well. In addition, this can create a serious hazard to the health and safety of wildland firefighters should a wildland fire event occur.

There is one particular property of serious concern to this community and that property is Indian Trust Land under the control of the Bureau of Indian Affairs located in the middle of the community.

- *Measure should be taken to address these parcels by any means necessary to mitigate removal of hazardous materials.*
  - *General tree thinning where appropriate to reduce fuel volume.*
  - *Thinning or removal of new brush growth*
  - *Removal of accumulating surface litter or debris*
  - *Relocation of heavy fuel load items to a more adequate or enclosed structure.*
  - *Work with hazardous property owners to mitigate hazardous fuel loads within close*

proximity to other structures, properties, etc.

- *Work with the Bureau of Indian Affairs to mitigate the extreme fire hazards and fuel loading of property under their oversight.*

8.2 Propane Tanks

- Flammable Materials Next to Tanks

  Code requires that we keep the area right around our propane tanks free of flammable materials. Unfortunately, we sometimes forget that requirement. Having flammable materials, vegetation or debris crowded around the tank is an invitation to disaster. Most residents deserve credit in this area as the area around their propane tank was well maintained. There were some tanks, however, that had grass and brush growing up to and under the tank. This creates a path to a highly combustible fuel source.

  - *It is essential that combustible materials be removed from within ten feet (10') of propane tanks.*

  - *Relocate propane tanks that are within the 30 feet zone from the home or structures to a location 30 feet or more from the home or structures.*

8.3 Defensible Space

As trees, shrubs and grass grows, they can change what was previously an acceptable situation into one that no longer meets state requirements for residential defensible space. Though most residents have done an excellent job creating defensible space around their home, we did observe some homes where trees needed to be limbed, brush needed to be removed and branches needed to be pruned away from chimneys and stove pipes.

- *CAL FIRE guidelines for meeting the requirements of State Law (PRC-4291) should be followed to ensure proper shrub selection and placement. Lower limbs of trees over eighteen feet (18') in height must be removed such that there is a MINIMUM of six feet (6') of clearance between the surface and the lowest part of the tree limb, and the surface beneath such trees must be kept clear of any flammable debris or vegetation. Grass should be cut to 4" or less. Tree branches should be kept clear of chimneys and stove pipes. Further specifics and alternatives can be found in the PRC-4291 guidelines.*

- *Choosing the right plant materials placed in close proximity to the structure is critical. Some plant materials are highly volatile when introduced to flame and embers therefore these plants/shrubs should be either removed or relocated. A good source for information on proper plant materials is the Lassen County Fire Safe Council, Inc. "Lassen County and*

Northeastern California Landscape Plant Guide". Additional information can be obtained through the Lassen County University of California Cooperative Extension Office.

8.4 Ingress/Egress

There is only one paved road in the community the remainder are all private roads maintained by the property owners. The paved road is called Milford Grade Road and is 1.6 miles in length before turning into a dirt surface The paved portion is maintained by the Lassen County Road Department. The remainder of the roads in the community are considered private roads and are not maintained by any organized agency. The roads do road name signage almost but it is very difficult to find the signs and most are not located properly. All road signs should be updated with proper County requirements and proper placement. All the roads except for the previously mentioned paved road are unpaved and very narrow with significant overgrowth. Should a fire sweep through this community, egress for residents and access for fire service vehicles would be compromised. Communities should have multiple options for escape should a wildfire event occur.

