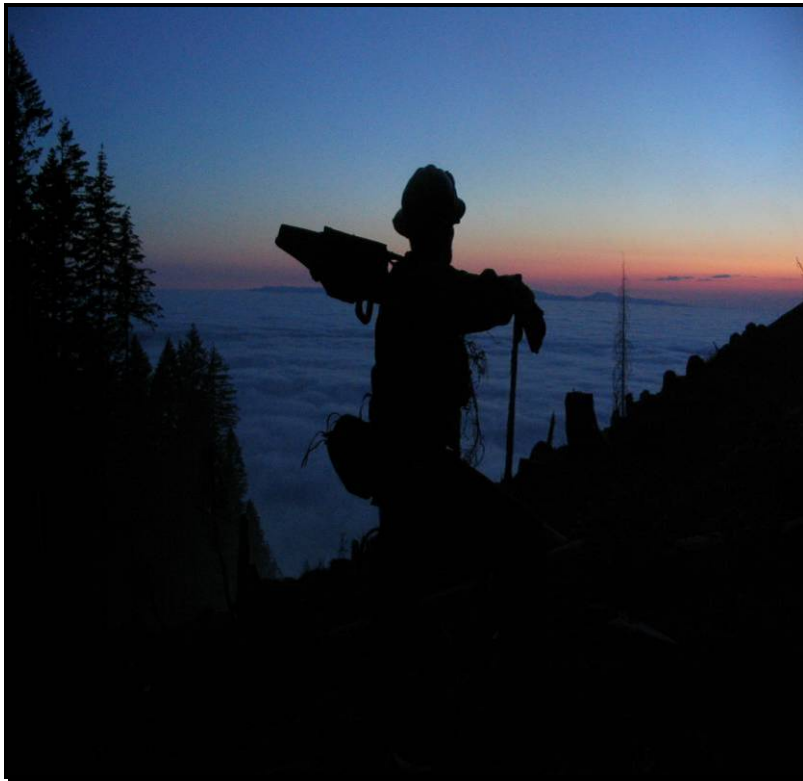


Benton County, Oregon

Community Wildfire Protection Plan **Appendices**

Adopted by the Benton County Board of Commissioners
June 2009



North Grass Mountain Fire, Benton County, Oregon 2006

Acknowledgments

This Community Wildfire Protection Plan represents the efforts and cooperation of a number of organizations and agencies working together to improve preparedness for wildfire events while reducing factors of risk.



West Oregon Forest Protective Association



To obtain copies of this plan contact:

Chris Bentley, Project Coordinator
 Benton County Community Development Department
 360 SW Avery Avenue
 Corvallis, Oregon 97330

Phone: 541-766-6293
 Fax: 541-766-6891

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Appendix 1

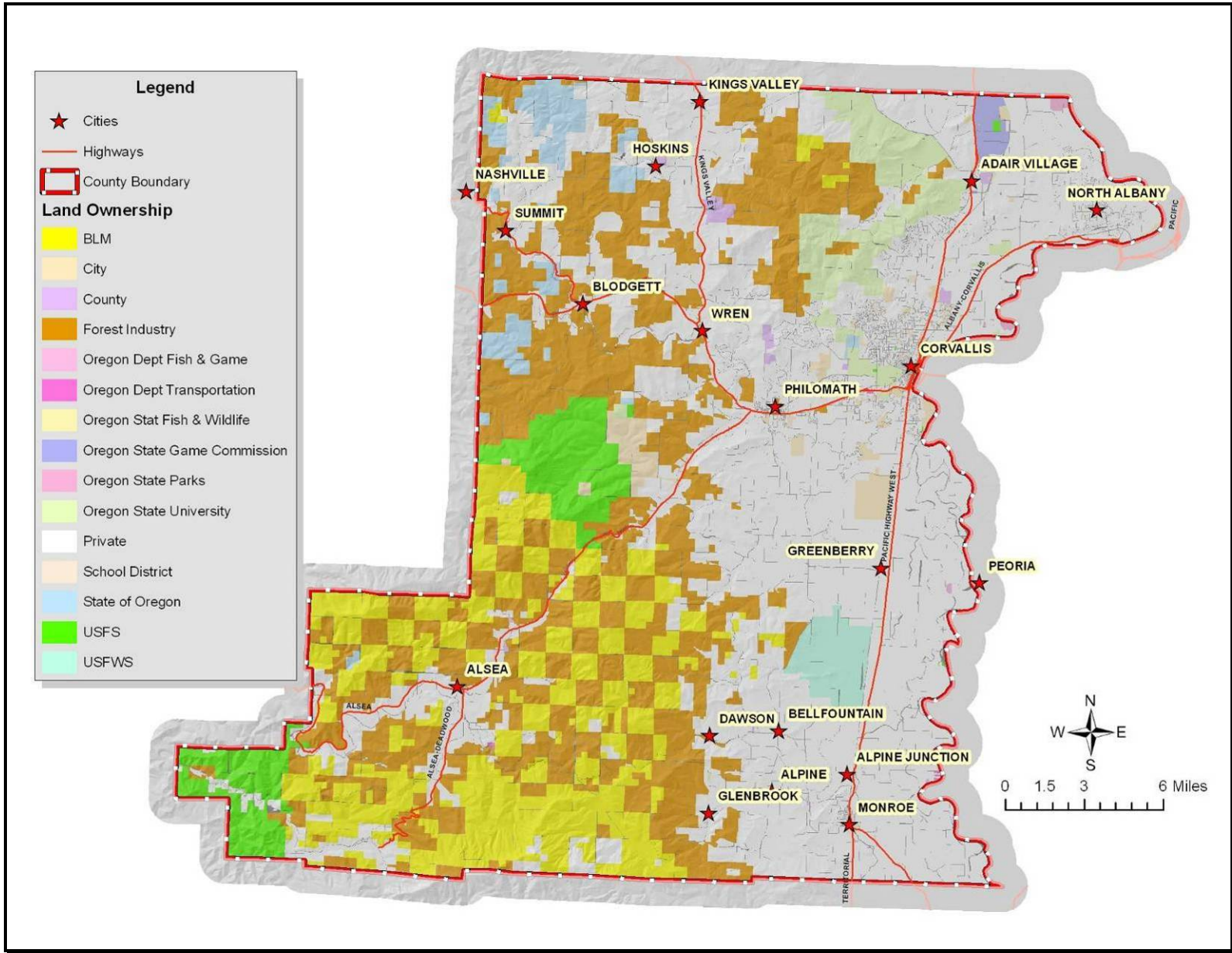
Mapping Products

Northwest Management, Inc.

