

Action Item Worksheet

Action Item worksheets were generated as a guide for the Matrix, further explaining the action items listed there. Each worksheet describes one action item, the rationale behind that item, and the steps that could be taken to implement it.

Linn County Community Wildfire Protection Plan Actions

Enhance Wildfire Response Capabilities # 1

Proposed Action Item:	
Assess and address deficiencies in equipment and resources available for wildland fire fighting for rural fire departments.	
Rationale for Proposed Action Item:	
Linn County Rural Fire Protection Districts identified the following equipment needs: <ul style="list-style-type: none"> • Brownsville - 1,000 gallon water tender • Sweet Home – type 3 engine • Albany - additional tender capacity and a type 3 brush unit • Jefferson - replace 2 type 6 engines with 2 new type 6 engines. • Scio - 2 or 3 new Forestry brush units • Lebanon - 2 3,000 gallon tenders with off road capabilities • Mill City - new tanker • Stayton - new type 5 or type 6 engine • Harrisburg - small type 3 engine, relocation of station to more central location 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Seek funding to acquire identified fire fighting equipment • Must secure personnel to staff additional equipment and train them • Determine availability of private contractor equipment (tenders, dozers, hand crews, engines) • Develop informal agreements between private contractors to make equipment available in times of need. • Explore the opportunity to use Op-Center for resource tracking. 	
Coordinating Organization:	Fire Defense Board
Internal Partners:	External Partners:
<ul style="list-style-type: none"> ▪ Roads Department (to move water and supply flaggers) ▪ Emergency Management 	<ul style="list-style-type: none"> ▪ Power Companies ▪ Hospitals ▪ Private Contractors ▪ ODF

Linn County Community Wildfire Protection Plan Actions

Enhance Wildfire Response Capabilities # 2

Proposed Action Item:	
Inventory alternative firefighting water sources in the Wildland Urban Interface, including helicopter dip sites.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated the need to address issues of water supply in Wildland Urban Interface areas. • ODF has undertaken a portion of this action by identifying water sources within the Wildland Urban Interface. • Water supply is a critical factor in an agency's ability to fight fire. • Older, established water sources often lack proper maintenance to keep them being viable water sources. • Lack of maintenance of dip sites 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Continue to inventory and assess areas where water sources are needed • Conduct maintenance on existing sites • Secure funding to develop new sites and provide for long-term maintenance • Utilize Oregon Civil Air Patrol for aerial photography • Focus efforts on smaller, private land owners 	
Coordinating Organization:	Oregon Department of Forestry
Internal Partners:	External Partners:
Rural Fire Protection Districts	<ul style="list-style-type: none"> ▪ United States Forest Service ▪ Small Woodlands Association ▪ Oregon Civil Air Patrol ▪ Industrial land owners ▪ Water Master

Linn County Community Wildfire Protection Plan Actions

Enhance Wildfire Response Capabilities # 3

Proposed Action Item:	
Improve addressing in rural areas.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated the need to improve rural addressing. • Some fire districts have received grant funding to provide fire resistant signage • County 911 system is working with GIS to produce better maps • Get the lanes named • Ensure that residences adhere to building code 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Continue with efforts around driveway signage • Make sure homes have address number visible at the home • Addressing posts need to be fire resistant • Clarify where new developments go to get addresses – County Planning or Post Office 	
Coordinating Organization:	Linn County Sheriff - Dispatch
Internal Partners:	External Partners:
<ul style="list-style-type: none"> ▪ Building Department ▪ Fire Defense Board ▪ Linn County GIS 	

Linn County Community Wildfire Protection Plan Actions

Enhance Wildfire Response Capabilities # 4

Proposed Action Item:	
Enhance interoperable communications by addressing communication deficiencies.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated the need to improve communication in order to improve response coordination. • Eventually, all radio frequencies will have to be “narrow band” by 2013. • Communication issues arise when responders come from other areas. • Gates, Lyons, and Mill City are on a separate 911 dispatch system. • Idhana and Detroit are on a separate dispatch system, as are Gates and Santiam • The Jefferson/Staton area is also on a separate dispatch 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Identify funding to upgrade radios for fire departments and repeater sites • Utilize local tactical radio frequencies so different partners can talk to each other • Establish a radio cache with portable radios and mobile repeaters to be used in an emergency • Utilize compatible radio systems 	
Coordinating Organization:	Linn County Sheriff – Dispatch (County Emergency Management)
Internal Partners:	External Partners:
Rural Fire Protection Districts Fire Defense Board	Oregon Department of Forestry US Forest Service Bureau of Land Management

Linn County Community Wildfire Protection Plan Actions

Enhance Wildfire Response Capabilities # 5

Proposed Action Item:	
Develop evacuation plans and procedures for high-risk WUI areas.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Rural county includes a number of areas that include dead-end roads and forest ground, making evacuation more difficult. • Washburn Heights, Mt. Tom, Ty Valley and Marion Forks are particularly in need of evacuation planning 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Develop a task force to assess the high risk communities and look at options for access/evacuation • Secondary plan to evacuate pets/livestock • Review Camp Sherman evacuation plan and determine applicability as a template • Review and incorporate County's existing mandatory evacuation codes • Develop and inventory of locked gates and work with property owners to gain access during emergency events. • Work with larger landholders to identify private logging roads that could be used for evacuation. 	
Coordinating Organization:	County Emergency Management
Internal Partners:	External Partners:
<ul style="list-style-type: none"> ▪ Roads Department ▪ Linn County GIS 	<ul style="list-style-type: none"> ▪ Oregon Department of Forestry ▪ United States Forest Service

Linn County Community Wildfire Protection Plan Actions

Enhance Wildfire Response Capabilities # 6

Proposed Action Item:	
Augment volunteer fire fighter training to improve response capabilities, especially in rural fire districts.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Most of the rural fire protection districts are staffed mainly by volunteers. • Some districts utilize local Community Emergency Response Team (CERT) as recruitment tool for volunteers 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Develop a regional volunteer training program that utilizes personnel and support from all participating fire districts. • ODF can provide wildland fire training to volunteer departments • Develop program for training on the Incident Command System (NIMS) • Utilize the Linn County Fire Training Council more effectively 	
Coordinating Organization:	Linn County Fire Training Council
Internal Partners:	External Partners:
Emergency Management	

Linn County Community Wildfire Protection Plan Actions

Enhance Wildfire Response Capabilities # 7

Proposed Action Item:	
Seek funding to build a smaller secondary substation on the east side of the Harrisburg District	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • According to a stakeholder interview with the Harrisburg District, time is an issue. The district is 86 square miles with the station positioned in the western most part. In some areas response times can be between 15 and 20 minutes. • This station would significantly reduce response times to the district's Wildland Interface areas and could save property owners considerable amount of money in reduced insurance premiums with better rates by virtue of a fire station located in the area. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Explore funding options including federal grants and state and local funds. 	
Coordinating Organization:	Harrisburg Rural Fire Protection District
Internal Partners:	External Partners:

Linn County Community Wildfire Protection Plan Actions

Education and Outreach # 1

Proposed Action Item:

Collaborate with developers/builders, fire protection agencies, and relevant County agencies to collect and distribute educational materials regarding fire-resistant construction materials, fire code standards for access, water supply, fuel breaks and fire-resistant vegetation in the wildland interface/forest designated areas.

Rationale for Proposed Action Item:

- Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated the need to maintain and enhance public communication about development in areas subject to wildfires.
- Though educational materials exist, there has not been a comprehensive and coordinated effort for distribution of materials.
- Interface residents need frequent reminders of the importance of reducing wildfire hazards around homes.

Ideas for Implementation:

- Develop and provide an educational packet to all WUI residents that includes suggestions for fire-safe construction materials, access, water supply, and fuel breaks (Some materials are available through the Missoula TDC).
- Encourage distribution educational materials through individual contact with residents in high hazard areas.
 - ✓ Fire personnel could perform “knock and talks” to educate the homeowners about the limitations of fire protection for homes without defensible space
 - ✓ Provide materials to CERT teams and neighborhood watch committees to promote neighbor-to-neighbor discussions.
- Make fire-safe construction educational materials readily available to Linn County residents at the following venues:
 - ✓ County Building and Planning when permits are acquired, County Community Development Counter, and other public offices
 - ✓ Banks (to be given to people financing or refinancing their properties)
 - ✓ Insurance companies

(these two bullets were discussed as potentially another action item)

Utilize local media for promoting fire safe building practices.

- Maintain a website to promote Linn County’s Community Wildfire Protection Plan. Billboards will also be useful during the fire season to reach a wide audience that includes those coming in from more urban areas.
- Work with insurance companies to distribute educational materials to interface

Linn County Community Wildfire Protection Plan Actions

policyholders, and identify incentives for reducing wildfire hazards.	
Coordinating Organization:	Fire Districts (Fire Prevention Officers) and Linn County Planning Department
Internal Partners:	External Partners:
<ul style="list-style-type: none"> ▪ Oregon Department of Forestry ▪ Office State Fire Marshall ▪ County Planning and Building Department 	<ul style="list-style-type: none"> ▪ Insurance companies ▪ Banks ▪ Community Emergency Response Teams ▪ Neighborhood watch groups ▪ Senior citizen groups ▪ OSU extension

Linn County Community Wildfire Protection Plan Actions

Education and Outreach # 2

Proposed Action Item:	
Work with local nurseries and the extension service's Master Gardeners program to promote firewise landscaping.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated the need to promote the use of firewise landscaping practices. The need for this type of educational program was also discussed at the Firewise Workshop held June 7th, 2007. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Partner with Oregon Gardens and the Master Gardeners to create firewise landscaping exhibitions. On possible place for a demonstration garden is at the Linn County Expo Center and Fairgrounds. 4-H and/or Boy Scouts could assist with initial landscaping and on-going maintenance. Add a "Firewise" tag to plants at nurseries that are on the approved landscaping list. 	
Coordinating Organization:	Oregon State University Extension Service
Internal Partners:	External Partners:
Linn County Fairgrounds	<ul style="list-style-type: none"> Oregon Gardens Nursery Master Gardners Oregon Nursery Association Oregon Department of Forestry 4-H clubs Boy scouts High school Forestry Clubs

Linn County Community Wildfire Protection Plan Actions

Education and Outreach # 3

Proposed Action Item:	
Continue to educate the public about the campfire safety.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated the need to maintain and enhance public communication about fire safety in the woods. • Educational programs exist, but participants in the Firewise Workshop noted that funding is scarce and the budget for patrolling has been reduced. Further, because new residents are moving into the area or are visiting campgrounds, ongoing educational efforts are necessary. • This problem is greatest in dispersed camping areas and backyards (rather than in campgrounds), which makes enforcement difficult. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Provide public service announcements using local media • Develop and install signs with campfire safety tips • Educate people about the use of retail campfire rings, which are not legal containment mechanisms (although they are marketed as such). • Place garbage bags and buckets for water with fire safety messages at campsites. • Target areas of high-use such as the Quartzville area. • Encourage collaboration among ODF, USFS, BLM, local sheriff's office, and others to help to improve enforcement. • Target residents in urban areas by providing educational materials at sporting goods stores and other the population centers. 	
Coordinating Organization:	<ul style="list-style-type: none"> ▪ United States Forest Service ▪ Bureau of Land Management ▪ Oregon Department of Forestry
Internal Partners:	External Partners:
<ul style="list-style-type: none"> ▪ County Sheriff's Office ▪ Rural Fire Protection Districts 	<ul style="list-style-type: none"> ▪ Oregon State Police ▪ Sporting goods stores

Linn County Community Wildfire Protection Plan Actions

Education and Outreach # 4

Proposed Action Item:	
Continue supporting and expand the Smokey Bear Fire Prevention Programs in schools.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated that districts in the County had been continually involved in the Smokey Bear Fire Prevention Program. The Smokey the Bear campaign has been particularly successful because: (1) reaching children is a good way to reach parents, and (2) the campaign promotes a fire prevention message that stays with children long into their adult lives. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> The Smokey the Bear program can incorporate other educational campaign, such as the “Stop, Drop, and Roll” campaign. Build partnerships with the school districts, boy scouts, girl scouts, churches, and other organizations that serve children to implement it. 	
Coordinating Organization:	<ul style="list-style-type: none"> United States Forest Service ODF
Internal Partners:	External Partners:
	Oregon State Parks School Districts

Linn County Community Wildfire Protection Plan Actions

Education and Outreach #5

Proposed Action Item:	
Integrate wildfire hazards and safety programs into educational curriculum.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated that many fire districts need additional staff and resources to assist in fire prevention. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Work with Colleges to develop fire fighter training courses Support service learning programs by utilizing students for conducting hazard assessments and as a labor force for fuels reduction. Utilize SFMO wildfire education curriculum in middle-schools, and encourage students to take an active role in reducing wildfire hazards around their homes. 	
Coordinating Organization:	Fire Defense Board
Internal Partners:	External Partners:
	<ul style="list-style-type: none"> Office of State Fire Marshall School Districts Colleges

Linn County Community Wildfire Protection Plan Actions

Education and Outreach #6

Proposed Action Item:	
Create an “Extreme Home Make-over” contest to highlight the need for firewise landscaping.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Reducing fuel loads around interface structures was identified as a key means for reducing structural ignitability. • Involving the media in a contest of this sort could improve visibility for the Firewise landscaping program and encourage neighbors to follow the examples of those in the community who are taking action on their properties. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Washington County recently partnered with ODF to complete a program like this that would be an excellent model. • Ongoing upkeep and maintenance of the landscaping is an important issue that should be addressed during the contest. 	
Coordinating Organization:	<ul style="list-style-type: none"> ▪ Linn County Planning and Building Departments ▪ Oregon Department of Forestry
Internal Partners:	External Partners:
	<ul style="list-style-type: none"> ▪ Media ▪ Hardware and supply stores

Linn County Community Wildfire Protection Plan Actions

Structural Ignitability # 1

Proposed Action Item:	
Identify incentives for improving maintenance of fire breaks and reducing hazardous vegetation.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated that maintenance of fuels reduction activities is difficult to track and enforce. Rural Fire Protection Districts and state and federal agencies may assist in initial fuels reduction programs, but homeowners need to be responsible for maintenance. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Consider potential resources and incentives associated with SB 360 implementation. Work with insurance providers to encourage homeowners to be proactive in maintaining fire safe vegetation and reducing hazardous fuels. Develop incentives for land owners adjacent to forested areas to reduce risk of fire spread from developed to undeveloped areas Develop fire district incentives (such as cost-share programs) for maintenance of hazardous vegetation. 	
Coordinating Organization:	Oregon Department of Forestry
Internal Partners:	External Partners:
Fire Defense Board	<ul style="list-style-type: none"> Insurance agencies (to hand out information) Small Woodlands Association Industrial land owners

Linn County Community Wildfire Protection Plan Actions

Structural Ignitability # 2

Proposed Action Item:	
Work with insurance providers to improve their criteria to adequately represent level of structural fire protection in residential structures, especially in high-risk areas.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated that the criteria insurance providers use to designate assess fire insurance eligibility and premiums does not accurately portray the true fire hazard. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Encourage insurance companies to work with local fire agencies to develop regional criteria (to include fire breaks, fuels reductions, access, water supply and fire prevention activities) for determining fire insurance eligibility and premiums to encourage accurate and consistent assessments. Encourage insurance companies to lower premiums for homeowners that reduce wildfire hazards. Encourage annual inspections of homes to encourage maintenance of hazardous vegetation. Provide an educational component to developers/builders regarding fire insurance considerations of homes built without adequate access and water supply. 	
Coordinating Organization:	State Insurance Commissioner's Office
Internal Partners:	External Partners:
Fire Districts	<ul style="list-style-type: none"> Office of State Fire Marshall Insurance Companies Oregon Department of Forestry

Linn County Community Wildfire Protection Plan Actions

Structural Ignitability # 3

Proposed Action Item:	
Enhance structural protection in structurally unprotected areas and comply with the Governor's policy in unprotected areas to be eligible for conflagration resources.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated that there are many homes in unprotected areas. County Land Use Planning identified unprotected areas as a major issue, and recently conducted a mailing to property owners in unprotected areas to make them aware of the lack of structural fire protection, and provide them with options for enhancing structural protection. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Support ODF in working with the County Tax Assessor to change the language on property tax statements for ODF assessment from "fire protection" to ODF "non-structural fire suppression" so homeowners and insurers are not led to believe they have structural fire protection. Continue to inform homeowners in unprotected areas of their unprotected status (using mailings and/or consider flagging the lots that are in unprotected areas) to educate the property owners about the lack of structural protection and provide options for enhancing structural protection. 	
Coordinating Organization:	Linn County Planning Department
Internal Partners:	External Partners:
Fire Districts	Land owners

Linn County Community Wildfire Protection Plan Actions

Structural Ignitability # 4

Proposed Action Item:	
Incorporate, maintain, and update Linn County's Wildland-Urban Interface Risk Assessment and GIS data elements.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Incorporating the wildland urban interface risk assessment GIS elements into the County's GIS system will help ensure that the County is able to incorporate new data, when available. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Develop an interactive website tool so that homeowners can see their level of fire hazard. Update hazard assessment every five years and update information on the website. Utilize the risk assessment to target areas for education and outreach as well as fuels reduction programs. Utilize GPS data to enhance and ground-truth hazard information. 	
Coordinating Organization:	Linn County GIS
Internal Partners:	External Partners:
Fire Defense Board	<ul style="list-style-type: none"> Oregon Department of Forestry United State Forest Service

Linn County Community Wildfire Protection Plan Actions

Structural Ignitability # 5

Proposed Action Item:	
Complete the fire structural risk assessments in Brownsville, Lebanon, and Sweet Home fire districts, and utilize this as a model program for the other Linn County fire districts.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated that one of the most pressing wildfire related issues is the lack of structural ignitability data. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Build upon Oregon Department of Forestry efforts that have completed over 2,000 home site assessments using GPS. Develop fire risk assessments on the watershed level (North Santiam, South Santiam and the Calapooia watersheds). Obtain grant funds to assist in assessments. Acquire additional GPS units for structural triage. Provide GPS training to fire staff, citizen volunteers, and students that could assist in data acquisition. 	
Coordinating Organization:	<ul style="list-style-type: none"> Fire Defense Board Oregon Department of Forestry
Internal Partners:	External Partners:
	<ul style="list-style-type: none"> Retired professionals Universities Neighborhood associations CERT teams Watershed councils

