

- Waterbar newly created roads or containment lines, as necessary, to prevent erosion
- Install sediment controls to prevent sedimentation of waterways
- Restore all fire staging areas with native seed mixes approved by BLM, NRCS, or other local experts
- Control all noxious weed invasions
- Evaluate the necessity to revegetate all or portions of the burn or areas impacted by fire suppression activities using native species by broadcast seeding, drilling, containerized stock or wildlings
- Encourage the use of plant stock from local collections of site-adapted stock
- Base decision to revegetate an area on inventories of affected areas for natural recovery that approaches pre-fire densities of native species
- Preclude off-road vehicle use in burned area for at least two growing seasons
- Continue monitoring until restoration is complete
- Conduct surveys of burned areas to assess damage to cultural resources.

Fire Prevention Programs – Public Education

Wildland Fire Education

The Fairfield Ranger District (personal communication – SNF) will begin implementation of a program called Redzone in the Camas County area of the Sawtooth National Forest during the summer of 2004. Redzone is a software program that incorporates digital photos, GPS locations, and Survivable Space surveys of homes into one easy to view document. The District fire prevention technician will be conducting a specialized survey of homes within the wildland urban interface area of Camas County. The survey will identify potential hazards the home may pose to firefighters that are trying to protect it from a wildland fire and it will suggest mitigation measures that can be taken by the home owner to reduce the risk of their home igniting in case of a wildfire in their area. The surveys will also contain information for firefighters to use in case of a wildland fire such as: water sources, access concerns (bridges/road width), and utility location information. The surveys will then be mailed to the homeowner for his review. We will also be including Firewise documents when we mail the survey that will aid the homeowner in creating Survivable Space around his home.

FIREWISE – A Community-wide Outreach Program

The National Wildfire Coordinating Group (NWCG) sponsors the FIREWISE Program. Members of the NWCG are responsible for wildland fire management in the United States and are represented by the USDA-Forest Service, the Department of Interior, the National Association of State Foresters, the U.S. Fire Administration and the National Fire Protection Association. FIREWISE promotes fire wise practices by 1) educating the public of the dangers of a wildfire in the area, 2) encouraging residents to take responsibility in reducing the risk of a wildfire and to create Survivable Space around

their residence, and 3) increasing awareness of the natural role of low-intensity fires and the benefits of prescribed burning or occasionally managing natural wildland fires to achieve ecological benefits while maintaining firefighter and public safety as top priority. The estimated cost is \$10,000.00 per program.

A Checklist for Homeowners

Many Idaho residents desire to live in rural areas adjacent to or surrounded by hazardous fuels. The fuels have the potential to ignite a wildland fire and possibly a structural fire. In some cases homeowners have little to no understanding of the risks to themselves or to the emergency personnel who must respond to these fires. It is the homeowner’s responsibility to protect their property.

The following checklist was developed to aid Camas County homeowners residing within subdivisions and additions. The checklist contains standard questions used by FEMA (2004) and the FIREWISE Program. These questions have been modified, based on earlier assessments of subdivisions and additions and interviews with homeowners and fire chiefs.

Table 24: A Checklist for Homeowners

Do you know your wildfire risk?
Learn about the history of wildfire in your area, local fire laws and building codes and protection measures. This information is available from but no limited to: 1) Shoshone District BLM office, 2) Fire department office, 3) county offices and, Fire departments adjoining Camas County. Consider having a professional inspect your property and offer recommendations for reducing the wildfire risk. Determine your Fire department’s ability to respond to a wildfire. <ul style="list-style-type: none"> • Are ingress and egress roads to your property clearly marked? • Are the roads wide enough to allow passage by firefighting equipment? • Can the Fire department find your house (house no., grid location)?
What should I do if a wildfire threatens my neighborhood?
<ul style="list-style-type: none"> • Contact the fire department or district fire warden immediately • Close all windows, doors and other openings to the outside to prevent sparks from blowing inside • Locate family members and pets • Wear non-flammable cotton or wool clothing • If you have time, wet down the roof and the area adjacent to the house
Do you have an evaluation plan for your family?
Plan several alternate routes for family members in the event wildland or a structural fire. <ul style="list-style-type: none"> • Establish where young family members will immediately go in the event of a fire and in the absence of adult supervision. • Establish “staging areas” for family members and/or community/subdivision members in the event normal evaluation routes become blocked, especially if the ingress and egress road is limited, that is, one road in, one road out • Prepare your vehicle for evacuation.
Should I create ‘survivable space’ around my home?

