

SPALDING COMMUNITY WILDFIRE RISK ASSESSMENT REPORT



Adopted by Spalding FIREWISE® Board:
May 14, 2014



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April 8, 2014

Reviewed by Spalding CSD
General Manager & Fire Chief:

April 21, 2014

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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



1. INTRODUCTION and BACKGROUND

Introduction

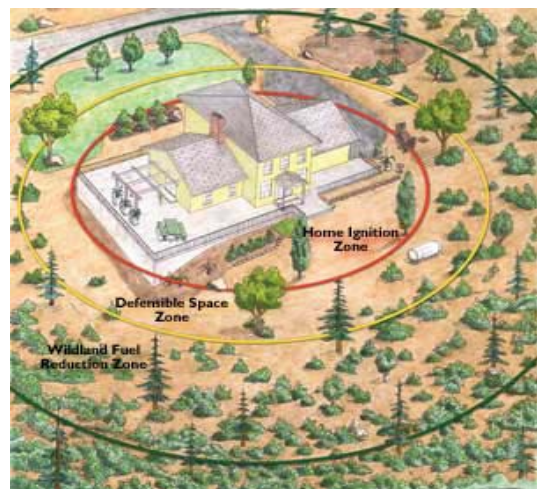
The Firewise Communities/USA® recognition program is designed to provide an effective wildland fire management approach for preserving wildland living aesthetics. The program can be tailored for adoption by any community and/or neighborhood association that is committed to ensuring its citizens maximum protection from wildland fire. The following community assessment is intended as a resource to be used by the Spalding 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 Spalding Community Services District Board began the process of seeking “Firewise Communities/USA®” recognition for their community located in Lassen County. Spalding lies within a wildland-urban interface (WUI), an area that figures prominently in wildland fire discussions. The Spalding area consists of the community of Spalding entirely. For purposes of this document, the Spalding 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 Spalding 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 Spalding 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 Spalding 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 Spalding 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. Spalding 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 dominated 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 pockets of 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 tree, 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 Spalding, as it relates to fire issues. The first map (Figure 1) shows the Spalding WUI Treatments Project area as documented in the Lassen County Community Wildfire Protection Plan (CWPP) and current work plan. The Spalding community location is 40.65N, 120.77W.

5.1 Overview

Spalding is a small community located along the western shore of Eagle Lake in Lassen County, California. The community itself is located in the Spalding Community Services District (CSD) surrounded in part by USFS lands and under the Eagle Lake USFS District Protection Area (DPA). This means the local CSD is responsible for fire protection of the structures and land in this area with assistance from the USFS. The surrounding area lies within the State Responsibility Area (SRA). This means the Spalding CSD is responsible for fire protection of the structures and CAL FIRE is responsible for fire protection of the wildland. (See Figure 4 for Spalding Community Services District fire protection boundaries) Many homes and properties within the community are considered "vacation rentals" and are occupied typically during the summer months.

