WILDLAND URBAN INTERFACE FIRE PROTECTION PLAN

Valley County Idaho
Title 10 Chapter 7

Gold Fork Reserve

A proposed subdivision located in the parts of N2SW & SENW Sec. 29, T16N, R4E

April 5, 2022

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EXHIBIT 2
C.U.P. 22-05
PZ 4.14.2022

Purpose

Valley County's community wildfire protection plan acknowledges that wildfire hazard areas exist throughout the county. Therefore, wildfire mitigation actions are prudent to enable safe habitation in these fire environments. The existence of said plans will assist Valley County Planning and Zoning Commission and the structural fire districts plus the wildland fire agencies in satisfying the current subdivision regulation, subsection 10-3-2-6D7 of Valley County's Code of Ordinances (Ord. 10-07, 8-26-2010). The objective of this document is to describe the proposed **Gold Fork Reserve** subdivision and identify clear priorities for the implementation of wildfire mitigation.

The wildland urban interface (hereafter referred to as WUI) consists of that geographical area where structures and other human development meets or intermingles with wildland and vegetative fuels. The character of the WUI ranges from urban areas adjoining wildlands to isolated ranches or cabins. Since 1993, the number of structures in the WUI has doubled and soon will triple. As the number of structures in the WUI continues to increase, concerns over public safety and the protection of improvements increases. The highest human-caused ignition sources in the WUI are miscellaneous and debris burning.

Executive Summary

The **Gold Fork Reserve** proposed subdivision consists of a parcel of land (approximately 80 acres in size) that is planned to be subdivided into twenty-eight (28) various sized lots that will eventually that will add more structures to the Valley County WUI. This Fire Protection Plan will assist in providing recommendations to minimize the wildfire risk to the property and proposed structures.

The property that is planned for this proposed subdivision is about 98% forested and lies within Valley County's Geographic Hazard Assessment Wildland Urban Interface **high** level condition for overall wildfire risk (see attached map in Appendix A). The overall health of the timber stand is in good condition due to the commercial timber harvest conducted by the previous owner (described in **Section A** #2). However, there are additional vegetative treatments and other requirements that need to be completed to mitigate the wildfire hazard and provide protection to the future homes. These are outlined in **Section B** ***Wildfire Risk Mitigation*** portion of this document and include the following:

1. water supply requirements for structural and wildland fire response
2. specifications for access roads and driveway construction and maintenance
3. evacuation planning
4. completed vegetative treatments prior to selling lots and defensible space guidelines for individual lots.

Section A *Wildfire Risk Assessment:*

1. Site Description:

The **Gold Fork Reserve** proposed subdivision consists of one parcel (RP16N04E294206 and owned by Estates 81 LLC) in parts of the N2SW and SENW in Section 29, T16N, R4E, B.M. Valley County, Idaho.

The property lies about five (5) miles southeast of Donnelly and consists of about 80 acres. Access will be provided off Gold Fork Road, a gravel county road. It is rolling ground (several small ridges and draws), the topographic elevation ranges from about 4900 to 5100 feet, and average precipitation is around 24 inches. There are no designated wetlands within the proposed area of the subdivision, however there is an intermittent Class II stream that flows through the north portion of the property. The property's west boundary is Gold Fork River. The proposed subdivision (located east of Gold Fork Road) consists of twenty-eight (28) lots that range from 1.2 to 2.99 acres in size.

2. Existing Vegetative and Fuel Hazard Conditions:

The property is about 98% forested with a 100% canopy cover of conifer tree species consisting of Lodgepole pine (25%), Ponderosa pine (75%) with a few Douglas-fir and Grand Fir. The deciduous tree canopy consists primarily of Aspen. The understory vegetation consists of snowberry, Mountain Maple, sagebrush, and several species of willows along with various forbs and grasses.

The timber stand was commercially thinned about 15 years ago as part of a larger ownership. About one half of the standing volume was removed leaving the overstory well-spaced. However, no management activity has occurred since that time. The overall existing timber stand is an uneven-aged (multi-storied) stand with three basic age groups:

1. **The seedling/sapling age group**: Trees range from one foot to 25 feet tall, have diameters up to six inches D.B.H., and ages from one to 30 years. Number of trees per acre range from zero to over 500 in the overcrowded clumps. This age group is a medium component of the overall timber stand.

2. **The pole size age group:** Trees range in size from six to 8 inches D.B.H. and ages from 30 to 45 years. This age group is a small to medium component of the overall timber stand often found are growing within the same overcrowded clumps or as a suppressed tree growing directly underneath a larger tree.

3. **Overstory**: Trees range from 10 to 25 plus inches D.B.H., heights range from 50 to over 100 feet tall, and ages range from 60 to over 150 years. Trees per acre range from 10 to 100 as the Basal Area (a representation of how close the trees are growing to each other) per acre ranges from 40 to 100 square feet.

Figure 1: Open spacing of overstory trees in the west portion of the property approximately where the primary access road will leave Gold Fork Road. Ponderosa pine (left of picture) have pointed tops and full crowns which indicate good growth rate plus spacing between crowns is good. The Lodgepole pine (right side of picture) have flat or rounded tops and crowns thinning that indicate poor growth rate. They also have multiple or forked tops and *Dwarf mistletoe* fungus (brooming of branches).

Figure 2: Dense overstory in the eastern portion of the property as the slope becomes steeper. Removing the poor quality (i.e., crooked, forked top, and those with less than one-third their height in live crown) trees plus thinning some of the smaller trees will increase the spacing to minimize a crown wildfire.

The western one-third of this property has an open appearance with the overstory age group overall spacing of about 20 feet apart and fewer younger trees established. The eastern portion of this property where the slopes get steeper and the ground more broken by ridges and draws the timber stand becomes denser. The overstory age group still has an average spacing of 20 feet apart however, natural regeneration has become well established. There are numerous overcrowded clumps of sapling/pole sized trees where the average spacing may be 3 to 5 feet apart. These overcrowded clumps create a wildfire risk due to the high fuel loading and ladder fuel for a wildfire to develop into a crown fire.

Overall, the timber stand health is good however, there has been recent activity by various bark beetles. The Western Pine bark beetle normally attacks the larger Ponderosa pine while the Ips pini bark beetle prefer trees six inches or less D.B.H. or the tops of larger trees. The Mountain Pine bark beetle favors Lodgepole pine that are 8 inches D.B.H. or larger and over 80 years old. Any trees that are observed to being attacked by this bark beetle should be removed immediately to keep the infestation from spreading. *Recommend not cutting* Ponderosa or Lodgepole pine before July 1 to avoid attacks from the Ips pini bark beetle.

Other forest health issues noted were as follows: Some of the overstory Lodgepole pine are moderately to heavily infected by *Dwarf Mistletoe* which can be identified by the brooming of the branches. This disease can be a major problem because it infects the younger Lodgepole pine growing underneath. Removal of these trees is important to manage the amount of infection within the smaller trees. The large brooms also can be a spot where embers from a wildfire land and cause a crown fire.

Another fungus problem with the Lodgepole pine is *Western Gall rust* which creates a knot like structure either on the branch or trunk of the tree. That portion of the branch or trunk beyond the know will eventually die or at the very least form a canker which can then be a weak point in the future.

Maintaining the timber stand with healthy vigorously growing trees will minimize losses from insect and disease losses and wildfire risk. See Appendix A for Forest Pest Fact Sheets on these insect and disease problems.

4. Fire History

The fire history records from all jurisdictional agencies show a very low occurrence from lightning or human caused ignitions in the past. As more structures are built the probability of human caused ignitions will increase.

Thunderstorms that are common in the summer months could result in rapid changes in fire behavior that could increase the risks to homeowners and firefighters. The Fire Behavior Triangle consists of three factors that combine to determine how a fire burns on a site- they are topography, weather, and fuels. The normal weather pattern and air flow comes from a south/southwest direction with average summer temperatures ranging from about 70 to 85 degrees. Given the right conditions this property is at risk from a wildfire being pushed by a strong wind gaining speed as it travels upslope.