Linn County Community Wildfire Protection Plan Actions

Structural Ignitability # 6

Proposed Action Item:	
Develop processes and standards for the implementation of SB 360.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> The Oregon Forestland-Urban Interface Fire Protection Act of 1997 (often referred to as Senate Bill 360) enlists the aid of property owners toward the goal of turning fire-vulnerable urban and suburban properties into less-volatile zones where firefighters may more safely and effectively defend homes from wildfires. The law requires property owners in identified forestland-urban interface areas to reduce excess vegetation, which may fuel a fire, around structures and along driveways, or compensate the County for some of the cost of fighting interface fires when they occur. In some cases, it is also necessary to create fuel breaks along property lines and roadsides. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Develop processes for implementing the SB 360 legislation – including educational outreach to interface property owners. 	
Coordinating Organization:	ODF
Internal Partners:	External Partners:
Board of Commissioners	<ul style="list-style-type: none"> Oregon Department of Forestry Bureau of Land Management United States Forest Service County Planning and Building Departments

Linn County Community Wildfire Protection Plan Actions

Fuel Reduction #1

Proposed Action Item:	
Develop and maintain an inventory of potential fuels reduction projects in high-risk areas, prescriptions, and list of prioritized future projects.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Stakeholder interviews with state and federal agencies indicated that fuel reduction efforts could be better coordinated. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Utilize county-wide risk assessment to identify the highest risk areas and potential fuels projects. Gather fire district priorities for fuels reduction annually. Utilize public outreach meetings to identify willing landowners, high hazard areas, and community priorities in order to develop a prescription. Establish a point agency that public and private companies could contact for project information and guidance on everything from assessment to project completion. Develop process to assure all potential and fuel reduction projects are considered regardless of ownership (Oregon Department of Forestry, Bureau of Land Management, Forest Service, County, Private, etc.) Incorporate potential project and track finished project in a publicly accessible Geographic Information System (GIS) 	
Coordinating Organization:	Linn County Planning (GIS), Oregon Department of Forestry
Internal Partners:	External Partners:
Linn County GIS	<ul style="list-style-type: none"> Fire Defense Board Bureau of Land Management United States Forest Service

Linn County Community Wildfire Protection Plan Actions

Fuel Reduction #2

Proposed Action Item:	
Develop educational materials designed to educate property owners about the benefits of sustained fuels reduction efforts.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated that education was needed about fuel reduction including information on the importance of maintenance. There is a need to inform private land owners on how to assess the risks and rewards of fuel reduction. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Focus on protection of structures. Continue door to door canvassing efforts to educate landowner and homeowner on the benefits of individual fuel reduction and Firewise practices. Provide Firewise information to homeowners when obtaining a building permit in WUI zone. Provide information and resources at the Oregon Logging Conference Develop outreach and awareness campaign in partnership with Arbor Day Foundation and local school Develop and advertise incentives for maintenance of fuels reduction projects over time. Work with insurance providers to provide incentives such as rebates for individuals who maintain defensible space. 	
Coordinating Organization:	Fire Defense Board
Internal Partners:	External Partners:
<ul style="list-style-type: none"> Linn County Planning Department Linn County Sheriff 's Office 	<ul style="list-style-type: none"> Oregon Department of Forestry Bureau of Land Management United States Forest Service Oregon State University Extension Service 4-H programs Boy Scouts Neighborhood Watch Program Small Woodland Association

Linn County Community Wildfire Protection Plan Actions

Fuel Reduction #3

Proposed Action Item:	
Develop a resource guide to assist private landowners on how to complete risk assessments and determine appropriate fuel reduction strategies.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated that homeowner education was needed about fuel reduction. • Often is difficult and time consuming for private land owners to find the trusted resources related to risk assessment and best practices 	
Ideas for Implementation:	
<ul style="list-style-type: none"> ▪ Develop a listing of resources that could provide technical assistance for property owners or other interested parties in assessing the wildfire hazard, developing prescriptions, removing hazardous vegetation, and adding value to the extracted vegetation. ▪ Develop a list of consultant foresters who are trained in WUI risk assessment methodology. ▪ Provide training for consultant foresters on wild land fire issues 	
Coordinating Organization:	Oregon Department of Forestry
Internal Partners:	External Partners:
Fire Defense Board	<ul style="list-style-type: none"> ▪ Oregon State University Master Woodland Manager Program ▪ Association of Oregon Loggers or small woodland owners ▪ SAF-SOC. Of American Foresters

Linn County Community Wildfire Protection Plan Actions

Fuel Reduction #4

Proposed Action Item:	
Identify opportunities to assist vulnerable populations who request assistance (i.e. elderly, disabled, etc. in isolated areas) in creating defensible space around homes and communities.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated that homeowner education was needed about fuel reduction. • Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies also indicated that elderly or disabled homeowners typically require assistance in doing the physical labor associated with fuel reduction. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> ▪ Work with social service providers to establish parameters for individuals to qualify for assistance. ▪ Develop process for individuals to request assistance. ▪ Establish a list of groups that could assist in fuels reduction projects(i.e. NW Youth Corp, 4H, Boy Scouts, contactors) ▪ Seek grant funds to provide incentives and/or cover cost of completing the work. ▪ Seek options utilizing inmate services/labor 	
Coordinating Organization:	Oregon Department of Forestry
Internal Partners:	External Partners:
<ul style="list-style-type: none"> ▪ Fire Defense Board ▪ Linn County Planning 	<ul style="list-style-type: none"> ▪ Oregon State University Extension Service ▪ Northwest Youth Corp

Linn County Community Wildfire Protection Plan Actions

Fuel Reduction #5

Proposed Action Item:	
Explore and promote opportunities for small diameter biomass utilization and marketing.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated that biomass utilization and marketing might be a method for paying for fuel reduction efforts. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Work with Freres Lumber and Totmon Chipping/Grinding in Sweet Home to identify any partnership opportunities for utilizing biomass for the 10 MW biomass plant at Lyons. 	
Coordinating Organization:	CWPP Committee
Internal Partners:	External Partners:
Linn County Planning Department	<ul style="list-style-type: none"> Oregon State University Extension Service Small Woodlands Association Bureau of Land Management United States Forest Service Association of Oregon Loggers

Linn County Community Wildfire Protection Plan Actions

Fuel Reduction #6

Proposed Action Item:	
Explore the development of a Linn County Fuels Management Cooperative through the Small Woodland Association for sustaining fuels management with the WUI	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated that fuel reduction efforts are a financial burden for some homeowners. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Explore cost sharing opportunities designed to decrease the financial burden on the property owner for reducing hazardous fuels. Enhance and expand Oregon Department of Forestry chipper program. Consider utilizing inmate crews to assist in vegetation management Partner with Northwest Youth Corp to assist in vegetation management 	
Coordinating Organization:	Fire Defense Board & Oregon Department of Forestry
Internal Partners:	External Partners:
	<ul style="list-style-type: none"> Small Woodlands Association Bureau of Land Management United States Forest Service Association of Oregon Loggers

Linn County Community Wildfire Protection Plan Actions

Fuel Reduction #7

Proposed Action Item:	
Work with forestland managers and watershed managers to protect water quality in high risk areas while reducing wildfire hazards.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Wildfires can have significant impacts on watersheds and water quality. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Create multi-objective wildfire projects can help leverage limited resources while increasing water quality and decreasing wildfire risk. 	
Coordinating Organization:	Oregon Department of Forestry
Internal Partners:	External Partners:
	<ul style="list-style-type: none"> Bureau of Land Management Watershed Councils Soil and Water Conservation District United States Forest Service Private Timber Companies, Department of Environmental Quality

Linn County Community Wildfire Protection Plan Actions

Fuel Reduction #8

Proposed Action Item:	
Work with County Roads Department and ODOT to reduce hazardous vegetation in Right of Ways to enhance access and create fuel breaks.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Slash piles located close to roads could hinder evacuation, and would serve to promote the spread of fire from one side of the road to the other. It is well-known that roads are important in wildfire defense, as they serve as evacuation routes, but sometimes even more importantly as fire breaks. • Consider developing and adopting codes and/or ordinances that promote fire safe construction practices and defensible space in high-risk areas. • Support development of codes/legislation to reduce the number of shake roofs on homes in WUI. • Consider flagging the lots that are in the designated WUI and provide recommendations for construction materials, access, water supply, and fuel breaks (incorporate SB360 requirements) during the land use and building permitting process. • Encourage Fire Defense Board to develop and adopt best practices guide that articulate minimum standards for access and water supply. <ul style="list-style-type: none"> • Make the guide available to the public on the County website 	
Ideas for Implementation:	
<ul style="list-style-type: none"> • Identify and prioritize roads for fuels reduction work. • Clear roads that have slash piles to create access and create fuel breaks around private landowners 	
Coordinating Organization:	County Roads Department
Internal Partners:	External Partners:
Linn County Planning Department Office of State Fire Marshall Fire Defense Board Board of County Commissioners	<ul style="list-style-type: none"> ▪ Oregon Department of Forestry ▪ Bureau of Land Management ▪ United States Forest Service ▪ Media

Linn County Community Wildfire Protection Plan Actions

Fuel Reduction #9

Proposed Action Item:	
Support creation of fire buffers around agricultural land.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> • Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated the need for the creation and/or maintenance of fuel breaks surrounding valuable agricultural lands. • Housing developments are encroaching on agricultural lands. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> ▪ Establish partnership with Agricultural industry to identify and address problem areas. 	
Coordinating Organization:	Linn County Planning Department
Internal Partners:	External Partners:
Fire Defense Board	<ul style="list-style-type: none"> ▪ Cities ▪ Rural Fire Districts ▪ Oregon Department of Forestry ▪ Department of Agriculture

Linn County Community Wildfire Protection Plan Actions

Collaboration, Coordination & Implementation #1

Proposed Action Item:	
Create and formalize a CWPP Advisory Committee to oversee implementation, identify and coordinate funding opportunities, and sustain the Linn County Community Wildfire Protection Plan.	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Formalizing an Advisory Committee that assist in implementing the Linn County Community Wildfire Protection Plan 	
Ideas for Implementation:	
<p>The Linn County Planning and Building Department will serve as the convener and will oversee the plan's implementation and maintenance.</p> <p>The plan development steering committee will become the advisory committee (the Committee) and will oversee implementation, identify and coordinate funding opportunities and sustain the CWPP.</p> <p>Some of the participating organizations and other stakeholders could also serve on subcommittees tasked with specific risk reduction activities.</p> <p>Potential future committee members may include:</p> <ul style="list-style-type: none"> Calapooia, North Santiam and South Santiam Watershed Councils Home Builders Association Insurance representatives Citizen representatives Local elected officials 	
Coordinating Organization:	County Commission, County Planning and Building
Internal Partners:	External Partners:
Committee representatives	

Linn County Community Wildfire Protection Plan Actions

Collaboration, Coordination & Implementation #2

Proposed Action Item:	
Establish a sub-committee or a Fire Prevention Cooperative to coordinate and sustain effective countywide public education and outreach activities	
Rationale for Proposed Action Item:	
<ul style="list-style-type: none"> Stakeholder interviews with Rural Fire Protection Districts and state and federal agencies indicated that education and outreach efforts were critical in this plan. Creating a sub-committee will more effectively utilize limited human resources to address education and outreach issues. 	
Ideas for Implementation:	
<ul style="list-style-type: none"> Encourage Fire Districts to form a Fire Prevention Cooperative that includes vested agencies, including a representative from the public affairs department. 	
Coordinating Organization:	CWPP Steering Committee, Fire Defense Board
Internal Partners:	External Partners:
	<ul style="list-style-type: none"> Oregon State University Extension Service Soil and Water Conservation District Keep Oregon Green

Meeting and Interview Notes

This appendix provides all documentation and notes from the following:

- FireWise community workshop
- Rural Fire Protection District interviews
- Fire Defense Board Meeting
- Two CWPP Steering Committee meetings
 - February 27th, 2007
 - September 12th, 2007

This appendix has been compiled in the order above.

FIREWISE PARTICIPANTS

In August, 2005, a FireWise workshop was held in an effort to gain feedback and input from a wide array of stakeholders. The workshop was attended by members of various groups, agencies, and organizations, and their participation and insight led to the formation of five goals for Oregon's County Community Wildfire Protection Plans.

Participants included members from the following:

- Federal agencies, such as the US Forrest Service, the Bureau of Land Management, and the Army Corps of Engineers
- State agencies, such as Oregon Department of Transportation, the State Parks, and the Oregon State Fire Marshall
- County representatives from the Sheriff's office, Public Works, County Parks, and the Land Management Division
- Local Government representatives from various City and Parks districts.
- Fire Departments
- Water Districts
- Utilities
- Elected officials
- Watershed Councils
- Non-Profit organizations
- Neighborhood groups
- Area builders and developers
- Home inspectors
- Landscapers
- Representatives from the timber industry
- Other community organizations with a perceived interest, such as the Homebuilder's Association and the Chamber of Commerce.

AGENDA
FIREWISE COMMUNITIES WORKSHOP
ALBANY, OR JUNE 7, 2007

- 0800-0830 – Registration
- 0830-0915 – Welcome and Overview of Workshop – Lee Vaughn
Firewise Communities Video
ODF Perspective – Ann Walker
Linn County Perspective – Commissioner Cliff Wooten
– Steve Michaels
– Chief Perry Palmer
- 0915-1015 – Introduction to Firewise Communities – Lena Tucker
PowerPoint “Firewise Concepts”
- Introduction of the Falls County Simulation – Lena Tucker
Falls County Wildland Fire Video
What we learned from the Great Bend Fire video
- Issue ID Form Explanation – Krista Mitchell
- 1015-1030 – Break and convene to breakout groups
- 1030-1200 – Breakout group exercise – 90 minutes
Task 1 – Determine the Wildfire Severity Rating for Bear Heights
Task 2 – Develop Solutions for Reducing Fire Hazard in Bear Heights
Task 3 – Identify Wildfire Issues and Solutions in Linn County - Krista Mitchell
- Discussion of the issues group members identified throughout the morning session
- 1200-1220 – Group Presentations for Task 1 and Task 2
- 1230-1330 – LUNCH
“Wildfire – Preventing Home Ignitions Video”
- 1330-1345 – Discussion on Community Solutions – Krista Mitchell
- 1345-1500 – Breakout group Action Planning -EcoNorthwest
Task 3 – Review and Refine Action Items for Linn County
- 1500-1530 – Breakout groups report on their action planning – Krista Mitchell
- 1530-1600 – Where do we go from here? – Cindy Kolomechuk
Door prizes and Closeout Workshop

Stakeholder Interview Results

The purpose of this portion of the appendix is to highlight the findings of a series of stakeholder interviews conducted with the rural fire protection districts (RFPDs) in Linn County as well as the Oregon Department of Forestry (ODF), Linn County representative from the State Fire Marshal's Office, Bureau of Land Management (BLM), and United States Forest Services (USFS). The interviews were conducted to gather background information on the Community Wildfire Protection Plan process and provide insight on potential mitigation measures. This appendix has the following sections:

- **Overview of results** provides a summary of common issues and themes expressed in the interviews with the rural fire protection districts and with other stakeholders (ODF, BLM, USFS, and the State Fire Marshal's Office).
- **Detailed results** provides the more detailed results of interviews with each of the stakeholders.
- **Survey instrument** provides the list of questions asked of interview participants

The following people were interviewed:

Bob	Johnston	Lyons Rural Fire District
Dennis	Jarvis	Scio Rural Fire District
Don	Bemrose	Jefferson RFPD
Jack	Carriger	Stayton Fire District
Kevin	Rogers	Brownsville Fire District
Kevin	Kreitman	Albany Fire Department
Mike	Beaver	Sweet Home Fire Department
Mike	Purcell	Tangent Fire District
Perry	Palmer	Lebanon Fire District
Scott	Mitchell	Harrisburg Fire & Rescue
Skip	Smith	Halsey-Shedd RFPD
Leland	Ohrt	Mill City RFPD
Lee	Vaughn	ODF
Barbara	Raible	BLM
Jerry	VanDyne	USFS
Kevin	Crowell	ODF
Paul	Hiebert	USFS
George	Crosair	State Fire Marshall's Office

OVERVIEW OF RESULTS

RURAL FIRE PROTECTION DISTRICT RESPONSES

The Rural Fire Protection Districts were asked a series of questions that covered the following topics:

- History of wildfire occurrence and response
- Wildfire risk factors
- Capacity and needs
- Prevention and education resources
- Ideas for mitigation

The matrix in Table 1 highlights key issues that the RFPD’s identified in the interview process.

Table X-1. Key issues mentioned in interview

	Brownsville	Sweet Home	Halsey	Albany	Jefferson	Scio	Lebanon	Mill City	Tangent	Stayton	Harrisburg	Lyons	ODF	BLM	USFS	State Fire Marshal
Historical WUI Fires	•	•				•	•	•		•						
Primary Response Issues Identified																
Personnel	•	•				•		•		•	•					
Non-Wildland Fires			•						•							
Access				•			•				•					
Communications					•											
Conducted Fuel Reduction			•					•		•	•					
Conducted Structural Ignitability	•		•				•	•		•	•					
Primary Structural Ignitability Issues Identified																
Defensible Space	•	•		•	•		•			•	•					
Access	•	•					•	•								
Construction Methods				•						•	•					
Unprotected Areas Outside District	•					•		•		•						
Fire Evacuation Plans in Place				•												
Fire Assistance Agreements in Place	•	•	•	•	•	•	•	•	•	•	•					
Conducted Education & Outreach	•	•	•		•		•	•	•	•	•					

Source: Various stakeholder interviews as documented in this appendix

HISTORY OF WILDFIRE OCCURRENCE AND RESPONSE

When asked if any wildfires had occurred within the wildland urban interface, responses varied based on district’s location within the County. RFPDs located on the east side of the County reported having multiple events over several years, but only two of the fires that were discussed threatened structures. Several districts indicated that they had had small fires that had the potential to grow out of control and threaten structures, but that those fires had been brought under control. RFPDs located on the west side of the County indicated that they didn’t have true wildland urban interface, but did have grass fires that had impacted traffic on Interstate 5.

Districts were asked to indicate how many wildfires they typically respond to in a given year. Responses ranged from only 1-2 fires per year to up to 40-60 fires. All the districts indicated that they typically respond in a mutual aid capacity at least once a year, with one district responding on up to 20 mutual aid events.

RFPDs were asked to identify the primary issues the district faces for effective wildfire response. Many of the districts identified several issues. The following were primary issues:

- Availability of volunteer fire fighters during the work week
- Protection of farms and smoke issues on the interstate
- Issues associated with steep slopes in interface areas in North Albany
- Lack of linkages in communication systems in the County
- Training for volunteers
- Distances necessary to travel within district
- Lack of personnel
- Concerns regarding field and industrial fires spreading to wildlands

By far, issues related to personnel were mentioned most frequently.