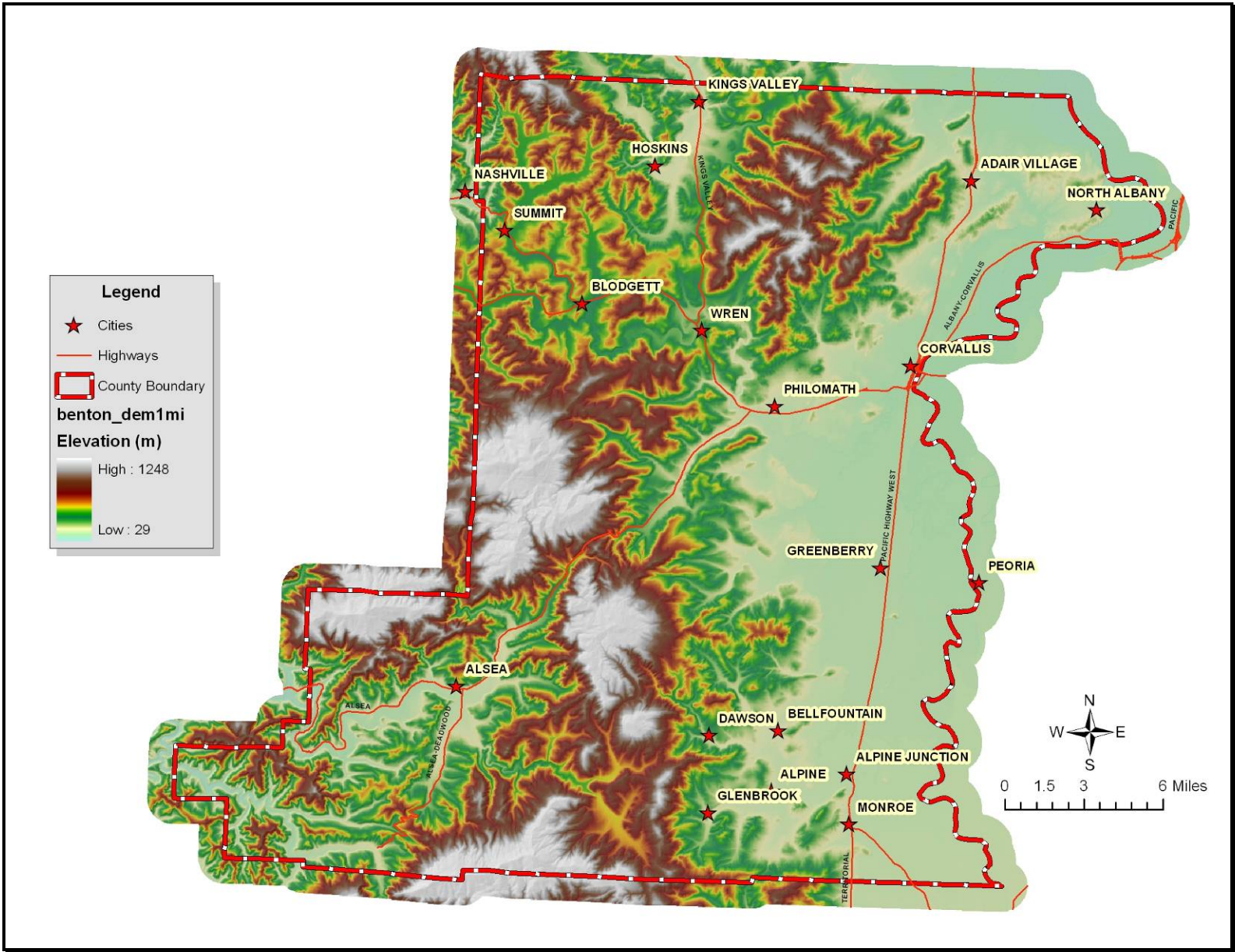
233 East Palouse River Dr.
P.O. Box 9748
Moscow, ID 83843
208-883-4488
www.Consulting-Foresters.com

The information on the following maps was derived from digital databases held by Northwest Management, Inc.. Care was taken in the creation of these maps, but all maps are provided “as is” with no warranty or guarantees. Northwest Management, Inc. cannot accept any responsibility for errors, omissions, or positional accuracy, and therefore, there are no warranties accompanying this product. Although information from land surveys may have been used in the creation of this product, in no way does this product represent or constitute a land survey. Users are cautioned to field verify information on this product before making any decisions.