<p>Create a 30-foot safety zone around the house.</p> <ul style="list-style-type: none"> • Keep volume of vegetation in this zone to a minimum. If you live on a hill, extend this zone on the downhill side. The steeper the slope, the more open space you will need to protect your home. • Remove vines from the walls of the house • Move shrubs and other landscaping away from the sides of the house • Prune branches and shrubs within 15 feet of chimneys and stove pipes • Remove tree limbs within 15 feet of the ground • Thin a 15-foot space between tree crowns • Replace highly flammable vegetation (e.g., juniper, sagebrush, pine) with lower growing, less flammable species • Replace vegetation that has living or dead branches from the ground level up (these act as ladder fuels for the approaching fire). • Keep lawns mowed frequently • Clear all areas of leaves, brush, dead limbs and fallen trees. <p>Create a second zone at least 100 feet around the house. This zone should begin about 30 feet from the house and extend to at least 100 feet</p> <ul style="list-style-type: none"> • Reduce or replace as much of the most flammable vegetation as possible. If you live on a hill, you may need to extend the zone for several hundred feet to provide the desired level of safety.
When selecting landscaping materials, how do I make the right choices?
<p>Choose plants that are acclimated to your area of the country. Avoid resinous varieties and look for those with a high amount of moisture in their leaves. Note that deciduous trees are generally less flammable than coniferous ones. Check with your State Foresters office, or with your extension agent because some areas of the country have regional plant lists available. A healthy, well-maintained landscape is very important, so:</p> <ul style="list-style-type: none"> • Space plants carefully • Prune them regularly • Remove dead leaves and other litter from around trees, shrubs and vines • Provide the landscape with sufficient moisture.
Are combustible materials away from the house?
Stack firewood 100 feet away and uphill from the house. Keep gas grills and propane tanks at least 15 feet from the house.
Are porches enclosed underneath?
<p>Any porch, balcony or overhang with exposed space underneath is fuel for an approaching fire. Overhangs ignite easily by flying embers and by the heat and fire that gets trapped underneath. If vegetation is allowed to grow underneath or if the space is used for storage, the hazard is increased significantly.</p> <ul style="list-style-type: none"> • Clear all flammable materials away from underneath sun decks and porches. • Extend ½-inch mesh screen from all overhangs down to the ground. • Enclose wooden stilts with non-combustible material such as concrete, brick, rock, stucco or metal. • Use non-combustible or fire-resistant materials for new porch or sun deck construction. If possible, build the structure to the ground so that there is no space underneath.
Are eaves and overhangs enclosed?
Are house vents covered with wire mesh?
Is the roof constructed of non-flammable materials?
<p>The roof is especially vulnerable in a wildfire because firebrands and flaming debris can travel great distances, land on your roof, and start a new fire.</p> <ul style="list-style-type: none"> • Avoid flammable roofing materials such as wood, shake and shingle. • Use fire resistant materials such as single-ply membranes, fiberglass shingles, slate, metal, and clay and concrete tile. • Keep gutters clean of debris.
My wood-shake roof was treated with fire retardant some years ago. How can I tell if retardant needs to be reapplied?
Chop a small piece of wood from the edge of one of the shakes and hold a lighted match under it. If the shake ignites, roof retardant needs to be reapplied.
Are chimneys and stovepipes covered with spark arrestors?
<p>Install spark arrestors on all chimneys, stovepipes and vents for fuel-burning heaters. Check with the Fire department for spark arrestor specifications</p> <ul style="list-style-type: none"> • Use non-combustible or fire-resistant materials for new chimney construction and follow chimney-building specifications.
Is the house siding fire resistant?
Use fire-resistant materials in the siding of your home, such as stucco, metal, brick, cement shingles, concrete and rock. Existing wood siding can be treated with UL-approved fire retardant chemicals (not a permanent fix).
Have windows been treated to reduce the risk?
<p>Windows allow radiant heat to pass through and ignite combustible materials inside. Dual-or triple-pane thermal glass, and fire resistant shutters or drapes, help reduce the wildfire risk.</p> <ul style="list-style-type: none"> • Close shutters or drapes while away from home to prevent the ignition of combustible materials and to keep home warmer in the winter and cooler in the summer.