WILDFIRE RISK FACTORS

Each district was asked to identify the most vulnerable areas within their districts. These responses were specific to each of the districts and can be found in the district specific write-ups located at the end of this appendix. Districts were also asked if there were areas that are likely to become more vulnerable in the future either due to development or unprotected areas. For the most part, districts indicated that the areas identified as being vulnerable were the areas prone to become more vulnerable as more development takes place.

Districts were asked to indicate whether or not they had engaged in any fuel reduction efforts in the past. Very few of the districts indicated that they had implemented fuel reduction projects in the past. For the most part, districts indicated that their primary activities had been focused on education around structural ignitability rather than fuel reduction. Brownsville, Lebanon, Mill City, and Harrisburg had all implemented projects to reduce the structural ignitability of homes in their district. In 2002, several districts partnered with ODF to complete ‘Knock and Talks’ with homeowners to discuss wildfire issues and potential mitigation measures the homeowners could take to reduce their risk.

RFPDs were asked to identify any issues they face related to response times. The majority of districts indicated that the availability of volunteer staff, especially during the day, was the biggest issue around response times.

In addition, some districts mentioned that some private industrial land owners having locked gates being a barrier to quicker response times.

Districts were asked to identify the primary issues their district faces in terms of structural ignitability. By far, most districts that indicated that they had structural ignitability issues mentioned that a lack of defensible space was the biggest issue. A second issue that was raised often was lack of access because of narrow, steep driveways.

CAPACITY AND NEED

RFPDs were asked whether or not they felt that the district had an adequate number of fire fighters. Only one district indicated that they had enough staff resources. Several districts mentioned that they might have adequate resources depending on the time of day because a majority of their volunteers work outside the community. Districts in Linn County have varying numbers of full time and volunteer fire fighters. Staff range from 1 full time person to 65 and 0 to 60 volunteers. Almost all of the districts indicated that they felt they had the capacity to apply for grants to implement wildfire mitigation projects, however, they also indicated that what they lacked were the people to implement those projects if funded.

Districts were asked to list the fire fighting apparatus that is currently available and what apparatus they would like to add to their fleets. Those results can be found in the district summaries located at the end of this appendix.

All the RFPDs indicated that they had some sort of fire assistance agreements with other districts or state agencies. For the most part, these agreements are in the form of mutual aid. Districts that have overlapping boundaries with Oregon Department of Forestry also have agreements in place with that agency. In addition, the Halsey district has an agreement in place with the Oregon Department of Fish and Wildlife for areas along the Willamette River.

PREVENTION AND EDUCATION RESOURCES

RFPDs were asked whether or not they had participated in education and outreach activities related to wildfire issues. All of the districts on the extreme east side of the County have participated with the Oregon Department of Forestry to educate homeowners on structural ignitability issues and potential hazard mitigation activities. Most districts also indicated that they have a variety of information in the form of fliers and brochures that are always available to residents. When asked about what future education and outreach campaigns the districts would like to see, the majority indicated that something around defensible space, access, and construction materials would be beneficial.

IDEAS FOR MITIGATION

Districts were asked what type of fuel reduction and structural ignitability projects they would like to see implemented in interface areas. Overall, most of the projects mentioned would be classified as structural ignitability projects. The ideas for projects included:

- Making chippers available for fuel reduction
- More homeowner education and outreach
- Working with developers on fire resistant materials and vegetation
- Use of inmate work crews to do fuel reduction
- Legislation to ban cedar shake roofs
- Fuel reduction programs to help elderly residents who might not be able to do the physical labor themselves
- Improved construction and design standards in wildland areas

STATE AND FEDERAL AGENCY RESPONSES

The following state and federal agencies were interviewed: Office of State Fire Marshal (OSFM), Oregon Department of Forestry (ODF), United States Forest Service (USFS), and the Bureau of Land Management (BLM). These entities were asked questions that fell into the following categories:

- Background questions
- Wildfire risk factors
- Capacity and needs
- Prevention and education resources
- Ideas for mitigation

BACKGROUND QUESTIONS

State and federal agencies were asked to describe their roles in wildfire response, planning or protection activities. Their responses are summarized below.

- The Office of the State Fire Marshal oversees the Conflagration Act. When there is a wildfire in the interface that exceeds local capacity, OSFM is asked to invoke the Act. The request goes to the Governor to declare a Conflagration, which provides resources from across the state. OSFM doesn't provide direct response to wildfires. On the planning side, they also manage the State Fire Defense Board, made up of the heads of all the County Fire Defense Boards. The State Fire Defense Board is the manager of the state's mobilization plan. Local plans are written to dovetail with the state plan.
- The Oregon Department of Forestry provides fire protection for private land owners and also is the contracted fire fighting organization for the BLM. Landowners pay assessment to ODF for fire protection. ODF is

active in fuels management. They typically provide fuel reduction recommendations to land owners through the fire assistance program. Landowners are responsible for implementing measures.

- The United State Forest Service is responsible for the protection of the national forest, not private lands. USFS has mutual aid agreements with locals to protect private lands, but these agreements are only valid for 24 hours. In the preseason, USFS works with partners on pre-attack planning, (i.e., designating helispots). USFS doesn't take the lead in planning processes like CWPP processes, but are there to participate and facilitate.
- The Bureau of Land Management contracts with ODF for fire protection activities. If ODF needs additional assistance, BLM can provide some staff resources. BLM manages the Northwest Oregon Fire Management Plan which covers response activities and cooperation between wildfire partners.

Agencies were asked what their primary wildfire response issues were if they were involved in response activities. Their responses included the following:

- Accessibility and concerns with future of ability to slash burn. With current efforts to end grass seed burning, see that slash burning is probably next to go. Without the ability to burn slash, it creates greater risk because of the build up of fuels
- Lack of resources and poor access
- Lack of defensible space
- Lack of weight ratings on privately owned bridges
- Communication with ODF is good, but don't have all the frequencies for locals

All the interviewees were asked to identify areas within their jurisdiction that are particularly vulnerable to wildfire. The individual agency responses are provided below.

- The OSFM identified concerns about interface areas on the periphery of valley floor where ODF and RFPDs overlap. Also isolate islands of interface like in Albany where there is a subdivision on a butte that has wildlands, but no ODF responsibility. It is solely in Albany's response area.
- ODF identified the following areas of concern: Washburn Heights, Mt. Tom, new development on NE end of Brownsville, Middle Ridge, Sodaville, Knox Butte (Albany, not ODF), Ridgeway Butte (proposed in Lebanon). All of these areas were also identified by the local protection districts as well.
- USFS identified the following areas of concern: Marion Forks, Hwy 20 corridor between Linn/Deschutes County border and Sweet Homes, and Quartzville (upper end only, have mutual aid for lower).

- BLM identified the following areas of concern: urban interface areas closer to the valley floor and those high value areas.

Agencies were then asked to identify those areas that are likely to become more vulnerable in the future. The areas/issues of concern include:

- The periphery of valley floors are becoming areas of risk as more people move out into steeper slopes.
- There is a growing concern in many areas because Linn County is relatively inexpensive place to live, so growth demand will most likely continue.
- The number of measure 37 claims currently filed in the County may lead to a large number of new subdivisions in potential wildland areas.
- Sweet Home is becoming a bedroom community for Albany and Eugene and is the gateway to the cascades. Future growth there may encroach on wildlands.
- Areas around Foster Reservoir are becoming a larger concern.
- Another big concern is timber companies selling off land to developers because the land is worth more in real estate than it is in timber.
- Mostly private forested lands that are protected by ODF. Logging operations create wildfire risk.
- Private industrial landowners who don't clean up slash after thinning operations add to fuel loading and increase risk.

The following is a summary of the fuel reduction activities that state and federal agencies have engaged in the past.

- OSFM has not directly been involved in fuel reduction, but has staff that provides training for RFPD to write wildland related grants.
- ODF frequently works with landowners to assist in fuel reduction on industrial forest lands through National Fire Plan (NFP) grants. Also participated indirectly by loaning equipments to do fuel reduction.
- USFS conducts brush disposal after timber sales to clean up logging slash using primarily mechanical means and burning piles.
- BLM does do fuel reduction in association with timber sales.

The following is a summary of the structural ignitability projects and programs that the state and federal agencies participated in.

- OSFM works with the Building Codes Division to ensure that building codes reflect adequate wildfire mitigation measures.
- ODF through the Fire Defense Board and mutual aid agreements provides brochures to Planning departments on construction standards for wildfire including access issues. ODF utilized an NFP grant to educate landowners on what they can do to mitigate. Also completed home assessments on 2,300 homes using Trimble GPS units.

- Both the USFS and BLM typically engage in structural ignitability projects, but have not completed any in Linn County.

The Oregon Department of Forestry and United State Forest Service, the only entities interviewed with direct response authorities identified the following issues related to wildfire response:

- As population continues to rise, more people will require evacuation, making it harder to get in to fight fires.
- Private homeowners with locked or security gates also create an issue, however, state law gives them permission to go through any locked areas, this just takes time. Industrial forest owners have typically given ODF keys to their gates, but when RFPD respond on mutual aid, they don't have these keys.
- For the USFS, response times in general are long. On federal lands, budgets are decreasing for road maintenance which means access is reduced and slower response times are being seen.
- Marion Forks is an issue because it is a long way and isn't in a RFPD.

The agencies were asked to identify specific structural ignitability issues that they are concerned about in Linn County. All agencies identified both defensible space and access as the primary issues. Landowner awareness was also listed as an issue.

CAPACITY AND NEEDS

The entities were asked to identify any fire assistance agreements they may have in place. The Oregon Department of Forestry indicated that they have countywide agreements in place in Linn and Benton Counties and with the BLM. They also have a closest forces and a reciprocal agreement with the Forest Service. The USFS has a mutual aid agreement with the state.

Agencies were asked to identify the most important need they face for effective wildfire response, mitigation and/or reduction. The following are their responses:

- The State Fire Marshal indicated the issue for the rural fire protection districts is knowing what the real hazard is and what the actual problems are so that their response plans can focus activities around education and mitigation in those problem areas.
- ODF indicated that the issue is public education on how to make structures survive. ODF is not paid to protect structures. They also indicated that it is important to maintain good relationships with partners – local and federal fire agencies. They have good working relationships now and are constantly interfacing. Need to keep up those relationships in the future as well. Another issue is the ever-changing command staff and the need for all partners to be knowledgeable about roles and connections The Community Wildfire Protection Plan (CWPP) is also an opportunity for

County Commissioners to make wildfire issues a priority and pass that along to county departments like GIS and planning.

- For the USFS, they can't do fuels treatments like they would want to. USFS gets money for fuel treatment from national analysis, where this forest doesn't rank especially high. They rely on fuel reduction after timber sales, which aren't always the most at risk areas.
- The BLM indicated that they haven't had very many fires, but when they do issues do come up. This particular district hasn't had any major fires in 15 years, but the potential is there. Sometimes there are differences of opinion between what is best for the natural resources (BLM) and what is best for fire fighting (ODF).

PREVENTION AND EDUCATION RESOURCES

Agencies were asked to describe any education and outreach programs that they have implemented in the past. These programs are described below.

- OSFM support the locals doing education and outreach by providing materials and training.
- ODF typically provides information on structural ignitability, including efforts during Fire Awareness Week with Lebanon Fire for Fireman Safety Day. ODF has displays on defensible space and National Fire Plan brochures. The first National Fire Plan grant they received in 2002 in Harrisburg, allowed ODF and the district to go door to door in Mt. Tom to educate homeowners on structural ignitability.
- The USFS works with the state to do education in cities – Sweet Home, Albany, Lebanon. They also administer the Smokey School program focusing on kids and matches. Other education efforts include their signage in the forest. The USFS's prevention officer is interested in expanding the program to Salem, Albany, and Corvallis to educate Nation Forest visitors about fire before they visit the forest.

IDEAS FOR MITIGATION

Finally, the agencies were asked to identify potential ideas for mitigation. The following is a general list of those ideas.

- Education on defensible space and access
- Complete fire assessments in stands to identify potential fuel reduction strategies and to educate landowners on what to do with fuels and the threat from neighboring landowners.
- Additional partnering between local, state and federal entities to do fuel reduction on adjacent lands to make fuel breaks.
- Clear roads that have slash piles to create access and create fuel breaks around private landowners
- Defensible space education specifically in the Marion Forks area
- Complete home assessments in terms of water supply issues.

- Stronger wildfire related codes.
- Fuel reduction through the marketing of small diameter biomass

DETAILED RESULTS

BROWNSVILLE RURAL FIRE PROTECTION DISTRICT

BACKGROUND

The Brownsville Rural Fire Protection District (RFPD) is located in the southwest corner of Linn County. The district has one full time fire fighter and 25 volunteer fire fighters. The current ISO Public Protection Capability Rating for the district is a *four* for the City, an *eight* for areas within five miles, and a *ten* for areas greater than five miles. The district currently has the following wildland fire fighting apparatus available: 4 engines, 2 brush pick-up trucks, 2 water tenders, and 1 rescue vehicle.

WILDFIRE HISTORY

The district has not had wildland urban interface fires in the past two years, but in 2005, the district had twelve grass or grass to brush fires. On average the district responds to anywhere between five and 11 fires within the district and two to three mutual aid responses outside.

WILDFIRE-RELATED ACTIVITIES

The district has been engaged in a number of wildfire related preparedness, response and planning activities in the past.

- The district has automatic mutual aid agreements with all Linn and Benton County districts as well as with the Oregon Department of Forestry.
- The district has not engaged in any fuel reduction activities within the district.
- In 2002, the district did a door-to-door campaign providing fliers to homeowners about defensible space.
- The district has not engaged in any evacuation planning.
- The district is working with the Oregon Department of Forestry to GPS all structures in the district. This project includes completing a fire assessment on those structures.

WILDFIRE ISSUES

The district identified a number of wildfire related issues that it currently faces. They are documented below.

- The biggest issue is manpower during the day shift. Brownsville is a bedroom community so most volunteers work in Eugene, Springfield, or

Albany. Forty percent of the district is dual coverage with ODF. A daytime fire is automatically a mutual aid event.

- Several timber companies have land within the district with locked gates. The top end of the Mountain Home area contains steep roads with many switchbacks which makes quick response difficult.
- Brownsville has 12 residences in the district that weren't annexed, so there are unprotected structures within the district. Response activities in this area are charged for services according to the state's conflagration rates.
- Forty percent of the district is in WUI. Specific areas of concern include: Washburn Heights, Powell Hills, Courtney Creek, Cochran Creek, Mountain Home, Oakview and Pine View. The last two locations are one-way in, one-way out situations.
- Areas of future growth and perhaps increased risk include the northeast side of city limits where development is occurring on steep slopes with heavy fuels. There is also a 10-mile stretch on Middle Ridge Rd. between Brownsville & Lebanon that is unprotected and it is likely that development will take place there.
- The primary structural ignitability issue in Brownsville is the lack of defensible space and overgrown driveways.

POTENTIAL WILDFIRE PROJECTS AND ACTIVITIES

Each district was asked a series of questions that were designed to illicit ideas for potential mitigation actions or projects that could be implemented to assist the district mitigation or better respond to wildfires. The results are presented below:

- Obtaining an additional 1,000-gallon water tender would increase fire fighting capacity.
- Focus of education and outreach programs on defensible space and access issues.
- Enhancement of the Oregon Department of Forestry chipper program.
- Development of codes/legislation to ban cedar shake roofs

SWEET HOME RURAL FIRE PROTECTION DISTRICT

BACKGROUND

The Sweet Home Rural Fire Protection District (RFPD) is located in the southwest corner of Linn County along the Highway 20 corridor. The district has ten full time fire fighters and 50 to 60 volunteer fire fighters. The current ISO Public Protection Capability Rating for the district is a 4 for the city and an 8b for rural. The district currently has the following wildland fire fighting apparatus available: 4 type 6 engines, 1 type 3 engine, 1 type 1 structural, and 2 type 2 tenders.

WILDFIRE HISTORY

The district hasn't had as many responses for small brush fires. They had at least 2 brush fires in the last two summers. A fire in the Marks Ridge area could have gotten much worse. An industrial fire did threaten an apartment complex. In 2005, a three-alarm fire in Sodaville/Mountain Home included response from ODF, Lebanon, Brownsville and Halsey. This fire was kept in check, but structures were threatened. Also in 2005, a three-alarm fire in the Brush Creek Road was caused by a downed power pole. A Weyerhaeuser helicopter was used to help fight the fire. On average the district responds to about 40-60 fires a year including those that fall under mutual aid.

WILDFIRE-RELATED ACTIVITIES

The district has been engaged in a number of wildfire related preparedness, response and planning activities in the past.

- The district has automatic mutual aid agreements with all Linn County districts as well as with the Oregon Department of Forestry.
- The district has not engaged in any fuel reduction activities within the district.
- The district has not engaged in any evacuation planning.
- The district provides education on an on-going basis and provides residents with brochures and hosts open houses.
- Participated with Brownsville and the Oregon Department of Forestry in education and outreach efforts.
- The district is working with the Oregon Department of Forestry to GPS all structures in the district. This project includes completing a fire assessment on those structures.

WILDFIRE ISSUES

The district identified a number of wildfire related issues that it currently faces. They are documented below.

- The biggest issue is personnel available during the day. The district has a small full time paid staff, the rest are volunteers who work outside the

community. The district doesn't have another district to its east to assist in response, so mutual aid response tends to take longer. On the positive side, Oregon Department of Forestry is located in Sweet Home.

- There are a handful of structures located outside the district.
- Specific areas of concern include: Marks Ridge (north of Sweet Home – lots of homes annexed in 2002 with narrow driveways and no turn-arounds), Riggs Hill (increase in expensive homes with no on-site water and access issues), Crawfordsville Dr. (homes abutting wildlands), Ames & Wylie Creek (new developments, one of which is sprinklering all new homes, but developments back right up against timber).
- The primary structural ignitability issue in Sweet Home is the lack of defensible space and narrow driveways. The Oregon Fire Code requires 20-foot driveways, Linn County only requires 12.

POTENTIAL WILDFIRE PROJECTS AND ACTIVITIES

Each district was asked a series of questions that were designed to illicit ideas for potential mitigation actions or projects that could be implemented to assist the district mitigation or better respond to wildfires. The results are presented below:

- Obtaining an additional type 3 engine would increase fire fighting capacity.
- Education and outreach programs focusing on structural preparedness including the risk associated with shake roofs, adequate driveway size and water supply.
- Working with developers to encourage: 1) use of fire resistant plants in new developments, 2) wider driveways, and 3) on-site water supplies.