5. Existing Roads and bridges

Access from Highway 55 could be either by travelling Davis Lane then turning north onto Gold Fork Road at the bridge over Gold Fork River or travelling East Roseberry Road from Donnelly then turning south on Gold Fork Road. An existing road within the property was used during the previous timber harvest however, it is virtually impossible to travel as young trees have become established on the old road surface.

6. Location of existing building structures and estimate of property density

There are numerous single-family units and subdivisions adjacent to the property however, no current buildings exist on site. This proposed subdivision density at full development is one single family unit per about 2.9 acres. The development is planned for twenty-eight (28) lots ranging from 1.2 to 2.99 acres in size.

7. Infrastructure that may affect wildfire risk.

Currently there are no fuel breaks or water sources within the proposed subdivision. The property is surrounded by timber stands on three sides that are in various stages of management. The two larger timber ownerships have been well managed and trees well-spaced. Along the south border of the property is a subdivision with a several single-family residences within the timber stand. Along the northwest side of the property is open grass land that is currently not being grazed.

8. Description of existing features that may assist in wildfire control.

Davis Lane and Gold Fork Road will provide good access for firefighting equipment. Gold Fork River and Lake Cascade should provide an adequate drafting source for firefighting equipment and a dipping source for aircraft.

9. Current structural and wildfire jurisdictional agencies

The structural fire jurisdiction for this development would be Donnelly Rural Fire Protection District (DRFPD). Southern Idaho Timber Protective Association (SITPA) provides wildfire protection for all timber lands in the area.

Wildfire Risk Assessment Summary:

The property lies within Valley County's Geographic Hazard Assessment Wildland Urban Interface **high** level condition for overall wildfire risk (see attached map in Appendix A) due to the following reasons:

- The property is rolling, broken with several ridges and draws, and has slopes from 5 to 35%. A wildfire that starts in the open grass areas west of the property could gain speed travel upslope given a strong west or southwest wind.

- The primary west facing aspect and the timber stand being composed of Ponderosa and Lodgepole pine indicates a drier site thus more susceptible to wildfire risk.

- The timber stand at the lower elevation of the proposed subdivision is more open with fewer trees and the crowns don't touch. As elevation is gained and the slopes become steeper this is where the overcrowded clumps of younger trees are well established underneath the overstory trees. Wildfire risk increases from the extra fuel loading (more trees) and increased slope where a fire can get into the crowns and start rolling.

Figure 3: Typical timber stand overstory trees well-spaced but smaller diameter trees needs to be thinned to reduce the overall wildfire risk.

Section B *Wildfire Risk Mitigation:*

The Fire Behavior Triangle consists of three factors that combine to determine how a fire burns- they are topography, weather, and fuels. Topography is fixed as it changes very slowly over time. Weather is highly variable and the ability to predict is somewhat limited. Fuels (anything that burns and changes from season-to-season or time of day) can be manipulated to minimize wildfire risk.

1. Access-Planned ingress and egress routes

Davis Lane and Gold Fork Road will be the primary ingress and egress routes thus the primary escape routes to travel north or south. These county roads are suitable for emergency vehicles and an adequate evacuation route. The main road system within the proposed subdivision has not been constructed and is recommended to bebuilt to Valley County Road Department standards (i.e., 24 foot running surface, grade not to exceed 10%, and install the appropriate turnaround structures at the dead ends.

2. Water supply for structural and wildland fire responses

The current wildland fire protection water supply needs for this proposed subdivision are only available by drafting or dipping from the Gold Fork River and Lake Cascade if needed.

In accordance with **Section 507.1 IFC 2018** an approved water supply capable of supplying the required fire flow for fire protection shall be provided to the premises upon which facilities, buildings or portions of buildings are hereafter constructed. Since there will be no common water supply system (i.e., hydrants) only individual wells; therefore, the approved fire protection water supply requirement is to install three (3) 10,000-gallon water storage tanks at approved locations. The water tanks must be connected to a well and have automatic fill capability. A yearly inspection is required to ensure the water level is maintained.

3. Estimated response time and distance for jurisdictional fire agencies

Estimated response time for Donnelly Rural Fire Protection District and SITPA is at least 20-30 minutes as they are about 5 to 25 miles away from the development. Additional wildfire resources from federal agencies are available on request.

4. Proposed internal fire protection systems.

No internal sprinkler systems within the individual residences are planned at this time.

5.Proposed infrastructure (including driveways, signage, and power connections).

Driveways to individual lots would be the responsibility of the Lot owner to construct and maintain. The Donnelly Rural Fire Protection District requires that driveways shall not exceed 10% grade, must be at least 12 feet wide, have an unobstructed vertical clearance of 13.5 feet, and shall be maintained to support fire apparatus up to 70,000 pounds.

New structures are strongly urged to utilize building materials meeting a standard of fire resistance advocated by the Valley County Building Department and the International Fire Code (**IFC**).

All new residences will have the address number posted as per Valley County standards (i.e., numbers posted at the entrance to the driveway or on the house and the numbers must be at least 3 and1/2 inches tall with a reflective coloring).

Electrical power will be provided to the subdivision via an underground infrastructure.

6. Evacuation and Pre-incident planning.

A pre-incident action plan must be developed and instituted in the community covenants. This action plan should address the escape route and evacuation plan to encourage pre-planning by residents for preparation in the event of an incident (see Appendix A for the **Wildfire Evacuation Checklist).** Every five years DRFPD and the future residents should formulate an assessment of the existing structures and vegetation that will aid in addressing whether the current action plan needs to be updated.

7. Planned vegetation treatments to reduce fuel loads.

A precommercial thinning of the overcrowded clumps is needed to space the trees so that their crowns are not touching. The spacing may range from 12 to 20 feet apart depending on the diameter of the tree and width of its crown. Also, removing or pruning the lower branches (i.e., ladder fuel) up 4 to 5 feet not to exceed one-third the tree height will help keep a fire on the ground where it is easier to suppress. Aspen trees or clumps of tall shrubs should also be managed by removing the dead or dying stems.

The precommercial thinning treatment **should** be completed during the main access road construction as there will be additional vegetation removed and associated woody debris created during this phase. All the woody debris created from the road construction and precommercial tinning treatment can then be removed from the project area, disposed on site by piling and burning (at the proper time), or masticated. Timing of the removal of Ponderosa pine and Lodgepole pine is critical to minimize the Ips pini bark beetle activity (see Appendix A for the Ips pini bark beetle fact sheet).

Figure 4: Overcrowded clump needs thinned, and lower branches pruned during the road construction phase to space trees at least 12-20 feet apart.

The primary objective for vegetation treatment to reduce the fuel load and protect each individual Lot future building structures would be the creation of a Defensible Space ***before*** *each residence is constructed.*

At a minimum, the Defensible Space guideline for each residence should follow the **Firewise** standards (see Appendix A for **Firewise** information pamphlets). The Defensible Space zone treatments are as follows:

1. ***Immediate Zone-*** 0 to 5 feet around the house.
    a. Trim branches that will overhang the home, porch, or deck.
    b. Prune the lower branches of large trees at least 6 to 10 feet from the ground level.
    c. Recommend using rock or gravel instead of flammable vegetation or mulches next to the house.
2. ***Intermediate Zone-*** the next 5 to 30 feet from the house.
    a. Space trees to have a minimum of 10 to eighteen feet between the crowns with the distance increasing with the percentage of slope. Trees and shrubs can be limited to small clusters or groups of a few each to break up the continuity of vegetation across the landscape.
    b. Remove the ladder fuel by pruning the lower branches at least six to ten feet from the ground. For shorter trees do not exceed 1/3 of the overall height when pruning. Pruning will minimize the risk of surface fire reaching the crowns.
    c. Keeping this zone green as possible into the hot dry summer months will also minimize a surface fire from reaching the residence.
3. ***Extended Zone-*** the next 30 to 100 feet from the house.
    a. Space trees to have a minimum of 6 to 10 feet between the crowns with the distance increasing with the percentage of slope.
    b. Remove the ladder fuel by pruning the lower branches at least 4 to 6 feet from the ground not to exceed 1/3 of the overall tree height.
    c. Remove dead trees and shrubs. Also remove large accumulations of ground litter/debris.

