Note: Anyone wishing to speak at any Planning Commission meeting is encouraged to do so. If you wish to speak, please rise and, after you have been recognized by the Chair, give your name and complete address for the record. You will then be allowed to speak. Please note that the public testimony may be limited by the Chair and normally is not allowed after the Public Hearing is closed.

ASHLAND PLANNING COMMISSION
STUDY SESSION
JUNE 24, 2014
AGENDA

I. CALL TO ORDER: 7:00 PM, Civic Center Council Chambers, 1175 E. Main Street

II. ANNOUNCEMENTS

III. AD-HOC COMMITTEE UPDATES

IV. PUBLIC FORUM

V. PRESENTATION

A. Presentation by the Ashland Fire Department on Amending the Wildfire Hazard Zone.

VI. ADJOURNMENT

CITY OF ASHLAND

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Community Development office at 541-488-5305 (TTY phone is 1-800-735-2900). Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to the meeting (28 CFR 35.102-35.104 ADA Title 1).

CITY OF ASHLAND

Memo

DATE: June 18, 2014

TO: Planning Commission

FROM: John Karns, Fire Chief

RE: Wildfire Hazard Zone Amendment

Ashland Fire & Rescue initiated a project to evaluate the current Wildfire Hazard Zone (WHZ) to the standards set forth by the Oregon Department of Forestry. Recent fire activity has indicated that significant hazard values exist well outside the current WHZ. Objective comparisons of properties inside and outside of the WHZ show that hazard values consistently meet the threshold established by the State for wildfire hazard designation.

For the project 16 zones were chosen in the city delineated by natural geographic features. With the help of the City's GIS staff and our Pictometry software, accurate topographical values were able to be placed on properties as well as those for fuel, fuel distribution, and regional fire weather. Extensive field studies allowed for establishment of the appropriate fuel model values for all areas in the city.

After final compilation of the hazard values, all 16 zones were found to be at or above the threshold for a WHZ as established by the Oregon Administrative Rules. It is the recommendation of Ashland Fire & Rescue that all areas within the city limits be declared a WHZ, amending the current WHZ as set forth in 1992.

CITY OF ASHLAND

Wildfire Hazard Zone Evaluation

2/17/2014

Evaluating the current boundary of Ashland's Wildfire Hazard Zone as it relates to the standards set forth by the Oregon Department of Forestry

Introduction

Ashland Fire & Rescue has entered into a project to evaluate the boundary of its existing Wildfire Hazard Zone (WHZ) relative to the standards established by the Oregon Department of Forestry in Chapter 629 of the Oregon Administrative Rules. The purpose of Chapter 629 is to set forth criteria that jurisdictions use to establish a WHZ so that the Oregon One and Two Family Dwelling Specialty Code and portions of the Oregon Structural Specialty Code can become effective. Ashland's existing WHZ, established in 1992, hasn't appeared consistent in delineating fire fuel profiles, land features, and other fire behavior factors in Ashland. Indeed, recent fire events have shown that high intensity, rapid spreading, and structure threatening fires have occurred well outside of the existing WHZ. . As an example, during the 2009 Siskiyou Fire 109 homes were evacuated under the threat of fire and none of these homes were in the officially designated WHZ. A careful analysis as well as new technology has allowed for a more critical look at what areas in the community meet the criteria for a WHZ.

This project will examine the City of Ashland and determine what areas of the city meet the criteria to be considered a WHZ as set forth by OAR Chapter 629, Division 044. According to OAR 629-044, there are four categories or "Hazard Factors" that are involved in determining the presence of a WHZ. Each of these four hazard factors are "scored" and there is the possibility of zero to three (0-3) points. After examining all four hazard factors for a geographic area, a numerical value can be assigned to each geographical area that will range from zero to twelve (0-12). If a particular geographical area receives an assigned "Hazard Value" of seven or greater, that geographic area will be designated as part of the jurisdiction's WHZ.

Ashland Municipal Code 18.62.090, the Development Standards for Wildfire Lands, designates requirements and standards for properties and structures that exist within the WHZ. A copy of the code section is included with this report.

In this report you will find the following:

1. Explanation of purpose and method for developing the geographical areas.
2. The four hazard factors and how they were determined for each geographical area.
3. A report for each geographical area showing an aerial photo, ground pictures of fuel models and a data sheet summarizing the total hazard values.

Contents

Developing the Geographical Areas

The first step in the project was to divide the entire city into geographic sections based on the presence of differing hazard values. The final outcome was a total of 16 areas utilizing natural geographic features such as ridges and hills as well as land features such as roads and easements. It is important to note that it is not the intent of OAR 629-044 that WHZ be determined on the basis of a tax lot or an ownership specific basis, but rather that a landscape approach be used.

The geographic sections were chosen utilizing practical roads such as Siskiyou Boulevard and Wimer Street, but more importantly, they were chosen by also using the natural geographic landscape such as the hillside from Strawberry-Hald Park that leads down into the downtown area. If you examine the Strawberry area, you will find that it is sectioned off in such a way that the area contains similar fuels. A fire starting anywhere in the area could potentially have an effect on the entire area. This is not to say that the geographic areas are completely different from neighboring areas, but rather that each area was chosen in such a way that you will find similar conditions throughout that specific area.

It is fair to say that there are two dominating models of geographic areas. The first of these is found mostly in the areas above (or south of) Siskiyou Boulevard. Characteristics found in these areas are mainly residential neighborhoods that are either on a steep slope or are directly at the base of a steep slope that leads up into densely forested areas. A fire in these areas would potentially be quick moving and spread into our valuable forested lands to the south.

The second model is found throughout the rest of the city below (or north) of Siskiyou Boulevard. These areas have significantly less slope and are not directly affected by forested areas, but rather by large areas of dry grass and shrubs. Ashland has seen two large scale fires within the last 4 years and both area types were involved. The Siskiyou Fire of 2009 was started just above Siskiyou Boulevard and travelled through steep forested terrain threatening many homes within the city. The Oak Knoll Fire of 2010 was started in an open, flat grass area and travelled quickly through a residential area destroying eleven homes in 45 minutes. In the Oak Knoll Fire, both the existence of natural fuels predominating the area *and* ornamental plantings within 30 feet of homes contributed to the fire's spread and loss of structures. Flammable ornamental plantings are ubiquitous throughout Ashland, and though ornamentals may be a small percentage of any one geographic area, they create a disproportionate hazard that cannot be regulated outside of a WHZ

The areas that these fires occurred are by no means unique. In every geographic area highlighted in this project, there is potential for similar fires to occur. The following pages will further explain the hazard factors and how they were applied to each geographic area.

Hazard Factor 1: Fire Weather

This weather hazard factor for all jurisdictions is provided by the Oregon Department of Forestry. ODF compiles a complete list of all counties within the state and provides scores based on weather history of the area. Jackson County was given a score of 3 points based upon the average weather the area experiences during a fire season.

Hazard Factor 2: Topography

Developing the topography hazard factor involves establishing the percentage of slope for each individual geographic area. Maps were provided by Ashland Public Works Engineering Division GIS giving the slope percentage for all areas in Ashland. Two color coded maps are provided with this report showing the slope of the city. This map was sectioned off into the geographic areas chosen for the analysis and an appropriate average slope for the area was chosen. A hazard value is then assigned to the area based on the average percentage of slope within that area according to the following schedule:

0-3% slope	0 points
3-12% slope	1 point
12-20% slope	2 points
20%+ slope	3 points

Hazard Factor 3: Natural Vegetative Fuel

The natural vegetative fuel hazard factor involves determining the main fuel type found within a geographic area. These fuel types are based on the "Aids to Determining Fuel Models for Estimating Fire behavior" produced by the Forest Service. There are 10 fuel models given and each of these is described in detail in OAR 629-044-0250. They can be generally described as three main types: grass, shrubs and timber. Each of these fuel models has a hazard value assigned from 0 to 3 points. The schedule of fuel models are as follows:

- Little or no natural vegetative fuels are present. – 0 points
- Fuel Model 1 – Grass – 3 points. Very little shrub or timber is present, generally less than one-third of the area. Main fuel is generally less than two feet in height. Fires are surface fires that move rapidly through cured grass and associated material.
- Fuel Model 2 – Grass – 3 points. Open shrub lands and pine stands or scrub oak stands that cover one-third to two-thirds of the area. Main fuel is generally less than two feet in

height. Fires are surface fires that spread primarily through the fine herbaceous fuels, either curing or dead.

- Fuel Model 3 – Grass – 3 points. Beach grasses, prairie grasses, marshland grasses and wild or cultivated grains that have not been harvested. Main fuel is generally less than four feet in height, but considerable variation may occur. Fires are the most intense of the grass group and display high rates of spread under the influence of wind.

- Fuel Model 4 – Shrubs – 3 points. Stands of mature shrubs have foliage known for its flammability, such as gorse, manzanita and snowberry. Main fuel is generally six feet or more tall. Fires burn with high intensity and spread very rapidly.

- Fuel Model 5 – Shrubs – 1 point. Young shrubs with little dead material and having foliage not known for its flammability, such as laurel, vine maple and alders. Main fuel is generally three feet tall or less. Fires are generally carried in the surface fuels and are generally not very intense.

- Fuel Model 6 – Shrubs – 2 points. Older shrubs with foliage having flammability less than fuel model 4, but more than fuel model 5. Widely spaced juniper and sagebrush are represented by this group. Main fuel is generally less than six feet in height. Fires will drop to the ground at low wind speeds and in stand openings.