HALSEY RURAL FIRE PROTECTION DISTRICT

BACKGROUND

The Halsey Rural Fire Protection District (RFPD) is located in the southwest corner of Linn County on the west side of Interstate 5. The district has two full time fire fighters and 30 volunteer fire fighters. The current ISO Public Protection Capability Rating for the district is a 6 district wide. The district currently has the following wildland fire fighting apparatus available: 4 - 3,200 gallon tenders, 2 - 6x6 1,000 gallon General Issue trucks, 5 - 1,000 gallon fire engines (pump and roll), and 2 type 6 quick attack trucks (150g and 300g each).

WILDFIRE HISTORY

The district is located in prime rye grasslands and does not have any true interface issues. The only fires the district has are mainly grass fires. On average the district responds to one fire a year.

WILDFIRE-RELATED ACTIVITIES

The district has been engaged in a number of wildfire related preparedness, response and planning activities in the past.

- The district has automatic mutual aid agreements with all Linn and Benton County districts. In addition, the district also has an agreement with the Oregon Department of Fish and Wildlife to protect areas around the Willamette River.
- The district's fuel reduction activities are related to the grass seed industry. Farmers bail grass after its been threshed, thus reducing the amount of fuel on the ground.
- The district promotes preparatory burns around farms. This provides protection from fires moving into farmer's fields.
- The district has not engaged in evacuation planning.
- The district provides education on an on-going basis. The district has a staff Captain who serves as a fire prevention officer. The district has several school programs where they talk to students about cooking safety, heating, fire alarms, and what to do when there is smoke. The district purchased with FEMA grant money, a 35-foot prevention trailer with demonstrations and information about fire safety. The trailer features a smoke machine to practice crawling under smoke and heated doors. This trailer is lent out to other districts.

WILDFIRE ISSUES

The district identified a number of wildfire related issues that it currently faces. They are documented below.

- The district is composed of 77,000 acres of rye grass and is the biggest grass fire department in the state. The biggest issue is in protecting farms and smoke issues on the interstate.
- Lack of volunteer availability
- Areas adjacent to Interstate 5 are of particular concern due to smoke causing visibility issues.

POTENTIAL WILDFIRE PROJECTS AND ACTIVITIES

Each district was asked a series of questions that were designed to illicit ideas for potential mitigation actions or projects that could be implemented to assist the district mitigation or better respond to wildfires. The results are presented below:

- Implement backyard burning programs to allow residents to burn vegetation.
- Maintain farmer's ability to burn fields as it is a major fuel reduction activity that keeps fire from reaching farm dwellings and structures.

ALBANY RURAL FIRE PROTECTION DISTRICT

BACKGROUND

The Albany Rural Fire Protection District (RFPD) is located in the northwest corner of Linn County along Interstate 5. The district has 65 full time fire fighters and no volunteer fire fighters. The current ISO Public Protection Capability Rating for the district is a 3 for the city and an 8 for rural, although insurance providers are using the city's rating in most places. The district currently has the following wildland fire fighting apparatus available: 2 brush units, 6 type 1 engines, and 1 tender.

WILDFIRE HISTORY

The district hasn't had any wildfires that have threatened homes in the last 25 years. On average the district responds to about ten fires a year including those that fall under mutual aid.

WILDFIRE-RELATED ACTIVITIES

The district has been engaged in a number of wildfire related preparedness, response and planning activities in the past.

- The district has automatic mutual aid agreements with all Linn County districts.
- The district has not engaged in any fuel reduction activities within the district.
- The district has taken preliminary evacuation planning steps by completing pre-planning for wildland areas and has identified potential access routes.

WILDFIRE ISSUES

The district identified a number of wildfire related issues that it currently faces. They are documented below.

- The primary wildfire interface issue is located in North Albany and Knox Butte, both areas with steep slopes. Knox Butte is likely to continue to develop.

POTENTIAL WILDFIRE PROJECTS AND ACTIVITIES

Each district was asked a series of questions that were designed to illicit ideas for potential mitigation actions or projects that could be implemented to assist the district mitigation or better respond to wildfires. The results are presented below:

- Additional tender capacity and a type 3 brush unit would increase fire fighting capacity.
- Education and outreach programs focusing on defensible space and access.

- Enhancement of ODF chipping and fuel management programs.
- Planning regulations to address defensible space issues.

JEFFERSON RURAL FIRE PROTECTION DISTRICT

BACKGROUND

The Jefferson Rural Fire Protection District (RFPD) is located in the northwest corner of Linn County and southwest corner of Marion County. The district has three full time fire fighters and 35 volunteer fire fighters. The current ISO Public Protection Capability Rating for the district is a 4 for the city and a 9 for rural (in 6 months rural should be an 8d). The district currently has the following wildland fire fighting apparatus available: 2 type 6 grass rigs, 2 multi-use tenders (2,500 gallons), and several tenders.

WILDFIRE HISTORY

The district doesn't have any true interface areas in the Linn County portion of the district. On average the district responds to about four to six fires a year, but rarely is involved in mutual aid.

WILDFIRE-RELATED ACTIVITIES

The district has been engaged in a number of wildfire related preparedness, response and planning activities in the past.

- The district has automatic mutual aid agreements with districts in Linn, Marion, Polk and Benton Counties.
- The district has not engaged in any fuel reduction activities within the district.
- The district has not engaged in any evacuation planning.
- The district provides education on an on-going basis and provides residents with fliers.

WILDFIRE ISSUES

The district identified a number of wildfire related issues that it currently faces. They are documented below.

- The biggest response issue is that the district utilizes a different dispatch system than the rest of the Linn County districts. This results in interoperability issues.
- The district lacks adequate apparatus to be able to fight fires along the river because of access issues. Boats have been used in the past to fight fires in this area.

POTENTIAL WILDFIRE PROJECTS AND ACTIVITIES

Each district was asked a series of questions that were designed to illicit ideas for potential mitigation actions or projects that could be implemented to assist the district mitigation or better respond to wildfires. The results are presented below:

- Replace 2 type 6 engines with 2 new type 6 engines.
- Focus education and outreach programs on defensible space and roof types.

SCIO RURAL FIRE PROTECTION DISTRICT

BACKGROUND

The Scio Rural Fire Protection District (RFPD) is located in northwest Linn County east of the Interstate. The district has no full time fire fighters and 45 volunteer fire fighters. The current ISO Public Protection Capability Rating for the district is a 4 for the city and a 9 for rural. The district currently has the following wildland fire fighting apparatus available: 3 engines, 2 tenders, 3 brush / grass fire apparatus, 3 rescues, and several “support” vehicles.

WILDFIRE HISTORY

The SRFD responds to several wildland / brush fires every fire season. These range from the small grass fires due to unattended burn piles to grass seed fields that for whatever reason are involved in fire. In 2006, Scio responded to 16 grass/wildland fires including those falling under mutual aid.

WILDFIRE-RELATED ACTIVITIES

The district has been engaged in a number of wildfire related preparedness, response and planning activities in the past.

- The district has automatic mutual aid agreements with surrounding districts as well as with the Oregon Department of Forestry.
- The district has not engaged in any fuel reduction activities within the district.
- The district has not engaged in any evacuation planning.
- The district has adopted the Linn County Disaster Plan for large-scale emergencies.
- The district also has a new Citizen Emergency Response Team (CERT).

WILDFIRE ISSUES

The district identified a number of wildfire related issues that it currently faces. They are documented below.

- The response issues the district faces include the loss of volunteers, the need for more training, and the lack of volunteers during the day time.
- There are a few unprotected areas that the district responds to.
- Scio has several large grass seed fields in the district, which seem to be the source of most of the problems during fire season. The residual grass hay bales have been a problem in the past, whether they are targeted or spontaneously ignite, the district has several haystack fires every year.
- Currently no development plans in potential interface areas.

POTENTIAL WILDFIRE PROJECTS AND ACTIVITIES

Each district was asked a series of questions that were designed to illicit ideas for potential mitigation actions or projects that could be implemented to assist the district mitigation or better respond to wildfires. The results are presented below:

- The purchase of 2 or 3 new Forestry brush units would increase their capacity to more effectively fight fire.
- Identifying and implementing a burn restriction during wildland season. The SRFD Board of Directors (under the recommendation of the previous Fire Chief) have adopted a District policy of not enforcing the recommended burn bans outside of the areas protected by ODF, unless the State Fire Marshal imposes a state-wide burn ban. This is due to the sparse population in the outlying areas of the District, and difficulty in enforcing a burn restriction due to distances needed to travel to investigate any burn complaints. The Chief has tried to impress upon them the need to follow the recommended restrictions, and they are reviewing the current policy.

LEBANON RURAL FIRE PROTECTION DISTRICT

BACKGROUND

The Lebanon Rural Fire Protection District (RFPD) is located in the western portion of Linn County east of the Interstate. The district has 26 full time fire fighters and 52 volunteer fire fighters. The current ISO Public Protection Capability Rating for the district is a 3 for the city and a 5-8 for rural. The district currently has the following wildland fire fighting apparatus available: a 4wd interface engine with 750 gallon tank, a pumper with 1,000 gallon tank, 2 type 6 engines, a brush tender with 2,000 gallon capacity, and a type 3 1,000 gallon engine.

WILDFIRE HISTORY

The district responds to several wildland / brush fires every fire season. These range from the small grass fires due to unattended burn piles to grass seed fields that for whatever reason are involved in fire. In an average year, the district responds to around 35 grass or brush fires, about 6 of which fall under mutual aid.

WILDFIRE-RELATED ACTIVITIES

The district has been engaged in a number of wildfire related preparedness, response and planning activities in the past.

- The district has automatic mutual aid agreements with all Linn County districts as well as with the Oregon Department of Forestry.
- The district has not engaged in any fuel reduction activities within the district.
- The district has not engaged in any formal evacuation planning, however, they have taken information to certain neighborhoods.
- The district has participated with neighboring districts and ODF in Knock and Talks with homeowners to educate them about defensible space.
- The district is working with ODF on a project to GPS all the structures in the district for pre-planning purposes.
- The district has worked with ODF in the past to provide chippers for fuel reduction for residents who may not be able to do the fuel reduction efforts themselves.

WILDFIRE ISSUES

The district identified a number of wildfire related issues that it currently faces. They are documented below.

- The response issues the district faces include the distances to travel, the lack of defensible space, and access to areas to fight fire.

- There is a lack of homeowner awareness of defensible space and navigable driveways.
- The district is bisected by a river, so access to certain points may take longer because of the need to cross the river.
- The district only faces unprotected area issues if they are on mutual aid with ODF.
- The district identified that the following areas are particularly vulnerable to wildfire. The south side of the district is a foothill range that spans the full length of the district. This area has 350 – 500 homes and 1,000 – 10,000 hour fuels. The second location is Golden Valley, which is northeast of town and north of the river with about 250 homes. This area is the most vulnerable because it has 1-10 hour flashy fuels and slope and wind issues create a bigger threat.
- The district identified the following areas as becoming more vulnerable in the future. Ridgeway Butte east of town has had several plans for developments of up to 300 homes on steep sloped and timber areas. However, the district has a good relationship with the City which helps ensure that developments that do get approved must incorporate wildfire safety measures like sprinklers, density, etc...

POTENTIAL WILDFIRE PROJECTS AND ACTIVITIES

Each district was asked a series of questions that were designed to illicit ideas for potential mitigation actions or projects that could be implemented to assist the district mitigation or better respond to wildfires. The results are presented below:

- Need for 2 3,000 gallon tenders with off road capabilities would increase their capacity to more effectively fight fire. The district is in the process of acquiring these resources.
- Education of homeowners about defensible space.
- Expansion of the ODF chipper program.
- Look into inmate work crews to do clean up work.

MILL CITY RURAL FIRE PROTECTION DISTRICT

BACKGROUND

The Mill City Rural Fire Protection District (RFPD) is located on the northern border of Linn County along Highway 22. The district has 1 full time fire fighter and 18 volunteer fire fighters. The current ISO Public Protection Capability Rating for the district is a 5 for the city and a 4-8 for rural. The district currently has the following wildland fire fighting apparatus available: 1 brush truck and tankers.

WILDFIRE HISTORY

The district has had a history of wildfire, but in the last couple years they haven't had any interface fires. This district did indicate that the potential was there. In an average year, the district responds to around one or two fires including mutual aid with Lyons or Gates.

WILDFIRE-RELATED ACTIVITIES

The district has been engaged in a number of wildfire related preparedness, response, and planning activities in the past.

- The district has automatic mutual aid agreements with Linn and Marion County districts.
- The district has engaged in any fuel reduction activities within the district by creating fire buffers between homes and wildland areas.
- The district provides homeowners with information and fliers about structural ignitability. The district also has articles in the local newspaper on a weekly basis.
- The district has not engaged in evacuation planning.

WILDFIRE ISSUES

The district identified a number of wildfire related issues that it currently faces. They are documented below.

- Availability of personnel. They work closely with ODF, but it takes a long time for ODF to respond because of distances.
- Issues associated with defensible space, driveways, and access are also significant response issues.
- The district does typically respond to unprotected areas between Lyons and Mill City.
- Vulnerability to wildfire include the developments along the river on N. Santiam State Park Rd, DeWitt Lane, and Sitkum Lane (Marion County).

POTENTIAL WILDFIRE PROJECTS AND ACTIVITIES

Each district was asked a series of questions that were designed to illicit ideas for potential mitigation actions or projects that could be implemented to assist the district mitigation or better respond to wildfires. The results are presented below:

- Purchase of a new tanker would increase the capacity to more effectively fight fire. The district is in the process of acquiring these resources.
- Educate homeowners about access and fuel reduction issues.

TANGENT RURAL FIRE PROTECTION DISTRICT

BACKGROUND

The Tangent Rural Fire Protection District (RFPD) is located on the western side of Linn County along Highway 34. The district has 2 full time fire fighters and 20 volunteer fire fighters. The current ISO Public Protection Capability Rating for the district is an 8 for the city and a 9 for rural. The district currently has the following wildland fire fighting apparatus available: 1 - 4wd unit 200 gallons and 3 – 3,000 gallon tenders (pump & roll).

WILDFIRE HISTORY

The district doesn't have any wildland urban interface areas, mostly grasslands. Occasionally, a field fire may spread to the forest. In an average year, the district responds to one fire on mutual aid.

WILDFIRE-RELATED ACTIVITIES

The district has been engaged in a number of wildfire related preparedness, response, and planning activities in the past.

- The district has automatic mutual aid agreements with Linn County districts as well as some in Benton and Marion Counties.
- The district has not engaged in evacuation planning.
- The district provides fire safety information to residents, but not focused on wildfire issues.
- The district has purchased wildland fire fighting equipment and trains personnel on wildland suppression for mutual aid.

WILDFIRE ISSUES

The district identified a number of wildfire related issues that it currently faces. They are documented below.

- The greatest response issue the district faces is field fires and industrial or commercial fires spreading into fields. The district includes 18,000 acres of flammable fuels.
- The only area in the district that has access issues is near the Calapooia River.
- There are unprotected areas outside the district that they typically respond to, but these are not wildland areas.
- A proposed development near North Lake Creek may present some wildfire issues, but the district is working with the developer to mitigation some of those issues before hand.

POTENTIAL WILDFIRE PROJECTS AND ACTIVITIES

Each district was asked a series of questions that were designed to illicit ideas for potential mitigation actions or projects that could be implemented to assist the district mitigation or better respond to wildfires. The results are presented below:

- Education of homeowners about field fires.
- Create more buffer zones around farms.

STAYTON RURAL FIRE PROTECTION DISTRICT

BACKGROUND

The Stayton Rural Fire Protection District (RFPD) is located in northern Linn County just south of Highway 22. The district has 5 full time fire fighters and 55 volunteer fire fighters. The current ISO Public Protection Capability Rating for the district is a 5 for the city and a 5 for rural. The district currently has the following wildland fire fighting apparatus available: 1 type 6 engine, 3 type 3 engines, 3 combination 1,800 gallon tenders/initial attacks, and one four wheel drive vehicle.

WILDFIRE HISTORY

The entire district is considered wildland urban interface. In an average year, the district responds to 20 fires within the district and 10 to 20 on mutual aid.

WILDFIRE-RELATED ACTIVITIES

The district has been engaged in a number of wildfire related preparedness, response and planning activities in the past.

- The district has automatic mutual aid agreements with Linn County districts as well as ODF.
- The district has done projects around structural ignitability and hazard mitigation in the Elkhorn area.
- The district has not done any wildfire evacuation planning.
- The district has provided information on defensible spaces, vegetation, and construction materials to homeowners along with ODF. In addition, they also work with the South County Fire Chiefs group out of Marion County on wildfire issues.

WILDFIRE ISSUES

The district identified a number of wildfire related issues that it currently faces. They are documented below.

- The greatest response issue the district faces is availability of personnel.
- There are unprotected areas outside the district in the Elkhorn area.
- Stayton identified that the Elkhorn and Marion areas are particularly vulnerable to wildfire and Elkhorn is likely to become more so in the future. There is currently a plan for a destination resort in this area.
- Structural ignitability issues the district faces include space proximity between structures and construction methods and materials.

POTENTIAL WILDFIRE PROJECTS AND ACTIVITIES

Each district was asked a series of questions that were designed to illicit ideas for potential mitigation actions or projects that could be implemented to assist the district mitigation or better respond to wildfires. The results are presented below:

- Purchase of a new type 5 or type 6 engine would increase their capacity to fight fire
- Educate homeowners about defensible space
- Address development codes and landscaping issues in Elkhorn area

HARRISBURG RURAL FIRE PROTECTION DISTRICT

BACKGROUND

The Harrisburg Rural Fire Protection District (RFPD) is located in southern Linn County, west of Interstate 5. The district has 1 full time and 2 part time fire fighters and 24 volunteer fire fighters. The current ISO Public Protection Capability Rating for the district is a 5 for the city, an 8b for less than 5 miles and a 10 for greater than 5 miles. The district currently has the following wildland fire fighting apparatus available: 3 type 1 engines and a 3,000 gallon tender.

WILDFIRE HISTORY

The entire district does have fires, but they typically don't involve structures. There are wildland urban interface areas within the district. In an average year, the district responds to four fires within the district and three to four on mutual aid.

WILDFIRE-RELATED ACTIVITIES

The district has been engaged in a number of wildfire related preparedness, response and planning activities in the past.