Outside the recommended three (3) Defensible Space zones conifer trees within the Lot should be thinned to create a minimum of 20 feet distance between the larger trees (i.e., 10 inches D.B.H.) and 12 to 15 feet between the smaller trees (i.e., 8 inches D.B.H. and less). Prune the lower branches of trees that have branches that extend to ground level at least 4 to 6 feet from the ground, <u>especially the large over mature or "heritage" Ponderosa pine trees</u>. All dead or dying trees should be removed by a piling and burning or mastication treatment.

Reminder: Do not cut Ponderosa or Lodgepole pine before July 1 to avoid attacks from the Ips pini bark beetle.

8. Long-term maintenance schedule to sustain fuel treat effectiveness.

- Promote the opportunity to maintain or return to native plant species and trees resistant to fire (such as Ponderosa pine, Western Larch, and Douglas-fir).
- Periodically (1-5 years) the current Lot owners or HOA representatives meet with the respective structural and/or wildland fire organizations meet to review trends and projections of future fire risk and fire risk reduction capabilities to ensure that mitigation measures are adequate.
- Vegetation encroachment within the 100' zone of each structure will be reduced annually. This may be accomplished by the homeowner, during a community workday, or by a professional contractor hired by the homeowner.
- Woody debris can be collected each spring and removed to an approved facility such as the Valley County transfer site.
- No open fires will be allowed during the closed burn season (May 10- October 20). Fire pits if installed should be maintained to prevent a fire from escaping the structure. Recommend using metal containers for the fire pit.
- Keep the shrubs and tree branches cut back along the main access roads and individual driveways to maintain a clear running surface to provide good access for firefighting equipment.

Included in the proposed CCR's should be a reference to maintaining good forest health practices and the removal of dead and dying material as a requirement of ownership. The resident owner may consult with professionals such as foresters, arborists, or other qualified individuals to inspect their property to ensure the proper treatments are applied. Residents will be subject to CCRs that provide for annual evaluation of fuel loading and recommendations for removal.

The following agencies and entities will be contacted to receive project-specific information and to provide input on the final Wildfire Protection Plan for the **Gold Fork Estates** proposed subdivision:

- McCall Planning and Zoning Commission
- Donnelly Rural Fire Protection District (DRFPD)
- Southern Idaho Timber Protective Association (SITPA)
- Wildfire Prevention Associates, LLC

Figure 5: Thinned timber stand created adequate crown and tree spacing plus pruned ladder fuel to minimize risk from a crown fire.

APPENDIX A

Maps:

- Vicinity map
- Preliminary plat map
- Valley County Hazard map

Information References:

- Living with Fire in Valley County
- Reducing Wildfire Risks in the Home Ignition Zone
- VCFWG Wildfire Evacuation Checklist
- Forest Pest Fact Sheets

Websites:

WUI references

www.idahofireswise.org

www.facebook.com/VCFWG

NFPA Code references

Class 2 Ignition standards IWUIC 505

https://codes.iccsafe.org/content/IWUIC2018/chapter-5-special-building-construction-regulations

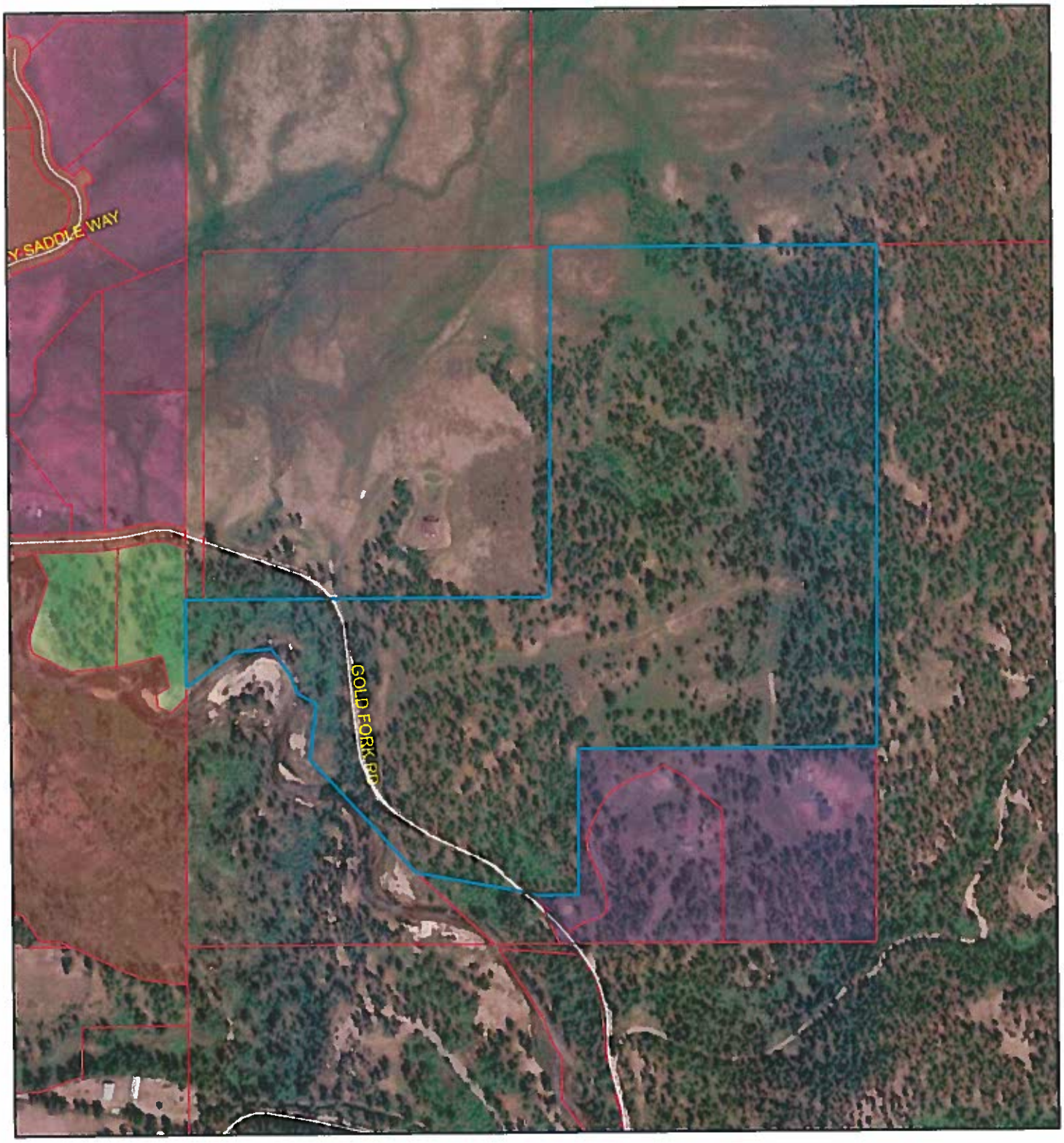
Defensible Space Section 606

https://codes.iccsafe.org/content/IWUIC2018/chapter-6-fire-protection-requirements#IWUIC2018_Ch06_Sec603

2018 IRC Idaho adopted water supply requirements see Section B 105

:https://codes.iccsafe.org/content/IFC2018P3/appendix-b-fire-flow-requirements-for-buildings

Gold Fork Reserve Subdivision



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Parcel Summary & Improvement Report