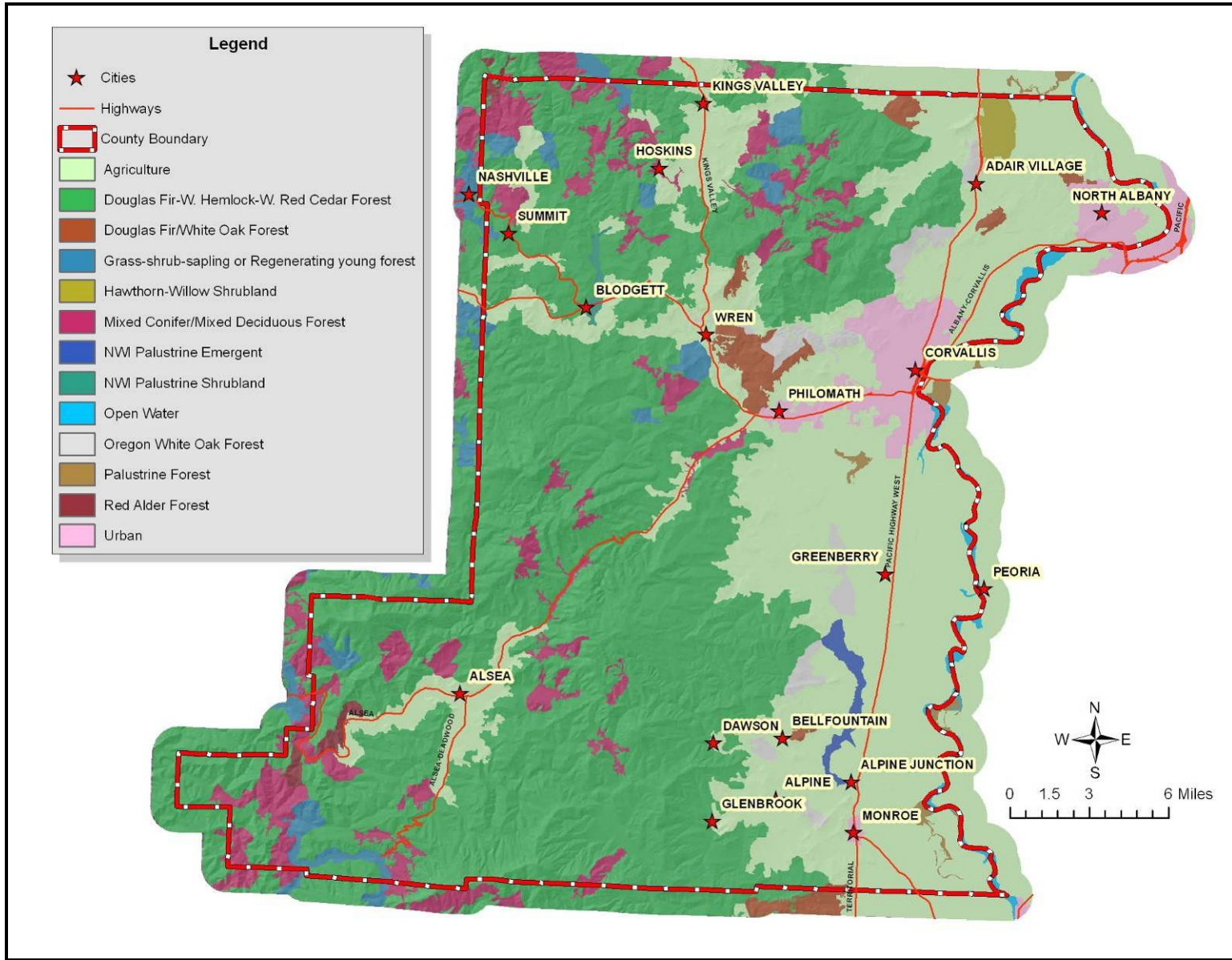
Land Ownership Map



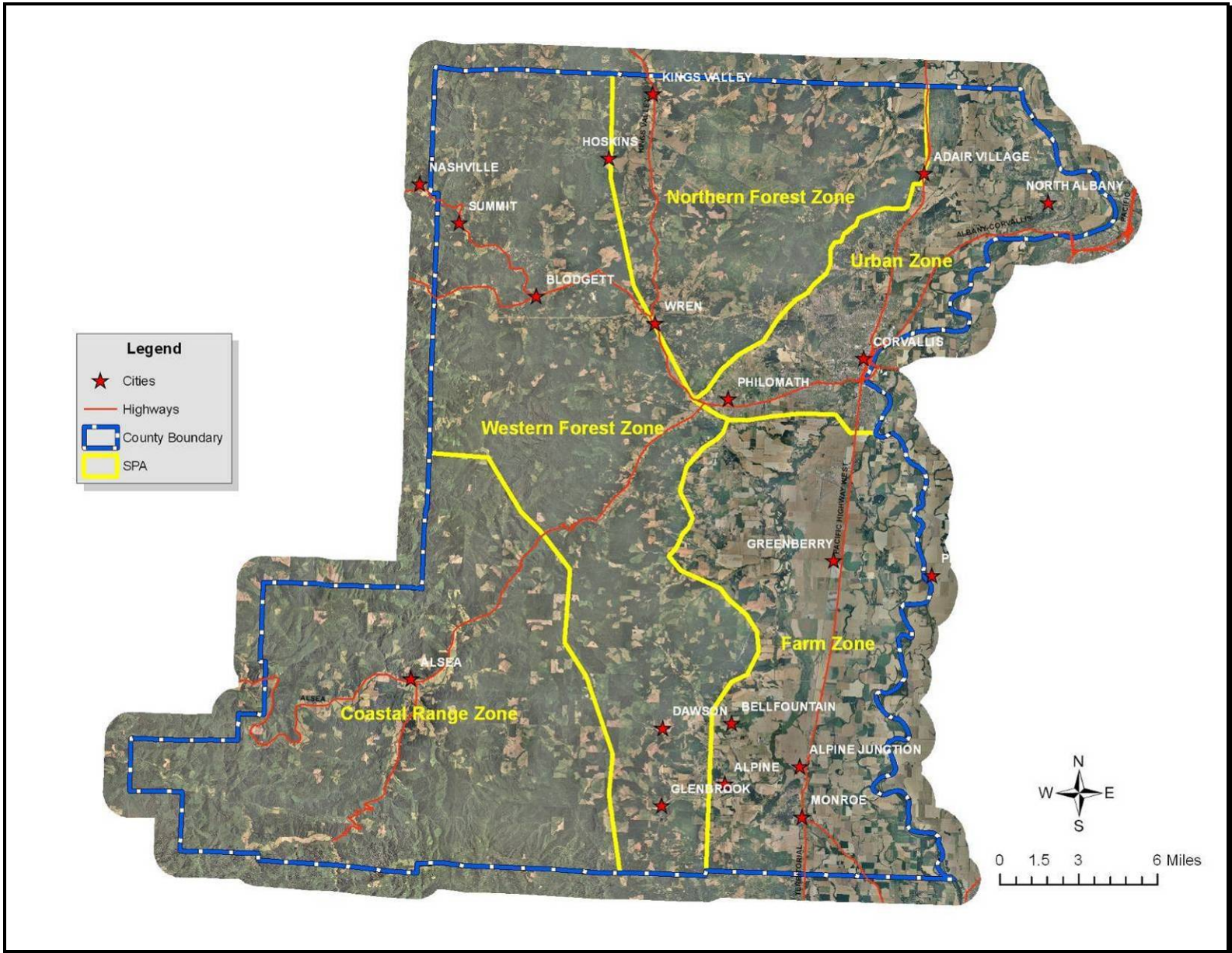
Elevation Map



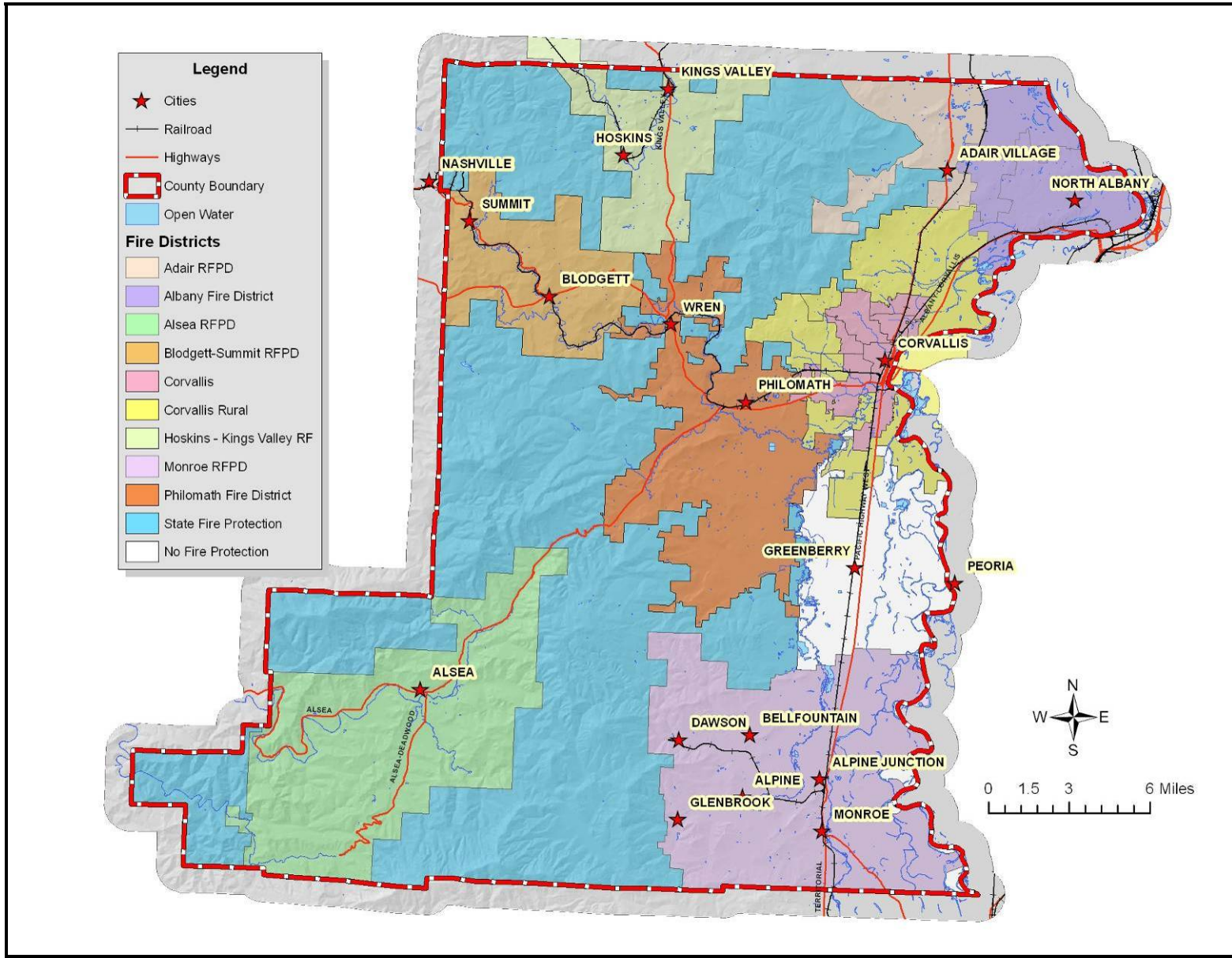