- The district has automatic mutual aid agreements with Linn County districts as well as ODF.
- Harrisburg has collaborated with ODF on a grant to do fuels reduction in a subdivision.
- The district has not done any wildfire evacuation planning.
- In 2003, the district partnered with ODF to provide public education on defensible space, fuel and access.

WILDFIRE ISSUES

The district identified a number of wildfire related issues that it currently faces. They are documented below.

- The response issues the district faces include the availability of personnel and the location of the station.
- Time is an issue, the district is 86 square miles with the station positioned in the western most part. In some areas response times can be between 15 and 20 minutes.
- There are limited areas with access issues including some gated homes in Mount Tom.
- Areas that are particularly vulnerable include the Mount Tom subdivision and adjacent areas that are jointly protected by ODF and the east side of the district by Coburg Hills.

POTENTIAL WILDFIRE PROJECTS AND ACTIVITIES

Each district was asked a series of questions that were designed to illicit ideas for potential mitigation actions or projects that could be implemented to assist the district mitigation or better respond to wildfires. The results are presented below:

- Purchase of a new small type 3 engine would increase their capacity to fight fire
- Educate homeowners about defensible space
- Additional fuel reduction projects around homes and driveways.



Linn County Fire Defense Board
Thursday, April 26, 2007
Harrisburg Fire

Minutes

ATTENDANCE:

Kevin Kreitman, Albany Fire
Lorri Headrick, Albany Fire
Kevin Rogers, Brownsville Fire
Perry Palmer, Lebanon Fire
Scott Mitchell, Harrisburg Fire
Mike Beaver, Sweet Home Fire
Stan Parker, Tangent Fire
Tim Mueller, Linn County Sheriff

Jim Howell, Linn County Emerg. Mgmt.
Steve Michaels, Linn County Planning/Bldg Dept.
Kevin Crowell, Oregon Dept. of Forestry
Lee Vaughn, Oregon Dept. of Forestry
Krista Mitchell, ECONorthwest
Lorelei Juntunen, ECONorthwest
Mike Price, Entrada/San Juan, Inc.

CALL TO ORDER: Chief Kreitman called the meeting to order at 10:05 a.m.

APPROVAL OF MINUTES: Chief Beaver made a motion to approve minutes of the March 22, 2007, meeting as submitted; Chief Rogers seconded the motion; and the minutes were unanimously approved as written.

REPORTS:

Linn-Benton Fire Training Council – No report.

Linn-Benton Fire Investigation Task Force – Contact George Crosiar if you have any comments on the Bylaws that were shared at the last meeting.

HazMat Team 5 – No report.

Linn County Dispatch/User Board – Sheriff Mueller spoke about a proposed addition to the jail, which would include new dispatch offices. The project would be at least two years out. Chief Kreitman mentioned that the County should consider the need to construct the addition with shelter-in-place in mind.

Reminder to please follow alarm assignments when additional equipment is needed, otherwise it creates problems later when you do request an additional alarm assignment and some of that equipment has already been individually assigned.

Linn County Sheriff's Office - Sheriff Burrig reported that SWAT is being covered by the Linn County Sheriff's Office and Albany Police. Benton County is unable to maintain their operating levy and dropped SWAT in August 2006.

Linn County Emergency Management – Jim Howell is working with the Linn County Commissioners to set up a one-day training event to cover Introduction to NIIMS, I-100, and I-200. Might be able to open the training up to other agencies as well. I-300 and I-400 will also be required next year for command staff and anyone at the Section Chief level.

Oregon Emergency Management Conference is May 5-7.

Oregon State Fire Marshal's Office – No report.

Oregon Dept. of Forestry – Kevin Crowell reported that their budget has been approved for next fiscal year. An additional firefighter has been added. The audit for last year's fires is being conducted on May 10, and they expect to see good results. Interviews are being held for three labor firefighters and a lookout firefighter at Green Peter.

Oregon State Police – No report.

Reach - No report.

OLD BUSINESS:

Community Wildfire Protection Plan - Krista Mitchell from ECONorthwest presented a PowerPoint slideshow on the findings from their interviews with Oregon Department of Forestry, Oregon State Fire Marshal's Office, Bureau of Land Management, United States Forest Service, and Linn County fire districts.

The issue of fuel reduction was discussed and suggestions for addressing this need. Kevin Crowell suggested that the ODF chipping equipment could be used outside their protection areas. They are also obtaining a commercial grade chipper which will be operated by ODF staff to aid landowners. The need to have a program in place to aid those who are unable to do the physical labor was identified.

Homeowner education and outreach should be focused on defensible space, to include brochures provided at the planning stage. Linn County already has something in place.

Encourage partnerships to address the high-risk areas for fuel reduction; focus on non-industrial lands next to BLM lands.

Consider use of inmate work crews

The possible need to address banning cedar shake roofs through legislation was considered. It appears that cost and education are already impacting a change toward non-shake roofing .

Improve construction and design standards in wildland areas.

Review and address water supply availability in interface areas.

Chief Beaver asked about road inspections and what is required of new roads. He explained that he has seen new roads in their district that are approved and then the road is drastically degraded during the project construction phase, making the roads nearly impassable for emergency traffic. Steve Michaels indicated that Linn County does not re-inspect after a road has already been approved.

Mike Price with Entrada/San Juan, Inc. presented a PowerPoint slideshow on Wildland/Urban Interface Mapping and Modeling.

County Bridge/Access Update - Tabled until May meeting.

NEW BUSINESS:

State Fire Defense Board Meeting - Chief Kreitman reviewed information that was shared at the State Fire Defense Board meeting. Concerning conflagrations, the following changes were discussed:

- Reimbursement for volunteers increased from \$12 to \$15/hour. Time over 40 hours/week will be paid at \$22.50/hour.

- Vehicle reimbursement rates will remain the same. Oregon is better in comparison to other states, especially portal to portal.
- Clarification on Type II to include 500 to 999 gallons.
- Urban structural firefighter standards require NFPA Firefighter I or equivalent.
- Engine Boss requires NFPA Firefighter II or equivalent.
- Fireground Leader will require I-100, I-200, I-700, & I-800.
- Vehicle Operator requires NFPA Pumper Operator or equivalent.

FireNet towers have been updated with narrowband capabilities (with exception of one in the northeast area). They will be testing, so if you hear this please respond to their inquiries.

The old hazmat unit has been set up as a communications unit with a cache of portable radios, with two mobile repeaters. This should allow for set up at any fire in the state.

State Communication Project - Jeff Johnson spoke at the State Fire Defense Board meeting about Oregon Wireless Interoperability Network. Local governments and agencies will see benefit to being on their system in lieu of maintaining their own system. It will affect the areas along the I-5 corridor from Portland, Oregon, to California and the Bend/Redmond area. Remainder of the state would be VHF. Targeted to have in place by 2011.

GOOD OF THE ORDER:

Kevin Crowell suggested discussion about burn ban and putting together Public Service Announcements at the next meeting. Kevin reported that ODF does not want to get involved at this time in the DEQ discussion of domestic burn banning. ODF has an abundance of bottled water available for use; contact Kevin if interested.

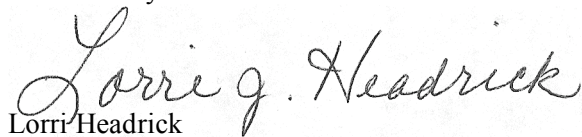
Chief Mitchell reported that Harrisburg is going out to Mississippi to inspect a 100-foot aerial ladder truck for possible purchase. Harrisburg will be hiring a new fulltime training officer.

NEXT MEETING:

The next meeting will be a joint meeting with the Benton County Fire Defense Board on Thursday, May 24, 2007, 10:00 a.m., at Halsey-Shedd Fire.

ADJOURNMENT: Meeting adjourned at 12:00 p.m.

Submitted by:



Lorri Headrick
Secretary/Treasurer

ECONorthwest

ECONOMICS • FINANCE • PLANNING

Phone • (541) 687-0051
FAX • (541) 344-0562
info@eugene.econw.com

Suite 400
99 W. 10th Avenue
Eugene, Oregon 97401-3001

Other Offices
Portland • (503) 222-6060
Seattle • (206) 622-2403

1 March 2007

TO: Linn County CWPP Steering Committee
FROM: Lorelei Juntunen
SUBJECT: NOTES OF 2/27 STEERING COMMITTEE MEETING

This memorandum contains notes of the February 27, 2007 kick-off meeting for the Linn County Community Wildfire Protection Plan (CWPP). The notes are organized to reflect the agenda topics for the meeting, as follows:

- Overview of CWPP purpose and requirements
- Linn County process overview
- Outreach strategy
- Risk assessment approach
- Next steps

The following individuals attended the meeting:

- Kevin Crowell, Oregon Department of Forestry
- Paul Hiebert, US Forest Service
- Jim Howell, Lane County Emergency Management
- Kevin Kreitman, Fire Defense Board
- Steve Michaels, Linn County Planning and Building Department
- Barbara Raible, Bureau of Land Management
- Dick Slinger, Linn County
- Howard Strobel, Oregon Department of Forestry
- Lena Tucker, Oregon Department of Forestry
- Jerry VanDyne, US Forest Service
- Lee Vaughn, Oregon Department of Forestry

Andre LeDuc and Lorelei Juntunen from ECONorthwest facilitated the meeting.

OVERVIEW OF CWPP PURPOSE AND REQUIREMENTS

Lena Tucker and Lee Vaughn from Oregon Department of Forestry (ODF) provided context for the Linn County planning process. Lena explained that many communities in Oregon have plans in place, especially those in the eastern and southern parts of the State. County plans tend to function as an umbrella plan, and some communities with higher risk producing their own plans.

The plans are designed to meet the requirements of the Healthy Forest Restoration Act (HFRA) and the National Fire Plan. One of the most important HFRA requirements is collaboration: the plans must involve local, state, and federal partners as well as members of the community (watershed councils, homeowners associations, etc.)

Lee described some ongoing projects in Linn County that are aimed at increasing wildfire resilience. ODF applied for and received a grant for fire education in the Mount Tom fire district, and are in the middle of a three-year process to implement education and outreach projects. They held a well-attended community meeting, and have been going door-to-door to discuss fuels treatments and debris removal with wildland-urban interface residents. Additionally, they have been completing site-specific assessments of properties for fire survivability and have so far assessed about 2300 homes. All assessment data has been logged in an updatable database.

Linn County's CWPP can build on the successes of projects like these.

LINN COUNTY PROCESS OVERVIEW

Lorelei provided a brief overview of the steps that the planning team and Steering Committee would take to complete the Linn County CWPP. She emphasized that the goal is to create a plan that has specific, implementable action items that can reduce the County's risk of wildfire. The general steps are: (1) scoping survey of ODF and fire districts, (2) website for ongoing communication with a broad range of stakeholders, (3) risk assessment, (4) interviews with key stakeholders, (5) two outreach forums to identify wildfire risk factors and critical issues, and (6) plan development and promulgation.

The Steering Committee will be deeply involved throughout the whole process. They will meet as an official planning body twice: once at project kick-off (the February 27th meeting that these notes describe), and once toward the end of the project to finalize and prioritize action items., however. The planning team from ECO will keep in regular contact via email to request feedback on draft products. Additionally, Committee members will attend stakeholder forums and will provide input through key stakeholder interviews. This arrangement assures the Steering Committee members are constantly apprised of the progress toward creating a plan while recognizing the limitations of everyone's busy schedules. It also minimizes administrative costs associated with Steering Committee meetings.

OUTREACH STRATEGY

The group discussed an outreach strategy for assuring that key stakeholders (including WUI landowners and residents, state and federal agency representatives, and others) provide input into the planning process. The outreach strategy (described in detail in a February 2007 memorandum regarding "Proposed outreach strategy for the Linn County Community Wildfire protection plan") has two major activities associated with it:

- Survey and follow-up interviews
- Stakeholder forums

The Committee discussed these activities and made the following suggestions:

- Targets for outreach should include builders associations, homeowners, neighborhood watch organizations, and insurance companies, along with watershed councils and soil and water conservation districts
- Marion County is also currently working toward a CWPP, and some fire districts cross County boundaries. There is an opportunity to coordinate with their planning team.
- The planning team should get on the agenda for the monthly Fire Defense Board. The group determined that it makes sense to administer a paper survey, and then present and ground-truth results at the Fire Defense Board meeting instead of doing individual phone-based interviews with Defense Board representatives. This will provide an opportunity for dialogue.
- Key issues that will probably arise in the planning process include:
 - Unprotected lands. There are probably 100 or more properties with structures on them that are not protected by any fire district. Most of these are residential, and many of these land owners probably do not realize that they do not have protection. The plan will probably need to have actions around education and limiting new development in these areas.
 - Access. Private bridges and gates as well as narrow roadways make it difficult to reach some areas that have high fire risk.
 - Staffing. Many of the fire districts are staffed almost entirely by volunteers. Additionally, it is difficult to meld the two types of groups that respond to wildfires: emergency services related response and the wildfire units that will stay on the scene much longer until the fire is out.
- One Steering Committee members stated that the most important outcome that can come from this planning process is outreach related: people who live and own property in WUI areas need to understand the realities of the risks they face and know what to do to reduce it. They need to know what to expect in terms of protection when wildfires occur.

RISK ASSESSMENT APPROACH

The Committee discussed an approach to creating a meaningful risk assessment using the methodology developed by ODF. Andre explained that Mike Price will lead the process of creating the risk assessment, and is currently in the early stages of assessing the available data. Until we have a clearer picture of what data are available, it is difficult to describe exactly how the risk assessment development process will work, but we do know the general steps that will be taken and have a general understanding of the outputs. An ECONorthwest memorandum from February 2007 provides greater detail.

The Committee discussed the tasks described in this memorandum and made the following suggestions:

- *Scope of analysis.* Andre suggested that the results will be best presented by some smaller geography than the entire County. The risk assessment might contain maps by watershed or by fire district.
- *Data gathering.* The strength of the risk assessment rests on the strength of the data available. Mike will be gathering data over the next several weeks. Committee members suggested that he contact representatives from Alsea Geospatial, which is doing some mapping work in the area.
- *Weighting factors.* The ODF methodology suggests weighting factors for a number of wildfire risk factors that the County faces. These might require some tweaking to more accurately portray risk for Linn County. For example, “previous occurrences” of wildfires are heavily weighted when determining risk in the ODF methodology, and Linn has not had many previous occurrences. However, other factors suggest that risk in Linn County is growing: fuel loading is high and the WUI is experiencing population growth.
- *Evacuation modeling.* If appropriate data are available, Mike Price can do some modeling of evacuation routes. This would, among other outputs, identify pinchpoints where equipment may not be able to access the fire, especially while evacuation is underway. To do this, Mike will need speed limits and times on various transportation routes in the County.
- *Mapping session with the Fire Defense Board.* The Committee suggested a mapping session with the Fire Defense Board to ground-truth preliminary risk assessment maps.
- *NIMS compliance* is a concern for some on the Committee. Linn County’s Emergency Operations Plan is currently not NIMS compliant, but the County will participate in a regional EOP update process that should lead to NIMS compliance. Compliance and non-compliance do not directly impact the CWPP planning process.

NEXT STEPS

The ECO team will remain in regular communication with the Steering Committee. The most immediate next step is developing and distributing a scoping survey based on the discussion at this meeting.

ECONorthwest

ECONOMICS • FINANCE • PLANNING

Phone • (541) 687-0051
FAX • (541) 344-0562
info@eugene.econw.com

Suite 400
99 W. 10th Avenue
Eugene, Oregon 97401-3001

Other Offices
Portland • (503) 222-6060
Seattle • (206) 622-2403

12 September 2007

TO: Linn County CWPP Steering Committee
FROM: Katy Siepert and Lorelei Juntunen, ECONorthwest
SUBJECT: NOTES OF 9/12/07 STEERING COMMITTEE MEETING

This memorandum contains notes of the September 12, 2007 meeting of the Steering Committee for the Linn County Community Wildfire Protection Plan (CWPP). The purpose of the meeting was to review a draft CWPP document and to review and prioritize action items for inclusion in the plan. The notes are organized to reflect the agenda topics and the areas of concern for the meeting, as follows:

- Draft CWPP: overview and orientation
- Risk assessment and maps discussion
- Action item discussion
- Plan maintenance and update
- Next steps

The following individuals attended the meeting:

- Kevin Crowell, Oregon Department of Forestry
- Steve Michaels, Linn County Planning and Building Department
- Anne Walker, Oregon Department of Forestry
- Robert Wheeldon, Linn County Planning and Building Department
- Howard Strobel, Oregon Department of Forestry
- Lena Tucker, Oregon Department of Forestry
- Lee Vaughn, Oregon Department of Forestry

Andre LeDuc and Krista Mitchell from ECONorthwest facilitated the meeting.

DRAFT CWPP: OVERVIEW AND ORIENTATION

Krista Mitchell introduced the purpose of the CWPP and briefly discussed the stakeholder interviews and the results from the Firewise workshop that are included in Section 4. She highlighted the need for more specific information from individual groups regarding their particular policy framework and emergency operations. The mission statement in the draft CWPP is the same mission statement as the county's All-Hazards Plan mission statement, while

Linn County CWPP

the goals and action items are wildfire specific, and refer to requirements in the Healthy Forest Restoration Act (HFRA) and the Firewise guidelines. This organization allows the County the option to integrate the CWPP into the County's all hazards plan.

RISK ASSESSMENT AND MAPS DISCUSSION

Anne brought up the Communities At Risk portion of section 3 (Risk Assessment). She explained that the Federal Register list, as it currently exists in the Risk Assessment, is a good starting off point, but is not explicit enough and needs to be refined further.

Andre suggested that the committee consider a priority ranking scale for the communities included in the Communities At Risk list. He said that from a grant-writing standpoint, it is important to remember each community's political will and capability as well as the factual, science-based risk rating. Both reiterated that the Federal government puts a lot of weight on a community's capability to complete a mitigation project when determining where funding will go. Anne wants to ensure that the prioritization mechanism remains transparent, i.e. the STAPLE-E process outlined in the draft plan is described.

Howard brought up a question about point classifying communities. He asked if a point system is adopted, and wondered if communities that aren't listed as high risk or medium risk can still be eligible for funding? Lee reminded the committee that a "low" priority rank doesn't fall out of the running for consideration. These communities can still be considered for a grant, and they can still get money to move forward with mitigation projects. No community is risk-free, so no community would be dropped from the risk list.