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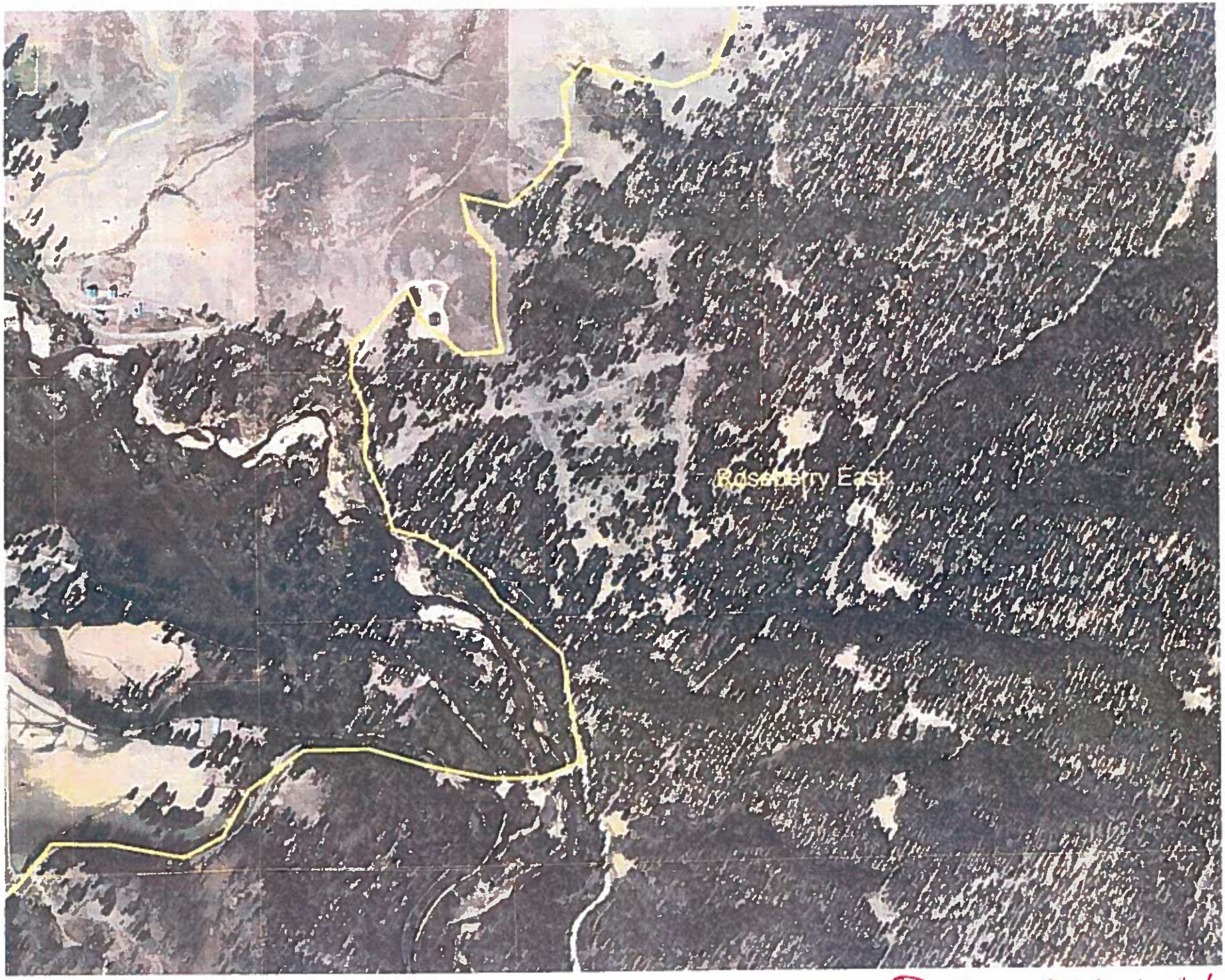
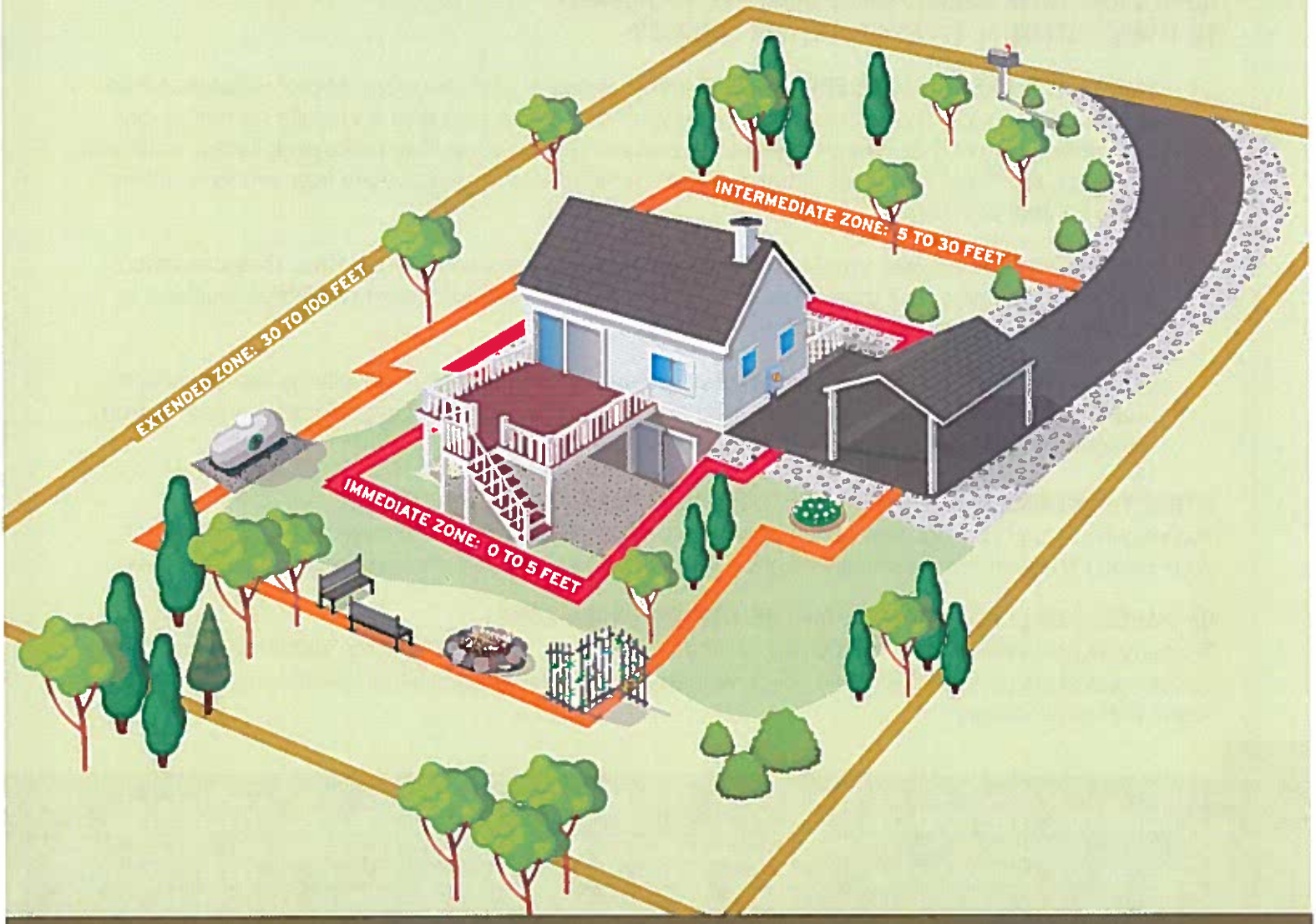
Valley County

Maxar | Compiled by the Bureau of Land Management (BLM), National Operations Center (NOC), OC-530. |



Valley County Geographic Hazard Assessment map (Roseberry East high hazard)

REDUCING WILDFIRE RISKS IN THE HOME IGNITION ZONE



Projects and tasks that can increase a home's potential survivability in a wildfire.

THE FACTS

Experiments, models, and post-fire studies have shown homes ignite due to the condition of the home, and everything around it, up to 200' from the foundation.

HOMES AND THEIR SURROUNDING AREA ARE VULNERABLE TO THREE POTENTIAL TYPES OF IGNITION SOURCES:

EMBER ATTACKS (A/K/A FIREBRANDS): Burning pieces of airborne wood and/or vegetation that can be carried more than a mile through the wind can cause spot fires and ignite homes, debris and other objects. They can also penetrate and smolder in woodpiles, patio/deck items, vents and openings, roofs and debris filled gutters. Most home losses in a wildfire are from embers, not by direct contact with flames.