- Fuel Model 8 – Timber – 1 point. Areas of timber with little undergrowth and small amounts of litter buildup. Healthy stands of lodge pole pine, spruce, fir and larch are represented by this group. Fires will burn only under severe weather conditions involving high temperatures, low humidity and high winds.

- Fuel Model 9 – Timber – 2 points. Areas of timber with more surface litter than fuel model 8. Closed stands of healthy ponderosa pine and white oak are in this fuel model. Spread of fires will be aided by rolling or blowing leaves.

- Fuel Model 10 – Timber – 3 points. Areas of timber with heavy buildups of ground litter caused by overmaturity or natural events of wind throw or insect infestations. Fires are difficult to control due to large extent of ground fuel. (Fuel model 10) -- 3

Since each geographic area has more than just one fuel model, hazard value was averaged based on which fuel model was most prominent. For example, if an area has a large stretch of grass field near residential area, it may not be accurate to give a blanket value of 3 for the entire area if there was a more prevalent fuel model. Residential areas commonly have a large amount of fuel model 5and 6 (shrubbery) that need to be weighed against other fuel models such as grass. In some cases the grass area (hazard value 3) and the shrub area (hazard value 1) were averaged and a final hazard value of 2 was given to the area.

Included with the final data for each geographic area is a series of four photographs showing various fuel models found within that area. These photos are not intended to imply that the entire area is a solid fuel type, but rather to give an example from the ground of the fuel models found.

Examples of ground photos for fuel models

Fuel Model 1

Fuel Model 4

Hazard Factor 4: Fuel Distribution

The natural vegetative fuel distribution hazard factor is basically a close look at percentages of an area occupied by vegetation. In short, how much of the area has fuel present. This hazard value was determined by using a series of aerial photos that are available in Pictometry. The program allowed for areas to be outlined and acreage calculated. From these images and outlines, it was possible to calculate the approximate percentage of an area that has vegetation present.

For example:

This picture shows a very simple area to measure for vegetation percentage. The red line shows the perimeter of the area being measured and gives the

acreage. The yellow line shows the perimeter of the area that is only vegetation and gives the acreage. To calculate the percentage of the area that is vegetation, simply divide the vegetation area by the total area. In this case: 1.10÷2.31=0.476, or, approximately 47%.

This gives us a rough percentage based only on the field area that has no buildings or improvements on it. If we examine the property around the three buildings on the left side of the picture, it is obvious that there is additional vegetation that we need to calculate the area of. The areas around structures are calculated by looking at the area as a whole and estimating the percentage of the area that has vegetation. In this example, the area around the structures is roughly ten percent of the total property (not including the open field area that we have already accounted for).

The numbers we have for this area:

Total acreage:	2.31
Solid vegetation:	1.10
Improved area: (area that is not solid vegetation, total acreage minus solid vegetation)	1.21
% of solid vegetation:	47%
Vegetation in improved area: (our estimated percentage for the area around structures)	10%

From these numbers we can calculate the total percentage of vegetation for the entire area. With the acreage from the field, we can find the acreage for the improved area. We are estimating the vegetation density of the improved area to be 10%; we will multiply the improved area (1.21 acres) by the percentage of vegetation (10%). This calculates to 0.121 acres. We can now say that the acreage of vegetation equivalent for the improved area is approximately 0.12 acres. To get the total acreage of vegetation we can add it to our previous acreage of solid vegetation (1.10). This will give us a total vegetation area of 1.22 acres. Now it is simply a matter of again dividing the total vegetation for the area by the total area. Now that we have accounted for the ten percent in the improved area our equation is: 1.22/2.31= 0.528, or 52%.

In this example the approximate percentage of vegetation for the area is 52%. This number allows us to assign a hazard value for the geographic area. Hazard values are assigned based on the following numbers.