Vegetative Cover Map



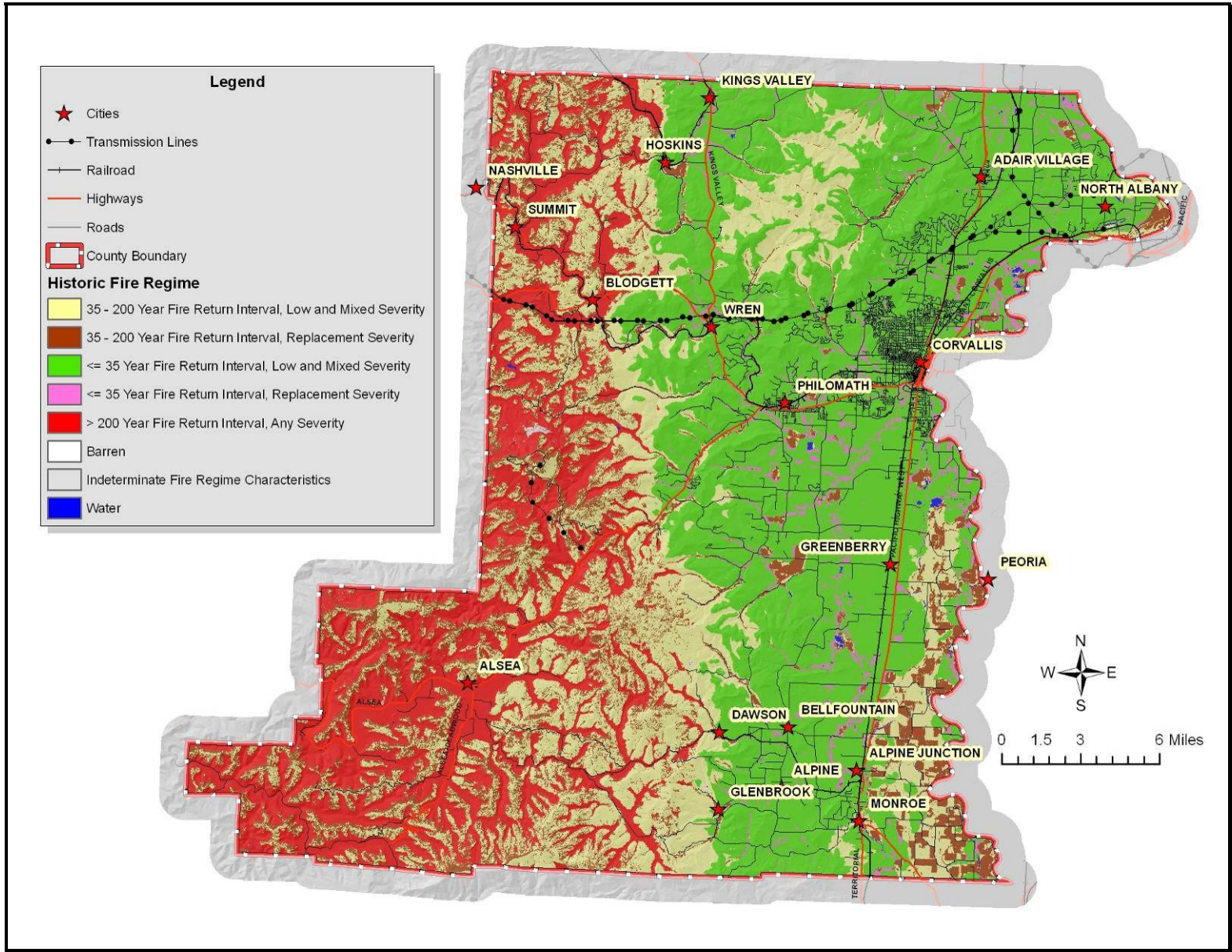
Strategic Planning Areas



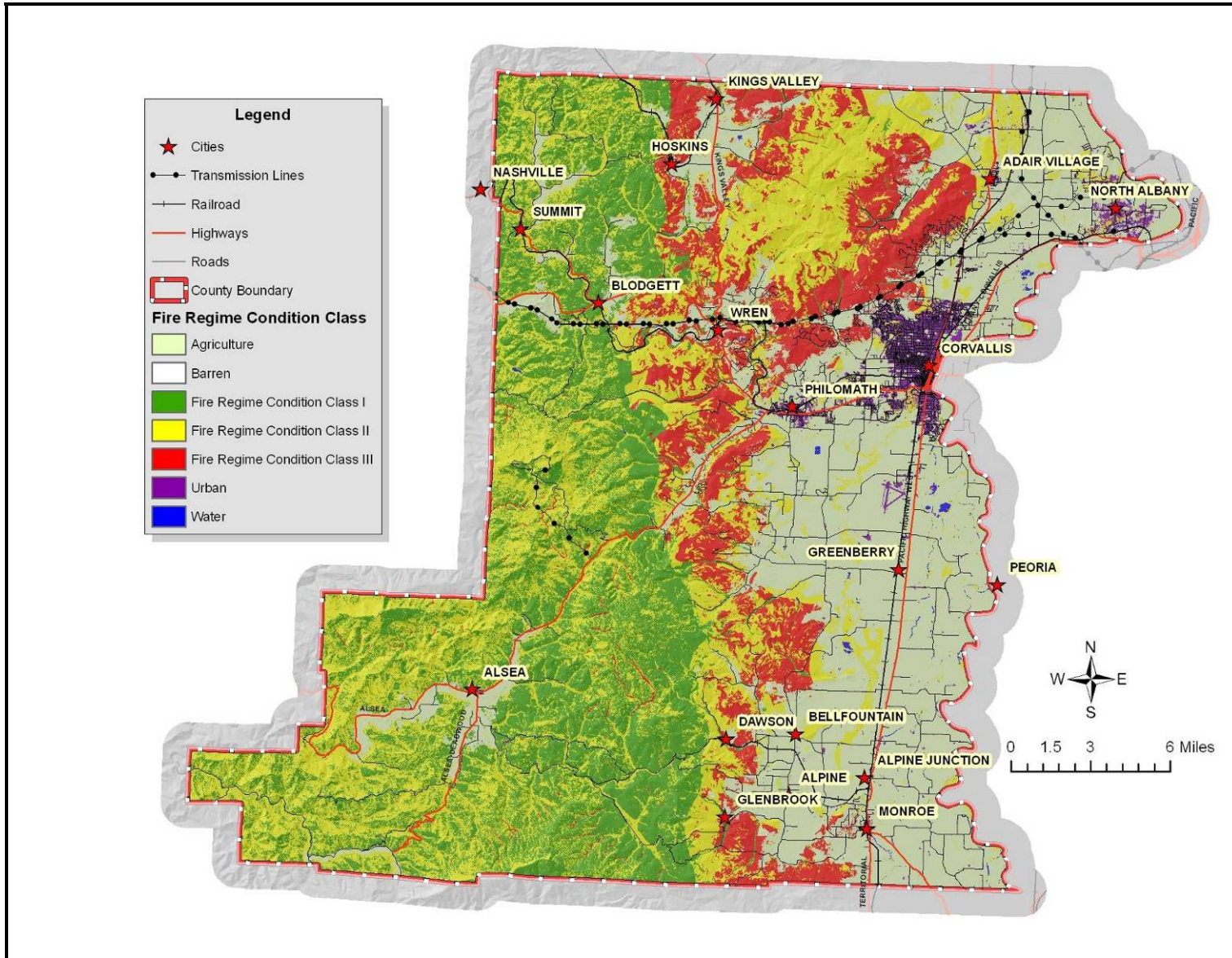
City and Rural Fire Protection Boundary Map