SURFACE FIRES: Typically small flames burning through grass and ground litter. They can reach houses or attachments if there's no interruption in the types of fuel sources. Flames touching a house, fence or deck can cause them to ignite.

CROWN FIRE: Large flames burning in the tops or canopies of trees. These large flames radiate heat that can ignite wood walls from up to 100' away. Other types of large flames can come from detached buildings, burning wood piles and ignited vehicles.

WHEN YOUR HOME IGNITION ZONE EXTENDS INTO NEIGHBORING PROPERTIES

You may find your home ignition zone overlaps into adjacent properties. To maximize the benefits of your work, it's extremely important to work collaboratively with neighbors to reduce your shared risk.

ON PARCELS OF LAND LARGER THAN THE 100' EXTENDED ZONE

Property owners with more than 100 feet of land that extends beyond the home should also consider additional actions up to 200 feet into the Extended Zone to provide additional benefits in protecting the home and outbuildings.

WHAT YOU NEED TO KNOW

Decades of research have shown that both the house and the landscape adjacent to it play a critical role in the structure surviving a wildfire. A wildfire can transfer from ignited vegetation or an ignited home(s) through:

- Radiation
- Convection
- Embers/Firebrands

A home's building materials, design and landscape have a significant role in the level of exposure that can be endured before ignition occurs from any of these sources.

WHERE TO START?

When planning your wildfire risk reduction projects, start with the house itself as the point where your efforts begin, then move into the landscaping section of the Immediate Zone; once both have been completed, move into the Intermediate and Extended Zones.

In many areas, residents can request a fire-risk overview visit from their local forestry or fire agency to learn more about the science-based guidelines that help residents prepare their home and property for wildfires - this opportunity will provide additional information as it pertains to your individual property and topography.

THE HOUSE AND IMMEDIATE ZONE CHECKLIST

The Immediate Zone includes both the home and the area of 0 to 5 feet out from the furthest attached exterior point of the home.

THE HOME AND ITS BUILDING MATERIALS

Ignition resistant building materials, construction techniques, along with vegetation and debris removal, play a vital role during wildfires.

FIRST PRIORITY

- **CARPORTS**: Remove flammable items stored in carports.
- **DECKS AND ELEVATED PORCHES:** Place 1/8" metal mesh screening between low-profile decks from surface to ground, to block embers from collecting underneath. Never store flammable materials underneath elevated decks/porches. Remove dead vegetation and debris from under decks/porches, and between deck board joints.
- **FENCING:** Use non-flammable fencing material (metal or masonry) when attaching directly to the siding. Ensure there's a minimum of at least 5' of noncombustible material where it attaches to the siding. Do not add vines or other types of vegetation to fencing material. Wooden fences can carry flames directly to the house.
- **FIREPLACE CHIMNEYS:** Remove debris that may accumulate at roof-to-wall intersections. Embers from a fireplace can exit the chimney and could ignite a wildfire; to prevent this install a spark arrestor. When wildfires are approaching close the damper, fireplace screens and glass doors.
- **GUTTERS:** Metal roof gutters do not ignite, only the debris material that accumulates in them – that's why keeping them clean is so important. Vinyl roof gutters can ignite when the debris material is ignited and flaming gutters can fall from the roof edge and land next to the house, which is why the immediate zone needs to be clear of flammable materials.
- **ROOF MAINTENANCE:** Keep roofs clean from leaf litter and pine needles. Remove all tree limbs within 10 feet of the chimney, or that overhang the roof.
- **SIDING:** Use ignition-resistant building materials on exterior walls. Examples include: Stucco, masonry products, plaster and cement. Seal gaps and crevices. Examine the siding for locations where embers could accumulate or lodge and apply caulking at trim-to-siding locations where it is missing or has failed.

SECOND PRIORITY

- **EAVES AND SOFFITS:** Reduce the size and number of embers that pass through vents in the eaves by covering them with a 1/8 inch metal mesh screening. Inspect soffit vents and maintain as needed.
- **CRAWL SPACES:** Remove combustible materials and install 1/8" mesh screening on vents.
- **FOUNDATION:** All foundation vents should have a 1/8 inch corrosion-resistant metal screening.
- **GARAGES:** Weather seal the perimeter of garage doors to help keep embers out. Be sure the door is tight fitting so embers can't slide under the door or in from the sides. If possible, choose a metal or wood core door with metal exterior.

- **SLIDING GLASS DOORS:** Choose double-pane tempered glass. Consider fireproof shutters to protect large windows and glass doors from radiant heat.

THIRD PRIORITY

- **ROOFING MATERIALS:** Types of Class A fire-rated roofing products offer the best protection. Examples include: Composite shingles, metal, cement tile and clay. Inspect shingles/tiles and replace/repair those that are loose or missing to prevent ember penetration. If gaps exist between the roof covering and the roof deck at the eave or ridge, fill the space with a "bird stop" material.
- **SKYLIGHTS:** Remove debris next to and on skylights. Glass is a better option than plastic or fiberglass.
- **VENTS:** Consider purchasing closure devices for foundation and gable end vents and installing a louver- type dryer vent that stays closed unless the dryer is running. Clean debris from attic vents and install 1/8 inch metal mesh screening. For turbine vents, access the attic and inspect where the vent attaches to the roof and attach 1/8 inch screening to the roof sheathing. Dormer-face vents should be replaced with a low-profile vent. Ridge vents should be rated for high wind/rain exposure.
- **WINDOWS:** Multi-paned tempered glass can help reduce the risk of fracture or collapsing in a wildfire.

LANDSCAPING/HARDSCAPING

Ignition resistant building materials, construction techniques, along with vegetation and debris removal, play a vital role during wildfires.

FIRST PRIORITY

- Dead vegetation, dried leaves, pine needles and ground debris accumulation should be frequently removed from this area.
- Hardscaping components should be installed around the perimeter of the home - keep them free of ground litter/debris. Concrete, stone or gravel walkways are great additions to the Immediate Zone.
- Remove trees and shrubs from this area; or replace with succulents.
- Wood mulch products should be replaced with non-combustible mulch products such as crushed stone/gravel options.
- Trim tree limbs that overhang from the Intermediate zone into this area.

INTERMEDIATE ZONE CHECKLIST

The Intermediate Zone includes the area of 5 to 30 feet from the furthest exterior point of the home.

LANDSCAPING/HARDSCAPING

Ignition resistant building materials, construction techniques, along with vegetation and debris removal, play a vital role during wildfires.

THIRD PRIORITY

- Clear vegetation from under large stationary propane tanks.
- Keep lawns and native grasses mowed to a height of four inches.
- Remove ladder fuels (vegetation under trees) so a surface fire cannot reach the crowns. Prune trees up to six to ten feet from the ground; for shorter trees do not exceed 1/3 of the overall tree height.
- Water plants, trees and lawns to keep them from becoming dry.

SECOND PRIORITY

- Space trees to have a minimum of eighteen feet between crowns with the distance increasing with the percentage of slope.
- Trees and shrubs in this zone should be limited to small clusters of a few each to break up the continuity of the vegetation across the landscape.

THIRD PRIORITY

- Create fuel breaks with driveways, walkways/paths, patios and decks.
- Tree placement should be planned to ensure the mature canopy is no closer than ten feet to the edge of the structure.

EXTENDED ZONE CHECKLIST

Extends out from 30 to 100 feet, keep in mind your property line may end prior to 100 feet. In these instances working collaboratively with your neighbor is important to helping protect multiple properties.

LANDSCAPING

Ignition resistant building materials, construction techniques, along with vegetation and debris removal, play a vital role during wildfires.

FIRST PRIORITY

- Dispose of heavy accumulations of ground litter/debris.
- Remove dead plant and tree material.
- Remove vegetation adjacent to storage sheds or other outbuildings within this area.

SECOND PRIORITY

- Remove small conifers growing between mature trees.