The committee agreed that "high", "medium", "low" rating on the maps made more sense than a point system, although the rankings will be based on a point system, described in the appendix. Steve wants to see the high risk areas pop out more on the map. Areas where there is canopy, federal land adjacency, capacity, gravel roads, areas outside the fire districts: Steve had a concern that these aspects of Linn County communities was not fully expressed by the Total Risk map (#6). He also requested more detail regarding the weighting of risk factors. Andre explained that the more detailed discussion of the data and methodology for creation of the maps would be included in an appendix to the CWPP, so that the Plan itself would be easily digestible to the average reader. Areas where data is missing need to be identified on the map, and then acted upon as an implementation of the CWPP by the owners of that action item continuing to gather data for those areas.

ACTION ITEMS DISCUSSION

The Committee clarified action items that were confusing, and suggested some changes for lead organizations and/or internal and external partners who will be likely support in implementing those action items. The updated Action Item Matrix reflects these changes (see attached).

Each lead organization will receive a memorandum outlining the action items over which they have "ownership", and a clear definition of what those items mean. These organizations will have an opportunity to review and finalize their action items before they are included in the final CWPP document.

PLAN MAINTENANCE AND UPDATE

The committee discussed the concern that while the plan may be up and running now, who is going to keep it alive when the current members of the committee retire? “What if ownership doesn’t get passed on?” Some suggestions included:

- Assign the convener as an entire department, i.e. the Planning Department.
- Make plan maintenance part of a job description
- Establish an annual or semi-annual report to Commissioners
- Can adopt the plan via resolution, though doesn’t have the weight of law
- Establish co-conveners that will share the responsibility of keeping the plan a living document

While there is no guarantee that the plan will stay active, it is much more likely if it is established as a part of the All-hazards Plan, and if co-conveners share ownership. It was suggested that the co-conveners be the Planning and Building Dept. and the Fire Defense Board (which includes ODF and others). The question was brought up: “where is the Federal representation?”

NEXT STEPS

- Mike Price (primary analyst on the risk assessment) will include a map that establishes risk as it is related to land class in order to see adjacency to Federal or State lands and the WUI boundaries on those lands
- Comments on the CWPP and on the Action Items due to Lorelei Juntunen [juntunen@portland.econw.com] by Sept 21st, 2007.
- Final Draft of the CWPP will be completed by the end of October, 2007.

Risk Assessment Methods

One of the core elements of the Linn County Community Wildfire Protection Plan (CWPP) is the risk assessment, which describes the risk and potential losses to life, property, and natural resources from wildfire based on best available science and data. The purpose of the risk assessment is to identify high risk areas and assist in the prioritization and implementation of strategies for preventing losses from fire. This appendix documents the methodology and process used to develop the Risk Assessment maps and conclusions. It has the following sections:

- **Overview.** Discusses the general methodology used for the Linn County CWPP Risk Assessment.
- **Risk.** What is the likelihood of a fire occurring?
- **Hazard.** What is the resistance to control once a wildfire starts, being the weather, topography and fuel that adversely affects suppression efforts?
- **Protection capability.** What are the risks associated with wildfire protection capabilities, including capacity and resources to undertake fire prevention measures?
- **Values at risk.** What are the human and economic values associated with communities or landscapes?
- **Structural vulnerability.** What is the likelihood that structures will be destroyed by wildfire?

OVERVIEW

The risk assessment for the Linn County CWPP was conducted by Mike Price of Entrada San Juan LLC (Entrada), using the model described in *Identifying and Assessment of Communities at Risk in Oregon – Draft Version 4.0*, published by the Oregon Department of Forestry (ODF). The methodology outlined by the ODF uses five factors to determine wildfire risk. Points are assigned for each risk factor, with higher scores indicating higher risk. This point system was used for the Linn County CWPP Risk Assessment. ECONorthwest and Entrada also conducted field surveys and interviews with rural fire protection districts to ground truth the data and conclusions of the risk assessment.

Entrada relied on the computer mapping software known as Geographic Information System (GIS) to conduct the risk assessment. This assessment uses GIS to perform a number of spatial analyses and to manage, store, and display wildfire information. The output of this analysis is a series of map layers, each layer displaying a separate yet interconnected piece of wildfire risk information. Through comparison and analysis of these layers, this assessment indicates areas that express **high**, **moderate**, and **low** risk of experiencing a Wildland Urban Interface fire.

The County maintains much of the data necessary for this type of analysis, but this information was supplemented with data from Oregon Department of Forestry, the U.S. Census, the U.S. Geological Survey, and data from field surveys. Data sources will be discussed in greater detail for each component of the Linn County CWPP Risk Assessment.

RISK

Risk measures the likelihood of a fire occurring. Two factors were used to measure risk for the Linn County CWPP Risk Assessment: historic fire occurrence, and ignition risk. The ODF scoring system allows a maximum of 40 points for risk, up to 13% of the total risk assessment score.

HISTORIC FIRE OCCURENCE

Historic fire occurrence is a measurement of the number of fires that have occurred per 1,000 acres over a ten-year period. This information was obtained from the Oregon Department of Forestry Historic Fires database¹. The data was filtered in ten-year intervals, and the most recent period (1996-2005) was selected. Points were assigned using the scoring system outlined in Table C-1. GIS was used to map the historic fire occurrence per 1,000 acres.

Table C-1. Scoring historic fire occurrence

Fire Occurrence - Per 1000 acres per 10 years	Points
0.0 to 0.1 Fires	5 pts.
0.1 to 1.1 Fires	10 pts.
Over 1.1 Fires	20 pts.

Source: ODF Identifying and Assessment of Communities at Risk in Oregon - Draft Version 4.0

IGNITION RISK

Ignition risk potential is a measurement of home density, as well as other risk factors. Home density is measured as the number of homes per 10 acres. Data for home density was obtained from Linn County Assessor Structure Point Database. Areas are sorted into three categories of density: rural, suburban, and urban. The scoring system for home density is summarized in Table C-2.

¹ <http://www.oregon.gov/ODF/GIS/datasets/stfires6205.zip>

Table C-2. Scoring home density.

Homes per 10 Acres	Points
Rural - 1 or less	0 pts.
Suburban - 1.0 to 5.0	5 pts.
Urban - 5.0 or over	10 pts.

Source: ODF Identifying and Assessment of Communities at Risk in Oregon - Draft Version 4.0

Other risk factors are defined as the presence of other types of development that increase the risk for wildfires. For the Linn County CWPP Risk Assessment, other risk factors include roads, railroads, power transmission corridors, schools, camping/recreational sites, and historic fire ignitions. Data for other risk factors was obtained from Linn County GIS, US Census TIGER data, and other data as available. Using GIS, these factors were gridded, counted, and scored. The scoring system for other risk factors is summarized in Table C-3.

Table C-3. Other risk factors

Other risk factors present	Points
3 factors or less	0 pts.
4 to 6 factors	5 pts.
7 factors or more	10 pts.

Source: ODF Identifying and Assessment of Communities at Risk in Oregon - Draft Version 4.0

HAZARD

Hazard is defined as the combination of factors that influence the ability to control a wildfire once it starts. These factors are weather, topography, natural vegetative fuel, and crown fire. The ODF scoring system allows a maximum of 80 points for hazard, up to 27% of the total risk assessment score.

WEATHER

Weather hazard is defined by the Oregon Department of Forestry as the number of days per season that forest fuels are capable of producing a significant fire event. ODF provides statewide weather data², which was developed following an analysis of daily wildfire danger rating indices in each area of the state. This data is described in Table 1 of OAR 629-044-0230. Linn County forested areas are entirely within Fire Weather area 2, and are scored at 20 points. Non-forest areas within Linn County receive 0 points. The scoring system for weather hazard is summarized in Table C-4.

² <http://www.oregon.gov/ODF/GIS/datasets/fwz100k.zip>

Table C-4. Weather

Weather Classification	Points
Non Forest	0 pts.
Zone 1	0 pts.
Zone 2	20 pts.
Zone 3	40 pts.

Source: ODF Identifying and Assessment of Communities at Risk in Oregon - Draft Version 4.0

TOPOGRAPHY

Topographic hazard is determined by the slope, aspect and elevation of the terrain. Slope and aspect affect the intensity and rate of spread of a wildfire. Elevation affects the type of vegetation present in the area, and the length of the wildfire season. Data for slope, aspect, and elevation was obtained from the US Geological Survey Seamless Data Distribution Site, and the National Elevation Dataset (NED) 1/3 Arc Second.³ The scoring system for topography is summarized in Table C-5.

Table C-5. Topography Hazard

Topography	Points
Slope	
0-25%	0 pts.
26-40%	2 pts.
greater than 40%	3 pts.
Aspect	
N, NW, NE	0 pts.
W, E	3 pts.
S, SW, SE	5 pts.
Elevation	
Greater than 5,000 ft.	0 pts.
3,501 to 5,000 ft.	1 pts.
3,500 ft. or less	2 pts.

Source: ODF Identifying and Assessment of Communities at Risk in Oregon - Draft Version 4.0

NATURAL VEGETATIVE FUEL AND CROWN FIRE

The Oregon Department of Forestry states that vegetation is the primary factor affecting the intensity of wildfires. It also affects the amount and travel distance of burning embers. For the Linn County CWPP Risk Assessment, the Oregon Statewide fuel model was used to classify fuel types, using the FBO 13 model.⁴ In addition to vegetation types, ODF recommends using data on crown fire potential. Data for Linn County crown fire potential was obtained from ODF.⁵ The potential for crown fires is greater in forest areas including insect infestation, disease, wind throw, and slash. The scoring system for vegetation and potential crown fire is summarized in Table C-6.

³ <http://seamless.usgs.gov>

⁴ <http://www.gis.state.or.us/data/fuel.zip>

⁵ <http://www.gis.state.or.us/data/crownfire.zip>

Table C-6. Natural vegetative fuel and crown fire

Hazard	Points
SB 360 - Natural Vegetative Fuel Hazard	
Non-forest	0 pts.
FBM 1,5, or 8-1	5 pts.
FBM 2,6, or 9-2	15 pts.
FBM 4, 10, or 11-3	20 pts.
Crown Fire Potential	
Passive - Low	0 pts.
Active - Moderate	5 pts.
Independent - High	10 pts.

Source: ODF Identifying and Assessment of Communities at Risk in Oregon - Draft Version 4.0

PROTECTION CAPABILITY

Protection capability is a measure of the capacity and resources to undertake fire prevention measures. Fire protection agencies, local governments and community organizations all contribute to protection capability. The ODF scoring system allows a maximum of 40 points for protection capability. Higher scores represent higher risk. For the Linn County CWPP Risk Assessment, two factors were used to determine protection capability: fire response and community preparedness.

FIRE RESPONSE

The presence of structural and wildland protection agencies, using structural fire district boundaries and wildland protection boundaries was used to evaluate fire response. Linn County provided information from their Roads Database, Fire Stations Database, Fire Districts Database, and Assessor Structure Point Database, in order to determine fire response times for areas both inside and outside of fire district and wildland protection boundaries. The scoring system for fire response is summarized in Table C-7.

Table C-7. Fire response

Fire Response	Points
Organized structural response < 10 min.	0 pts.
Inside fire district, but structural response > 10 min.	8 pts.
No structural protection, wildland response < 20 min.	15 pts.
No structural response & wildland protection > 20 min.	36 pts.

Source: ODF Identifying and Assessment of Communities at Risk in Oregon - Draft Version 4.0

COMMUNITY PREPAREDNESS

Community interviews were conducted by ECONorthwest to identify and map community awareness and education programs, in an effort to identify and map factors that will increase or decrease the effectiveness of the fire protection system. Examples of community preparedness actions include planned escape routes, safety zones, and road brushing projects. The scoring system for community preparedness is summarized in Table C-8.

Table C-8. Community preparedness

Community Preparedness	Points
Organized stakeholder group, community fire plan, phone tree, mitigation efforts.	0 pts.
Primarily agency efforts (mailings, fire free, etc.)	2 pts.
No effort	4 pts.

Source: ODF Identifying and Assessment of Communities at Risk in Oregon - Draft Version 4.0

VALUES PROTECTED

The Oregon Department of Forestry states that protection of life is the top priority for all agencies and levels of government performing wildfire risk assessments. In addition to the number of lives at risk, other important community assets are also identified, including community infrastructure and property. For the Linn County CWPP Risk Assessment, values protected is a factor of both homes density and community infrastructure. These factors combine for a maximum of 50 points of the total risk assessment score.

HOME DENSITY

Home density is the measure of homes per 10 acres. Data was obtained from the Linn County Assessor Structure Point Database. Areas of higher homes density represent a greater concentration of population. These areas are a higher priority and receive higher scores in accordance with the ODF scoring system. The scoring system for homes density is summarized in Table C-9.

Table C-9. Home density

Home Density (Homes per 10 acres)	Points
Less than 1.0 (rural)	0 pts.
1.0 - 5.0 (suburban)	15 pts.
Greater than 5.0 (urban)	30 pts.

Source: ODF Identifying and Assessment of Communities at Risk in Oregon - Draft Version 4.0

COMMUNITY INFRASTRUCTURE

In addition to homes density, the identification and evaluation of additional human and economic values is needed for community fire planning. For the Linn County CWPP Risk Assessment, comprehensive values were obtained through local, state, and federal sources. Infrastructure values were validated through stakeholder interviews. A list of valued infrastructure and corresponding data sources is included in Table C-10.

Table C-10. Infrastructure Data

Infrastructure Type	Source	File
Airstrips	Linn County, US Census TIGER	AP_400
Cemetaries	Linn County, US Census TIGER	CE_500
Municipal Buildings	Linn County	CH_200
Fire Stations	Linn County	FS_300
Hospitals	Linn County	HO_300
Parks	Linn County	PK_300
Police Stations	Linn County	PS_200
Roads	Linn County	RD_200
Railroads	Linn County	RR_200
Schools	Linn County	SC_300
Transportation Terminals	US Census TIGER	TR_200
Electrical Transmission	US Census TIGER	UT_300
Watersheds	ODF	WA_000

Points are allocated based on the presence of identified community infrastructure. Areas with multiple infrastructure types are a higher priority and are allocated more points. The scoring system for community infrastructure is summarized in Table C-11.

C-11. Community infrastructure

Community Infrastructure	Points
None present	0 pts.
One present	10 pts.
Two or more present	20 pts.

Source: ODF Identifying and Assessment of Communities at Risk in Oregon - Draft Version 4.0

STRUCTURAL VULNERABILITY

Structural vulnerability measures the likelihood that structures will be destroyed by wildfire. Structural vulnerability is determined by several factors and characteristics of individual structures. The results are displayed as points over the completed risk assessment. ODF recommends using methods defined by either local ordinances or the National Fire Protection Association's (NFPA). NFPA standards were used for the Linn County CWPP Risk Assessment. The scoring system for structural vulnerability is based on three major factors: structure, defensible space, and road access. These factors combine for a maximum of 90 pts. The scoring system for structural vulnerability is summarized in Table C-12.

Table C-12. Structural vulnerability

Structural Vulnerability	Points
Structure	
Flammable roofing	20 pts.
Building materials	10 pts.
ft.	5 pts.
Defensible Space	
Less than 30 ft.	25 pts.
Separation of adjacent homes	5 pts.
Fire Access	
Presence of ingress/egress	7 pts.
Road width less than 20 ft.	4 pts.
All-season road condition	4 pts.
than 300 ft. without turnaround)	5 pts.
Presence of street signs	5 pts.

Source: Entrada, adapted from NFPA 1144

Fuel Treatment Types

One of the minimum requirements for a Community Wildfire Protection Plan (CWPP) as described by the Healthy Forests Restoration Act is the identification of prioritized fuel reduction projects. A CWPP must identify and prioritize areas for hazardous fuel reduction treatments, as well as recommend appropriate treatment methods. Due to the diverse topography and eco-regions present in Lane County, the appropriate treatment methods vary considerably by vegetation type, annual precipitation, slope, aspect, and elevation.

The purpose of this appendix is to compare the common fuel treatment methods for each of the three eco-regions found in Lane County: the Coast Range, Willamette Valley, and Cascade Mountains. The following table provides information on the advantages, concerns, seasonality, application in the wildland-urban interface, and maintenance and scheduling for prescribed fire, mechanized thinning, and manual treatments across Lane County. The table only provides a general framework, and individual projects will need to be tailored to the conditions present in the local area. Local fuels specialists should be consulted in order to determine the most feasible array of fuels treatment options for a given geographical area.

LINN COUNTY CONTACTS

Albany Fire Department
333 Broadalbin St Sw
Albany, OR 97321-0144

Lyons Rural Fire Protection District
1114 Main St
Lyons, OR 97358

Brownsville Rural Fire District
255 N Main Sq
Brownsville, OR 97327

Mill City Rural Fire Protection District
400 S First Avenue Ave
Mill City, OR 97360

Halsey Shedd Fire Protection District
740 W Second St
Halsey, OR 97348-0409

Scio Rural Fire Protection District
38975 Sw Sixth Ave
Scio, OR 97374-0001

Harrisburg Fire/ Rescue
500 Smith St
Harrisburg, OR 97446

Sweet Home Fire & Ambulance District
1099 Long Street
Sweet Home, OR 97386-2118

Lebanon Fire District
1050 W Oak St
Lebanon, OR 97355

Tangent Rural Fire Protection District
32053 Birdfoot Dr
Tangent, OR 97389

The structure of the table was adapted from the Florida Department of Community Affairs guide, *Wildfire Mitigation in Florida: Land Use Planning Strategies and Best Development Practices*. Bev Reed, fuels specialist at the Cottage Grove Ranger District of the U.S. Forest Service modified the table with information appropriate to Oregon.

ⁱ State of Florida. 2004. *Wildfire Mitigation in Florida: Land Use Planning Strategies and Best Development Practices*. Florida Department of Community Affairs and Florida Department of Agriculture and Consumer Services.