Historic Fire Regime Map

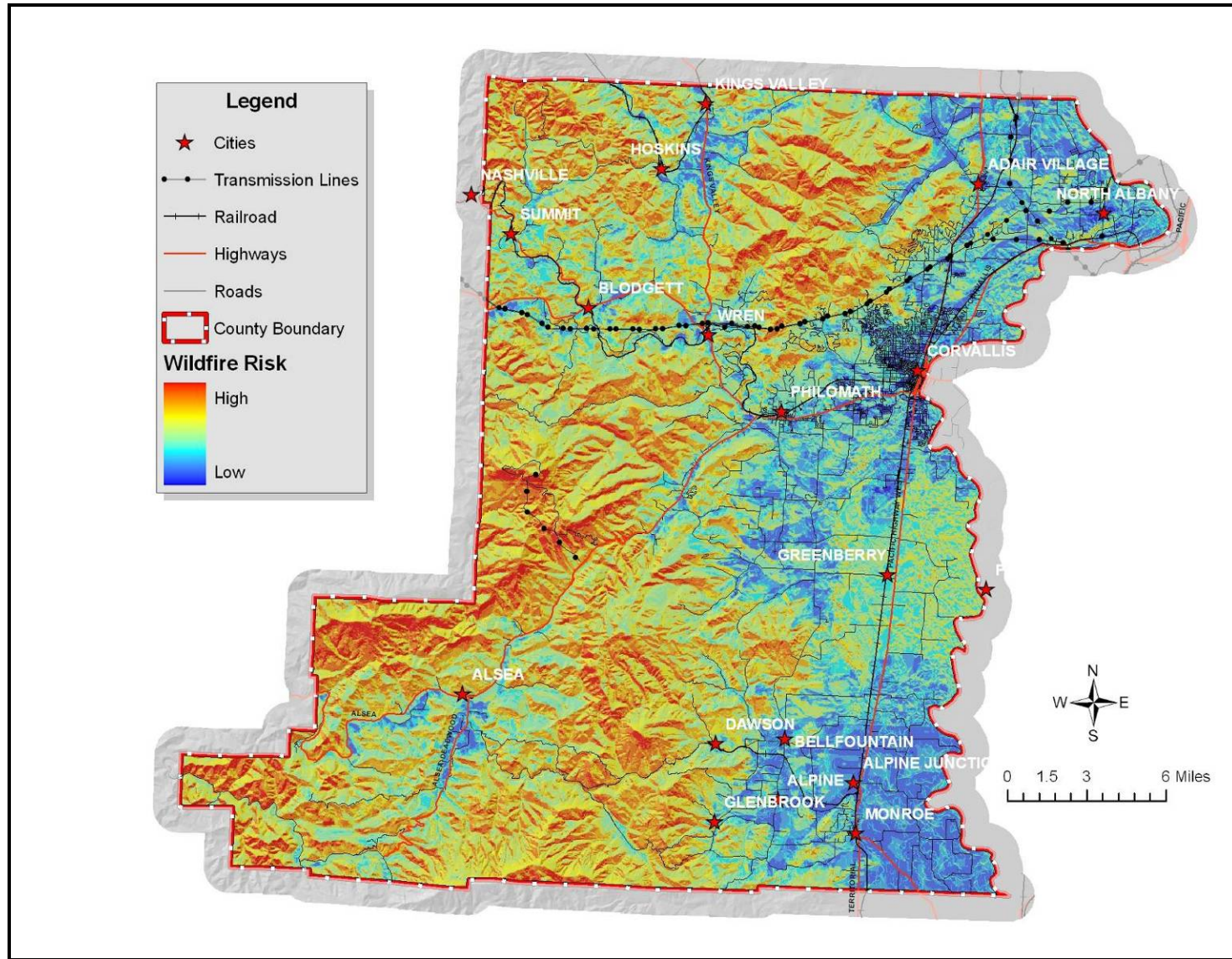


Fire Regime Condition Class Map



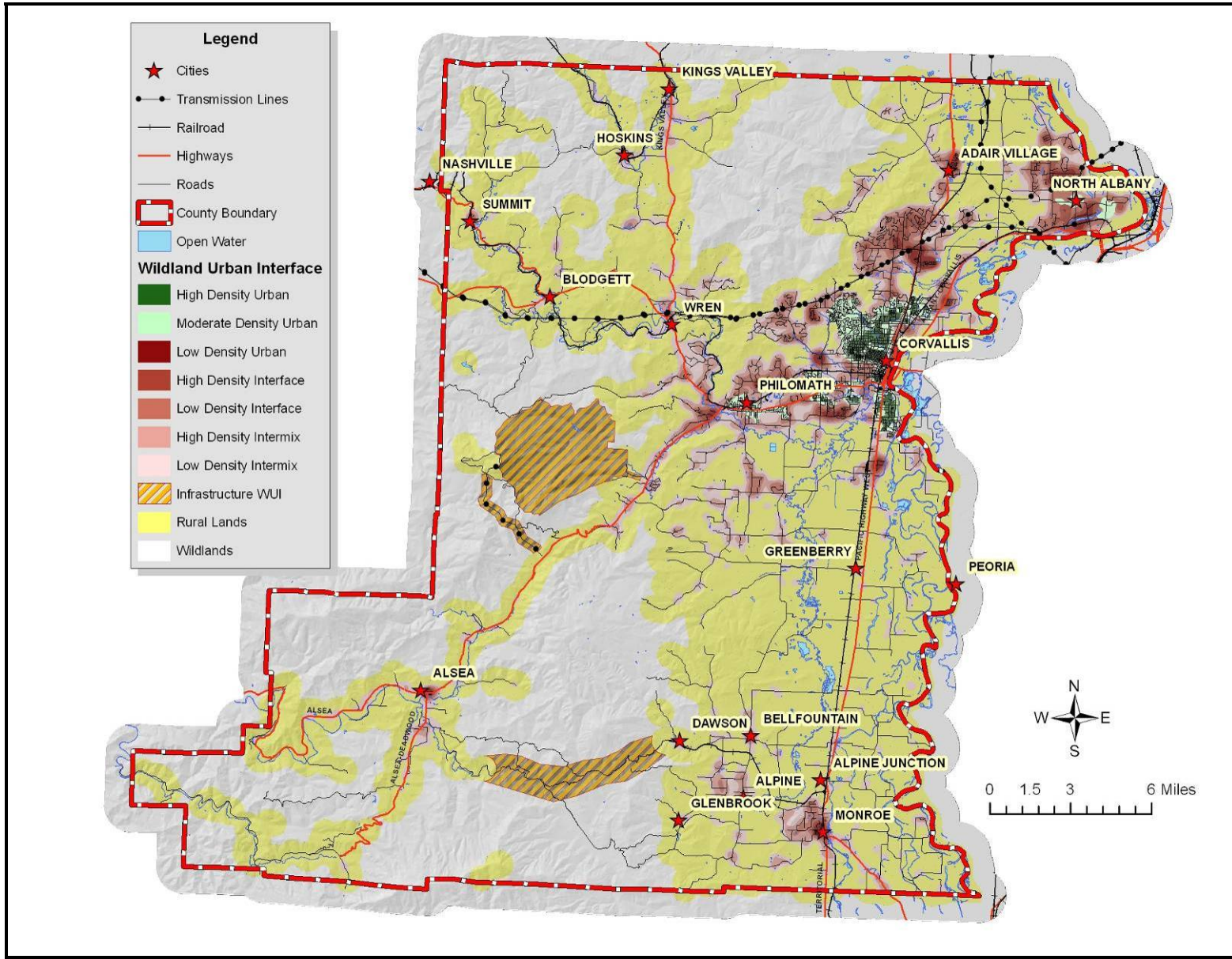
**A complete explanation of the Fire Regime Condition Class model can be found on page 38 of the CWPP and page 37 of these Appendices.