THIRD PRIORITY

- Trees 30 to 60 feet from the home should have at least 12 feet between canopy tops. Trees 60 to 100 feet from the home should have at least 6 feet between canopy tops

OTHER CONSIDERATIONS

- Add color and interest with high moisture content plants in containers that could be easily moved to the Intermediate zone when wildfires are approaching.
- Addresses should be visible from the road.
- Closable foundation and gable end vents should be shut when threatened by a wildfire and reopened after the danger passes.
- Close and protect home openings, including attic and basement doors and vents, windows, garage and pet doors to prevent embers from gaining access to the home.
- Connect garden hoses, fill pools, hot tubs, garbage cans or other large containers with water and place ladders outdoors. Firefighters have been known to use hoses, ladders and water sources to extinguish spot fires.
- Consider installing non-flammable shutters similar to hurricane shutters.
- Consider using noncombustible deck boards (metal and fiber cement), or a solid light weight concrete.
- Incorporate a mixture of deciduous and conifer trees.
- Install a garage door on both attached and detached garages.
- Move vehicles into a non-combustible area (gravel or concrete) and roll-up all windows.
- When wildfire threat is high, move patio/deck furniture, cushions, door mats and potted plants indoors, or as far away from the home, shed and garage as possible when wildfire warnings are received.

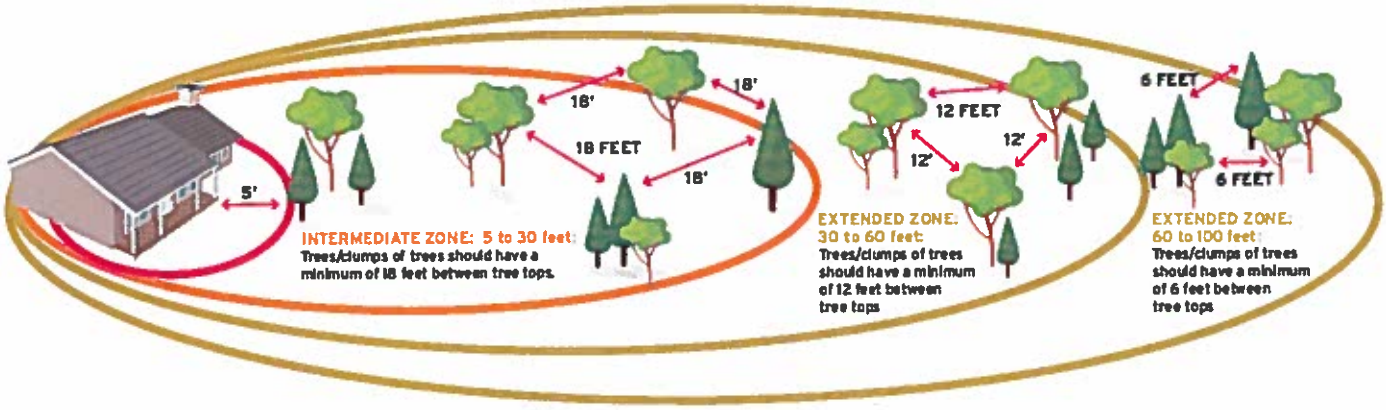
OTHER CONSIDERATIONS (continued)

- Place swing/playsets in the Extended Zone.
- Use rubber doormats instead of those manufactured with natural fiber materials.
- When making future patio furniture purchases select fire resistant options.

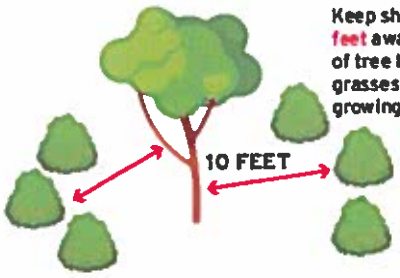
TREE SPACING AND PRUNING GUIDELINES

Guidelines for tree crown clearance vary depending on slope, tree species and understory vegetation, along with proximity to homes and other site specific factors. Check with your local forestry or fire agency to get specific distance recommendations for where you live.

TREE SPACING



TREE PRUNING



Keep shrubs a minimum of 10 feet away from the lower edge of tree branches; and remove grasses and other vegetation growing underneath tree limbs

For mature/tall trees, prune lower branches up 6 to 10 feet from the ground

For shorter trees, prune lower branches up from the ground, but do not exceed 1/3 of the tree's overall height

The distances listed for crown spacing are suggested based on NFPA 1144. However, the crown spacing needed to reduce/prevent crown fire potential could be significantly greater due to slope, the species of trees involved and other site specific conditions. Check with your local forestry professional to get advice on what is appropriate for your property.

WILDFIRE EVACUATION CHECKLIST

FIRESafe Valley County - Idaho

https://www.facebook.com/VCFWG/

If evacuation is anticipated and time allows, follow this checklist to give your family and home the best chance of survival. Complete the Family Communication Plan on the opposite side for each family member and keep in your wildfire and emergency "Go Kit(s)."

EVACUATION NOTIFICATIONS & INFORMATION *Register for CODE RED to receive evacuation and fire information notices!*

CODE RED: https://public.coderedweb.com/CNE/en-US/BFCA66524AE5

Used when **emergency action** is needed at a **specific address**: wildfires, imminent flooding, evacuations, or other public safety incidents where lives may be at risk; critical information about evacuation routes, hazards, and shelters. *Online registration required!*

Sign up for... CODE RED Keeping citizens informed.

Valley County Fire Working Group

SOCIAL MEDIA, RADIO, TV

Used to provide less critical and low level frequent **updates** intended for larger populations: traffic updates, road closures, incident updates, and contact information; safety announcement, power outages, minor issues; disaster recovery resources.

EVACUATION ORDER: Leave now! Evacuate immediately. Do not delay to gather valuables or prepare your home. Follow any directions given in the evacuation order.

EVACUATION WARNING: Evacuate as soon as possible. A short delay to gather your *Go Kit* and prepare your home may be OK. Leave if you feel unsafe or conditions change.

SHELTER IN PLACE: Stay in your current location or the safest nearby building or unburnable area. May be required when evacuation is impossible, too dangerous, or unnecessary.

ALWAYS:

COMMUNICATIONS

- ☐ Keep your cell phone fully charged.
- ☐ Notify an out-of-area contact of your phone number, location and status. Update regularly.
- ☐ Leave a note with your contact info and out-of-area contact taped to fridge or inside a front window.
- ☐ Check on or call neighbors to alert them to prepare at first sign of fire.

ON YOUR PERSON

- ☐ Dress all family members in long sleeves and long pants; heavy cotton or wool is best, no matter how hot it is.
- ☐ Wear full coverage goggles, leather gloves, head protection.
- ☐ Cover faces with a dry cotton or wool bandanna or scarf over an N95 respirator. Tie long hair back.
- ☐ Carry a headlamp *and* flashlight (even during the day).
- ☐ Carry car keys, wallet, ID, cell phone, and spare battery.
- ☐ Drink plenty of water, stay hydrated.
- ☐ Put "Go Kits" *(reverse)* in your vehicle.

PETS & ANIMALS

- ☐ Locate your pets and place in carriers NOW. You won't be able to catch them when the fire approaches.
- ☐ Be sure your pets wear tags and are registered with microchips.
- ☐ Place carriers (with your pets in them) near the front door, with fresh water and extra food.
- ☐ Prepare horses and large animals for transport and consider moving them to a safe location early, before evacuation is ordered.

IF TIME ALLOWS:

INSIDE THE HOUSE

- ☐ Shut all windows and doors (interior too) and leave them *unlocked*.
- ☐ Remove combustible window shades and curtains; close metal shutters.
- ☐ Move furniture to the center of the room, away from windows.
- ☐ Leave indoor and outdoor lights on.
- ☐ Shut off HVAC and ceiling fans.