0-10% of the area= 0 points

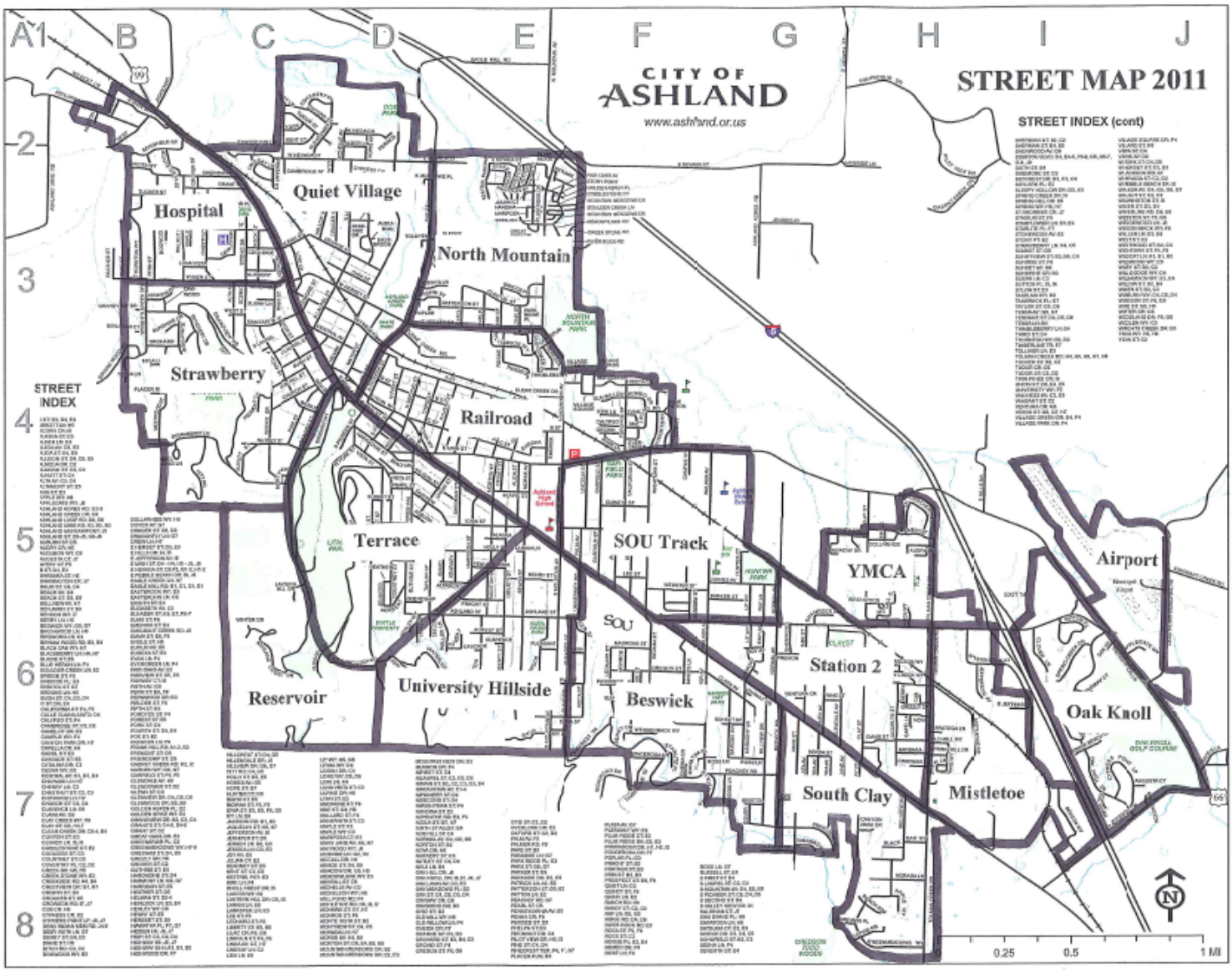
10-25% of the area= 1 point

25-40% of the area= 2 points

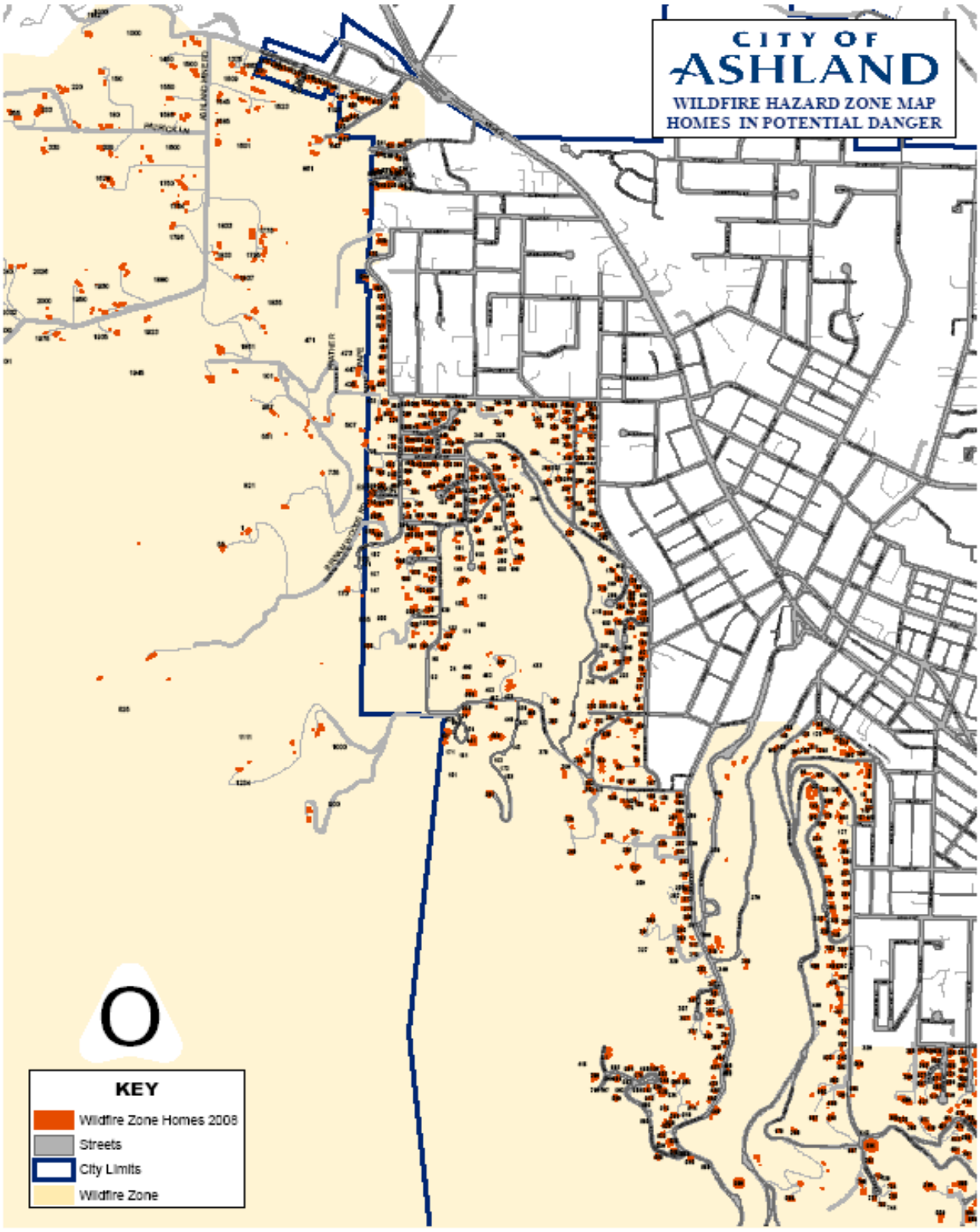
40-100% of the area= 3 points

These four hazard factors have been analyzed for each geographical area and the findings are presented in the following pages. There are three pages for each geographic area in the city. The first page gives a brief description of the area and a summary of the hazard values. The second page shows a few fuel model examples from the ground level. The third page shows an aerial view the entire area with a border and vegetation outlined.

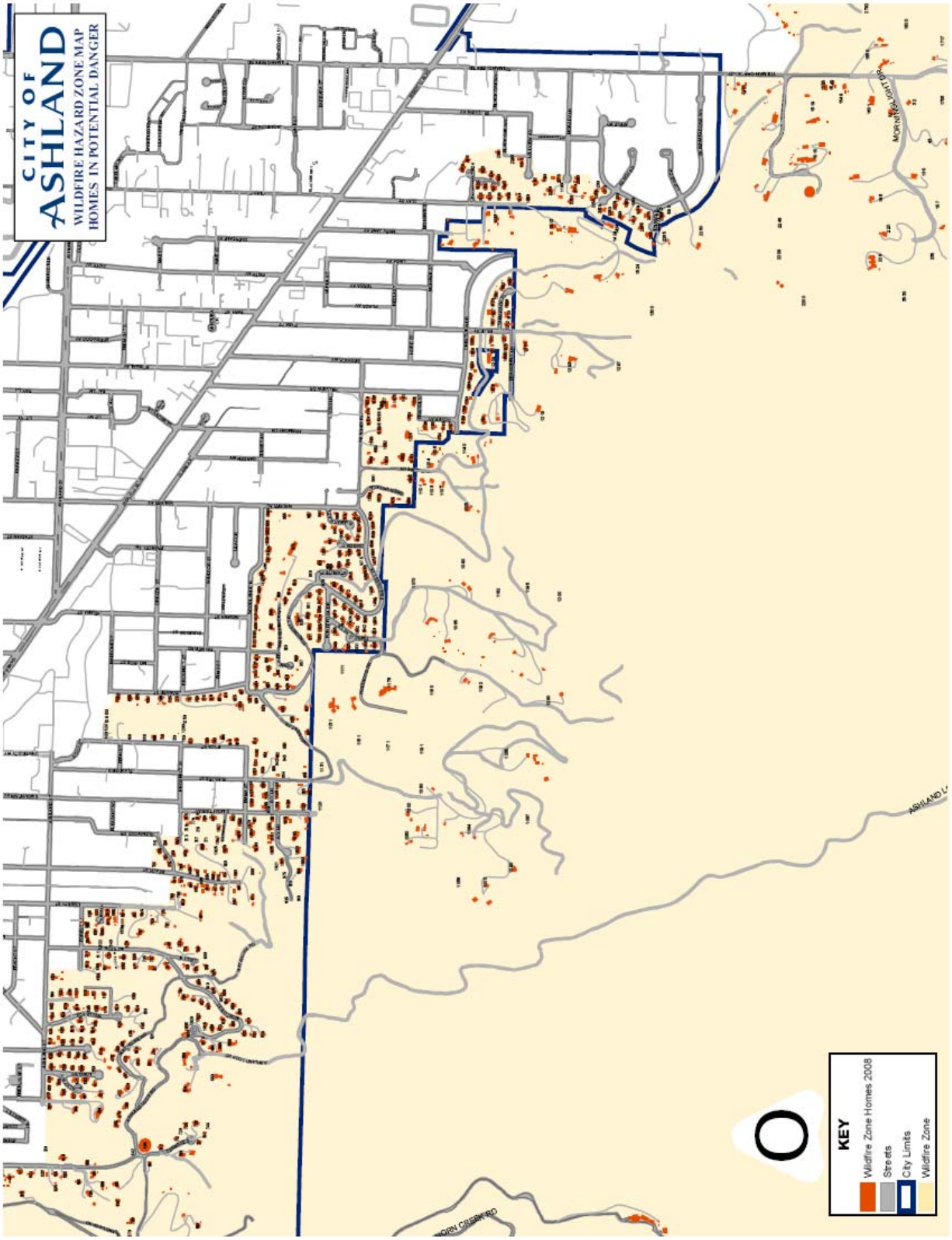
Geographical Areas for Wildfire Hazard Zone Evaluations



Current Wildfire Hazard Zone Map #1



Current Wildfire Hazard Zone Map #2



Hospital Area

Steep hillside residential with heavy grass/brush slopes to the west and northwest. (Type 1 and 6 fuel models)

Residential yards are mostly well kept with a large amount of vegetation evenly spread throughout the area. Fuel models 5 and 6 are most accurate. Also several patches of grass (vacant lots etc) throughout the area giving additional patches of fuel model 1.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution)		
Total acreage:	188.17	3
Solid vegetation:	24.17acres	
Improved area:	164 acres	
% of solid vegetation:	13%	
Vegetation in improved area:	35%	
Total approximate vegetation:	43%	
Vegetation type (fuel model)		
Most prominent fuel models are type 1 (3 points) and type 5 (1 point). Since these models are evenly dispersed and mixed together, a total point value of 2 is the most accurate.		2
Weather: Jackson County		3
Slope (Topography): 12-20%		2
Total Hazard Rating		10
Meets wildfire hazard zone requirements?		**Yes**

Hospital Area

Photo A

Photo B

Photo C

Photo D

Hospital Area

Strawberry Area

Area is represented by steep hillside residential with heavy grass/brush area. (Type 1 and 6 fuel models) Residential plots have an overall moderate to heavy fuel load and many areas are in close proximity to dry hillsides.

Hazard Factor			Hazard Value
Vegetation density (Fuel Distribution):			
	Total acreage:	334.22	3
	Solid vegetation:	92.84 acres	
	Improved area:	241.38 acres	
	% of solid vegetation:	27.78%	
	Vegetation in improved area:	35%	
	Total approximate vegetation:	53.06%	
Vegetation type (fuel model)			
Most prominent fuel models are type 1 (3 points) and type 6 (3 points).			3
Weather: Jackson County			3
Slope (Topography): 12-20%			2
Total Hazard Rating			**11**
Meets wildfire hazard zone requirements?			**Yes**

Strawberry Area

Photo A

Photo B

Photo C

Photo D

This area is dense residential that transitions up to very steep terrain. Large area of open grass/brush at top of hill. (Type 1 and 6 fuel models) On the west side, there are large patches of grass (fuel model 1) around residential areas. More towards downtown, residential yards are mostly well kept with a large amount of vegetation evenly spread throughout the area. Fuel models 5 and 6 are most accurate.	Total acreage: 334.22 Solid vegetation: 92.84acres Improved area: 241.38 acres %of solid vegetation: 27.78% Vegetation in improved area: 35% Total approximate vegetation: 53%

Strawberry Area

Reservoir Area

This area is a steep and densely forested area with some residential off the upper part of Granite street. (Type 1, 4 and 9 fuel models)

This area of Ashland is the most densely vegetated and the limited areas of improvement/construction are on steep lots with dense vegetation around the homes.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	219.53	3
Solid vegetation:	189.36	
Improved area:	30.17 acres	
% of solid vegetation:	86.26%	
Vegetation in improved area:	35%	
Total approximate vegetation:	91%	
Vegetation type (fuel model)		
Most prominent fuel models are type 1 (3 points) and type 4 (3 points). Since most of the area is forested, a value of 3 is definitely given		3
Weather: Jackson County		3
Slope (Topography): 20-35%		3
Total Hazard Rating		**12**
Meets wildfire hazard zone requirements?		**Yes**

Reservoir Area

Photo A

Photo B

Reservoir Area

Photo C

Photo D

Reservoir Area

Terrace Area

Steep hillside residential with heavy grass/brush slopes to the west above Lithia Park. (Type 1 and 4 fuel models)