- *The community should develop escape routes to distribute to home owners and post in the event of a fast-moving wildfire and work to improve existing roads within the community.*
- *Roads signage should be consistently and accurately placed at corners, intersections, and include cross street signage. All Private Road signs should be updated to indicate the road type (County maintained or Private Road) by using 3" black letters on a white background.*
- *Roads sign post should be replaced with fire proof posts.*
- *Roads should be widened to accommodate the passage of two vehicles side by side sufficient for first responder and fire apparatus. At a minimum provide for "turn-outs" along roads to allow for passage of vehicles.*
- *Roads should be cleared of overgrown shrubs and weeds to at least 10 but preferred 15 feet to provide a buffer from the advance of fire.*
- *Homes/property at "Dead End" roads should have sufficient space for apparatus and vehicles to turn around should rapid escape be necessary.*
- *Roads signs that are obstructed by trees and/or shrubbery should be cleared of these or other obstructions at all times.*
- *Regular road maintenance plans should be developed in order to maintain the integrity of community roadways.*

8.5 Access to Structures

It is important that emergency service personnel have access to residences and structures. Fire engines need to be able to get into a driveway and access all sides of a home in order to provide structure protection. Many homes, in the community have items blocking access to the structure or are electronically controlled access. House numbers should be standardized so that first responders are able to more easily find the home.

- *Items preventing access to a structure should be relocated/removed.*
- *Create and maintain a list to be provided to ambulance, fire, and law enforcement personnel of all "gated" homes controlled by electronic access and require all to install either "knox box" or keypad access.*
- *Encourage the installation of standardized house numbering system that is highly visible including large reflective numbers with contrasting background.*

8.6 Hazardous Fuel Loads Beyond the Home Ignition Zone

- Reduction of Fuel Volume and Ladder Fuels

  Hazardous fuels on undeveloped lots and common areas within Milford is not covered by the defensible space requirements of PRC-4291 but is of significant concern, however it is incumbent on the community to insure that all property owners are not knowingly or even unknowingly creating a situation within the community that could in fact threaten the community's survivability from a wildland fire threat. Therefore it is necessary to consider community adoption of local ordinances such as weed abatement, hazardous fuel accumulation reduction, absentee property owner maintenance regulations, etc.

  - *Efforts should be made to educate homeowners (including absentee owners) about the benefits of creating defensible space. Corrective action would be relatively straightforward, and should focus on:*
    - *Elimination of "ladder fuels" (i.e., fuels bridging the gap between the surface and lower tree limbs)*
    - *Removal of additional lower branches, as needed*
    - *General tree thinning where appropriate to reduce fuel volume and maintain forest health*
    - *Thinning or removal of new brush growth*
    - *Thinning or removal of new seedlings/saplings*
    - *Removal of accumulating surface litter or debris.*
    - *Removal of debris piles.*

9. Successful Firewise® Modifications

When adequately prepared, a house can likely withstand a wildfire with minimal intervention of the fire service. Further, a house and its surrounding community can be both Firewise® and compatible with the area's ecosystem. The Firewise Communities/USA® program is designed to enable communities to achieve a high level of protection against WUI fire loss even as a sustainable ecosystem balance is maintained.

A homeowner/community must focus attention on the home ignition zone and eliminate the fire's potential relationship with the house. This can be accomplished by:

- Disconnecting the house from high and/or low-intensity fire that could occur around it.
- **Hardening the home** by taking measure to protect the structure by adding fire resistant improvements such as:
  - *Install perimeter foundation, gable, eave and roof vents using ⅛ steel screening that restrict the ability of embers gaining access into the home.*
  - *Install metal, composition or tile (or other non-combustible) roofing with capped ends and covered fascia.*
  - *Installing fire resistant siding.*
  - *Installing double pane windows.*
  - *Boxing in roof overhangs with enclosed soffits.*
  - *Enclosing decks or foundations with ¼ or smaller screening to eliminate the accumulation of leaves and debris under the structure.*

Several examples of positive actions were observed during the assessment inspection process.

A brief summary of some of the positive indicators that were noted would include the following:

- The service level of the Milford Volunteer Fire Department performs at a very high level.
- The volunteer firefighters participate in regular and updated training.
- Additional fire suppression resources are nearby.
- Defensible space work is very evident in some areas.
- There is access for emergency vehicles via main thoroughfares.
- Many lots that are developed do have good addressing.
- It is also noted that many homeowners have taken steps to reduce the effect of fire to their home by installation of some of the recommended measures noted above.