Table 25: Mitigation Summary for Camas County.

Priority Rating	Potential Problems/Risks	Responsible Agency/Recommended Mitigation
H	Transition from wideband to narrowband with communications equipment and operations has the potential to adversely affect firefighter safety and performance, specifically in the initial and extended action environment (NIFC, 2004).	Federal, State, Fire departments <ul style="list-style-type: none"> • Accelerate local conversion to narrowband to match Federal schedule • Firefighters and aerial resources must withdraw from fire operations activities if positive communication with their forces, supervisor, or adjoining forces are compromised • Ensure local frequency management plans are in place and understood to support initial and extended action activities, and include contingencies for cooperators and aviation resources • If communication problems become an issue, the fall back position is to revert to wideband mode • Report problems with specific details through SAFENET or SAFECOM reporting systems
H	Lack of detailed training records for individual firefighters	Fire departments <ul style="list-style-type: none"> • Conduct instructor-led training that results in national or state certification in basic, operational level firefighting, operational level rescue, driver training or first responder training or officer training
H	Lack of detailed firefighting vehicle acquisition programs	Fire departments <ul style="list-style-type: none"> • Comply with NFPA 1901 or 1906 standards • Need total number of vehicles in fleet • Mileage or hours of engine operation and total number of vehicles in this category • Incident activities (call volume) • Vehicle equipment status and condition
H	Lack of detailed information for facility modification	Fire departments <ul style="list-style-type: none"> • Need information on sprinkler systems • Exhaust venting systems • Smoke and fire alarm systems and emergency facility generators • Details of occupancy and frequency of use of existing facilities
H	Lack of National Fire Protection Association (NFPA) standards for entire county. Lack of National Fire Protection Association (NFPA) standards for entire county. Note: The cost of enforcement is prohibitive for small rural communities (personal communication – Camas County fire chiefs).	<ul style="list-style-type: none"> • Adopt all or portions of, 2003 NFPA 1141 Standard for Fire Protection in Planned Building Groups (See Appendix A) • Adopt all or portions of, 2003 NFPA 1143 Standard for Wildland Fire Management (See Appendix A) • Adopt all or portions of 2002 NFPA 1144 Standard for Protection of Life and Property from Wildfire (See Appendix A) • Fire departments should meet and discuss the current system of building permit review and identify problems that exist and

		implement solutions
H	Hazardous fuels within subdivisions	County, Fire departments, Homeowners <ul style="list-style-type: none"> • Request grant funding to purchase an industrial chipper or make arrangements to use the Forest Service chipper • Identify areas where people can dump debris • Offer free dump passes • Create Survivable Space • Host cleanup days • Place evacuation plan map and map of readily available water sources for each subdivision within a lockable container and positioned at the entrance of subdivision • Place safety flags on standpipes used for drafting at each water source • Construct fuel breaks at designated locations (see map) • Maintain fuel breaks (periodic mowing, greenstripping, noxious and invasive weed removal (see Environmental Effects, p. 30)
H	Lack of Survivable Space around homes	Homeowners <ul style="list-style-type: none"> • See Table 24: A Checklist for Homeowners
H	No RedZone program within subdivisions	Fire departments, Homeowners <ul style="list-style-type: none"> • Expand the Sawtooth National Forest RedZone program to include subdivisions • Conduct surveys identifying potential hazards a home may pose to firefighters during a wildland fire • Conduct surveys identifying measures a home owner will take to reduce risks of their home igniting during a wildfire • Conduct surveys identifying water sources, access concerns (bridges/road width), and utility location information needed by firefighters • Mail surveys to homeowners for review. Include Firewise documents in the mailing to aid the homeowner in creating Survivable Space around the home
H	Inadequate permanent water supply and drafting locations	County, Fire departments <ul style="list-style-type: none"> • Pursue grant opportunities to purchase additional water tenders • Request grant funding to develop dry hydrant systems and drafting locations as delineated (see map) • Require storage tanks (cisterns) and/or hydrant systems in new subdivisions
	Reduce human-caused fires	County, Fire departments <ul style="list-style-type: none"> • Work with its federal cooperators to develop grass roots fire prevention efforts to reduce the occurrence of person caused fire ignitions through public education and