Residential yards are mostly well kept with a large amount of vegetation evenly spread throughout the area. Fuel models 5 and 6 are seen with various shrubs/bushes throughout the entire area. There are also some areas with timber representing fuel models 8 and 9.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	351.5	3
Solid vegetation:	93.23acres	
Improved area:	258.27 acres	
% of solid vegetation:	26.52%	
Vegetation in improved area:	25%	
Total approximate vegetation:	44%	
Vegetation type (fuel model)		
Most prominent fuel models are type 1 (3 points) and type 5 (1 point). Since these models are evenly dispersed and mixed together, a total point value of 2 is the most accurate.		2
Weather: Jackson County		3
Slope (Topography): 12-20%		2
Total Hazard Rating		**10**
Meets wildfire hazard zone requirements?		**Yes**

Terrace Area

Photo A

Photo B

Photo C

Photo D

Terrace Area

University Hillside Area

This is a dense residential area above Siskiyou Blvd that transitions to steep hillside above the university. Upper area is densely vegetated with fuel models 1, 4, 8 and 9 present. Residential areas are densely vegetated with large amounts of trees and bushes. Fuel models 5 and 6 are most accurate for the residential area.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	298.24	3
Solid vegetation:	83.67acres	
Improved area:	214.57 acres	
% of solid vegetation:	28.05%	
Vegetation in improved area:	25%	
Total approximate vegetation:	46%	
Vegetation type (fuel model)		
Most prominent fuel models are type 4 (3 points), type 9 (2 points) and type 5 (1 point). Since these models are evenly dispersed and mixed together, a total point value of 2 is the most accurate.		2
Weather: Jackson County		3
Slope (Topography): 12-20%		2
Total Hazard Rating		**10**
Meets wildfire hazard zone requirements?		**Yes**

University Hillside Area

Photo A

Photo B

Photo C

Photo D

University Hillside Area

Beswick to Roca Canyon Area

A dense residential area that transitions from mild slope to steep slope. Moderately dense vegetation around homes with fuel models 5 and 6 seen most frequently around homes. There are also patches of grass and timber models present, especially towards the Roca Canyon area.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	308.15	2
Solid vegetation:	47.33acres	
Improved area:	260.82 acres	
% of solid vegetation:	15.36%	
Vegetation in improved area:	25%	
Total approximate vegetation:	36.5%	
Vegetation type (fuel model)		
Most prominent fuel models are type 1 (3 points) and type 5 (1 point). Since these models are evenly dispersed and mixed together, a total point value of 2 is the most accurate.		2
Weather: Jackson County		3
Slope (Topography): 12-20%		2
Total Hazard Rating		**9**
Meets wildfire hazard zone requirements?		**Yes**

Beswick to Roca Canyon Area

Photo A

Photo B

Photo C

Photo D

Beswick to Roca Canyon Area

South Clay Area

This area is a gradual sloped residential area that transitions into steep slope. The area towards the top of Park has some forested models although the area is dominated mostly by brush and grass areas with moderately vegetated areas around homes. Again, Fuel models 1, 4, 5 and possibly 8 are seen here.

There is also a creek running through the residential area giving a heavy fuel load splitting the area into two distinct but similar residential areas.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	197.08	3
Solid vegetation:	18.24acres	
Improved area:	178.84 acres	
% of solid vegetation:	9.26%	
Vegetation in improved area:	35%	
Total approximate vegetation:	41%	
Vegetation type (fuel model)		
Most prominent fuel models are type 1 (3 points), type 6 (2 points) and type 5 (1 point). Since these models are evenly dispersed and mixed together, a total point value of 2 is the most accurate.		2
Weather: Jackson County		3
Slope (Topography): 3-12%		1
Total Hazard Rating		**9**
Meets wildfire hazard zone requirements?		**Yes**

South Clay Area

Photo A

Photo B

Photo C

Photo D

South Clay Area

Oak Knoll Area

A dense residential area with substantial vegetation and varying degrees of slope throughout. Despite recent improvements to the area after the fire of 2010, there is still a significant amount of flammable vegetation around many homes. Fuel models 5 and 6 are present with a number of bush/shrub types around homes including juniper, Manzanita and pine.

There is also significant grass and brush bordering the area along the freeway as well as the densely overgrown hillside below the Windmill Inn.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	217.83	2
Solid vegetation:	25.55acres	
Improved area: (excluding golf course)	123.33 acres	
% of solid vegetation:	11.73%	
Vegetation in improved area:	35%	
Total approximate vegetation:	31.5%	
Vegetation type (fuel model)		
Most prominent fuel models are type 1 (3 points), 4 (3 points), 5 (1 point) and 6 (2 points). Because there is fuel model 5 mixed in throughout the residential area it is fair to give 2 points instead of the full 3 that would be awarded to other fuel models.		2
Weather: Jackson County		3
Slope (Topography): 3-7%		1
Total Hazard Rating		**8**
Meets wildfire hazard zone requirements?		**Yes**

Oak Knoll Area

Photo A

Photo B

Photo C

Photo D

Oak Knoll Area

Airport Area

The airport is a large open area surrounded by fields of grass (fuel model 1). There is also significant brush along the southwest border where a creek runs.

In addition to the airport, there is also a small section of industrial shops and storage yards that are also in close proximity to the brush/grass areas.

Hazard Factor			Hazard Value
Vegetation density (Fuel Distribution):			
	Total acreage:	117.49	2
	Solid vegetation:	36.62 acres	
	Improved area:	80.87 acres	
	% of solid vegetation:	31.17%	
	Vegetation in improved area:	5%	
	Total approximate vegetation:	34.61%	
Vegetation type (fuel model)			
Most prominent fuel models are type 1 (3 points) and type 6 (2 point). However, the grass areas are by far the greater area and threat and the area should be awarded the full 3 points			3
Weather: Jackson County			3
Slope (Topography): 0-3%			0
Total Hazard Rating			**8**
Meets wildfire hazard zone requirements?			**Yes**

Airport Area

Photo A

Photo B

Photo C

Photo D

Airport Area

Mistletoe Area

Relatively flat area with large fielded areas mixed in with industrial buildings and a bordering residential area to the west.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	196.88	2
Solid vegetation:	60.32 acres	
Improved area:	136.56 acres	
% of solid vegetation:	30.64%	
Vegetation in improved area:	10%	
Total approximate vegetation:	37.57%	
Vegetation type (fuel model)		
Most prominent fuel model is type 1 (3 points) with some smaller areas of type 5 (1 point). Since the grass fields are the biggest threat it is reasonable to give the full three points for fuel model 1		3
Weather: Jackson County		3
Slope (Topography): 3-7%		1
Total Hazard Rating		**9**
Meets wildfire hazard zone requirements?		**Yes**

Mistletoe Area

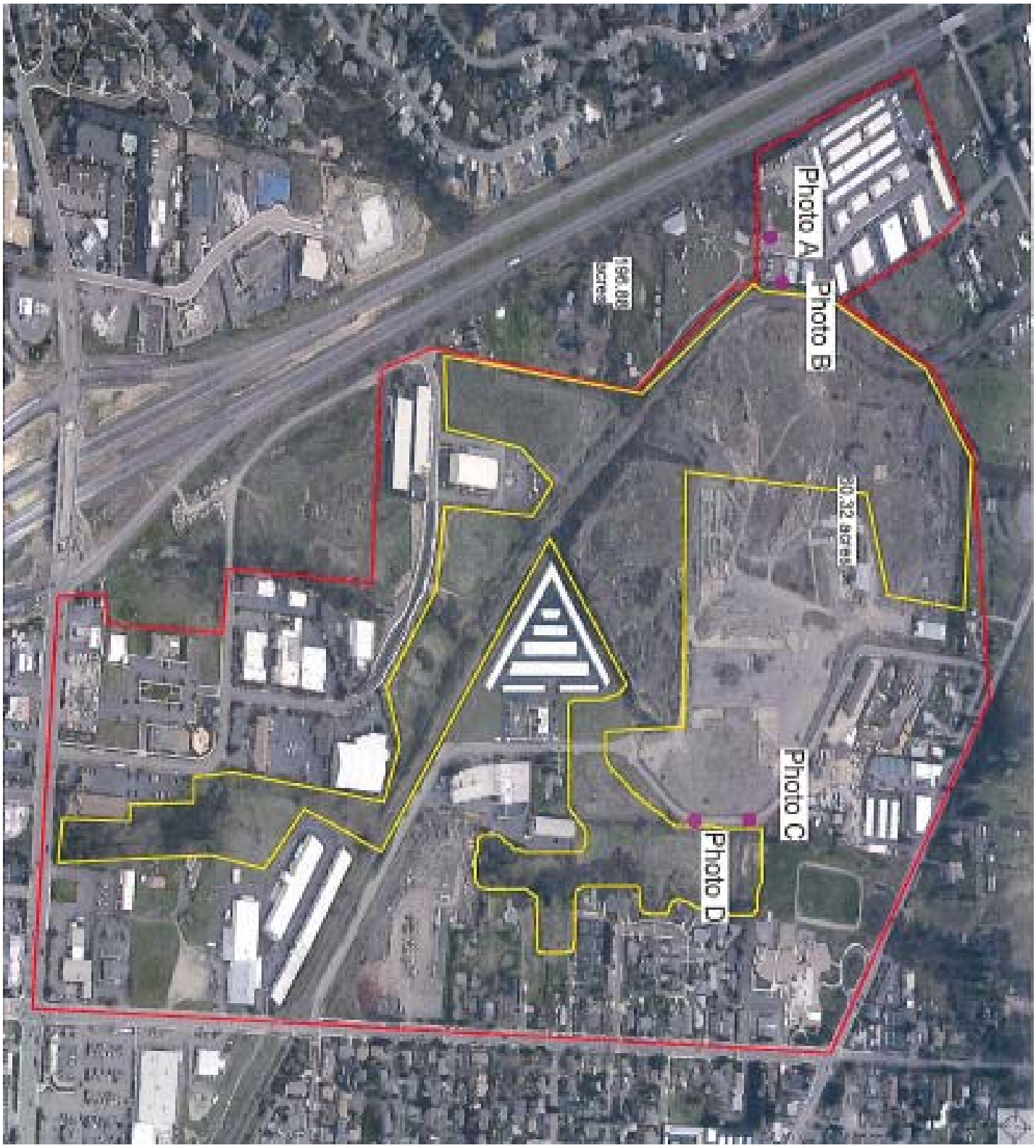
Photo A

Photo B

Photo C

Photo D

Mistletoe Area



Quiet Village Area

This area is a relatively low slope area with steeper banks bordering the creek that runs through it on the east side. There are several large areas of grass and brush bordering quiet village as well as grass and brush running the entire creek area between Oak Street and Helman Street.

