(Make welcoming comments)

(Next)
“Living With Fire in the Big Sagebrush / Bitterbrush Environment” is sponsored by a variety of organizations concerned with Nevada’s wildfire threat.
Funding for this program was provided by the Nevada State Office of the Bureau of Land Management through a grant from the National Fire Plan.

The program was produced by University of Nevada Cooperative Extension. (Next)
This program provides suggestions to homeowners living in Nevada’s Big Sagebrush / Bitterbrush environment that will improve their safety and the survivability of their homes during wildfire.

The sponsors of this program assume that sooner or later homes located within the Big Sagebrush / Bitterbrush environment will be threatened by wildfire. It is not a question of “if,” but “when” this will occur.

Fortunately, a number of things can be done before a wildfire occurs that improve the likelihood of home survival.

(Next)
The Big Sagebrush / Bitterbrush vegetation type is considered one of Nevada’s most dangerous wildland environments for wildfire. Homes surrounded by sagebrush and bitterbrush are at great risk to burn. (Next)
As the name suggests, this type of vegetation is dominated by two kinds of shrubs — big sagebrush and bitterbrush.

(Next)
Big Sagebrush / Bitterbrush Type

Big sagebrush is the gray-green shrub and… (Next)
bitterbrush is the darker green and typically larger shrub.

Big Sagebrush / Bitterbrush vegetation is fairly common in northern Nevada and usually occurs on mountain slopes and foothills. (Next)
A large number of housing developments have been built in this type of vegetation. Examples include Lakeview in Carson City, Smith Creek in Elko County, the Foothill Road area of Douglas County, and Galena in Washoe County. (Next)
Unfortunately, all too often homes have been built and maintained in this environment without regard to the wildfire threat. And, the wildfire threat is significant.

Some of Nevada’s most intense wildfires have occurred in the Big Sagebrush / Bitterbrush vegetation type. Some noteworthy examples include the Arrow Creek, Peavine, Autumn Hills, and Red Rock fires. (Next)
On a dry, hot, windy day, the Big Sagebrush / Bitterbrush vegetation type on level ground is capable of producing a wildfire that can travel at eight miles per hour and generate flame lengths in excess of 50 feet. Fire behavior can be even more severe in steeper terrain. (Next)
Videotape of Big Sagebrush / Bitterbrush Fire Behavior

(Show videotape of Big Sagebrush / Bitterbrush fire behavior)

This is video footage of a wildfire burning in the Big Sagebrush / Bitterbrush environment. (Return to PowerPoint presentation when the videotape clip has concluded)

(Next)
The purpose of this program is to… (Next)
Provide *wildfire fuel* management suggestions that reduce the fire threat to people, homes, and property in the Big Sagebrush / Bitterbrush environment. (Next)
Wildfire fuel includes:

- wildland vegetation such as big sagebrush and bitterbrush,
- ornamental plants in the home landscape, and
- unfortunately, houses. (Next)
Why is fuel so important?

Of the three factors that control wildfire behavior — weather, topography, and fuel — we can only change fuel. (Next)
Consequently, if we want to increase house survivability during a wildfire, our greatest opportunity lies in changing the fuel available for burning. (Next)
Change fuels by...

• Reducing the amount
• Shortening the height
• Increasing the moisture content
• Decreasing the continuity
• Locating properly

The major fuel characteristics that we want to change include:

• Amount: Less fuel is better than more fuel.
• Height: Short fuel is less hazardous than tall fuel.
• Moisture Content: Plants with high moisture content are more fire-resistant than plants with low moisture content.
• Continuity: Fuels that are widely separated are more desirable than fuels that are close together. And finally,
• Location: Hazardous fuels should be kept away from the house. (Next)
Wildfires will...

- Be less likely to start
- Burn more slowly
- Burn cooler
- Have shorter flames
- Burn for a shorter time

By changing the fuels, we can create changes in fire behavior such as:
- keeping it from starting,
- slowing it down,
- cooling it down,
- keeping it’s flames shorter, and
- making it burn for a shorter period of time.

All of these help a home survive wildfire. (Next)
Important! The fuel characteristics of the house and the adjacent vegetation often determine house survivability

Investigations of houses destroyed by wildfire have consistently found that the fuel characteristics of the house and the adjacent vegetation are the most influential factors in determining house survivability. (Next)
Important! The homeowner is the most important person in preventing the house from being destroyed by wildfire

This conclusion is significant because it implies that the most important person in preventing a house from burning is the homeowner. And, it is the actions that a homeowner takes before a wildfire occurs that are critical. (Next)
How Wildfire Threatens a House

Before looking at wildfire threat reduction recommendations, we need to have an understanding of how wildfires threaten homes. (Next)
Wildfire threatens a home in three ways...