Relative Fire Risk Map

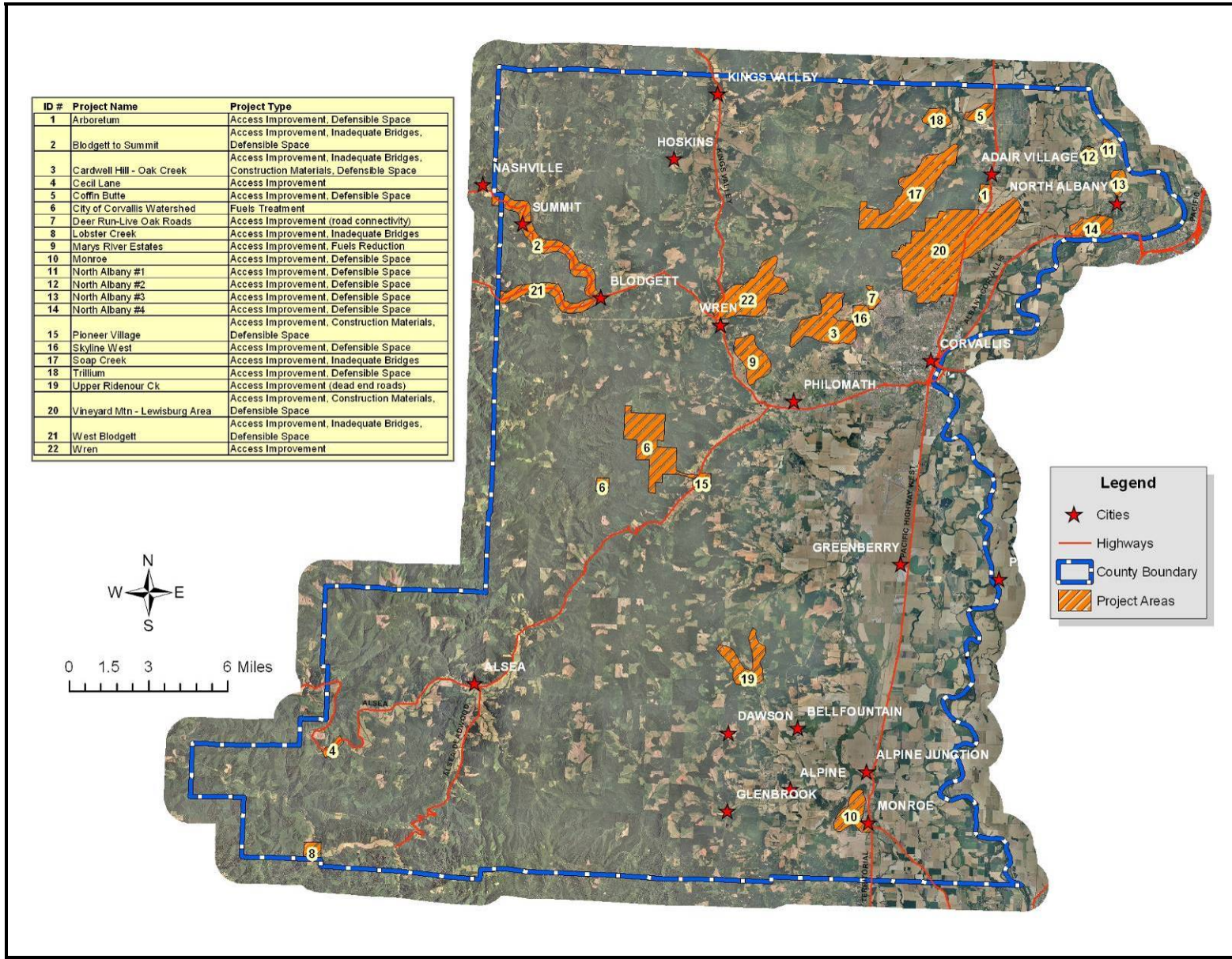


** This analysis is meant to only approximate the relative fire risk in Benton County based solely on the variables used and may differ dramatically from actual conditions on the ground. This assessment is not site-specific.

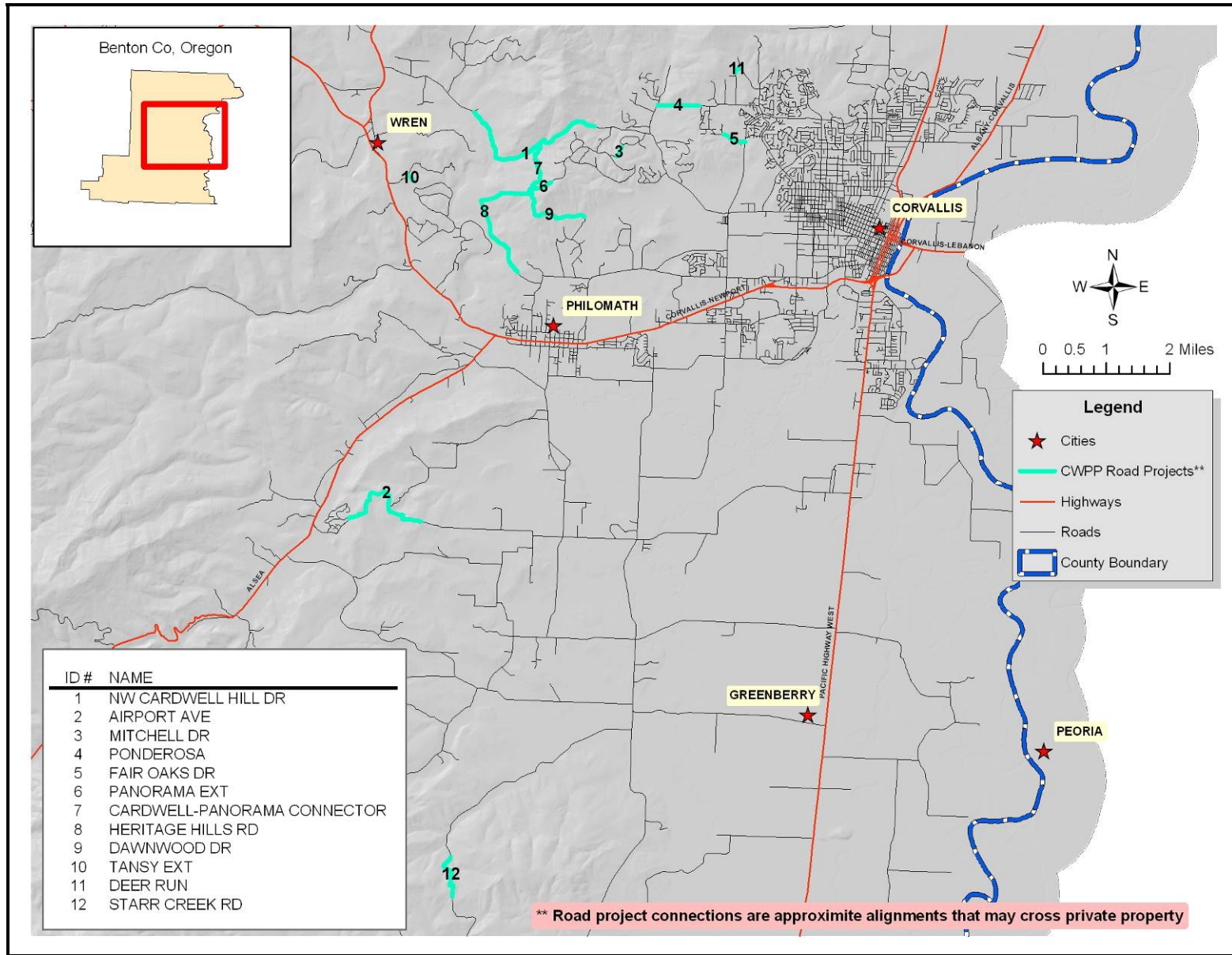
Wildland Urban Interface Map



Proposed Treatment Area Map



Benton County Public Works' Proposed Access Improvement Projects



Appendix 2

Documenting the Planning Process

Documentation of the planning process, including public involvement, is necessary to meet FEMA's DMA 2000 requirements (44CFR§201.4(c)(1) and §201.6(c)(1)). This appendix includes the minutes taken at planning committee meetings, a record of published articles regarding the CWPP, and the presentation given at local public meetings.

Planning Committee Meeting Minutes

June 26th, 2008 – Benton County Community Development Office

Agenda Item #1 – Introduction:

Chris Bentley, Benton County Community Wildfire Protection Plan (CWPP) coordinator, opened the meeting and introduced Tera King and Vaiden Bloch from Northwest Management Inc. (NMI), the consultants selected to assist the committee in developing the County's CWPP. Chris gave an overview of the purpose of the CWPP and how it relates to previous planning and outreach efforts conducted in the county, specifically the FRIED initiative. FRIED stands for Fire Risk Implementation and Education for Development. The overview was followed by a round table introduction of the committee members.

Northwest Management distributed several handouts prepared for the meeting.

Agenda Item #2 – Northwest Management Presentation:

In order to give the committee an overview of the CWPP planning process, NMI prepared a PowerPoint presentation that went through the steps that will be used in developing the plan. The following items were outlined in the presentation

- Purpose of the CWPP
- Planning guidelines
- Firewise communities standards
- Major components of the document
- The Wildland Urban Interface and how it will be defined
- Types of projects to be identified
- Public involvement process
- Committee & NMI Responsibilities

The planning committee discussed scheduling of future planning meetings. It was decided that meetings will be held on the 3rd Wednesday of each month at 2:00 pm at the Benton County Community Development office, large conference room, pending the existing room schedule. NMI will attend the monthly meeting of the Benton County Fire Defense Board to give a CWPP progress report. Fire Defense Board meetings are held monthly on the 3rd Thursday of each month at 1:00 pm.\

Agenda Item #3 – Mission, Vision, and Goals Statement:

A template version of potential mission, vision and goals statements was provided for committee review and revision. Committee members were asked to edit the wording of the statements and be prepared for discussion at the July meeting.

Agenda Item #4 – Public Survey and Press Release:

Draft copies of the public mail survey were handed out for review and editing. It was decided that the survey's introduction letter will go out on County letterhead and will be signed by both the County Board of Commissioners and the Fire Defense Board. It was suggested that the letter also include a picture of wildfire to capture attention. The committee was asked to review both the survey letter and questions and be prepared to finalize the document at the July meeting. The survey will be mailed immediately following the next committee meeting.

A draft press release announcing the development of the CWPP planning committee as well as the upcoming survey and public meetings was distributed to the committee for review. NMI asked the committee to review the press release immediately and provide comments to Tera by July 2nd. The committee agreed that all press releases and other public announcements should be reviewed and distributed by the County Public Information Officer.