Table D.1: Comparison of Fuel Treatment Types

Coast Range					
Treatment Methods	Advantages	Concerns	Seasonality	Application in WUI	Maintenance & Scheduling
Prescribed Fire (incl. broadcast, understory or pile burning)	<ul style="list-style-type: none"> - Encourages herbaceous growth and supports native species and ecosystems - Cost effective fuels treatment method in most cases 	<ul style="list-style-type: none"> - Broadcast & understory burning requires skilled application - Multiple entries may be required to achieve objectives - Re-burn potential in areas of heavy fuels or duff 	<ul style="list-style-type: none"> - Broadcast & understory burning constrained by weather, fuels characteristics, and smoke management constraints - Pile burning may be conducted under a broader range of conditions (i.e. less constraints) 	<ul style="list-style-type: none"> - Burning may be effective within or adjacent to WUI, either as a stand-alone treatment or in conjunction with mechanized or manual vegetation treatment methods 	<ul style="list-style-type: none"> - Timing for subsequent treatments dependent upon condition class goals and degree of change made via initial treatment
Mechanized (i.e. large equipment) Treatments (incl. thinning, pruning, lop and scatter, mowing, crushing, chipping, etc)	<ul style="list-style-type: none"> - Large local labor and contract pool - Cost effective over larger areas - Most methods reduce fire risk by getting fuels on ground (accelerating decomposition rates) or by removal - Can be followed by prescribed fire where needed 	<ul style="list-style-type: none"> - Large equipment limited to gentler slopes - Potential “product” may be market-dependent - May be less economically feasible on small sites due to move-in/move-out costs - May create short-term increase in fire risk 	<ul style="list-style-type: none"> - May require shut-down periods on some sites due to soils conditions or seasonal wildlife concerns - May be constrained by fire season requirements in summer 	<ul style="list-style-type: none"> - Can be very effective within or adjacent to WUI, either as a stand-alone treatment or in conjunction with follow-up prescribed fire treatment methods 	<ul style="list-style-type: none"> - Timing for subsequent treatments dependent upon condition class goals and degree of change made via initial treatment - Re-entry into thinning areas may be scheduled using standard silvicultural practices
Manual (i.e. hand) Treatment (incl. thinning, pruning, hand piling, raking, etc)	<ul style="list-style-type: none"> - Large local labor and contract pool - Can treat areas that cannot be treated by prescribed fire or mechanical means 	<ul style="list-style-type: none"> - More labor intensive; may not be cost effective in areas of heavy fuels - May require more than one entry to achieve initial objectives for site 	<ul style="list-style-type: none"> - Work can usually be conducted year-round - Chainsaw use may be constrained by fire season requirements in summer 	<ul style="list-style-type: none"> - Can be very effective within or adjacent to WUI, either as a stand-alone treatment or in conjunction with follow-up fuels treatment methods (i.e. removal or burning) 	<ul style="list-style-type: none"> - Timing for subsequent treatments dependent upon condition class goals and degree of change made via initial treatment - Re-entry into thinning areas may be scheduled using standard silvicultural practices

Willamette Valley

Treatment Methods	Advantages	Concerns	Seasonality	Application in WUI	Maintenance & Scheduling
Prescribed Fire (incl. broadcast, understory or pile burning)	<ul style="list-style-type: none"> - Encourages herbaceous growth and supports native species and ecosystems - Cost effective fuels treatment method in most cases 	<ul style="list-style-type: none"> - Broadcast & understory burning requires skilled application - Must invest time in informing and educating the public - Complete mop-up, if required for air quality reasons, may increase costs 	<ul style="list-style-type: none"> - Burning constrained by weather, fuels characteristics, and smoke management constraints - Low elevation seasonal inversions and valley fog may affect burning opportunities 	<ul style="list-style-type: none"> - Burning may be effective within or adjacent to WUI, either as a stand-alone treatment or in conjunction with mechanized or manual vegetation treatment methods - Most burning opportunities will exist along outer perimeters of urban areas/boundaries 	<ul style="list-style-type: none"> - Timing for subsequent treatments dependent upon kinds of sites being treated, condition class goals and degree of change made via initial treatment - Recreation and other high use areas may be evaluated annually as part of a fire prevention and fuels maintenance program planning
Mechanized Treatments (incl. thinning, pruning, lop and scatter, mowing, crushing, chipping, etc)	<ul style="list-style-type: none"> - Large local labor and contract pool - Cost effective over larger areas - Most methods reduce fire risk by getting fuels on ground (accelerating decomposition rates) or by removal - Can be followed by prescribed fire where needed - Opportunities may exist for public to readily utilize material (i.e. chips, firewood, etc.) 	<ul style="list-style-type: none"> - Potential “product” may be market-dependent - May be less economically feasible in isolated sites due to move-in/move-out costs - May create short-term increase in fire risk, especially in high-use recreation areas - In high use areas, if site precludes prescribed fire as a follow-up treatment, fuels removal or increased fire prevention patrols may be warranted 	<ul style="list-style-type: none"> - May require shut-down periods on some sites due to soils conditions or seasonal wildlife concerns - May be constrained by fire season requirements in summer 	<ul style="list-style-type: none"> - Can be very effective within or adjacent to WUI, either as a stand-alone treatment or in conjunction with follow-up prescribed fire treatment methods - Proximity to private residences may limit mechanical use due to noise concerns 	<ul style="list-style-type: none"> - Timing for subsequent treatments dependent upon condition class goals and degree of change made via initial treatment - Re-entry into thinning areas may be scheduled using standard silvicultural practices - Recreation and other high use areas may be scheduled for annual mechanized treatments (i.e. mowing) - Private landowners and homeowners may be advised as to recommended maintenance by fire protection experts -
Manual Treatment (incl. thinning, pruning, hand piling, raking, etc)	<ul style="list-style-type: none"> - Large local labor and contract pool - Opportunities for volunteers, partnerships, stewardships or homeowner involvement - Can access areas that cannot be treated by prescribed fire or mechanical means 	<ul style="list-style-type: none"> - More labor intensive; may not be cost effective in some areas - May require more than one entry to achieve initial objectives for site 	<ul style="list-style-type: none"> - Work can usually be conducted year-round - Chainsaw use may be constrained by fire season requirements in summer 	<ul style="list-style-type: none"> - Can be very effective within or adjacent to WUI, either as a stand-alone treatment or in conjunction with follow-up fuels treatment methods (i.e. removal or burning) 	<ul style="list-style-type: none"> - Timing for subsequent treatments dependent upon condition class goals and degree of change made via initial treatment - Private landowners and homeowners may be advised as to recommended maintenance by fire protection experts

Cascade Mountains

Treatment Methods	Advantages	Concerns	Seasonality	Application in WUI	Maintenance & Scheduling
Prescribed Fire (incl. broadcast, understory or pile burning)	<ul style="list-style-type: none"> - Encourages herbaceous growth and supports native species and ecosystems - Cost effective fuels treatment method in most cases 	<ul style="list-style-type: none"> - Broadcast & understory burning requires skilled application - Multiple entries may be required to achieve objectives - May require additional costs if mop-up or post-burn monitoring of site is required 	<ul style="list-style-type: none"> - Broadcast & understory burning constrained by weather, fuels characteristics, and smoke management constraints - Pile burning may be conducted under a broader range of conditions (i.e. less constraints) 	<ul style="list-style-type: none"> - Burning may be effective within or adjacent to WUI, either as a stand-alone treatment or in conjunction with mechanized or manual vegetation treatment methods 	<ul style="list-style-type: none"> - Timing for subsequent treatments dependent upon condition class goals and degree of change made via initial treatment
Mechanized Treatments (incl. thinning, pruning, lop and scatter, mowing, crushing, chipping, etc)	<ul style="list-style-type: none"> - Large local labor and contract pool - Cost effective over larger areas - Most methods reduce fire risk by getting fuels on ground (accelerating decomposition rates) or by removal - Can be followed by prescribed fire where needed 	<ul style="list-style-type: none"> - Large equipment limited to gentler slopes - Potential “product” may be market-dependent - May be less economically feasible on small sites due to move-in/move-out costs - May create short-term increase in fire risk, especially in high-use recreational areas 	<ul style="list-style-type: none"> - May require shut-down periods on some sites due to soils conditions or seasonal wildlife concerns - May be constrained by fire season requirements in summer 	<ul style="list-style-type: none"> - Can be very effective within or adjacent to WUI, either as a stand-alone treatment or in conjunction with follow-up prescribed fire treatment methods 	<ul style="list-style-type: none"> - Timing for subsequent treatments dependent upon condition class goals and degree of change made via initial treatment - Re-entry into thinning areas may be scheduled using standard silvicultural practices - Recreation and other high use areas may be scheduled for annual treatments designed to minimize risk of human-caused fire
Manual Treatment (incl. thinning, pruning, hand piling, raking, etc)	<ul style="list-style-type: none"> - Large local labor and contract pool - Can treat areas that cannot be treated by prescribed fire or mechanical means 	<ul style="list-style-type: none"> - More labor intensive; may not be cost effective in areas of heavy fuels - May require more than one entry to achieve initial objectives for site 	<ul style="list-style-type: none"> - Except at highest elevations, work can usually be conducted year-round - Chainsaw use may be constrained by fire season requirements in summer 	<ul style="list-style-type: none"> - Can be very effective within or adjacent to WUI, either as a stand-alone treatment or in conjunction with follow-up fuels treatment methods (i.e. removal or burning) 	<ul style="list-style-type: none"> - Timing for subsequent treatments dependent upon condition class goals and degree of change made via initial treatment - Re-entry into thinning areas may be scheduled using standard silvicultural practices

Wildfire Resources

This appendix provides a list of wildfire agencies and organizations that are potential sources of support and collaboration. The following are wildfire resources to help communities, landowners, and other interested parties help reduce Wildland Urban Interface fire risk. There are four main categories: agencies, policies, wildfire mitigation/education, and fire prevention and interagency cooperation.

Wildfire Resources

The following are wildfire resources to help communities, landowners, and other interested parties help reduce wildland urban interface fire risk. There are four main categories: agencies, policies, wildfire mitigation/education, and fire prevention and interagency cooperation.

Agencies

A variety of agencies do work that affects forest and fire management and other factors associated with reducing wildfire risk to forests and communities. The following resources provide information on federal, state, and local agencies that are related to forests, fire, and resource management and planning:

United States Forest Service, Fire and Aviation Management

Contact: USFS Fire and Aviation Management
Address: 3833 South Development Avenue, Boise, ID 83705
Phone: (208) 387-5100
Website: <http://www.fs.fed.us/fire/>

United States Forest Service, Willamette National Forest

Contact: Willamette National Forest
Address: PO Box 10607, Eugene, OR 97440
Phone: (541) 225-6300
Website: <http://www.fs.fed.us/r6/willamette/>

Bureau of Land Management

Contact: Bureau of Land Management
Address: 1849 C Street, Room 406-LS, Washington DC 20240
Phone: (202) 452-5125 (voice) or (202) 452-5124 (fax)
Website: <http://www.blm.gov/nhp/index.htm>

Oregon Department of Forestry

Contact: Oregon Department of Forestry
Address: 2600 State Street, Salem, OR 97310
Phone: (541) 945-7200 (voice) or (503) 945-7212 (fax)
Website: <http://oregon.gov/ODF/index.shtml>

Oregon State Fire Marshall

Contact: Oregon State Fire Marshall
Address: 3225 State Street, Salem, OR 97301
Phone: (503) 378-3056
Website: <http://www.blm.gov/nhp/index.htm>

Washington Department of Natural Resources

Contact: Fire Prevention Program Coordinator
Address: PO Box 47037, Olympia, WA 98504-7037
Phone: (360) 902-1754 (voice) or (306) 902-1757 (fax)
Website: <http://www.dnr.wa.gov/contact/>

National Interagency Fire Center (NIFC)

Contact: NIFC
Address: 3833 South Development Avenue, Boise, ID 83705-5354
Phone: (208) 387-5512
Website: <http://www.nifc.gov/>

Policies

Policies are often created at the federal and state level that affect how agencies, businesses, and residents can work individually and collaboratively to reduce communities' risk to wildfire. The following resources provide information on existing federal and state policies regarding wildfire risk reduction.

Healthy Forest Restoration Act

Website: <http://www.fs.fed.us/projects/hfi/>

National Fire Plan 10 Year Comprehensive Strategy

Website: <http://www.forestsandrangelands.gov/plan/>

Disaster Mitigation Act of 2000

Website: <http://www.dem.dcc.state.nc.us/PA/Assets/Forms/dma2000.pdf>

Oregon Statewide Land Use Planning Goal 7: Areas Subject to Natural Hazards

Website: <http://www.lcd.state.or.us/LCD/docs/goals/goal7.pdf>

Oregon Forestland Dwelling Units Statute, ORS 215.730

Website: <http://landru.leg.state.or.us/ors/215.html>

Oregon Forestland-Urban Interface Fire Protection Act of 1997 (Senate Bill 360)

Website:

http://www.odf.state.or.us/divisions/protection/fire_protection/prev/sb360/docs/legal/PROTACT%20ORS%20090704.pdf

Wildfire Mitigation/Education

Many programs currently exist to help mitigate communities' risk to wildfire and to educate agencies, businesses, and residents on issues related to wildland-urban interface fire. The following resources provide links to educational information and programs regarding wildfire mitigation and community outreach:

Firewise Communities

Contact: Firewise Communities

Address: N/A

Phone: N/A

Website: <http://www.firewise.org/>

Missoula FireLab

Contact: Missoula FireLab

Address: PO Box 8089, 5775 West Highway, Missoula, MT 59807

Phone: N/A

Website: <http://www.firelab.org/>

Fire Safe Councils

Contact: Fire Safe Council

Address: N/A

Phone: N/A

Website: <http://www.firesafecouncil.org/>

Federal Alliance for Safe Homes

Contact: Federal Alliance for Safe Homes
Address: 1427 East Piedmont Drive, Suite 2, Tallahassee, FL 32308
Phone: (877) 221-7233
Website: <http://www.flash.org/welcome.cfm>

What Trees Can Provide

Contact: Center for Urban Forest Research
Address: PSW Research Station, USDA Forest Service c/o Department of Environmental Horticulture, Suite 1103, One Shields Avenue, Davis, CA 95616
Phone: (530) 752-7636 (voice) or (503) 752-6634 (fax)
Website: <http://cufr.ucdavis.edu/>

Home and Fire Magazine

Contact: Home and Fire Magazine
Address: PO Box 458, Lebanon, OR 97355
Phone: (541) 451-4670 (voice) or (541) 451-1015
Website: <http://www.homeandfire.com/>

A Model for Improving Community Preparedness for Wildfire

Contact: Pacific Northwest Research Station
Address: Pacific Northwest Research Station
Phone: (206) 732-7832
Website:
<http://www.ncrs.fs.fed.us/4803/highlights/Intro%20to%20website.pdf>

The Ad Council Firewise Campaign PSA's

Address: The Advertising Council, INC., 261 Madison Avenue, 11th Floor, New York, NY 10016
Phone: (212) 922-1500 (voice) or (212) 922-1676 (fax)
Website: <http://www.adcouncil.org/campaigns/firewise/>

Where's the Fire Wise Choices Make Safe Communities

Contact: Center for Urban Forest Research
Address: PSW Research Station, USDA Forest Service c/o Department of Environmental Horticulture, Suite 1103, One Shields Avenue, Davis, CA 95616
Phone: (530) 752-7636 (voice) or (503) 752-6634 (fax)
Website: http://cufr.ucdavis.edu/products/8/curf_150.pdf

National Wildfire Coordinating Group

Contact: National Wildfire Coordinating Group
Address: National Office of Fire and Aviation, Bureau of Land Management, National Interagency Fire Center
Phone: (208) 387-5144
Website: <http://www.nwccg.gov/teams/wfewt/biblio/index.htm>

National Fire Protection Association

Contact: National Fire Protection Association
Address: 1 Batterymarch Park, Quincy, MA 02169-7471
Phone: (617) 770-3000
Website: <http://www.firepreventionweek.org/>

National Interagency Fire Center: Fire Prevention and Education

Contact: NIFC: Fire Prevention and Education
Address: 3833 South Development Avenue, Boise, ID 83705
Phone: (208) 387-5512
Website: <http://www.nifc.gov/preved/index.html>

Federal Emergency Management Association for Kids: Teaching Kids About Prescribed Fire

Contact: FEMA
Address: 500 C Street, Southwest Washington D.C. 20472
Phone: (202) 566-1600
Website: <http://www.fema.gov/kids/wldfire.htm>

Protecting and Landscaping Homes in the Wildland/Urban Interface

Contact: University of Idaho Extension
Address: Forest, Wildlife and Range Experiment Station, College of Natural Resources, University of Idaho, Moscow, ID 83844-1130

Wildfire Mitigation in Florida: Land use planning strategies and best development practices

Contact: State of Florida Department of Community Affairs, Division of Community Planning, Publications
Address: 2555 Shumard Oak Blvd, Tallahassee, FL 32399-2100
Phone: (850) 487-4545
Website:
http://www.dca.state.fl.us/fdcp/dcp/publications/Wildfire_Mitigation_in_FL.pdf

Grant Opportunities

Federal and state grants already exist to assist counties and local communities in funding various wildfire risk reduction projects. To assist the county and local communities in accessing existing funding sources, the following resources have been adapted from the *National Fire Plan - Pacific Northwest Interagency: Grant Opportunity Summaries*¹ and explain and provide contact information for some federal and state grants:

FS/BLM/NFWS/NPS/BIA Community Assistance and Economic Action Programs

This grant is to be used for community based planning and projects for fuels reduction and community wildland-urban interface education and prevention. Agency partnerships and fund sharing is encouraged. Federally recognized tribes, universities, colleges, state chartered non-

profit organizations, counties, cities, federal, state, and local government agencies are eligible to apply for this grant.

Applications due: March
Website: www.nwfireplan.gov

FEMA Assistance to Firefighters Grant Programs

This grant funds programs by fire departments that help protect the public and firefighting personnel against fire related hazards. This grant additionally focuses on programs aimed at children and firefighting personnel training, protective equipment, and vehicles. Recognized local fire departments are eligible to apply for this grant.

Applications: March
Website: <http://www.usfa.fema.gov/grants/afgp/>

Volunteer and Rural Fire Department Assistance

This grant provides financial assistance to volunteer and rural fire departments for improving fire protection through improved organization, training, equipment, prevention, and planning.

Applications: February
Contact: Oregon Department of Forestry
Phone: (503) 945-7341

State Fire Assistance Wildland Urban Interface Hazard Mitigation Grants

This grant provides funding for education and outreach programs, fuels reduction and ecosystem restoration programs, and community assistance in seventeen western states and Pacific Island territories. State Forestry agencies are eligible to apply and can sponsor other participants.