- Contact by flames
- Radiated heat
- Flying embers

Wildfire can threaten a home in three ways:
- through direct contact by flames,
- from radiated heat, and
- by flying embers. (Next)
First, there is contact by flames.

This type of threat occurs when fuels burning near the house produce flames that come in contact with the home and ignite it. (Next)
Direct contact by flames is probably what most homeowners visualize when they think of a house burning during wildfire. (Next)
The next way wildfire threatens the house is through radiated heat. Radiated heat is produced by invisible electromagnetic waves that travel out in all directions from a flame.

When a house receives enough radiated heat for sufficient time, it will ignite without flames contacting it. Sometimes radiated heat can burst windows and allow burning embers to enter the house.

Consequently, even vegetation and other fuels located away from the house are a concern.
Radiated heat melted the vinyl siding on this house. Flames never came in contact with the siding. (Next)
The most common wildfire threat to a house is flying embers. If conditions are right, pieces of burning material, such as shrub branches, pine cones, and wood-shakes from a burning roof, can be lofted high into the air and transported hundreds of feet to more than a mile from the actual fire. Burning embers can also be carried by wind and fire whirls.

If these burning embers land in areas with easily ignitable materials, such as wood-shake or shingle roofs, leaves in rain gutters, dry weeds, trash, or woodpiles, a new fire can start.
This is an example of a burning ember starting a fire in the Big Sagebrush / Bitterbrush vegetation type. Fortunately, there were firefighters on the scene to quickly respond to this new fire. (Next)
In this smoky picture, burning embers landed on the roof, rolled down, and were trapped in the rain gutter. The dried leaves in the gutter ignited. Other embers started a fire in the flower beds. (Next)
The following recommendations are made to reduce these three threats from wildfire. (Next)
Three categories of recommendations...

- Built Zone
- Defensible Space Zone
- Access Zone

The wildfire threat reduction recommendations are presented in three categories:

- the Built Zone,
- the Defensible Space Zone, and
- the Access Zone.

Research shows that these three zones are important for a homeowner to manage in order to reduce the wildfire threat to the home.
The Built Zone refers to how the house is constructed and maintained.

The Defensible Space Zone pertains to the vegetation growing near the house, including both ornamental landscape plants and native vegetation, such as big sagebrush.

The Access Zone is the area that allows firefighters to locate and arrive at your home in a timely manner. (Next)
These three zones are shown in this photo. (Next)
The Built Zone includes the house… (Next)
the Defensible Space Zone includes the vegetation surrounding the house… (Next)
and the Access Zone includes driveways, roads, and signage. (Next)
First, let’s look at the Built Zone recommendations.
The goal for the Built Zone is to improve the ignition resistance of the house. If the house doesn’t ignite, it can’t burn.

Research has shown that houses highly resistant to ignition can survive high intensity wildfires.

Conversely, homes that ignite easily can be destroyed during low intensity wildfires. (Next)
This is a photograph of one of the more than 200 homes destroyed in the Cerro Grande Fire in Los Alamos, New Mexico.

In this case, the house ignited more easily than the surrounding vegetation. Note the unburned trees, shrubs, and the unscathed wooden rail fence.

The charred trees near the house burned because the house ignited. (Next)
While we are concerned about flame contact and radiated heat, we are particularly concerned with flying embers igniting the house. (Next)
The most common reason why houses burn during wildfire is flying embers igniting the exterior of the house or entering the house through openings.

Common exterior ignition sites include:
• wood-shake roofs,
• rain gutters filled with dried leaves,
• flammable materials such as paper, trash, and firewood, on, beside, or beneath decks and porches, and
• wood siding.

Embers enter the house through unscreened vents and open or broken windows.
The following recommendations for the Built Zone are brief, generalized points. For more detailed information, contact your Fire Marshal.

First, let’s look at the roof.

The roof is the most vulnerable part of a house to wildfire. It is also the best predictor of house survivability during wildfire. (Next)
Houses with wood-shake or shingle roofs are many times more likely to be destroyed during a wildfire than homes with a fire-resistant roof. If you have one, consider replacing it with a fire-resistant type. (Next)
Fire-resistant roofing materials include composition, metal, and tile. The fire resistance of a roof is rated “A,” “B,” “C,” or “non-rated.” An “A” rating has the highest fire resistance.
Regardless of the type of roof you have, keep it free of fallen leaves, needles, and branches. (Next)
Rain gutters trap flying embers. (Next)
Always keep your rain gutters clean during fire season. Check and clean them several times during fire season.