Agenda Item #5 – Resources and Capabilities:

General resources and capabilities information is needed from all fire fighting entities in the county. The summary form provided by NMI includes a brief description of the district, priority areas, interagency agreements, availability of equipment, and a section to list district needs. NMI asked that this information be provided by the next committee meeting.

NMI will be conducting community risk assessments for discussion at the July committee meeting. Specific areas of the county that are determined to be of high risk or have specific wildland fire related issues need to be identified in the CWPP. NMI will be contacting local fire district representatives to set up meetings and/or tours to identify and discuss specific issues and potential project areas.

Agenda Item #6 – Map Review:

NMI reviewed the GIS data available through the County, maps, and map products that will be used for development of the wildfire risk analysis as well as for display purposes at public meetings. One of the committee's first tasks will be to divide the county into strategic planning areas that will be used to refine the risk analysis process.

Updated and draft maps will be brought to each meeting for review and editing by the committee. Completed maps will be included in the final plan document and all map products and data will be provided to the County upon completion of the plan.

Agenda Item #7 – Task List and Assignments:

Information can be sent to Tera King at NMI.*

1. Send NMI info on existing mitigation programs, planning documents, etc – Committee
2. Review/send edits on Mission, Vision, and Goals Statements by July 16th – Committee
3. Send NMI press release edits by July 2nd – Committee
4. Review public survey and send edits to NMI by July 14th – Committee
5. Send committee all review materials electronically - Tera
6. Conduct community assessments and meet with fire districts - NMI

7. Send NMI completed Resources and Capabilities surveys – Fire Depts & Agencies
8. Send NMI organization logos by the next meeting – Committee

Agenda Item #8 – Adjournment:

The first meeting of the Benton County CWPP planning committee was adjourned at 4:00 pm. The next meeting will be held on July 16th.

July 16th, 2008 – Benton County Community Development Office

Agenda Item #1 – Introduction and Housekeeping:

Chris Bentley brought the meeting to order by welcoming the committee and asking for round table introductions. The committee also watched a brief video highlighting the responsibilities of homeowners to create defensible space around homes in high risk areas and make access to their property safe for firefighters.

There were several housekeeping items on the agenda that were action items from the last meeting.

- Mission, Vision, and Goals Statements – Tera handed out a revised version of the statements and explained what revisions had been made. There was some discussion regarding the order of the goals statements to reflect County priorities as well as two new goals added. Tera will email the revised version of the statements to the committee including the shorter alternatives to the mission and vision statements.
- Public Survey – Tera reviewed the edits made to the document via email responses and asked if there were any further comments or discussion. There were a few minor edits to the questions. The committee discussed the potential of the survey responses to be used as official property assessments by insurance companies. Chris is going to research some of the possibilities to see if there is a way to keep the individual responses out of the public record.
- Press Release – The first CWPP press release has been sent to the County Public Information Officer and should be released within the next week.
- Fire District Summaries – Tera noted that she hadn't received fire district summaries from all of the fire departments yet. This will be an ongoing task.
- Fire District Tours – Tera and Vaiden have schedule tours with several fire department representatives for July 16th and 17th and may be doing more on August 20th and 21st.
- Logos – Tera noted that participants' logos are included on an "Acknowledgements" page in the CWPP, so anyone wishing to display their logo needs to send those to NMI as soon as possible (preferably as an image file).
- Existing Info, Plans, Projects, etc. – If anyone has information on existing or planned wildfire mitigation projects or county documents pertaining to wildland fire (Comp Plan, building codes, etc), please send those to NMI immediately.

Agenda Item #2 – Public Meetings:

Five public meetings have been tentatively scheduled for September 15th-19th. Potential venues include the Wren Community Hall, the Corvallis Fire Department Station #1, the Alsea Library, the Adair Officer's Club, and the Monroe Fire Station. Tera will work on scheduling the

meetings and producing a flyer advertisement for the Benton County Fair booth. The meetings will also be advertised in the local newspapers and on the Benton County website.

Agenda Item #3 – Strategic Planning Areas:

The discussion regarding the breakdown of the County into smaller strategic planning areas for the purpose of drafting descriptive narratives of the wildland fire risk was continued from the last meeting. Vaiden produced a map showing the County's Maintenance areas; however, the committee chose to draw SPA boundaries based on other geographic and planning boundaries. Vaiden will work on producing an updated map. Tera and Vaiden will also be drafting the community assessments to be available at the August meeting.

Agenda Item #4 – Wildland Urban Interface:

NMI displayed a structure density map to begin the discussion of mapping the boundaries of the wildland urban interface. Several issues regarding the WUI were discussed including using the WUI boundary to regulate WUI building codes; however, it was decided that more information and time was needed before lines were actually drawn. NMI will provide some additional information and WUI discussion points for the next meeting. Chris also has some additional models that may be of assistance.

Agenda Item #5 – Project Mapping:

At the end of the meeting, the committee gathered around the ownership map to begin the process of mapping project and/or treatment areas. Several potential projects were mapped and discussed. These polygons will be digitized and mapped for a draft map display at the County Fair booth. More projects will likely be added after the tours and at the August meeting.

Agenda Item #6 – Task List and Assignments:

Information can be sent to Tera King at NMI.*

1. Send NMI local fire pictures to be used in survey, flyers, etc. by July 25th - Committee
2. Send NMI info on existing mitigation programs, planning documents, etc – Committee
3. Review/send edits on Mission, Vision, and Goals Statements by August 15th – Committee
4. Review public survey and send edits to NMI by July 30th – Committee
5. Draft community assessments – NMI
6. Develop public meeting flyer for Fair Booth – Tera
7. Create Ownership map showing WUI boundary - NMI
8. Send NMI completed Resources and Capabilities surveys – Fire Depts & Agencies
9. Send NMI organization logos by the next meeting – Committee

Agenda Item #7 – Adjournment:

The second meeting of the Benton County CWPP planning committee was adjourned at 4:45 pm. The next meeting will be held on August 20th at 2pm in the large conference room of the Benton County Community Development office (same location).

August 20th, 2008 – Benton County Community Development Office

Agenda Item #1 – Introduction:

Chris opened the meeting and reported that Benton County lost their Public Information Officer and that she would be developing a CWPP-specific website that was linked to the County's site. Pictures and fire district information should be sent to her so she can post them to the new site.

Tera handed out the meeting agenda and several items before welcoming the committee and beginning the meeting.

Agenda Item #2 – Housekeeping Items:

The committee reviewed the mission, vision, and goals statement containing the suggested alternative wording changes. Through committee collaboration, both the alternative mission and vision statements were selected. Chris suggested adding an item #15 under Goals that would be worded “Identify areas of inadequate fire protection, such as gaps in district coverage, and develop solutions”. Discussion followed that fire districts were in favor of covering gaps in areas not protected if it was through annexation of whole areas rather than a leap frog or checker board pattern of protection areas.

NMI is in the process of sending out public surveys to 300 randomly selected addresses. Addresses within the city limits of Corvallis and North Albany were excluded from the sample.

NMI has received the resource and capabilities information from most of the fire districts, ODF and USFS. A list of departments that still need to provide the information is included on the agenda handed out and will be updated as the information comes in.

NMI still needs logos from several fire departments and agencies to include in the acknowledgements section of the Plan.

Agenda Item #3 – Public Meetings:

Public Meetings are scheduled for the week of September 15-18th, 2008:

- Monroe Fire Station on 9/15 at 6:30 pm.
- Alsea Community Library on 9/16 at 6:30 pm
- Wren Community Hall on 9/17 at 6:30 pm
- Corvallis Public Library on 9/18 at 2:00 pm
- Adair Village Officer’s Clubhouse on 9/18 at 6:30 pm

The meetings will start with a short slideshow presentation with explanation of maps and other materials being developed by the committee. Committee members that are available to attend any or all meetings are encouraged to participate in the discussion as well as answer questions.

It was suggested that the public meeting flyer be revised to include more information on purpose of the project as reflected in the mission, vision, and goals statements. NMI will work on the revision and send it out for review to committee members before it is distributed.