Residential area has mostly fuel models 5 and 6 with the bordering areas of fuel model 1. Overall this area is very similar area to the Railroad area.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	349.65	2
Solid vegetation:	61.34 acres	
Improved area:	288.31 acres	
% of solid vegetation:	17.54%	
Vegetation in improved area:	20%	
Total approximate vegetation:	34%	
Vegetation type (fuel model)		
Most prominent fuel models are type 1 (3 points) and type 5 (1 point). Since these models are evenly dispersed and mixed together, a total point value of 2 is the most accurate.		2
Weather: Jackson County		3
Slope (Topography): 3-7%		1
Total Hazard Rating		**8**
Meets wildfire hazard zone requirements?		**Yes**

Quiet Village Area

Photo A

Photo B

Photo C

Photo D

Quiet Village Area

North Mountain Area

This area is slightly unique as it is a large central area of grassland on slope that leads to residential in nearly every direction. Dense residential neighborhoods with moderate vegetation are present along Oak and Hersey Street. The community on North Mountain Street has significantly less vegetation around homes but is still surrounded by dry grass fields.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	247.97	3
Solid vegetation:	84.26 acres	
Improved area:	163.71 acres	
% of solid vegetation:	33.98%	
Vegetation in improved area:	20%	
Total approximate vegetation:	47.18%	
Vegetation type (fuel model)		
Most prominent fuel model in this area is fuel model 1 (grass, 3 points). There are other models present along the creek and around homes, but the significant amount of grass in the area justifies a full 3 points		3
Weather: Jackson County		3
Slope (Topography): 3-7%		1
Total Hazard Rating		**10**
Meets wildfire hazard zone requirements?		**Yes**

North Mountain Area

Photo A

Photo B

Photo C

Photo D

North Mountain Area

Railroad Area

This community is a fairly low slope residential with large areas of grassy field running through it and along the railroad tracks. The most significant fuel load is the large fields in the Clear Creek area that are in close proximity to residential areas. Fuel model 1 (grass, 3 points) plays a significant role in fuel type. This area is very similar to the Station 2 area and the SOU track area except for the fact that the grass areas are within city boundaries which will raise the hazard value. However, residential fuel density is low as part of the downtown area and also the high school will dilute the density average.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	351.06	1*
Solid vegetation:	39.72 acres	
Improved area:	311.34 acres	
% of solid vegetation:	11.31%	
Vegetation in improved area:	15%	
Total approximate vegetation:	24.62% *	
Vegetation type (fuel model)		
Most prominent fuel models are type 1 (3 points) and type 5 (1 point). Since these models are evenly dispersed and mixed together, a total point value of 2 is the most accurate.		2
Weather: Jackson County		3
Slope (Topography): 3-7%		1
Total Hazard Rating		**7**
Meets wildfire hazard zone requirements?		**Yes**

Railroad Area

Photo A

Photo B

Photo C

Photo D

Railroad Area

SOU Track Area

The area is an average residential area with moderate vegetation mixed in with patches of grassy fields (fuel model 1). However, this area also has a high number of sports fields which are similar to the golf course and will heavily dilute the vegetation density hazard value. The area also has heavy grass fields to the east and north which lay just outside of city boundaries and are not accounted for in these figures.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	272.31	1
Solid vegetation:	12.3 acres	
Improved area:	260.01 acres	
% of solid vegetation:	4.5%	
Vegetation in improved area:	10%	
Total approximate vegetation:	14%	
Vegetation type (fuel model)		
Most prominent fuel models are type 1 (3 points) and type 5 (1 point). Since these models both would play important roles in the event of a fire, a total point value of 2 is the most accurate.		2
Weather: Jackson County		3
Slope (Topography): 3-7%		1
Total Hazard Rating		**7**
Meets wildfire hazard zone requirements?		**Yes**

SOU Track Area

Photo A

Photo B

Photo C

Photo D

SOU Track Area

Fire Station 2 Area

This area is mostly dense residential with commercial shopping centers on the east and west ends. Fuel density is reduced a little as these areas are taken into account. Fuel model 5 and 6 are again found in the residential areas and along the creek that parallels Clay Street. There is also a notable amount of dry grass (fuel model 1) bordering the railroad tracks and area near Bimart.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	242.41	2
Solid vegetation:	16.5 acres	
Improved area:	225.91 acres	
% of solid vegetation:	6.81%	
Vegetation in improved area:	20%	
Total approximate vegetation:	25.45%	
Vegetation type (fuel model)		
Most prominent fuel models are type 1 (3 points) and type 5 (1 point). Since these models are evenly dispersed and mixed together, a total point value of 2 is the most accurate.		2
Weather: Jackson County		3
Slope (Topography): 3-7%		1
Total Hazard Rating		**8**
Meets wildfire hazard zone requirements?		**Yes**

Fire Station 2 Area

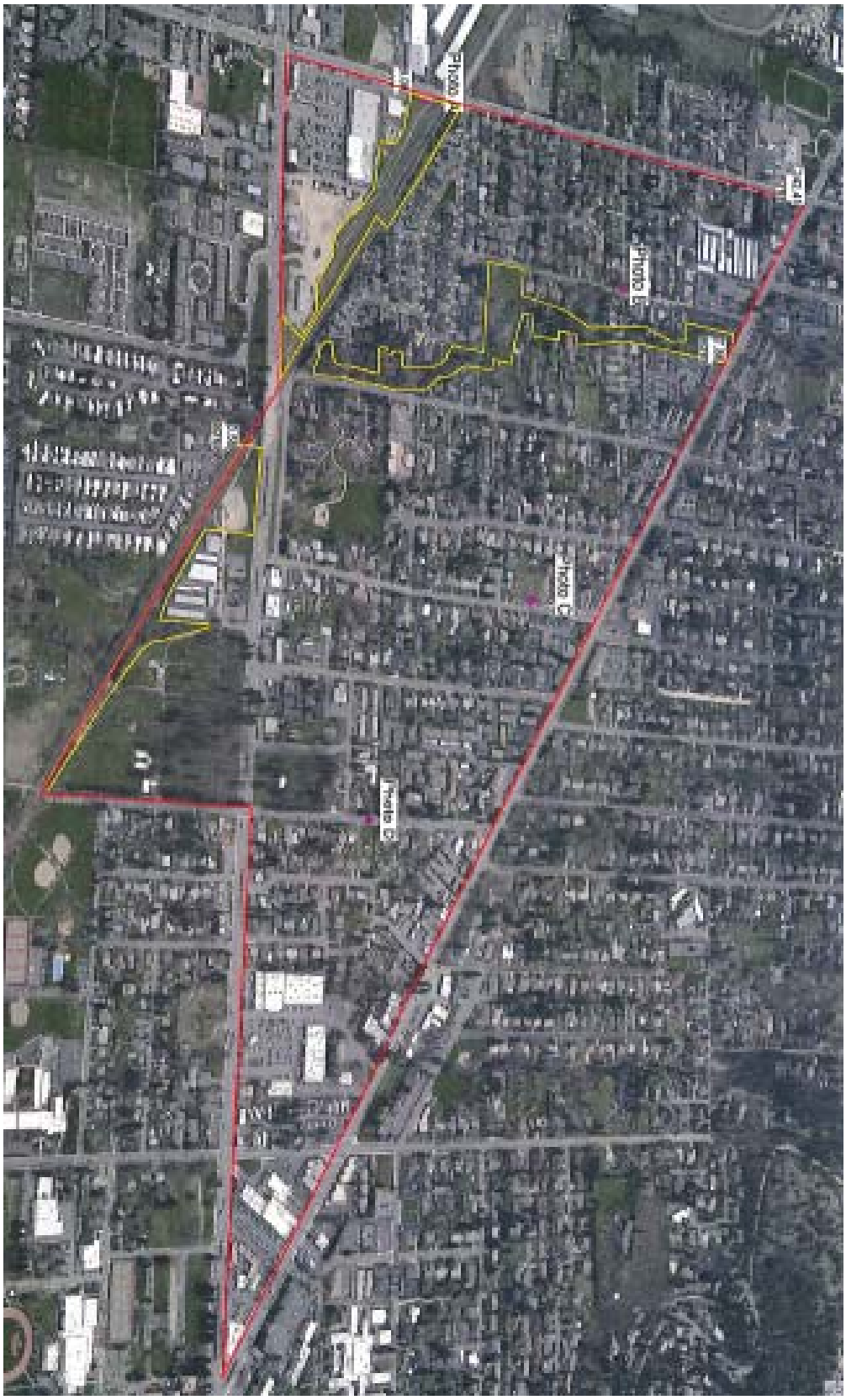
Photo A

Photo B

Photo C

Photo D

Fire Station 2 Area



YMCA Area

This area is represented by an even blend of residential and open field. Several grass fields fall just outside of the city boundaries and are not represented in these numbers. The fuel density on improved areas is also heavily diluted due to the soccer fields and commercial areas around the YMCA.