Applications: Fall
Website: www.fs.fed.us/r4/sfa_grants/sfa_grants.html

Energy Trust Grants

This grant provides financial assistance to renewable energy programs that do not already have incentive programs developed through the Energy Trust of Oregon. Projects in the areas of small wind, solar photovoltaics, biomass, biogas, small hydro, and geothermal electric will generally receive grants. Schools, local and state governments, and commercial, industrial, residential, agricultural, and non-profit businesses are eligible to apply for this grant

Contact: The Energy Trust of Oregon
Address: 733 S.W. Oak Street, Suite 200, Portland, OR, 97205
Phone: (503) 493-8888 (voice) or (503) 546-6862 (fax)
Website: <http://www.energytrust.org>

Fire Prevention and Interagency Cooperation²

Reducing communities' wildfire risk is a shared responsibility not only between residents and agencies, but also between agencies at the federal, state, and local levels. Federal, state, and local agencies frequently work closely with one another and form partnerships in coordinating wildfire prevention programs. Examples of existing partnerships and current coordinating efforts and programs include the following:

Prevention Working Team of the Pacific Northwest Wildfire Coordinating Group (PNWCG)

This group is composed of representatives of ODF, the Oregon State Fire Marshal (OSFM), the Washington State Fire Marshal, the five federal wildfire agencies, and the Keep Oregon Green (KOG) Association. Meetings are held monthly. Recent work has included:

- Ongoing oversight of the Industrial Fire Precaution Level System
- Coordination of the deployment of National Fire Prevention and Education Teams into the region.
- General coordination of wildfire prevention programs and campaigns across the region.
- Development of a regional wildfire prevention web site.
- Creation and implementation of Wildfire Awareness Week
- Review and scoring of National Fire Plan grant applications related to fire prevention.
- Design and conduct of a prescribed awareness and ecosystem health media campaign.
- Development and distribution of a "Fire in the Northwest Ecosystem" curriculum, to teachers of grades 7-12.

Bureau of Land Management (BLM)

BLM and ODF worked closely on a number of fronts:

- ODF protects approximately 2.5 million acres of BLM forestland from fire. This protection includes all aspects of wildfire prevention: education, engineering and enforcement.
- - The two agencies work together, frequently, on groups such as the Prevention Working Team of the PNWCG.

Forest Service (USFS)

In addition to working together on many statewide and regional fire prevention related groups, the two agencies:

- Routinely combine efforts to conduct wildfire prevention related training.
- Coordinate the implementation of closures and restrictions.
- Coordinate assistance to communities in the preparation of community wildfire protection plans.
- Facilitate and coordinate various projects conducted as a part of the National Fire Plan.
- Implementation of various national prevention programs and campaigns, such as Firewise and Smokey Bear.

Forest Industry

Working primarily through the Oregon Forest Industries Council and the Associated Oregon Loggers (AOL), ODF works closely with the forest industry. Recent examples include:

- Refinement of fire prevention standards required for logging operations.
- Annual “operator dinners”, where members of the logging community are brought up to date on new fire prevention regulations and emerging trends in logging related fire causes.

Pacific Northwest Fire Prevention Workshop Committee

This body plans and hosts an annual, week long, gathering of several hundred fire prevention personnel from across the region and, increasingly, from across the nation. The success of this committee is evidenced by their receipt of a national Silver Smokey Bear Award in 2000. The committee is made up of personnel from ODF, the state of Washington, the five federal wildfire agencies, the structural fire services of Oregon and Washington, KOG, and the Oregon Fire Marshal Association.

Prevention Working Group, Fire Program Review

Over the past year, this group reviewed Oregon’s wildfire prevention efforts and made recommendations for improvements. Represented on the group were small woodland owners, large industrial owners, Oregon Forest Resources Institute, AOL, city fire departments, Oregon State University, Insurance Information Service of Oregon & Idaho, OSFM, rural fire departments, USFS and others. The group was co-chaired by representatives from KOG and ODF.

Local fire prevention cooperatives

In many areas of the state, fire prevention cooperatives have been formed to facilitate interagency cooperation in the local delivery of wildfire fire prevention messages and materials. Cooperative membership normally includes structural fire departments, ODF and the USFS. Some cooperatives also have the American Red Cross, local 911 dispatch centers and other emergency oriented organizations as members. Projects commonly undertaken by cooperatives include:

- Presentation of Smokey Bear wildfire prevention programs in area grade schools.
- Presentation of home fire safety, “stop, drop and roll” and “exist drills in the home” (EDITH) programs in local schools.
- Establishment of hunter education booths, on the opening weekend of hunting season, to make hunter aware of fire prevention practices.
- Joint staffing of county fair fire prevention displays and booths.
- Joint sponsorship of local special events, such as Smokey Bear day at professional baseball games.
- Fire prevention related training for member agency employees.
- Implementation and delivery of various fire prevention and wildland-urban interface programs and campaigns.

Oregon State Fire Marshal (OSFM)

ODF often and frequently works with OSFM on a variety of initiatives. Perhaps the largest ongoing such initiative is the implementation of the Oregon Forestland-Urban Interface Fire Prevention Act (aka Senate Bill 360), of which OSFM was a co-sponsor. In addition to working together on many statewide and regional fire prevention related groups, the two agencies have recently:

- Jointly sponsored, with KOG, a Wildfire Awareness Week proclamation from the Governor.
- Worked together to assist local communities in the completion of community wildfire protection plans.

Oregon Interagency Hazard Mitigation Team

This organization, established by the Oregon Department of Homeland Security, meets monthly to share information about all types of natural hazard, including wildfire. Membership includes a wide diversity of state agencies. The team recently completed development of the state’s Natural Hazards Mitigation Plan, which included a chapter on Wildland-Urban Interface Wildfire. Other chapters, such as those dealing with volcanic hazards and windstorms, also related to fire prevention issues.

Oregon Department of Parks and Recreation (ODPR)

In addition to assisting ODPR with campground fire safety, during the summer months, ODF has recently been working with ODRP to enhance wildfire prevention on the ocean shore. Also involved in this

recent effort has been OSFM, several rural fire protection districts and KOG.

Oregon Department of Justice (DOJ)

ODF works extensively with DOJ on efforts related to changing people's unacceptable fire prevention behavior, when such behavior has resulted in an escaped wildfire. DOJ assists ODF in collecting the costs of suppressing these fires, from the negligent parties. DOJ has also assisted with specific projects, such as the 2003 ground breaking effort to prevent the Union Pacific Railroad from engaging in a continuing pattern of fire starting activities.

Oregon State Police (OSP)

OSP and ODF frequently join forces to carry out wildfire prevention efforts. Such efforts include:

- The annual, full time assignment of two OSP troopers to conduct wildfire arson prevention programs across the state, during fire season.
- Joint fire investigation training.
- Assisting ODF to outfit and operate a fire investigation vehicle.
- Cooperative investigation of fires. The investigation of fires related to arson is headed by OSP while the investigation of fires related to other causes is normally headed by ODF.

Oregon Department of Transportation (ODOT)

In recent years, ODOT and ODF have increasingly worked together to deliver the wildfire prevention messages to motorists, primarily through the use of ODOT's fixed and mobile variable message reader boards.

Keep Oregon Green Association (KOG)

KOG and ODF have history of joint collaboration, which spans the last 65 years. KOG is currently collocated with ODF in Salem and receives extensive direct support from the agency. In addition to working together on many statewide and regional fire prevention related groups, the two organizations routinely and regularly conduct fire prevention programs, campaigns and media offerings.

City and Rural Fire Departments

Especially at the local level, ODF often works with local fire departments to carry out wildfire prevention activities. One ongoing example is the Fire Free campaign in central Oregon. Headed by the Bend Fire Department, ODF has assisted with the conduct and expansion of this award winning and highly successful wildfire mitigation and prevention program. Often, the agencies work together on activities under the auspices of the local fire prevention cooperative.

County and City Governments

Increasingly, ODF has been working with local governments on wildfire prevention. On a statewide basis, three of the major such efforts have been:

- Implementation of Oregon's Forestland-Urban Interface Fire Protection Act (Senate Bill 360)
- Preparation of community wildfire protection plans
- Creation of wildfire hazard zones

National level involvement

ODF is represented on several committees working at the national level, through the National Wildfire Coordinating Group. Each of these committees has members from the federal wildfire agencies, the National Association of State Foresters, and others:

- Wildland Fire Education Working Team, which is responsible for the development wildfire prevention related materials and programs.
- Fire Investigation Working Team – which is responsible for the development of training programs and standards related to wildfire investigation.

¹ Oregon Department of Forestry. 2005. *National Fire Plan - Pacific Northwest Interagency: Grant Opportunity Summaries*. <<http://oregon.gov/ODF/FIRE/docs/NatnlFirePlanGrantSummary.pdf>>.

² Fire Prevention and Interagency Cooperation information developed by Rick Rogers of the Oregon Department of Forestry.

Glossary

This appendix contains the glossary of terms found in Linn County's CWPP and in other wildfire literature.

Glossary terms were identified through two sources: 1) Firewise.org Glossary and 2) Florida Department of Community Affairs's *Wildfire Mitigation in Florida: Land use planning strategies and best development practices*. Definitions pulled from the Firewise resource are noted in *italics*.

Canopy – *The stratum containing the crowns of the tallest vegetation present (living or dead), usually above 20 feet.*

Combustible – *Any material that, in the form in which it is used and under the conditions anticipated, will ignite and burn.*

Crown Fire – *A fire that advances from top to top of trees or shrubs more or less independent of a surface fire.*

Debris Burning Fire – *In fire suppression, a fire spreading from any fire originally ignited to clear land or burn rubbish, garbage, crop stubble, or meadows (excluding incendiary fires).*

Defensible Space – *An area, typically a width of 30 feet or more, between an improved property and a potential wildfire where the combustibles have been removed or modified.*

Duff – *The layer of decomposing organic materials lying below the litter layer of freshly fallen twigs, needles and leaves and immediately above the mineral soil.*

Escape Route – *Route away from dangerous areas on a fire; should be preplanned.*

Evacuation – *The temporary movement of people and their possessions from locations threatened by wildfire.*

Exposure – *(1) Property that may be endangered by a fire burning in another structure or by a wildfire. (2) Direction in which a slope faces, usually with respect to cardinal directions. (3) The general surroundings of a site with special reference to its openness to winds.*

Fire Behavior – *The manner in which a fire reacts to the influences of fuel, weather, and topography.*

Fire Department – Any regularly organized fire department, fire protection district or fire company regularly charged with the responsibility of providing fire protection to the jurisdiction.

Fire Hazard – A fuel complex, defined by volume, type condition, arrangement, and location, that determines the degree of ease of ignition and of resistance to control.

Fire History – The chronological record of the occurrence of fire in an ecosystem or at a specific site. The fire history of an area may inform planners and residents about the level of wildfire hazard in that area.

Fire Prevention – Activities, including education, engineering, enforcement and administration, that are directed at reducing the number of wildfires, the costs of suppression, and fire-caused damage to resources and property.

Fire-Proofing – Removing or treating fuel with fire retardant to reduce the danger of fires igniting or spreading (e.g., fire-proofing roadsides, campsites, structural timber). Protection is relative, not absolute.

Fire Protection – The actions taken to limit the adverse environmental, social, political and economical effects of fire.

Fire Resistant Roofing – The classification of roofing assemblies A, B, or C as defined in the Standard for Safety 790, Tests for Fire Resistance of Roof Covering Materials 1997 edition.

Fire Resistant Tree – A species with compact, resin-free, thick corky bark and less flammable foliage that has a relatively lower probability of being killed or scarred by a fire than a fire sensitive tree.

Fire Retardant – Any substance except plain water that by chemical or physical action reduces flammability of fuels or slows their rate of combustion.

Fire Triangle – Instructional aid in which the sides of a triangle are used to represent the three factors (oxygen, heat, and fuel) necessary for combustion and flame production; removal of any of the three factors causes flame production to cease.

Firebrands – Any source of heat, natural or human made, capable of igniting wildland fuels. Flaming or glowing fuel particles that can be carried naturally by wind, convection currents, or by gravity into unburned fuels. Examples include leaves, pine cones, glowing charcoal, and sparks.

Firefighter – A person who is trained and proficient in the components of structural or wildland fire.

Firewise Construction – The use of materials and systems in the design and construction of a building or structure to safeguard against the spread of fire within a building or structure and the spread of fire to or from buildings or structures to the wildland-urban interface area.

Firewise Landscaping – Vegetative management that removes flammable fuels from around a structure to reduce exposure to radiant heat. The flammable fuels may be replaced with green lawn, gardens, certain individually spaced green, ornamental shrubs, individually spaced and pruned trees, decorative stone or other non-flammable or flame-resistant materials.

Flammability – The relative ease with which fuels ignite and burn regardless of the quantity of the fuels.

Fuel(s) – All combustible material within the wildland-urban interface or intermix, including vegetation and structures.

Fuel Condition – Relative flammability of fuel as determined by fuel type and environmental conditions.

Fuel Loading – The volume of fuel in a given area generally expressed in tons per acre.

Fuel Management/Fuel Reduction – Manipulation or removal of fuels to reduce the likelihood of ignition and to reduce potential damage in case of a wildfire. Fuel reduction methods include prescribed fire, mechanical treatments (mowing, chopping), herbicides, biomass removal (thinning or harvesting of trees, harvesting of pine straw), and grazing. Fuel management techniques may sometimes be combined for greater effect.

Fuel Modification – Any manipulation or removal of fuels to reduce the likelihood of ignition or the resistance to fire control.

Ground Fuels – All combustible materials such as grass, duff, loose surface litter, tree or shrub roots, rotting wood, leaves, peat or sawdust that typically support combustion.

Hazard – The degree of flammability of the fuels once a fire starts. This includes the fuel (type, arrangement, volume, and condition), topography and weather.

Hazardous Areas – Those wildland areas where the combination of vegetation, topography, weather, and the threat of fire to life and property create difficult and dangerous problems.

Hazard Reduction – Any treatment of living and dead fuels that reduces the threat of ignition and spread of fire.

Herbicide – Any chemical substance used to kill or slow the growth of unwanted plants.

Human-caused Fire – Any fire caused directly or indirectly by person(s).

Human-caused Risk – The probability of a fire ignition as a result of human activities.

Ignition Probability – Chance that a firebrand will cause an ignition when it lands on receptive fuels.

Initial Attack – The actions taken by the first resources to arrive at a wildfire to protect lives and property, and prevent further extension of the fire.

Ladder Fuels – Fuels that provide vertical continuity allowing fire to carry from surface fuels into the crowns of trees or shrubs with relative ease.

Mechanical Treatment(s) – Ways to reduce hazardous fuels for the purpose of wildfire prevention.

Mitigation – Action that moderates the severity of a fire hazard or risk.

Noncombustible – A material that, in the form in which it is used and under the conditions anticipated, will not aid combustion or add appreciable heat to an ambient fire.

Overstory – That portion of the trees in a forest which forms the upper or uppermost layer.

Peak Fire Season – That period of the fire season during which fires are expected to ignite most readily, to burn with greater than average intensity, and to create damages at an unacceptable level.

Preparedness – (1) Condition or degree of being ready to cope with a potential fire situation. (2) Mental readiness to recognize changes in fire danger and act promptly when action is appropriate.

Prescribed Burning – Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions, which allows the fire to be confined to a predetermined area, and to produce the fire behavior and fire characteristics required to attain planned fire treatment and resource management objectives.

Prescribed Fire – *A fire burning within prescription. This fire may result from either planned or unplanned ignitions.*

Property Protection – *To protect structures from damage by fire, whether the fire is inside the structure, or is threatening the structure from an exterior source. The municipal firefighter is trained and equipped for this mission and not usually trained and equipped to suppress wildland fires. Wildland fire protection agencies are not normally trained or charged with the responsibility to provide structural fire protection but will act within their training and capabilities to safely prevent a wildland fire from igniting structures.*

Protection Area – *That area for which a particular fire protection organization has the primary responsibility for attacking an uncontrolled fire and for directing the suppression action. Such responsibility may develop through law, contract, or personal interest of the fire protection agent. Several agencies or entities may have some basic responsibilities without being known as the fire organization having direct protection responsibility.*

Response – *Movement of an individual fire fighting resource from its assigned standby location to another location or to an incident in reaction to dispatch orders or to a reported alarm.*

Retardant – *A substance or chemical agent which reduces the flammability of combustibles.*

Risk – *The chance of a fire starting from any cause.*

Rural Fire District (RFD) – *An organization established to provide fire protection to a designated geographic area outside or areas under municipal fire protection. Usually has some taxing authority and officials may be appointed or elected.*

Rural Fire Protection – *Fire protection and firefighting problems that are outside of areas under municipal fire prevention and building regulations and that are usually remote from public water supplies.*

Slash – *Debris left after logging, pruning, thinning, or brush cutting. Slash includes logs, chips, bark, branches, stumps, and broken trees or brush that may be fuel for a wildfire.*

Slope – *The variation of terrain from the horizontal; the number of feet rise or fall per 100 feet measured horizontally, expressed as a percentage.*

Smoke – *(1) The visible products of combustion rising above a fire. (2) Term used when reporting a fire or probable fire in its initial stages.*

Structure Fire – Fire originating in and burning any part or all of any building, shelter, or other structure.

Structural Fire Protection – The protection of a structure from interior and exterior fire ignition sources. This fire protection service is normally provided by municipal fire departments, with trained and equipped personnel. After life safety, the agency's priority is to keep the fire from leaving the structure of origin and to protect the structure from an advancing wildland fire. (The equipment and training required to conduct structural fire protection is not normally provided to the wildland firefighter.) Various taxing authorities fund this service.

Suppression – The most aggressive fire protection strategy, it leads to the total extinguishment of a fire.

Surface Fire – A fire that burns leaf litter, fallen branches and other surface fuels on the forest floor, as opposed to ground fire and crown fire.

Surface Fuel – Fuels lying on or near the surface of the ground, consisting of leaf and needle litter, dead branch material, downed logs, bark, tree cones, and low stature living plants.

Tree Crown – The primary and secondary branches growing out from the main stem, together with twigs and foliage.

Uncontrolled Fire – Any fire which threatens to destroy life, property, or natural resources, and (a) is not burning within the confines of firebreaks, or (b) is burning with such intensity that it could not be readily extinguished with ordinary, commonly available tools.

Understory – Low-growing vegetation (herbaceous, brush or reproduction) growing under a stand of trees. Also, that portion of trees in a forest stand below the overstory.

Urban Interface – Any area where wildland fuels threaten to ignite combustible homes and structures.

Volunteer Fire Department – A fire department of which some or all members are unpaid.

Water Supply – A source of water for firefighting activities.

Wildfire – An unplanned and uncontrolled fire spreading through vegetative fuels, at times involving structures.

Wildland – An area in which development is essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered.

Wildland Fire Protection – The protection of natural resources and watersheds from damage by wildland fires. State and Federal forestry or land management agencies normally provide wildland fire protection with trained and equipped personnel. (The equipment and training required to conduct wildland fire protection is not normally provided to the structural fire protection firefighter.) Various taxing authorities and fees fund this service.

Wildland-Urban Interface – The zone where structures and other human development meets or intermingles with undeveloped wildland fuels and other natural features.

Wildland-Urban Interface – Any area where wildland fuels threaten to ignite combustible homes and structures.