(Next)
House vents are potential entry points for flying embers. They include attic, foundation, and eave vents. (Next)
All vent openings need to be covered with ¼-inch or smaller noncorrosive wire mesh. Do not use fiberglass or plastic mesh because they can melt or burn. (Next)
The siding covering the exterior walls of a house is particularly vulnerable to radiated heat and direct flame contact. (Next)
Wood products, such as boards, panels, and shingles, are the most common siding materials. They are combustible and not good choices for fire prone areas.

Log homes are a possible exception. They have a higher fire-resistance rating than other wood products. (Next)
Noncombustible siding materials, such as stucco, brick, and cement board, are better choices. (Next)
The eaves of the house are particularly prone to ignition. (Next)
As a wildfire approaches, hot air and gases are deflected off the side of the house and trapped under the eave. The eaves can also trap heat from flames directly underneath them. Heat builds up under the roof and may enter the attic. The chance for ignition is greatly increased. (Next)
By covering the underside of the eave with a soffit, or “boxing in” the eave, the heat is better able to escape.

(Next)
Decks can also be potential heat traps. (Next)
Since decks are often positioned on the downhill side of the house, they effectively trap heat, flames, and embers from an oncoming wildfire. (Next)
The trapped heat dries out the wood decking and raises its temperature. The deck becomes more likely to ignite under these conditions.

The threat increases when leaves, dried grass, trash, and other combustible materials are allowed to accumulate under the deck. (Next)
Houses with decks that are open underneath are more likely to be destroyed during wildfire. (Next)
Preferably, the underside of the deck should be enclosed with fire-resistant materials. (Next)
At the very least, the underside of the deck should be enclosed with 1/8-inch wire mesh.

Keep this area free of all easily combustible materials.

(Next)
Windows are one of the weakest parts of a house and usually break before the building ignites.

If exposed to enough heat for a long enough period of time, glass can crack and the fractured pieces may fall away. This allows burning embers and heat to enter the house, which may lead to internal ignition. (Next)
Single-paned and large windows are particularly vulnerable. In high fire hazard areas, install windows that are at least double-glazed or tempered glass. Low “E” glass may provide added protection.

Windows using aluminum frames and sashes are better choices than those using wood or vinyl.

Exterior window coverings, such as shutters, can provide added protection. (Next)
Chimney and stovepipe openings should be screened with ½-inch or smaller noncombustible mesh or an approved spark arrestor cap. (Next)
The final Built Zone recommendation is to keep the porch, deck, and other areas of the house free of combustible materials. (Next)
Decorative items on porches such as baskets, dried flower arrangements, and pine cones, have been known to ignite houses when burning embers land on them. Also, keep these areas free of newspapers, exposed mail, and trash. (Next)
Firewood stacks should be located at least 30 feet from the house. If the stacks are stored uphill from the house, make sure that burning firewood cannot roll downhill and ignite the home.
The next set of recommendations concerns the Defensible Space Zone. This zone includes the vegetation growing near the house. (Next)
The term “defensible space” refers to the area between a house and an oncoming wildfire where the vegetation has been managed to reduce the wildfire threat and allow firefighters to safely defend the house. (Next)
The Defensible Space Zone is comprised of three areas:

- the Noncombustible Area,
- the Lean, Clean, and Green Area, and
- the Wildland Fuel Reduction Area. (Next)
The Noncombustible Area lies immediately adjacent to the house.

The Lean, Clean, and Green Area extends out from the Noncombustible Area for at least 30 feet. This area is usually part of the irrigated home landscape.

The Wildland Fuel Reduction Area extends out from the Lean, Clean, and Green Area and is usually where native plants such as big sagebrush and bitterbrush grow. (Next)
Unfortunately, when some homeowners hear the term “defensible space,” they envision a large expanse of bare ground surrounding their home. While this is certainly effective at increasing home survivability, it is unacceptable for aesthetic reasons and because it contributes to soil erosion. It is also unnecessary.

(Next)
A homeowner can have both... an effective defensible space and an attractive landscape. (Next)
The following six steps describe how to create an effective defensible space. (Next)
Step One:

How big is an effective defensible space?