Hazard Factor		Hazard Value
Vegetation density (Fuel Distribution):		
Total acreage:	114.77	2
Solid vegetation:	16.56 acres	
Improved area:	98.21 acres	
% of solid vegetation:	14.43%	
Vegetation in improved area:	15%	
Total approximate vegetation:	27.26%	
Vegetation type (fuel model)		
Most prominent fuel models are type 1 (3 points) and type 5 (1 point). Since these models are evenly dispersed and mixed together, a total point value of 2 is the most accurate.		2
Weather: Jackson County		3
Slope (Topography): 3-7%		1
Total Hazard Rating		**8**
Meets wildfire hazard zone requirements?		**Yes**

YMCA Area

Photo A

Photo B

Photo C

Photo D

YMCA Area


Photo D
Photo C
Photo A
Photo B
0.88 acres
9.11 acres
114.77 acres
8.57 acres

Conclusion

This evaluation of Ashland's wildland urban interface fire vulnerability utilized the criteria cited in the Oregon Administrative Rules for Wildfire Hazard Zone determination. We were able to take advantage of technology and produce accurate average slope calculations for Hazard Factor 2, topography. GIS data was also helpful in calculating fuel distribution in the zones, a task that had been quite difficult before GIS technology. Ashland has a wide variety of topographies and fuel models though all zones scored seven or higher, qualifying as a wildfire hazard zone under Oregon Administrative Rules. A summary of the zone scores are as follows:

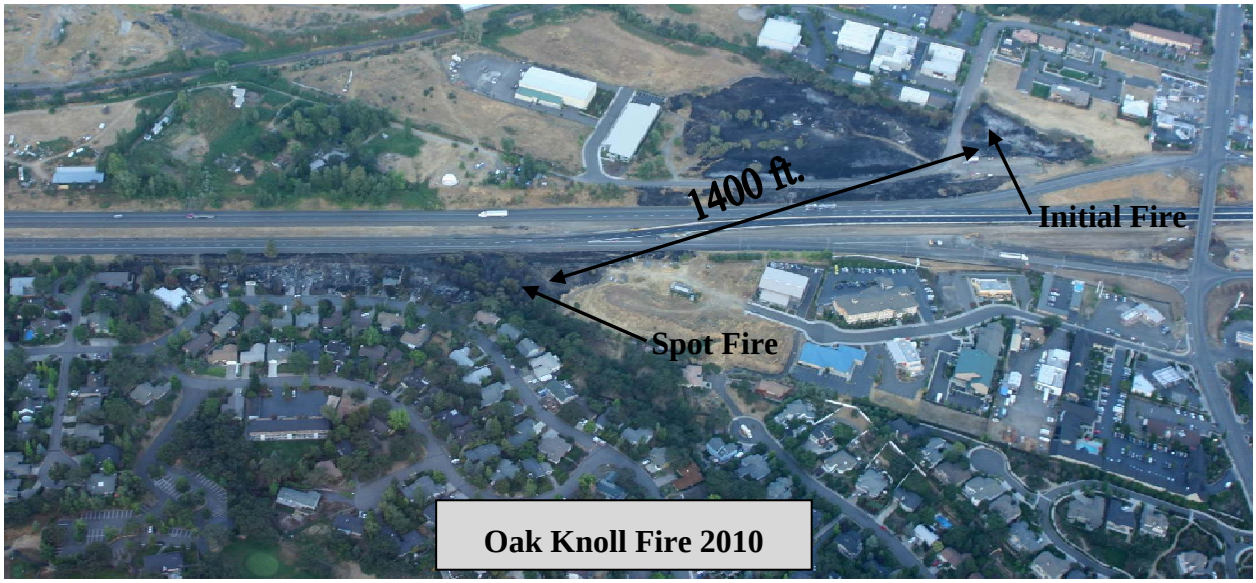
Hospital Area	10
Strawberry Area	11
Reservoir Area	12
Terrace Area	10
University Hillside Area	10
Beswick to Roca Canyon Area	9
South Clay Area	9
Oak Knoll Area	8
Airport Area	8
Mistletoe Area	9
Quiet Village Area	8
North Mountain Area	10
Railroad Area	7
SOU Track Area	7
Fire Station 2 Area	8
YMCA Area	8
Average Score	**9**

Two of the zones evaluated scored a seven and arguably present less of a fire and fire spread threat than other zones, however there are pockets of higher hazard properties within each of these areas. It must be mentioned that the fire behavior in any zone is but one concern. The spread of fire by windborne fire brands is of an equal or greater concern. The largest structure loss fire in Ashland history, the Oak Knoll Fire, occurred in a zone with a score of eight. The fire

Fire Brand Migration

Post-fire Oak Knoll Neighborhood

was started from a flying fire brand originating from the Mistletoe zone, having a score of nine, over 1400 feet away.



One of the main components of the fire suppression strategy for Ashland is keeping a city-sourced fire out of the Ashland Creek Watershed as well as keeping a watershed fire from spreading into the community. Both scenarios have been studied extensively and significant efforts are underway to reduce and manage the fuel loading in the watershed. Along with the Ashland Forest Resiliency Stewardship project, the City manages the fuels on city-owned lands in the watershed and partners with private owners on fuel reduction. Very detailed prescriptions have been developed that define the treatment of the fuels in the watershed to minimize the potential of an extreme fire behavior wildfire that could not only compromise the City's water supply, but threaten city structures as well. Wildlands can be forests, brush, or grass. Homes can be a cabin in the woods or residential neighborhoods. The highest losses of lives and homes occur when wildland fires burn into dense neighborhoods like past fires in Oakland (1991), San Diego County (2003), and South Lake Tahoe (2007). Ashland is most similar to these communities in vegetation types, home density, and weather.

It is recommended that the Wildfire Hazard Zone be increased to include all of the City of Ashland. Doing so will enhance several elements of the fire safety strategy of the city. The City will be able to regulate roof coverings to those appropriate for a community adjacent to and containing wildland fuels. Currently flammable wood product roof coverings are allowed outside of the wildfire hazard zone. The City will also be able to regulate landscape profiles for new construction that lend themselves to a low intensity fire behavior with far less spread potential. Currently vegetation that produces severe fire behavior and spread such as juniper, cypress, blackberries, and arbor vitae are allowed unrestricted outside of the wildfire hazard

zone. Both roof coverings and hazardous landscape fuels were a major factor in the destruction of 11 homes in the Oak Knoll fire.

Properties in wildfire zones are often the only ones that qualify for hazardous fuel mitigation grants that are developed. Expanding the zone would allow more properties to apply for grant funds to help with fuels reduction and creating defensible spaces.

The suggested expansion of Ashland's Wildfire Hazard Zone to include the entire city has been approved by the Oregon Department of Forestry and is recommended by the local Division Chief of the United States Forest Service. This expansion will be a major step in achieving an improved fire safety profile for the City of Ashland.

Appendix A

DEPARTMENT OF FORESTRY

DIVISION 44
CRITERIA FOR DETERMINATION OF
WILDFIRE HAZARD ZONES

629-044-0200
Definitions
As used in OAR chapter 629, division 044, unless otherwise required by context:
(1) "Geographic Area" means the areas which result from the partitioning of all or portions of a jurisdiction into smaller segments, based on the presence of differing hazard values.
(2) "Hazard" means the potential to burn.
(3) "Hazard Factor" means the factors which most influence the potential of a geographic area to burn. Hazard factors are fire weather, topography, natural vegetative fuels, and natural vegetative fuel distribution.
(4) "Hazard Rating" means a cumulative value resulting from the summation of hazard values for all four hazard factors. It reflects the overall potential for a given geographic area to burn.
(5) "Hazard Value" means a value assigned to a hazard factor within a geographic area.
(6) "Jurisdiction" means a unit of local government authorized by law to adopt a building code or a fire prevention code.
(7) "Land Features" means roads, jurisdictional boundaries and other features created by human activity.
(8) "Natural Geographic Features" means streams, ridge lines and other features naturally occurring.
(9) "Wildfire Hazard Zone" means a geographic area having a combination of hazard factors that result in a significant hazard of catastrophic fire over relatively long periods of each year.
Stat. Auth.: ORS 526.016
Stats. Implemented: ORS 93.270
Hist.: FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

629-044-0210
Purpose
The purpose of OAR chapter 629, division 044 is to set forth the criteria by which Wildfire Hazard Zones shall be determined by jurisdictions. Such a determination is necessary before the provisions of ORS 93.270(4), portions of the **Oregon One and Two Family Dwelling Specialty Code**, and portions of the **Oregon Structural Specialty Code** can become effective. The determination of Wildfire Hazard Zones by jurisdictions is voluntary.
Stat. Auth.: ORS 526.016
Stats. Implemented: ORS 93.270
Hist.: FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

629-044-0220
Wildfire Hazard Zones
(1) For the convenience of administration, when practical, a jurisdiction may utilize nearby natural geographic features or land features to delineate the boundaries of Wildfire Hazard Zones.
(2) It is not the intent of OAR chapter 629, division 044 that Wildfire Hazard Zones be determined on a tax lot or an ownership specific basis, but rather that a landscape approach be used.
(3) To determine the existence of Wildfire Hazard Zones, a jurisdiction shall:
(a) Determine, for each hazard factor, the appropriate geographic areas and associated hazard values; then
(b) Overlay the geographic areas and associated hazard values determined in subsection (3) (a) above, then determine the resulting composite geographic areas and the associated hazard rating for each composite area.
(c) For each composite geographic area determined in subsection (3) (b) above, determine whether a Wildfire Hazard Zone is present from **Table 5**.