H		<ul style="list-style-type: none"> participation in community events. Develop partnerships with local businesses to promote fire prevention. Some examples are Sporting goods dealers will display materials relating to campfires and outdoor activities, Landscaping companies will display information relating to Survivable Space and fire resistant plants, Agriculture related businesses will display information related to agricultural burning, Off road vehicle dealers will display information related to fire prevention as it relates to OHV.
M	No enforcement of State regulations regarding burning permits outside of city limits	Federal, State DEQ, County, Fire departments <ul style="list-style-type: none"> Create county ordinance regarding burning Educate public Notify sheriff's office of controlled burns Coordinate with state and federal agencies using fire restrictions
M	Lack of agreements with landowners to allow access to irrigation mainline values	BLM, Fire departments <ul style="list-style-type: none"> Cooperate with landowners by obtaining a written agreement allowing access to irrigation wells or pipes. This would require proper pipefitting on tenders and engines.
L	Roads and Bridges	County <ul style="list-style-type: none"> Inspect Camas Creek bridges, post weight ratings and, if necessary, upgrade bridges to handle fire department's heaviest apparatus Widen roads for better ingress and egress.

Web Sites for Homeowners

FIREWISE programs
<http://www.firewise.org/>

Red Zone Software
<http://www.redzonesoftware.com/index2.html>

FireWars/NOVA
http://www.pbs.org/wgbh/nova/teachers/programs/2908_fire.html

Taking a Stand: Pros and Cons of Forest Fires
<http://www.thirteen.org/wnetschool/origlessons/fire/index.html>

FEMA for Kids
<http://www.fema.gov/kids/wldfire.htm>

Living with Fire
http://www.fs.fed.us/rm/fire_game/

Pikes Peak Wildfire Prevention Partners
<http://www.ppwpp.org/>

Smokey Bear
<http://www.smokeybear.com/>

Sparky's Home Page
<http://www.sparky.org/>

Woods on Fire
National Institute for Science Education and the National Science Foundation
http://whyfiles.news.wisc.edu/018forest_fire/index.html

REFERENCES

Billings, W.D. 1994. Ecological impacts of cheatgrass and resultant fire on ecosystems in The western Great Basin. In: Monsen, Stephen B. and Kitchen, Stanley G., comps. 1994. Proceedings—ecology and management of annual rangelands: 1992, May 18-22; Boise, ID, Gen. Tech. Rep. INT-GTR-313. Ogden, UT: U.S. Department of Agriculture, Forest Service, and Intermountain Research Station. 22-30.

Federal Emergency Management Agency, 2004. *Avoiding Wildfire Damage: A Checklist for Homeowners*. In: Department of Homeland Security's Program Guidance for the 2004 Assistance to Firefighters Grant Program.

Graham, R. T. 2003. *Hayman Fire Case Study: Summary*. Gen. Tech. Rep. RMRS-GTR-115. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 32 p.

Kempthorne, D., D. Rittenhouse, W. Wiggins, M. Ferguson, B. Estes, J. Foard, J. Stires, and J.W. Twitchell. 2002. *Idaho Statewide Implementation Strategy for the National Fire Plan*.

Pellant, M. 1992. *History and applications of the Intermountain Greenstripping Program*, Symposium on Ecology, Management, and Restoration of Intermountain Annual Rangelands, Boise, Idaho, May 18-22.

Pohlman, J. and R. White. 2003. *A Guide to Planning and Installing Dry Fire Hydrants*. Wisconsin Department of Natural Resources, PUB-FR-044-2003, Ladysmith, WI.

Prather, T.S., S.S. Robins, D.W. Morishita, L.W. Lass, R.H. Callihan, and T.W. Miller. 2002. *Idaho's Noxious Weeds*. University of Idaho, Moscow, Idaho and Idaho Department of Agriculture, Boise, Idaho.