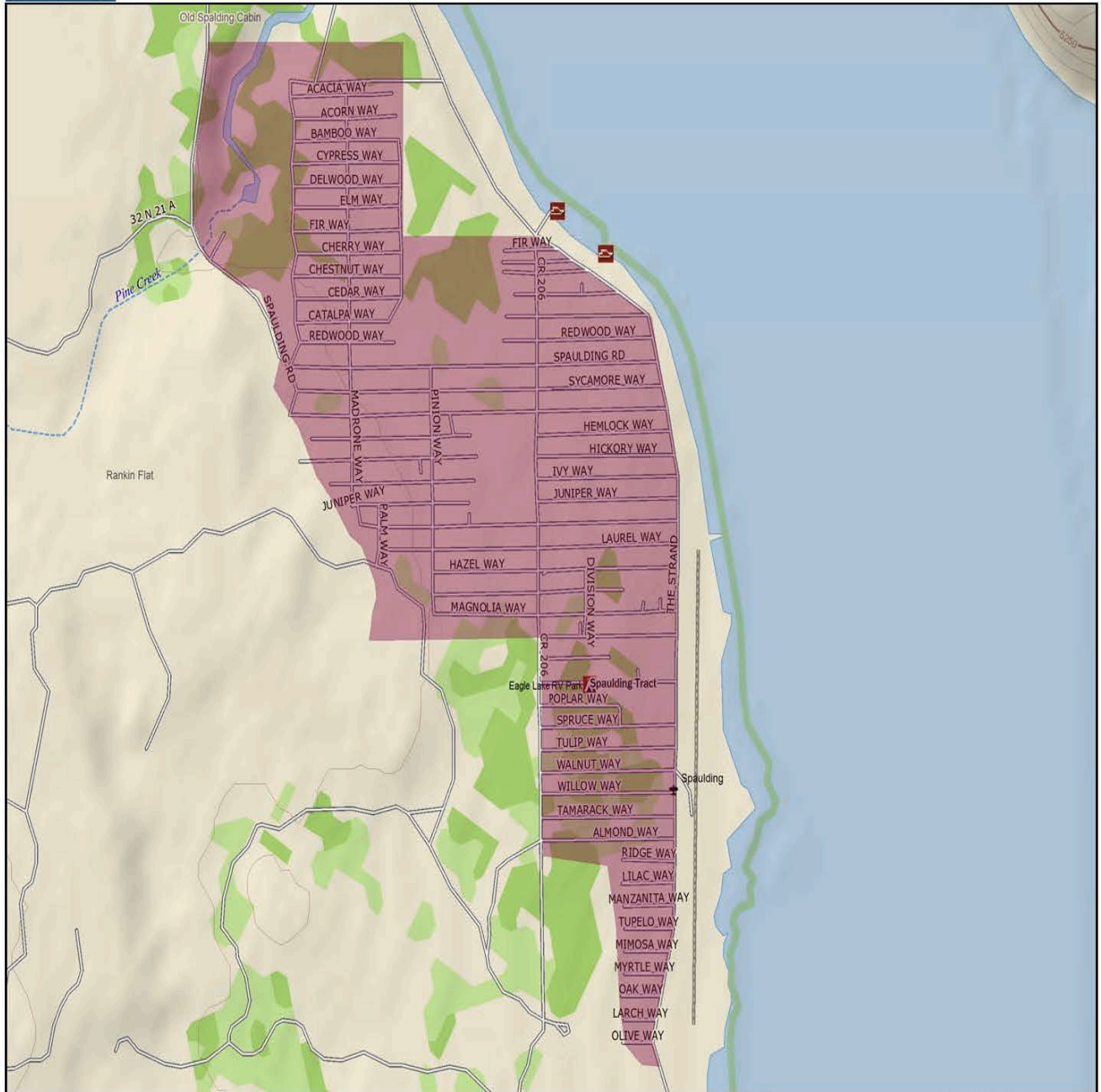
5.2 Topography

Spalding sits at an elevation of 5138 feet. The topography of Spalding, (see Figure 2), is mostly level with slopes averaging less than 5% surrounded by federal and private timberlands to the west, north and south and a band of brush/grassland along the eastern edge between Eagle Lake and the community.

FIGURE 1– Spalding community Project Area Map



XMap® 7



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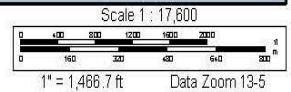


FIGURE 2- "Google Earth" Map of the Spalding Community



5.3 Vegetation

Vegetation in Spalding consists of mixed stands of Ponderosa 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

Eagle Lake, the second largest natural lake in California, runs north to south along the east side of Spalding providing a natural protective zone to the east of the community.

5.5 Demographics

The community of Spalding has a year round population of 178, with 94 households, according to the 2010 United States Census.

According to the Lassen County Assessor's Office, Spalding consists of 996 parcels. Approximately 600 of those parcels have been improved in some way (*meaning they have some type of structure*) and 396 parcels are undeveloped.

5.6 Local Fire Department

The Spalding Community Services District (CSD) has the oversight of the local Spalding Volunteer Fire Department which has one small station adjacent to the CSD offices and provides fire suppression and emergency medical services (see Figure 4). In addition, during the fire season, Spalding rents an equipment bay at the fire department during the summer months to the Lassen National Forest, Eagle Lake District Office in order to house wildland fire units with staffing which assists in their wildland fire fighting capabilities.



5.6.1 Personnel

The Spalding Volunteer Fire Department Fire Chief states that there are 9 local residents who are volunteer firefighters.