The first step is to determine the size of an effective defensible space. (Next)
The size of the defensible space zone is usually expressed as a distance extending outward from the house in all directions. (Next)
The recommended distance is not the same for everyone. It varies depending on the type of vegetation present and the steepness of slope surrounding the home. (Next)
For homes located on flat to gently sloping terrain in the Big Sagebrush / Bitterbrush environment, the recommended defensible space distance is 100 feet from the house. (Next)
For homes located on slopes greater than 20 percent, the recommended distance is 200 feet. (Next)
A 20% slope is equal to 9 degrees and represents a 2-foot rise over a 10-foot run.
Once the recommended distance for defensible space is known, mark it by tying strips of cloth or flagging to shrubs. This becomes the “defensible space zone.” The next five steps apply to the vegetation growing within this area.

If the defensible space zone exceeds the property boundaries, do not work on someone else’s property without their permission.

It is important to note that the effectiveness of the defensible space zone improves when entire neighborhoods implement defensible space practices.
Step Two:

Is there any dead vegetation?

Is there any dead vegetation within the defensible space zone? If so, remove it.

Dead vegetation includes… (Next)
dead branches from shrubs and trees… (Next)
Dead shrubs…

dead shrubs… (Next)
Fallen leaves and needles…

dead leaves and needles that are still attached to plants, draped on live plants, or lying on the ground…

(Next)
Dried grass and weeds...

dried grass and weeds... (Next)
and dead flowers, both wildflowers growing in the sagebrush and flowers in flower beds around the house. (Next)
If dead vegetation is present within the defensible space zone… (Next)
Defensible Space Zone

Step 2: Dead Vegetation

remove it. (Next)
Step Three:

Is there a separation between shrubs?

Within the defensible space zone, are wildland shrubs, such as sagebrush and bitterbrush, widely spaced or do they occur in a dense stand? (Next)
Dense stands of big sagebrush and bitterbrush pose a significant wildfire threat. If this situation is present within the defensible space zone, thin dense shrub stands. (Next)
On flat to gently sloping terrain, individual shrubs or small clumps of shrubs within the defensible space zone should be separated from one another by at least twice the height of the average shrub.

For homes located on steeper slopes, the separation distance should be greater. (Next)
For example, if the typical shrub height is 2 feet, then there should be a separation between shrub branches of at least 4 feet. Remove shrubs or prune to reduce their height and/or diameter.

In most instances, removing big sagebrush is the preferred approach. It is a very flammable plant, is easily removed, does not resprout, and is typically abundant.
If there is a dense stand of shrubs present in the defensible space zone… (Next)
provide a separation between shrubs through removal or pruning. (Next)
Step Four:

Is there a separation between tree canopies and lower growing plants?

If trees are present within the defensible space area, there should be a separation between the lower growing vegetation and the lowest tree branches. (Next)
Vegetation layers…

Vegetation often occurs at different heights or layers, like the rungs in a ladder. (Next)
For example, in this photograph dried grass is the lowest rung, shrubs are the next highest rung, and tree branches are the upper rung. (Next)
Vegetation that can carry a fire burning in low growing plants to taller plants is called “ladder fuel.”
In the left photo, a burning shrub has ignited the lower branches of a tree.

Trees, particularly evergreen trees such as pine, supply a large amount of potential fuel to a wildfire. Once ignited, they can burn very intensely and are a threat to life and structures. (Next)
By removing some of the rungs of the ladder, the amount of wildfire fuel can be greatly reduced.
Provide a separation…

The recommended separation for ladder fuels is three times the height of the lower vegetation layer. (Next)
For example, if the lower vegetation layer is 3 feet tall, then there should be a separation of 9 feet. Prune the lower tree branches, shorten the height of shrubs, or remove lower plants.

Do not, however, remove more than one-third of the total tree branches. This could be detrimental to tree health. As an alternative, remove the lower vegetation layers.

If there is no vegetation growing under or near the tree, remove lower tree branches to 2 feet above the ground. (Next)
If ladder fuels are present in the defensible space area... (Next)
Step 4: Ladder Fuels

Defensible Space Zone

remove them. (Next)
Step Five:

Is there a Lean, Clean, and Green Area extending at least 30 feet around the house? (Next)
Lean…

Small amount of flammable vegetation

By “Lean” we mean that only a small amount of flammable vegetation, if any, is present within 30 feet of the house.