OUTSIDE & IN NEIGHBORHOOD

- ☐ Place combustible outdoor items (patio furniture, toys, doormats, trash cans, etc.) in garage or 30' from structures.
- ☐ Shut off gas at the propane tank; move small tanks at least 15' away from combustibles.
- ☐ Connect garden hoses with squeeze-grip nozzles to outdoor spigots for use by firefighters.
- ☐ Fill water buckets and place around outside of house, especially near decks and fences.
- ☐ Clean your gutters and blow leaves away from house.
- ☐ Back your car into driveway, loaded, with doors and windows closed.
- ☐ Prop open fence and side gates.
- ☐ Place ladder(s) at the corner(s) of structures for firefighters.
- ☐ Seal attic and ground vents with pre-cut plywood or metal covers (even duct tape will protect from ember entry) if time allows.
- ☐ Patrol your property and monitor conditions. Leave if spot fires ignite or conditions change.

WHEN YOU LEAVE:

- ☐ Leave immediately if ordered.
- ☐ Don't wait for an evacuation order if you feel unsafe or conditions change- leave early if unsure
- ☐ Assist elderly or disabled neighbors.
- ☐ Carpool with neighbors to reduce traffic.
- ☐ Take only essential vehicles with adequate fuel.
- ☐ In your car, turn on headlights, close windows, turn on inside air and AC, tune to local radio.
- ☐ Drive slowly and defensively; be observant.
- ☐ The best evacuation route is usually the one you know best. Take the fastest paved route to a valley floor, away from the fire if possible.
- ☐ Proceed downhill, away from the fire if possible. Know at least two routes.
- ☐ If roads are impassable or you are trapped: take shelter in a building, car, or an open area; park in an *outside turn* if trapped on a hillside; stay far from vegetation; look for wide roads, parking lots, playing fields, etc.
- ☐ If trapped, you are better protected inside a building or vehicle.
- ☐ Don't abandon your car in the road if passage is impossible. If you must leave your car, park it off the road and consider other options for shelter.
- ☐ Evacuate on foot *only as a last resort.*
- ☐ Don't evacuate by fire road, uphill, or into open-space areas with unburned vegetation.
- ☐ **Remain calm** - panic is deadly.

FIRESafe Valley County

Your Family's Name

Family Emergency Communications Plan

HOUSEHOLD INFORMATION

ADDRESS

PHONE

EMAIL

NAME

MOBILE

EMAIL

OTHER # or SOCIAL MEDIA

NAME

MOBILE

EMAIL

OTHER # or SOCIAL MEDIA

NAME

MOBILE

EMAIL

OTHER # or SOCIAL MEDIA

NAME

MOBILE

EMAIL

OTHER # or SOCIAL MEDIA

NAME

MOBILE

EMAIL

OTHER # or SOCIAL MEDIA

SCHOOL, CHILDCARE, CAREGIVER, WORKPLACE

NAME

ADDRESS

PHONE

EMAIL

WEB

EMERGENCY PLAN/PICKUP

NAME

ADDRESS

PHONE

EMAIL

WEB

EMERGENCY PLAN/PICKUP

NAME

ADDRESS

PHONE

EMAIL

WEB

EMERGENCY PLAN/PICKUP

LOCAL CONTACTS

NAME

ADDRESS

PHONE

EMAIL

NAME

ADDRESS

PHONE

EMAIL

OUT-OF-AREA CONTACTS

NAME

ADDRESS

PHONE

EMAIL

NAME

ADDRESS

PHONE

EMAIL

EMERGENCY MEETING LOCATIONS

LOCATION 1

INSTRUCTIONS

LOCATION 2

INSTRUCTIONS

LOCATION 3

INSTRUCTIONS

IMPORTANT NUMBERS & INFORMATION

FIRE & MEDICAL EMERGENCIES **911** or **208-382-5160**

POLICE, SHERIFF EMERGENCIES **911** or **208-382-5160**

POISON CONTROL **800-222-1222**

SOCIAL MEDIA, FIRE INFO **@valleycountysheriffsoffice**

YOUR LOCAL AGENCIES (SOCIAL MEDIA)

LOCAL RADIO **FM98.3, KDZY**

PHYSICIAN

PEDIATRICIAN

VETERINARIAN

INSURANCE

HOMEOWNER/RENTER POLICY

AUTO POLICY

MEDICAL POLICY 1

MEDICAL POLICY 2

WILDFIRE & EMERGENCY "GO KIT"

Put together an emergency supply kit in advance for each family member and keep it easily accessible. Plan to be away from your home for an extended period of time. Each person should have their own **"Go Kit"**. Store kits in backpacks.

- ☐ Bandana, N95 respirator, goggles, leather gloves, long shirt and pants (cotton or wool), boots, hat
- ☐ Flashlight and headlamp with spare batteries
- ☐ Extra car keys, credit cards, cash
- ☐ Map marked with two evacuation routes (if possible)
- ☐ Prescription medications
- ☐ Extra eyeglasses or contact lenses
- ☐ First aid kit
- ☐ Battery-powered radio and extra batteries
- ☐ Copies of important docs (birth certificates, passports, insurance policies, etc.)
- ☐ Pet food and water, leashes, pet supplies and medications
- ☐ Water bottles and food
- ☐ Sanitation supplies
- ☐ Change of clothing
- ☐ Spare chargers for cell phones, laptops, etc.

Items to take *only if time allows*:

- ☐ Easily carried valuables
- ☐ Family photos, small heirlooms, and other irreplaceable items
- ☐ Personal computer data and digital information backups on hard drives and/or disks