10. Next Steps

This assessment once approved and adopted by the Milford Community Services District Board of Directors will be incorporated into the Lassen County CWPP and will provide a blueprint on recommended improvements to the community to improve wildfire survivability and may improve the ISO ratings for the community.

The Milford Community Association is seeking Firewise Communities/USA® recognition. In California, communities that are recognized as an active Firewise® Community and performs all the requirements for annual renewals of their status can see reductions in their property owner insurance. A meeting held on August 21, 2014 established the formation of the local Firewise® Board. This assessment provides agreed-upon, area-specific Firewise® solutions and recommendations.

The community has met the following Firewise Community/USA® standards:

- A local Firewise® board has been created to establish and maintain Firewise Community/USA® status.
- The community has invested in excess of the minimum contribution of $2.00 annually per capita in its local Firewise® activities in the amount of $200,500 total invested in 2014.
- Firewise Communities/USA® Day activities was held on June 26, 2014 which was a presentation of the Firewise Communities/USA® program to the community by the Lassen County Fire Safe Council, Inc. Education Director. In addition to that event the Milford Community Association under contract with the Lassen County Fire Safe Council, Inc. are working on a community-wide hazardous fuels treatment project to remove hazardous fuel accumulations surrounding and within the community thereby reducing the communities fuel hazard threats and improving wildland fire survivability for the residents.
- This document represents the Community Assessment that has been completed.

Milford residents are reminded that street signs, addresses, road widths and fire hydrants do not keep a house from igniting. ***Proper attention to their home ignition zones does***. They should keep regular vigilance by identifying the things that will ignite their homes and address those that are evident and as they arise.

11. Literature Cited

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Exhibit A

Milford Firewise® Community Action Plan

Upon the development and subsequent adoption of the Milford Community Assessment document on August 21, 2014, discussion was held regarding the need to develop a "Community Action Plan". The Community Action Plan is a list of actions the community can take in order to systematically address the recommendations presented in the Assessment.

An Action Plan was drafted and was approved by the Milford Firewise® Board on September18, 2014. The list of actions that are reasonably achievable by the community are listed below. This Action Plan may be reviewed annually and amended as the Milford Firewise® Board feels is necessary.

The Milford Community Action Plan consists of the following:

1.) **Work to on local roads to maintenance and improve evacuation routes** – Work to improve local the private road system throughout the community. Many of these roads are property owner owned and issues have arisen when maintenance of these roads is needed. The community will work towards resolving these issues with these home/property owners by any means possible to ensure that all roads are accessible should evacuations from wildfire be required.

2.) **Annual Firewise® Activity Days** – Conduct annual "Firewise® Activity Days". These annual events are activities provided to bring attention to the community of the need to create and maintain the individual homeowner and property owners' defensible space, evacuation routes, etc. These events may be educational or actual laborious activity to remove vegetation from around homes and buildings, improve the roads within the community, etc. or both.

3.) **5 Year Review of Community Action Plan** – This is an opportunity to review the Community Action Plan update the plan and make any additions to the plan that would be relevant to the overall community safety from wildland fires.

With the funding assistance from the Lassen County Board of Supervisors by providing SRSA, Title III funds to conduct a fuel treatment project and educate the community on the Firewise® Communities/USA Program, we have addressed our annual requirement to conduct a Firewise® day activity within the community by providing an opportunity on June 26, 2014 for residents to learn about the Firewise® Communities program as well as the hazardous fuels removal project.

Work on action item number 1 will require significant funding to provide for road improvements sufficient enough to allow for passenger vehicles to exit the community should a wildfire event occur. Due to the fact that this will require that private property owners allow and work with the community to make road improvements and regular maintenance on these roads agreements will need to be negotiated that would allow this activity. These discussions may take several years to accomplish.