(Next)
Clean…

No accumulation of dead vegetation or other flammable debris

By “Clean” we mean that there is no accumulation of dead vegetation or flammable debris within 30 feet of the house.
Green…

Plants are healthy and green during the fire season

By “Green” we mean that plants located within 30 feet of the house are kept healthy, green, and irrigated during the fire season. (Next)
**Lean, Clean, and Green Area goals…**

- Prevent ignitions from flying embers
- Reduce fire intensities so the house cannot ignite

The goals of the Lean, Clean, and Green Area are twofold:

First, to eliminate easily ignitable fuels, or “kindling,” near the house. In the event that flying embers begin landing in your yard, they would be unable to start a fire.

Second, to keep fire intensity low if it does ignite near the house. Should a fire start within 30 feet of the house, the fuels present would be unable to generate enough heat for a long enough time to ignite the home. (Next)
For most homeowners, the Lean, Clean, and Green Area is also the residential landscape. This area often has irrigation available, is planted with ornamental vegetation, and is regularly maintained.

Consider these fire-smart tips… (Next)
Tip #1
Remove most or all flammable wildland plants…

Within the Lean, Clean, and Green area, remove most or all flammable wildland plants. (Next)
These would include big sagebrush, bitterbrush, rabbitbrush, and cheatgrass.

If you wish to retain a few of these as specimen plants, make sure they are free of dead wood and leaves, pruned to reduce the amount of fuel, and separated from adjacent brush fields. (Next)
Retaining wildflowers, such as lupine, phlox, and balsamroot, is acceptable. The top growth, however, should be removed once it dries out and turns brown.

Desert peach and Mormon tea can also be retained within this area so long as they are kept free of dead wood, are less than 3 feet in height, and separated properly. (Next)
There is some good news and some bad news concerning wise plant choices for the Lean, Clean, and Green Area.

First, the bad news. Unfortunately, there is no such thing as a fireproof plant. Any plant can burn if it is exposed to enough heat for a long enough period of time.

The good news is that there are some plants that do not ignite as easily nor burn as hot as other plants.

Some rules of thumb in selecting landscape plants for the Lean, Clean, and Green Area are… (Next)
All other things being equal, shorter plants are a better choice than taller plants. Taller plants can produce longer flames and contain more fuel than lower growing plants. Emphasize the use of plants that are less than 2 feet tall at maturity.
When green and healthy, herbaceous plants such as flowers, succulents, and lawn, are better choices than woody plants, such as shrubs and trees. When actively growing, herbaceous plants have a much higher water content than woody plants. The higher the plant water content, the harder it is to ignite and the more slowly it burns.

When herbaceous plants dry out, however, they ignite easily, are a fire hazard, and should be removed. (Next)
Deciduous better than evergreen…

Many evergreen shrubs and trees contain flammable oils and resins that burn very hot when ignited. Because of this, deciduous shrubs and trees are usually a better choice for landscape use in the defensible space. (Next)
There are several particularly bad choices for landscaping in the Lean, Clean, and Green Area.

Juniper and arborvitae can burn very hot. Also, their dead leaves often accumulate in and under them and are extremely flammable. They are easily ignited by flying embers. (Next)
Ornamental pines such as Scotch pine, Austrian black pine, and mugo pine are poor choices for use in the defensible space. (Next)
Scotch broom has been identified as a particularly flammable plant as are most large ornamental grasses when they become dry. Both are considered poor choices. (Next)
Good choices for the Lean, Clean, and Green Area include deciduous shrubs like barberry and spirea. (Next)
Green lawn is low growing and has a high water content and is therefore an excellent Lean, Clean, and Green Area plant choice.

Lawn, however, does have its drawbacks such as having relatively high water and maintenance requirements. Clover and conservation grasses, such as crested wheatgrass, may be suitable alternatives especially if irrigated and mown occasionally. (Next)
Flowers, including perennials, annuals, succulents, and bulbs, are good choices so long as they are actively growing. Once they start drying out and turn yellow, dead leaves and flowers should be removed. (Next)
Ground covers are excellent choices for the Lean, Clean, and Green Area. (Next)
Well-maintained deciduous trees are also good choices. Plant deciduous trees so that there is at least a 10-foot separation between branch tips at maturity.
Tip #3
Emphasize hard surfaces and mulches…

Emphasize the use of hard surfaces and mulches within the Lean, Clean, and Green Area. (Next)
Hard surfaces include materials such as concrete, asphalt, and brick.