FIGURE 3– Spalding Community Street map.



5.6.2 Equipment at Station

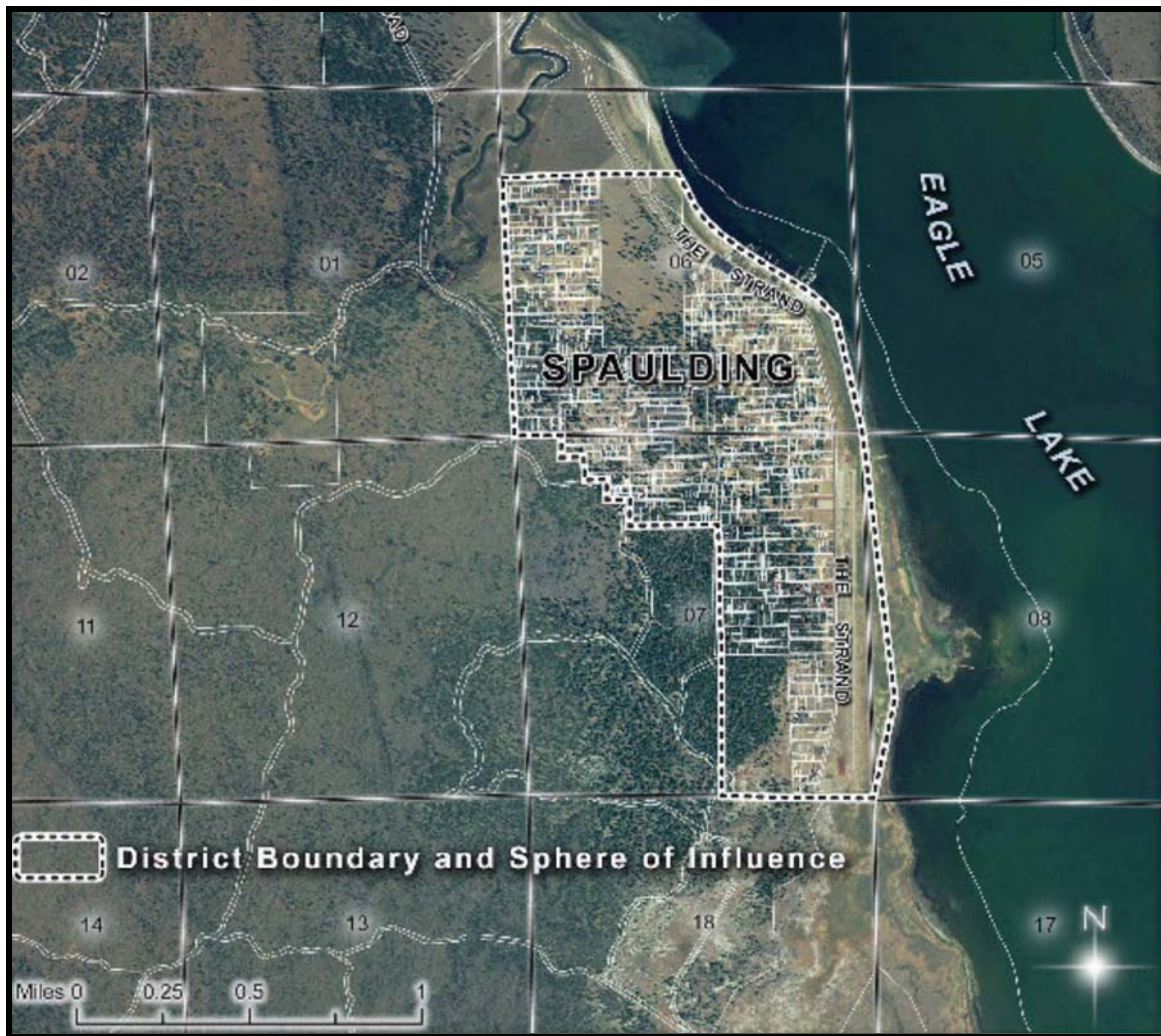
Equipment located at the fire station includes the following vehicles:

Table 1: Spalding Volunteer Fire Department equipment List

Vehicle Description	Vehicle ID	Make	License	Year
Chief's Vehicle	1200	Chevy	1306881	2005
Engine Pumper	1221	International	1169409	2006
Type I Engine	1223	American LaFrance	1030682	1960
Water Tender	1234	Kenworth	010909	1985
Ambulance	1253	Ford	1359069	1995

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.