TABLE 5
WILDFIRE HAZARD ZONE
Hazard Rating -- Wildfire Hazard Zone
1, 2, 3, 4, 5, or 6 -- NO
7, 8, 9, 10, 11 or 12 -- YES
Stat. Auth.: ORS 526.016
Stats. Implemented: ORS 93.270
Hist.: FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

629-044-0230
Fire Weather Hazard Factor
(1) The reference for establishing the fire weather hazard factor shall be data provided by the Oregon Department of Forestry, which was developed following an analysis of daily fire danger rating indices in each regulated use area of the state.
(2) For geographic areas described in **Table 1**, select the appropriate hazard value from **Table 1**.

TABLE 1
FIRE WEATHER HAZARD FACTOR
County -- Hazard Value
Jackson -- 3
Stat. Auth.: ORS 526.016
Stats. Implemented: ORS 93.270
Hist.: FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

629-044-0240
Topography Hazard Factor
(1) The reference for establishing the topography hazard factor shall be:
(a) The General Soil Map Report published by the Oregon Water Resources Board and the Soil Conservation Service, USDA in 1969; or
(b) The appropriate 7.5 minute quadrangle map published by the U.S. Geological Survey, USDI.
(2) For geographic areas determined by use of a reference set forth in subsection (1) above, select the appropriate hazard value from **Table 2**.

TABLE 2
TOPOGRAPHY HAZARD FACTOR
Map Slope Class -- Hazard Value
1 (Slopes 00-03%) -- 0
2 (Slopes 03-07%) -- 1
3 (Slopes 07-12%) -- 1
4 (Slopes 12-20%) -- 2
5 (Slopes 20-35%) -- 3
6 (Slopes 35-60+ %) -- 3
Stat. Auth.: ORS 526.016
Stats. Implemented: ORS 93.270
Hist.: FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

629-044-0250
Natural Vegetative Fuel Hazard Factor
(1) The reference for establishing the natural vegetative fuel hazard factor shall be the "Aids to Determining Fuel Models For Estimating Fire Behavior" published by the Forest Service, USDA Intermountain Forest and Range Experiment Station in 1982 as General Technical Report INT-122.
(2) Using the natural vegetative fuel models described in the reference set forth in subsection(1), and summarized in T**able 3**, divide the jurisdiction into geographic areas which best describe the natural vegetation expected to occupy sites for the next 10 to 15 years and then select the appropriate hazard value from **Table 3**.

TABLE 3
NATURAL VEGETATIVE FUEL HAZARD FACTOR
Natural Vegetative Fuel Description -- Hazard Value
Little or no natural vegetative fuels are present. -- 0
Grass. Very little shrub or timber is present, generally less than one-third of the area. Main fuel is generally less than two feet in height. Fires are surface fires that move rapidly through cured grass and associated material. (Fuel model 1) -- 3
Grass. Open shrub lands and pine stands or scrub oak stands that cover one-third to two-thirds of the area. Main fuel is generally less than two feet in height. Fires are surface fires that spread primarily through the fine herbaceous fuels, either curing or dead. (Fuel model 2) -- 3
Grass. Beach grasses, prairie grasses, marshland grasses and wild or cultivated grains that have not been harvested. Main fuel is generally less than four feet in height, but considerable variation may occur. Fires are the most intense of the grass group and display high rates of spread under the influence of wind. (Fuel model 3) -- 3
Shrubs. Stands of mature shrubs have foliage known for its flammability, such as gorse, manzanita and snowberry. Main fuel is generally six feet or more tall. Fires burn with high intensity and spread very rapidly. (Fuel model 4) -- 3
Shrubs. Young shrubs with little dead material and having foliage not known for its flammability, such as laurel, vine maple and alders. Main fuel is generally three feet tall or less. Fires are generally carried in the surface fuels and are generally not very intense. (Fuel model 5) -- 1
Shrubs. Older shrubs with foliage having a flammability less than fuel model 4, but more than fuel model 5. Widely spaced juniper and sagebrush are represented by this group. Main fuel is generally less than six feet in height. Fires will drop to the ground at low wind speeds and in stand openings. (Fuel model 6) -- 2
Timber. Areas of timber with little undergrowth and small amounts of litter buildup. Healthy stands of lodge pole pine, spruce, fir and larch are represented by this group. Fires will burn only under severe weather conditions involving high temperatures, low humidities and high winds. (Fuel model 8) -- 1
Timber. Areas of timber with more surface litter than fuel model 8. Closed stands of healthy ponderosa pine and white oak are in this fuel model. Spread of fires will be aided by rolling or blowing leaves. (Fuel model 9) -- 2
Timber. Areas of timber with heavy buildups of ground litter caused by overmaturity or natural events of wind throw or insect infestations. Fires are difficult to control due to large extent of ground fuel. (Fuel model 10) -- 3
Stat. Auth.: ORS 526.016
Stats. Implemented: ORS 93.270
Hist.: FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

629-044-0260
Natural Vegetative Fuel Distribution Hazard Factor
(1) Divide the jurisdiction into geographic areas which best describe the percentage of the area which is occupied by the foliage of natural vegetative fuels.
(2) For each geographic area determined in section (1) above, select the appropriate hazard value from **Table 4**.

TABLE 4
NATURAL VEGETATIVE FUEL DISTRIBUTION
HAZARD FACTOR
Natural Vegetative Fuel Distribution -- Hazard Value
0 to 10% of the area -- 0
10 to 25% of the area -- 1
25 to 40% of the area -- 2
40 to 100% of the area -- 3
Stat. Auth.: ORS 526.016
Stats. Implemented: ORS 93.270
Hist.: FB 2-1996, f. 3-13-96, cert. ef. 4-1-96

Appendix B

2010 Oregon Fire Code 304.1.2
Requires compliance with the vegetation requirements of the Wildland Urban Interface Code

> **304.1 Waste accumulation prohibited.** Combustible waste material creating a fire hazard shall not be allowed to accumulate in buildings or structures or upon premises.
> **304.1.1 Waste material.** Accumulations of wastepaper, wood, hay, straw, weeds, litter or combustible or flammable waste or rubbish of any type shall not be permitted to remain on a roof or in any *court*, yard, vacant lot, alley, parking lot, open space, or beneath a grandstand, *bleacher*, pier, wharf or other similar structure.
> **304.1.2 Vegetation.** Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the *owner* or occupant of the premises. Vegetation clearance requirements in urban-wildland interface areas shall be in accordance with the *International Wildland-Urban Interface Code*.

2012 Wildland Urban Interface Code 603 & 604

- Defensible space required 30-100 feet depending on the hazard determination
- Tree spacing crown-to-crown and crown-to-structure is not less than 10 feet
- Domestic vegetation is required to meet the same requirements
- Maintenance of the above is required

Ashland Municipal Code

> **18.16 R-R Rural Residential District**
> **18.16.030 Conditional uses.**
> Accessory Residential Units in Rural Residential Zoning are required to install residential fire sprinkler systems.
>
> **18.62.090 Development Standards for Wildfire Lands**
> **Land partition or subdivision of lots requires:**
> Fire Prevention & Control Plan which includes:
>
> - An analysis of the fire hazards on the site from wildfire, as influenced by existing vegetation and topography.

- A map showing the areas that are to be cleared of dead, dying, or severely diseased vegetation.
- A map of the areas that are to be thinned to reduce the interlocking canopy of trees.
- A tree management plan showing the location of all trees that are to be preserved and removed on each lot. In the case of heavily forested parcels, only trees scheduled for removal shall be shown.
- The areas of Primary and Secondary Fuel Breaks that are required to be installed around each structure, as required by 18.62.090 B (see below)
- Roads and driveways sufficient for emergency vehicle access and fire suppression activities, including the slope of all roads and driveways within the Wildfire Lands area.
- Required to be implemented then inspected by fire department prior to issuance of building permit.
- Maintenance shall be included in CCR's

New construction and increases in building size requires the following. This is also required for all partitions:

"Fuel breaks" are required and are defined as:

- Area which is free of dead or dying vegetation
- Native, fast-burning species sufficiently thinned so that there is no interlocking canopy of this type of vegetation.
- Where necessary for erosion control or aesthetic purposes, the fuel break may be planted in slow-burning species.
- "Fuel Breaks" may include structures, and shall not limit distance between structures and residences beyond that required by other sections of this title.

Primary Fuel Break

- A minimum of 30 feet, or to the property line, whichever is less, in all directions around structures, excluding fences, on the property.
- The goal within this area is to remove ground cover that will produce flame lengths in excess of one foot.
- Such a fuel break shall be increased by ten feet for each 10% increase in slope over 10%. Adjacent property owners are encouraged to cooperate on the development of primary fuel breaks.

Secondary Fuel Break

- A secondary fuel break will be installed, maintained and shall extend a minimum of 100 feet beyond the primary fuel break where surrounding landscape is owned and under the control of the property owner during construction.
- The goal of the secondary fuel break is to reduce fuels so that the overall intensity of any wildfire is reduced through fuels control.
- Class B or better roofing – wood materials not permitted

- Implemented prior to combustible construction

Accessory Residential Units in Rural Residential Zoning are required to install residential fire sprinkler systems.