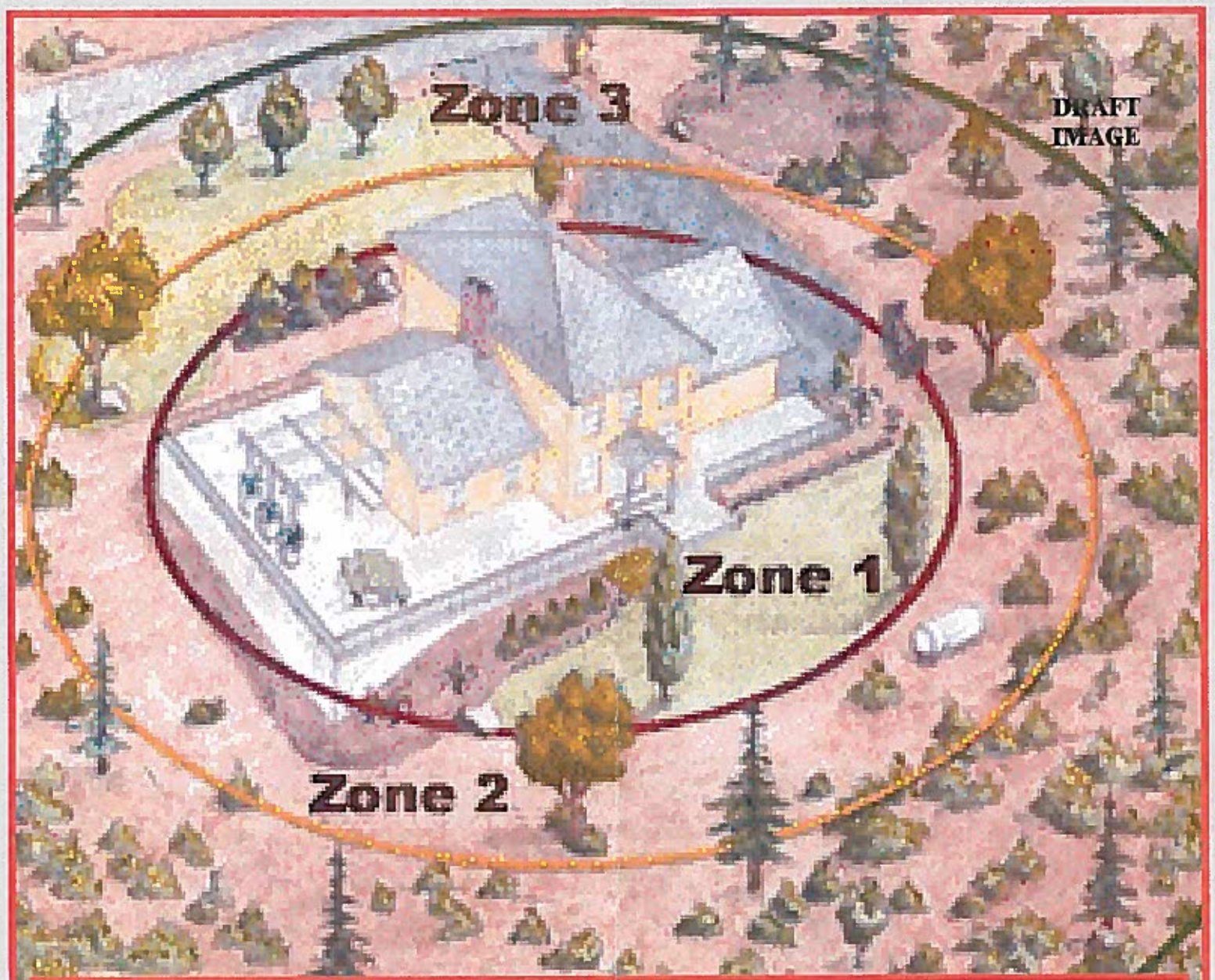
MORE INFORMATION AVAILABLE ONLINE

http://www.co.valley.id.us/
http://www.idahofirewise.org/ http://www.donnellyfire.com/
www.Firewise.org
http://nfpa.typepad.com/firewise/
http://www.firewise.org/fw_youcanuse/learningcenter/index.htm
http://www.fema.gov/hazard/fire/pubs/athome_woods.shtm
www._____
www._____
www._____

Living with Fire in Valley County is a collaborative document developed by the Fire Working Group, a sub-committee of the Local Emergency Planning Committee as chartered by the Valley County Board of County Commissioners.

Information on the committee membership and the updated County Wildfire Protection Plan can be viewed at:
www.idl.idaho.gov/nat_fire_plan county_wui-plans/valley/valley.htm

Published March 2012



THE HOME IGNITION ZONE (HIZ)

The HIZ refers to the home itself and the immediate surrounding 30-200 feet. Create a survivable space around your structures by removing, reducing, relocating and replacing fuels and vegetation to slow the spread of wildfire. Survivable space involves developing a series of management zones in which different treatments are used.

Zone 1 - **(within 30 feet)** Remove all combustible material & dead vegetation, plant 5 feet from structures, mow & irrigate grass, consider trees part of the structure - the fewer the better. Incorporate structure mitigation.

Zone 2 - **(30-100 feet)** Thin trees and shrubs 10 feet apart, prune trees a minimum of ten feet up or 1/3 height, locate propane tanks and fire wood 30 feet away, remove flammable vegetation.

Zone 3 - **(100-200 feet)** Thin trees and shrubs according to land management objectives.

Living with Fire in Valley County

WILDFIRE IN VALLEY COUNTY

Some ecosystems depend on periodic fires to maintain the habitats which make up the ecosystem. In these fire adapted areas, fire promotes plant and wildlife diversity and burns away accumulations of live and dead plant material. Historically, fires have burned regularly, consuming vegetation, accumulation of insects and diseases, and triggering a rebirth of forests. Nearly every region in the country has some kind of fire dependent plant or tree.[1]

Wildfire has always been here, wildfire will continue to be here, even though you and your home are here.

Mixed Conifer

Examples: Warren Wagon Road & West Mountain

Composed of Ponderosa Pine, Douglas-fir, Grand Fir, Spruce, and other species, fires in this forest type may burn at moderate or high intensities. The more dense the ground vegetation and trees, the higher the fire intensity.

Lodgepole Forests

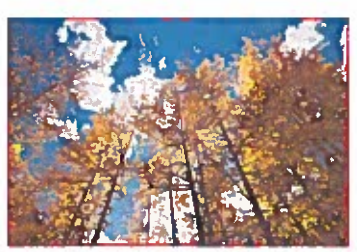
Examples: Paddy Flat & Wagon Wheel

It is typical for Lodgepole pine forests to burn at very high intensities that often result in burning most or all of the standing Lodgepole trees and ground vegetation.

Aspen Groves

Located Throughout Valley County

Aspen groves love high intensity fire, which is their primary means of regeneration. Lack of fire in Aspen causes conifers to encroach and eventually replace them. Aspen groves throughout the west are in rapid decline.



Accepting fire as a natural part of healthy ecosystem functioning, while at the same time protecting people and property presents a major challenge. The challenge can be eased if we work with nature rather than against it.[2]

NO ONE CAN PREVENT *ALL* WILDFIRES

Nine-tenths of all forest fires in the United States are man-caused.[3] These fires are the direct result of carelessness or ignorance. They start when motorists toss burning cigarettes out of windows, when untended campfires are left in the woods, when ATV's are ridden through dry grass, or when your neighbor sets fire to weeds and brush and lets the flames spread to nearby timber.

NO ONE CAN STOP *ALL* WILDFIRES

Many people assume that when a wildfire starts, it will be quickly controlled and extinguished. For most wildfires, firefighters have the ability, equipment, and technology for effective fire suppression. However, some of the time, wildfires burn so intensely that there is little firefighters can do. The key to prevent a house from burning is to reduce fire intensity as wildfire nears and employ fire resistant building materials and design.

Consequently the most important person protecting a house from wildfire is not a firefighter, but you, the owner.[4]

IS YOUR PROPERTY AT RISK?

YOU CAN MAKE A DIFFERENCE

Do you live in or border a fire dependant area?

Is the vegetation around your home "lean and clean?"

Do you have a wood pile, wood deck or fuel tank in close proximity to your home?

Is your home's exterior flammable?

Are your eaves, soffits, and fascias unenclosed?

Wildfire happens, it is not "if" but "when"

LANDOWNER RESPONSIBILITIES

PREVENTION

EDUCATION

MITIGATION

Prevention includes activities directed at reducing unwanted human caused and catastrophic wildfire.

Education includes continual learning by the public and fire management community.

Mitigation includes identifying Wildland fire hazards and taking action to reduce risk.

SURVIVABLE SPACE = FUELS MITIGATION + STRUCTURE MITIGATION

Survivable Space

You and your home do not need to leave survival to chance. Survivable space is the modification of landscape design, fuels and building materials within the Home Ignition Zone (see diagram on reverse side) to make an ignition caused by wildfire unlikely even without direct firefighter intervention. The likelihood of you and your home surviving a wildfire therefore are highly dependent on two variables within your immediate control:

= Fuels Mitigation

Removal of dead and down material

Reduction of ladder fuels & plant densities

Replacement with fire resistant landscape

Relocation of flammable materials

+ Structure Mitigation

Locate structures on gentle terrain where possible

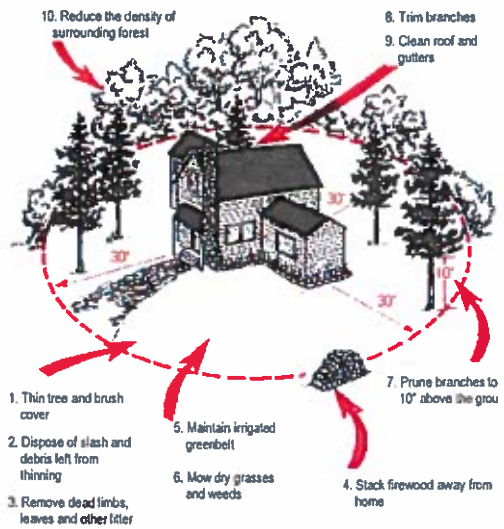
Construct structures with non-combustible materials

Evaluate fire access: reduce grade, improve surface and increase width

Soffits, eaves, fascias and vents should be enclosed

COST, TIME & EFFORT

Landowners can reduce their fire risk without great cost if they are willing to do some of the work themselves. Routine landscaping chores that clear combustible materials from around the house, make a big impact without breaking the bank.



[1] www.smokeybear.com/natural-hickory.asp
[2] Our Changing Planet, Upper Midwest Aerospace Consortium
[3] www.idahofirewise.org/safety-prevention/history-of-keep-idaho-green/
[4] Living With Fire: Homeowners' Firewise Guide...