FIGURE 4 – Spalding Community Services District and Volunteer Fire Department Boundary map



Automatic aid and mutual aid agreements are in place with other nearby agencies to supplement the Spalding Volunteer Fire Department force as required or as necessary. Such support in the event of a major structural fire would typically come from other agencies as well as the Lassen National Forest and CAL FIRE. Fire protection for the wildland surrounding Spalding would be through the Lassen National Forest and CAL FIRE.

5.7 **Fire Hydrant System**

There is no substantial fire hydrant system in the community of Spalding however there are currently 2 hydrants located next to their Wastewater Maintenance building behind the CSD office. They also have another one in the water district on Madrone and Cedar Streets. Each home has its own domestic water supply.

5.8 **Spalding WUI Area Treatment History**

1989 – Spalding CDZ Project - Fuels reduction treatments occurred on 127 acres immediately adjacent to the community of Spalding. The resource objectives of this project were to reduce the risk of damage or loss of property and life during a wildfire incident. This project is somewhere in the footprint of the Spalding WUI project area.

9/2004- Spalding WUI Project - The Lassen National Forest, the Lassen County Fire Plan, and the Lassen County Fire Safe Council, Inc. identified Spalding 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 Spalding.

Project objectives included:

- Protect the community of Spalding and its evacuation route, and create a safer more effective fire suppression environment in the Wildland Urban Intermix Defense and Threat Zones.
- 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.
- Protect and enhance bald eagle, nesting and roosting, habitat within the project area from catastrophic wildfire and/or insect mortality.
- Enhance bald eagle prey habitat by increasing nesting opportunities for Canada geese.

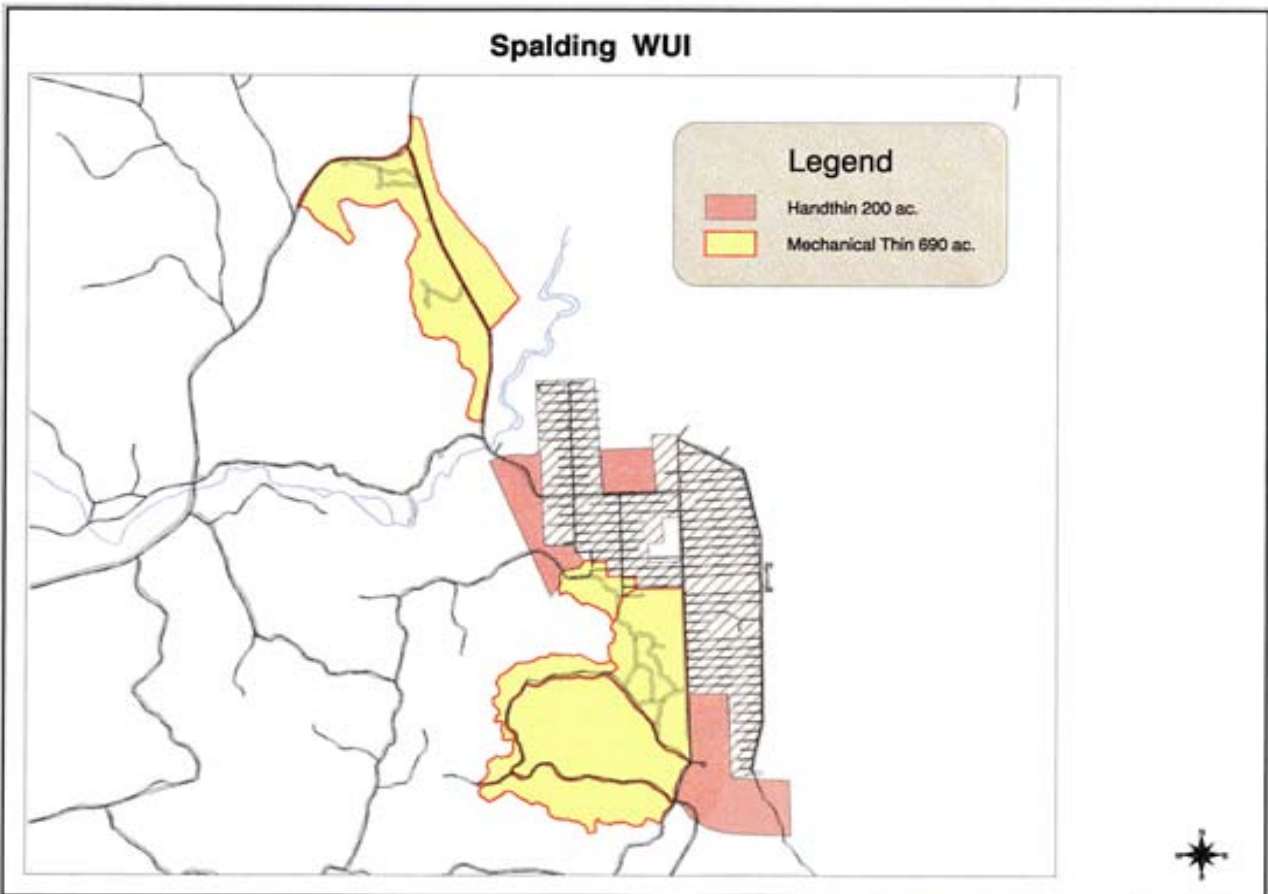
Within the project area, approximately 900 acres of vegetation was treated around the community of Spalding (see Figure 5). The treatments were designed to reduce fire behavior by reducing surface, ladder, and canopy fuels.