2010 Oregon Residential Specialty Code

Section 324 – Wildfire Hazard Mitigation

Dwellings and accessory structures

- Roof shall be asphalt shingles, slate shingles, metal roofing, tile, clay or concrete shingles or other roofing equivalent to a Class C rated roof covering. Untreated wood shingle and shakes are not permitted.
- When 50% or more of the roof covering is repaired or replaced within one year, it must meet this requirements and attic ventilation is required to comply with this code with opening protected with wire mesh.

REFERENCED CODES

Oregon Fire Code

SECTION 603
DEFENSIBLE SPACE

603.1 Objective. Provisions of this section are intended to modify the fuel load in areas adjacent to structures to create a *defensible space*.

603.2 Fuel modification. Buildings or structures, constructed in compliance with the conforming *defensible space* category of Table 503.1, shall comply with the *fuel modification* distances contained in Table 603.2. For all other purposes the *fuel modification* distance shall not be less than 30 feet (9144 mm) or to the lot line, whichever is less. Distances specified in Table 603.2 shall be measured on a horizontal plane from the perimeter or projection of the building or structure as shown in Figure 603.2. Distances specified in Table 603.2 are allowed to be increased by the code official because of a site-specific analysis based on local conditions and the fire protection plan.

TABLE 603.2
REQUIRED DEFENSIBLE SPACE

603.2.1 Responsible party. Persons owning, leasing, controlling, operating or maintaining buildings or structures requiring defensible spaces are responsible for modifying or removing nonfire-resistive vegetation on the property owned, leased or controlled by said person.

603.2.2 Trees. Trees are allowed within the *defensible space*, provided the horizontal distance between crowns of adjacent trees and crowns of trees and structures, overhead electrical facilities or unmodified fuel is not less than 10 feet (3048 mm).

WILDLAND-URBAN
INTERFACE AREA
FUEL MODIFICATION DISTANCE
Moderate hazard 30
High hazard 50
Extreme hazard 100

FIGURE 603.2
MEASUREMENTS OF

603.2.3 Groundcover. Deadwood and litter shall be regularly removed from trees. Where ornamental vegetative fuels or cultivated ground cover, such as green grass, ivy, succulents or similar plants are used as ground cover, they are allowed to be within the designated *defensible space*, provided they do not form a means of transmitting fire from the native growth to any structure.

SECTION 604
MAINTENANCE OF DEFENSIBLE SPACE

604.1 General. Defensible spaces required by Section 603 shall be maintained in accordance with Section 604.

604.2 Modified area. Nonfire-resistive vegetation or growth shall be kept clear of buildings or structures, in accordance with Section 603, in such a manner as to provide a clear area for fire suppression operations.

604.3 Responsibility. Persons owning, leasing, controlling, operating or maintaining buildings or structures are responsible for maintenance of *defensible spaces*. Maintenance of the *defensible space* shall include modifying or removing nonfire-resistive vegetation and keeping leaves, needles and other dead vegetative material regularly removed from roofs of buildings and structures.

604.4 Trees. Tree crowns extending to within 10 feet (3048 mm) of any structure shall be pruned to maintain a minimum horizontal clearance of 10 feet (3048 mm). Tree crowns within the *defensible space* shall be pruned to remove limbs located less than 6 feet (1829 mm) above the ground surface adjacent to the trees.

604.4.1 Chimney clearance. Portions of tree crowns that extend to within 10 feet (3048 mm) of the outlet of a chimney shall be pruned to maintain a minimum horizontal clearance of 10 feet (3048 mm).

604.4.2 Deadwood removed. Deadwood and litter shall be regularly removed from trees.

Ashland Municipal Code 18.62.090 Development Standards for Wildfire Lands

A. Requirements for Subdivisions, Performance Standards Developments, or Partitions.
   1. A Fire Prevention and Control Plan shall be required with the submission of any application for an outline plan approval of a Performance Standards Development, preliminary plat of a subdivision, or application to partition land which contained areas designated Wildfire Hazard areas.
   2. The Staff Advisor shall forward the Fire Prevention and Control Plan to the Fire Chief within 3 days of the receipt of a completed application. The Fire Chief shall review the Fire Prevention and Control Plan, and submit a written report to the Staff Advisor no less than 7 days before the scheduled hearing. The Fire Chief's report shall be a part of the record of the Planning Action.
   3. The Fire Prevention and Control Plan, prepared at the same scale as the development plans, shall include the following items:
      a. An analysis of the fire hazards on the site from wildfire, as influenced by existing vegetation and topography.
      b. A map showing the areas that are to be cleared of dead, dying, or severely diseased vegetation.
      c. A map of the areas that are to be thinned to reduce the interlocking canopy of trees.
      d. A tree management plan showing the location of all trees that are to be preserved and removed on each lot. In the case of heavily forested parcels, only trees scheduled for removal shall be shown.
      e. The areas of Primary and Secondary Fuel Breaks that are required to be installed around each structure, as required by 18.62.090 B.
      f. Roads and driveways sufficient for emergency vehicle access and fire suppression activities, including the slope of all roads and driveways within the Wildfire Lands area.
   4. Criterion for Approval. The hearing authority shall approve the Fire Prevention and Control Plan when, in addition to the findings required by this chapter, the additional finding is made that the wildfire hazards present on the property have been reduced to a reasonable degree, balanced with the need to preserve and/or plant a sufficient number of trees and plants for erosion prevention, wildlife habitat, and aesthetics.
   5. The hearing authority may require, through the imposition of conditions attached to the approval, the following requirements as deemed appropriate for the development of the property:
      a. Delineation of areas of heavy vegetation to be thinned and a formal plan for such thinning.
      b. Clearing of sufficient vegetation to reduce fuel load.
      c. Removal of all dead and dying trees.
      d. Relocation of structures and roads to reduce the risks of wildfire and improve the chances of successful fire suppression.
   6. The Fire Prevention and Control Plan shall be implemented during the public improvements required of a subdivision or Performance Standards Development, and shall be considered part of the subdivider's obligations for land development. The Plan shall be implemented prior to the issuance of any building permit for structures to be located on lots created by partitions and for subdivisions or Performance Standards

developments not requiring public improvements. The Fire Chief, or designee, shall inspect and approve the implementation of the Fire Prevention and Control Plan, and the Plan shall not be considered fully implemented until the Fire Chief has given written notice to the Staff Advisor that the Plan was completed as approved by the hearing authority.

7. In subdivisions or Performance Standards Developments, provisions for the maintenance of the Fire Prevention and Control Plan shall be included in the covenants, conditions and restrictions for the development, and the City of Ashland shall be named as a beneficiary of such covenants, restrictions, and conditions.
8. On lots created by partitions, the property owner shall be responsible for maintaining the property in accord with the requirements of the Fire Prevention and Control Plan approved by the hearing authority.

B. Requirements for construction of all structures.
   1. All new construction and any construction expanding the size of an existing structure, shall have a "fuel break" as defined below.
   2. A "fuel break" is defined as an area which is free of dead or dying vegetation, and has native, fast-burning species sufficiently thinned so that there is no interlocking canopy of this type of vegetation. Where necessary for erosion control or aesthetic purposes, the fuel break may be planted in slow-burning species. Establishment of a fuel break does not involve stripping the ground of all native vegetation. "Fuel Breaks" may include structures, and shall not limit distance between structures and residences beyond that required by other sections of this title.
   3. Primary Fuel Break - A primary fuel break will be installed, maintained and shall extend a minimum of 30 feet, or to the property line, whichever is less, in all directions around structures, excluding fences, on the property. The goal within this area is to remove ground cover that will produce flame lengths in excess of one foot. Such a fuel break shall be increased by ten feet for each 10% increase in slope over 10%. Adjacent property owners are encouraged to cooperate on the development of primary fuel breaks.
   4. Secondary Fuel Break - A secondary fuel break will be installed, maintained and shall extend a minimum of 100 feet beyond the primary fuel break where surrounding landscape is owned and under the control of the property owner during construction. The goal of the secondary fuel break is to reduce fuels so that the overall intensity of any wildfire is reduced through fuels control.
   5. All structures shall be constructed or re-roofed with Class B or better non-wood roof coverings, as determined by the Oregon Structural Specialty Code. All re-roofing of existing structures in the Wildfire Lands area for which at least 50% of the roofing area requires re-roofing shall be done under approval of a zoning permit. No structure shall be constructed or re-roofed with wooden shingles, shakes, wood-product material or other combustible roofing material, as defined in the City's building code.

C. Fuel breaks in areas which are also Erosive or Slope Failure Lands shall be included in the erosion control measures outlined in section 18.62.080.

D. Implementation.
   1. For land which have been subdivided and required to comply with A. (6) above, all requirements of the Plan shall be complied with prior to the commencement of construction with combustible materials.

2. For all other structures, the vegetation control requirements of section (B) above shall be complied with before the commencement of construction with combustible materials on the lot. (Ord. 2657, 1991)
3. As of November 1, 1994, existing residences in subdivisions developed outside of the Wildfire Lands Zone, but later included due to amendments to the zone boundaries shall be exempt from the requirements of this zone, with the exception of section 18.62.090 B.5. above. All new residences shall comply with all standards for new construction in section 18.62.090 B.
4. Subdivisions developed outside of the wildfire lands zone prior to November 1, 1994, but later included as part of the zone boundary amendment, shall not be required to prepare or implement Fire Prevention and Control Plans outlined in section 18.62.090 A. (Ord 2747, 1994)