Mulches include rock and wood types. Rock mulches are a great choice. Wood bark and mulches may be flammable and should be kept at least 3 feet away from combustible house and deck materials. Wood mulches can burn, but they typically smolder and produce little, if any, flame. Ideally, keep them moist with irrigation during fire season. (Next)
Tip #4

Don’t forget the propane tank…

The propane tank is often located in the Lean, Clean, and Green Area. (Next)
All flammable vegetation should be cleared from within 10 feet of the propane tank and other fuel tanks if present. Screening the propane and other fuel tanks with fire resistant materials can provide additional protection. (Next)
Tip #5
Problem tree limbs should be removed…

Problem tree limbs should be removed. (Next)
Remove problem tree limbs…

This includes tree limbs within 15 feet of the chimney, limbs touching the house or deck, branches overhanging the roof, and limbs encroaching on power lines. (Next)
Tip #6
Create a Noncombustible Area within three feet of the house…

The last Lean, Clean, and Green tip is to create a non-combustible area at least 3 feet wide around the base of the house. (Next)
This area needs to have a very low potential for ignition from flying embers. During an intense wildfire, embers may pileup next to the house. If wood mulches are present, they may add fuel to the embers and eventually produce enough heat to ignite the house.

Emphasize the use of irrigated herbaceous plants, such as lawn, ground covers, and flowers and also use rock mulches and hard surfaces within 3 feet of the house.

This recommendation is particularly important for wood-sided houses. (Next)
In regards to Step 5, extending at least 30 feet from the house, create a … (Next)
Step 5: Lean, Clean, and Green

Lean, Clean, and Green Area. (Next)
Step Six: Is the area maintained on a regular basis?

The last step to creating a defensible space is maintenance. (Next)
Plants grow back…

Defensible space is an ongoing activity. Plants grow back and flammable vegetation needs to be routinely removed and disposed of properly. (Next)
Before each fire season, re-evaluate your property using the previous five steps and… (Next)
implement the necessary defensible space recommendations. (Next)
The final category of recommendations pertains to the Access Zone. (Next)
This deals with the ability of firefighters to locate and arrive at a threatened house in a timely manner. A house is much more likely to survive a wildfire if firefighters are present.

A proper Access Zone also helps you and your family to safely evacuate the area. (Next)
Some housing developments are a virtual maze under the best of circumstances.  (Next)
Add the dark, smoky conditions of an intense wildfire and it becomes even more difficult to find a particular house in need of assistance or to evacuate safely. It is also important to note that the firefighters may be from out of town and not familiar with the neighborhood.

The following recommendations will help make a house more accessible to firefighters.
The home address should be readily visible from the street. The characters on the address sign should be at least 4 inches high and the sign should be fire-resistant. (Next)
There should be street signs at each intersection leading to your house. The signs should feature characters that are at least 4 inches high and be made of reflectorized, noncombustible material.
Flammable vegetation should be removed for at least 10 feet on either side of the driveway. Obstructions, such as overhanging branches, should be removed to provide at least a 15-foot vertical clearance. (Next)
Houses located at the end of long driveways should have turnaround areas suitable for large fire equipment.
Without a turnaround area, firefighters may be reluctant to place fire equipment and personnel at your home.

Contact your local Fire Marshal for Access Zone recommendations specific to your area. (Next)
This program described the wildfire threat in Nevada’s Big Sagebrush / Bitterbrush environment and offered recommendations concerning how to reduce that threat. Your Key Points handout summarizes the important points. (Next)
There were three categories of wildfire threat reduction recommendations:

- Built Zone,
- Defensible Space Zone, and
- Access Zone. (Next)
The Built Zone recommendations dealt with making a fire-resistant house. (Next)
The Defensible Space Zone recommendations included the management of vegetation to reduce the wildfire threat. (Next)
The Access Zone dealt with the ability of firefighters to locate and arrive at your home in a timely manner.

(Next)
Finally, will implementing these recommendations make a difference? Based on examinations of houses destroyed by wildfire, the answer is “Yes.”

This graphic shows the roof and vegetation characteristics of more than 2000 homes destroyed by wildfire in California. The gray houses had wood-shake roofs and the brown houses had fire-resistant roofs. The red arrows indicate the distance of each house from flammable vegetation. The size of the flames and the yellow numbers indicate the percent of each house type destroyed by wildfire. (Next)
Note that only 50 percent of the houses with wood-shake roofs and less than 30 feet of flammable vegetation clearance were destroyed by wildfire. But, less than 1 percent of the homes with fire-resistant roofs and at least 100 feet of flammable vegetation clearance were destroyed.

By being proactive and implementing the wildfire threat reduction recommendations presented in this program, a homeowner can live much more safely in the Big Sagebrush / Bitterbrush environment.
Questions?

Are there any questions?

(End of program)