Table 2: Spalding WUI Project Treatments

Treatment Summary	Acres (Approx.)
Mechanical Treatment: Reduction of ladder and canopy fuels.	700
Hand Thinning: Reduction of ladder and canopy fuels.	200
Prescribed Burning and/or Mastication: Reduction of surface and ladder fuels.	900

The contract for the project was awarded in 2005 and the mechanical treatments were completed in 2007. The Silviculture prescription was a “thin from below” prescription. This treatment left the largest, healthiest trees, while removing the smaller suppressed trees (ladder fuels), or diseased trees. The mechanical and hand treated areas were thinned to approximately 40 to 100 trees per acre, with a basal area of 60 to 80 square feet per acre and crown closure ranging from 20 to 40 percent. 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 volume removed from the project was approximately 10,978 green tons (GT). Approximately 55 percent was sawlog material (6,081 GT) and 45 percent was biomass or chips (4,897 GT). The post-harvest treatment would be prescribed fire and/or mastication. Prescribed fire treatments would reduce the surface fuel loading in the project area.

Figure 5 - Spalding WUI Project Treatment Area



5.9 Spalding WUI Area Fire History

The vegetative composition and structure within Spalding WUI and surrounding area has undergone dramatic changes within the last 140 years. 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), forest reconnaissance reports, comparisons of transect data and Government Land Office (GLO) data. This research indicates that current vegetative conditions within eastside landscapes

on the Eagle Lake Ranger District (ELRD) 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 on the Lassen National Forest (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 years. 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.

Similarly, Norman found that fire history along meadow-forest edges in eastside habitats on ELRD showed a frequent and prevalent disturbance at the meadow edge prior to 1850, with fire burning within study plots every 11 to 13 years. Norman also found that there was a large number of coincident fire dates between his study sites, indicating fires of large extent. He suggested that these large fires provided strong evidence that meadows and intervening forests had a continuous herbaceous component that allowed fire to spread over wide areas.

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 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.

In contrast to historical fire return frequency and the widespread nature of the fires, there has been an average of approximately 4 fires and 76 acres burned per year over the last 102 years, in the 3 township and ranges surrounding the Spalding WUI area (Table 2).

5.10 Fire Record

The Spalding WUI area has experienced fire caused by human and lightning activity, with the majority of the fire starts originating from lightning. According to the Lassen National Forest fire history records, there have been 370 wildland fires between 1911 and 2013 within the 3 township and ranges surrounding the Spalding WUI area (T33N R10E, T32N R10E, and T32N R11E), for a total of 7,722 acres. Lightning started 251 of the fires, 110 were caused by human activity, and the remaining 9 were listed as unclassified starts in the fire history database. These fires ranged in size from 0.10 to 6,200 acres (Table 2). The expected fire behavior in the area has changed dramatically since pre-settlement times.

Table 3. Historical Fires Recorded in the Vicinity of the Spalding WUI Area (1911-2013).

	Size Class Distribution (Acres)							Total
	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	
Human Caused	72	27	7	2	1	0	1	110
Lightning Caused	218	29	2	2	0	0	0	251
Unclassified	7	1	1	0	0	0	0	9
Total Fires	297	57	10	4	1	0	1	370
Total Acres	31	94	430	667	300	0	6,200	7,722

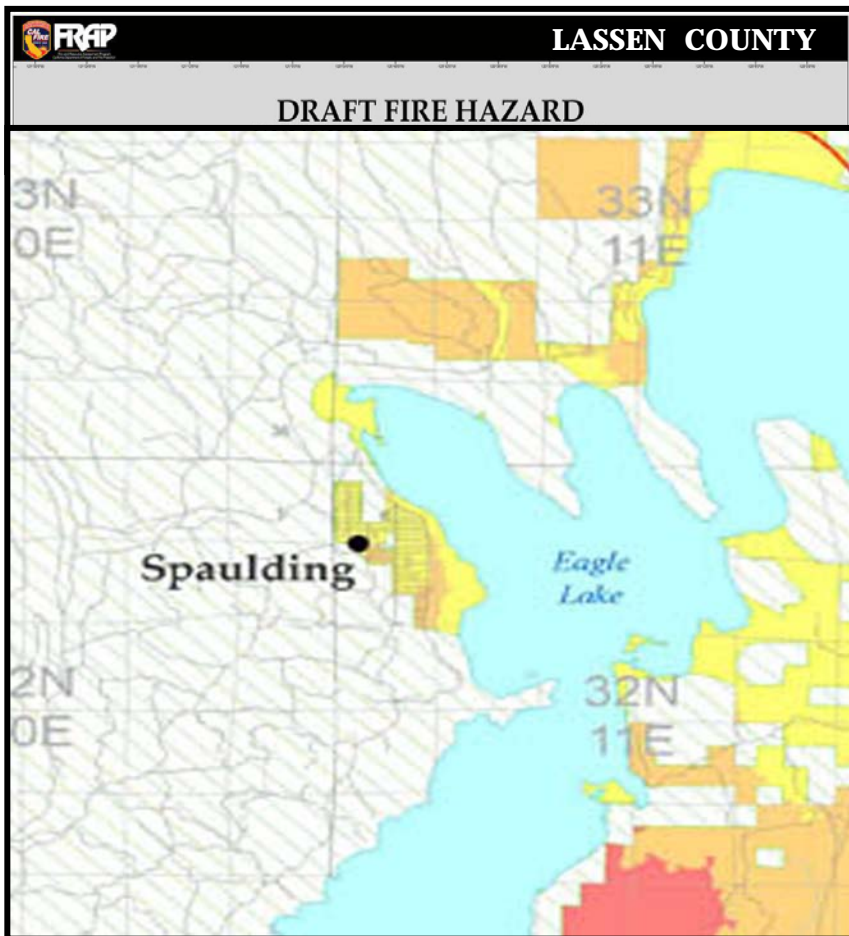
Source: USDA Forest Service 2013. Lassen National Forest fire history database.

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.

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) map for the region rates most of the Spalding area as a "Moderate" fire hazard area with some pockets rated as "High" (see Figure 6).

FIGURE 6 – Spalding 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.

- Spalding Volunteer Fire Department has an ISO rating of 8B.

6. Assessment Process

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

On February 17, and April 8, 2014 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

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

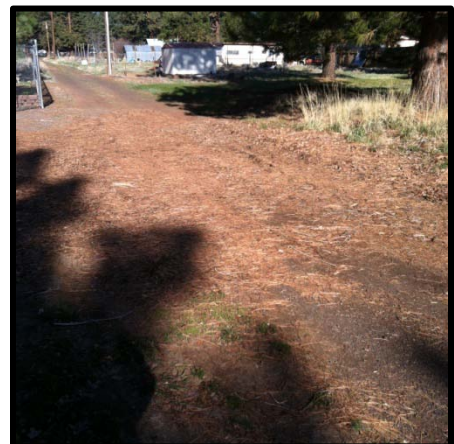
This report groups the issues into physical zones, starting at the structure and working outward from there. No attempt has been made to quantify the number of instances that such problematic issues were observed. Recommended remedial action is shown in *italic type*.

8.1 Fire Hazards

- Pine Needles on Roofs or in Gutters and on Roadways

Most homes in Spalding were excellent examples of keeping roofs and gutters clear of pine needles. 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 fill gutters, they not only interrupt the flow of rainwater, they too become ignition beds right at the vulnerable edge of the roof.

In addition, many roads within the community have significant buildup of pine needles. This pine needle litter can be a significant risk to the community by providing the opportunity for a fire to creep onto adjacent properties. The potential for a fire to move from one "well maintained" property to another which may not be maintained could cause a "low threat"



fire to suddenly become a conflagration causing severe damage to property and structures.

- *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 helps keep pine needles from accumulating there.*

- Flammable Materials on Decks

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.*



- Hazardous parcels

There are multiple parcels within the community that are not properly maintained or have other issues that require attention. This is a significant risk to adjoining property owners.

- *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*
 - *Installation of required and proper screening on chimney pipes, soffits, foundations, etc.*



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.*



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*



8.4 Ingress/Egress

There is only one paved road leading into Spalding (*Lake View Drive/Spalding Road*). The road is 1.6 miles in length before reaching the community, and is maintained by the Lassen County Road Department. There are very few paved roads. Although the roads do have good signage almost all could use improvements. Most roads are unpaved and very narrow. Should a fire sweep through this community, egress for residents and access for fire service vehicles could be compromised. Communities should have multiple options for escape should a wildfire event occur. In addition, several homes in this area are used as vacation rentals for people who may be unfamiliar with escape routes.



- *The community should develop escape routes and post in the event of a fast-moving wildfire and work to improve Mahogany Road, where it runs beyond the transfer station, as an alternate escape route.*
- *Roads signage should include cross street signage.*
- *Roads sign post should be replaced with fire proof posts.*
- *Roads signs that are obstructed by trees and/or shrubbery should be cleared of these or other obstructions.*
- *Posting escape routes inside those homes that are rentals would inform vacationers who may be unfamiliar with the area on their options.*



8.5 **Access to Structures**

It is important that emergency service personnel have access to residences. 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. 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.*
- *Encourage the installation of standardized house numbering system that is highly visible including large reflective numbers with contrasting background.*

8.6 **Vegetation Beyond the Home Ignition Zone**

- **Reduction of Fuel Volume and Ladder Fuels**

Vegetation on undeveloped lots and common areas within Spalding is not covered by the defensible space requirements of PRC-4291 but is of significant concern.

- *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 1/8 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 1/4 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 at the community of Spalding.

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

- On April 10, 2013 the Spalding Community Services District Board adopted a "Weed, Rubbish and Debris Abatement" ordinance (Exhibit A attached). Letters of enforcement have been sent to property owners that this ordinance will be enforced
- The service level of the Spalding Community Services District and the Spalding Volunteer Fire Department is very good.
- 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 good access for emergency vehicles via main thoroughfares and are well signed.
- Those 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 Spalding 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 Spalding Community Services District Board of Directors, which are also recognized as the local community Firewise® Board is seeking Firewise Communities/USA® recognition. This assessment provides agreed-upon, area-specific Firewise® solutions and recommendations and should be considered the community's action plan.

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 \$2,500 total invested in 2013.
- Firewise Communities/USA® Day activities were held in 2013 which was called the "Spalding Green Waste Clean-up " event that consisted of a four day opportunity for home/property owners to dispose of their yard debris for \$1 per yard at the local landfill. In addition, a community pancake breakfast as a fundraiser for the fire department and community improvements was held which included a booth by the Lassen County Fire

Safe Council, Inc. providing information on defensible space needs, fire history and opportunities for residents to ask questions concerning their actions regarding the creation and maintenance of their own defensible space.

- Another Green Waste Clean-up Firewise Communities/USA® Day activity is planned for 2014 that will provide home and property owners in the community the opportunity to dispose of their acquired pine needle, tree branch debris.
- This document represents the Community Assessment that has been completed.

Spalding 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