Agenda Item #4 – Community Assessments:

NMI handed out the draft community assessments for committee members to review and provide input/edits. At the last meeting the committee divided the county into 5 strategic planning areas for assessment. NMI has toured the areas and provided in the draft a narrative assessment of those planning areas. NMI requests that the committee provide feedback and edits by September 11th, so the revised draft will be available for the September 17th meeting.

Agenda Item #5 – Wildland Urban Interface:

The committee held a lengthy discussion on defining the county WUI. NMI provided information on the definition as stated in HFRA in comparison with using the term for defining building code boundaries. Various methods for defining the WUI and other potential features the committee can include in the County’s definition and boundary were discussed. NMI

displayed a draft of the Benton County WUI developed from a population density model that identifies the areas where people live based on structure density. The committee is in favor of using this identified area as the County WUI with some editing and inclusion of critical infrastructure that was pointed out. Critical infrastructure to add includes the Corvallis watershed, all major access/escape routes, major communication repeater sites and Mary's Peak electrical transmission route as well as the major transmission route running east west through the north part of the county.

Agenda Item #6 – Risk Assessment Mapping:

NMI provided a handout and showed slides of risk assessment mapping techniques they have done in other county CWPPs as well as the ODF Statewide Total Score Risk Assessment developed to identify communities at risk in Oregon. Benton County would like to have a general wildfire risk assessment performed for the county that will serve as the basis for possibly developing WUI building code boundaries. It was determined that a map based on general slope, aspect, vegetation, access, and fire protection within the proposed WUI would provide adequate information to identify areas of high, medium, and low risk.

Agenda Item #7 – Project Mapping continued:

NMI provided maps and information on all of the projects that have been identified to date by the committee. At last month's CWPP and Fire Defense Board meetings as well as on tours taken with fire districts, specific projects and areas of concern were identified and mapped.

Committee members reviewed the maps, made changes, and added other projects to the list. The maps and lists were taken to the FDB meeting the next day for review. Additional project areas were added at that meeting as well.

Agenda Item #8 – Task List and Assignments:

Information can be sent to Tera King at NMI .*

1. Review Strategic Planning Area Risk Assessments and send NMI comments by Sept. 11 - Committee.
2. Review Project List and send NMI additions or corrections by Sept. 11 -Committee.
3. Send NMI local fire pictures for Public Meeting flyer - Committee
4. Send NMI remaining Fire District Summaries - Blodgett/Summit, Alsea, Adair, & Hoskins/Kings Valley RFPDs
5. Send NMI department/agency logos - Committee
6. Check with George Foster about Alsea area project areas - NMI
7. Make revisions to Mission, Vision, and Goals statements - NMI
8. Revise Public Meeting flyer and send to committee for review - NMI
9. Revise WUI boundary - NMI
10. Develop and apply fire risk model - NMI

Agenda Item #9 – Adjournment:

The meeting was adjourned at 3:55 pm. The next meeting will be held on September 17th at the same location at 2pm.

September 17th, 2008 – Benton County Community Development Office

Agenda Item #1 – Introduction:

Chris Bentley opened the meeting and welcomed committee members in attendance as well as George Crosiar from the Oregon State Fire Marshal's office. Chris gave a brief overview of the public meetings taking place this week and encouraged committee members to attend the remaining meetings to help answer questions.

Tera handed out the meeting agenda and several items before welcoming the committee and beginning the meeting.

Agenda Item #2 – Housekeeping Items:

Tera King (NMI) went over unfinished business and several housekeeping items.

- Approximately 30% of the CWPP public surveys mailed out had been returned. NMI is sending out the final reminder this week, so a final tally and list of concerns can be compiled for review at the October committee meeting.
- NMI received a few comments and corrections to the community assessment section of the plan. This section of the plan will be updated as more information is received from the committee.
- Several fire district summaries have been returned since the last meeting. Districts that still need to send in information are listed on the agenda.
- We still need logos to display in the Plan. If you have a logo and want it included in the list of acknowledgments with the other committee participants, send a digital image or hard copy to Tera right away. All committee participants will be listed whether a logo is received or not.
- Benton County's web page now has a CWPP section describing the planning effort and public meeting schedule. Additional information will be added as the planning process moves forward. The county website as well as other venues will be used to access the draft plan during the public review process. Helpful links will be added that provide access to information on defensible space and fire safe landscaping.

Agenda Item #3 – Draft Chapters:

Tera handed out copies of chapters 1 and 2 for committee review. These chapters are titled "Overview of the Plan" and "Documenting the Planning Process". Comments and edits need to be returned to NMI by October 10, 2008 so that they can be included in the draft plan that will be handed out at the October 15th committee meeting.

Tim O'Neill with Alsea Emergency Management made a presentation to the committee on a proposed project that will be included in the CWPP. The project involves developing a more extensive fire hydrant system in Alsea by upgrading the existing system from 3" supply lines to 6" and extending the lines to areas currently not covered.

Agenda Item #4 – Wildland Urban Interface/SPA Map Update:

NMI revised the WUI map to include areas of critical infrastructure identified at the August committee meeting. These areas include the Corvallis watershed, transmission lines supplying power to the communication site on top of Mary's Peak, and the emergency access route in the southern part of Benton County between Glenbrook and Alsea (South Fork Road).

Several suggestions for revision to the Strategic Planning Area (SPA) boundaries were made at the August committee meeting. NMI showed maps with the suggested changes and asked that the committee come to a consensus on the boundaries so that the community assessment write ups can be finalized. After discussion, the committee determined and agreed on the boundary locations. As CWPP projects are identified and prioritized, they will be organized within SPAs.

Agenda Item #5 – Risk Assessment Mapping:

NMI presented a mapping analysis developed for this project that is intended to show areas of relative wildfire risk within Benton County. The mapping analysis is similar to the statewide analysis conducted by the ODF; however, the Benton County risk model only considers the variables of slope, aspect, vegetation cover type, and existence of fire protection. The committee reviewed a map of the analysis and generally agreed that it adequately identified the areas of high risk of wildfire based on the variables used. In the analysis east and west aspects were given equal weight, but in reality western aspects tend to be hotter and drier than eastern aspects due to extended sun exposure throughout the day. NMI will perform the analysis again with a higher risk rating for the western aspect and send copies of the map to the committee for review.

Agenda Item #6 – Project Mapping continued:

A revised draft Project List was handed out to the committee for review and comment. The list categorizes projects by Policy and Safety, Community and Structures, Infrastructure, Resource and Capability Enhancements and Site Specific Projects identified by location on maps by the committee. Projects that are identified by the public at the public meetings will be added to this list. At the next meeting the committee will be asked to prioritize these projects.

Agenda Item #7 – Task List and Assignments:

Information can be sent to Tera King at NMI.*

1. Send any additional SPA assessment revisions ASAP - Committee
2. Review Project List and send NMI additions or corrections by October 10 -Committee
3. Send NMI remaining Fire District Summaries - Blodgett/Summit, Alesa, & Hoskins/Kings Valley RFPDs
4. Send NMI department/agency logos - Committee
5. Re-run risk assessment model with revisions - NMI
6. Send committee Chapters 1 & 2 electronically - NMI

Agenda Item #8 – Adjournment:

The meeting was adjourned at 3:30 pm. The next meeting will be held on October 15th at the same location at 2pm.

October 15th, 2008 – Benton County Community Development Office

Agenda Item #1 – Introduction:

Chris Bentley opened the meeting by welcoming new faces and talking about the good turn out for the public meetings held in September.

Agenda Item #2 – Housekeeping Items:

Tera opened the group meeting by going over several housekeeping items including missing fire district summaries, logos, and the September public meetings.

A question was asked if any other public involvement was planned. It was explained that that was all of the publicly held meetings, but the next step for public participation would be public review of the draft plan. Also, the public is welcome to submit comments and attend the final adoption hearing with the Board of Commissioners.

Agenda Item #3 – CWPP Draft Review:

Copies of the draft CWPP were handed out to the committee. Tera went over completed sections and discussed general formatting and order of information.

- Information on Marys River CWPP and Starker Forest Mobilization Plan have been added to the plan in section 1.1.5.
- A list of media used for advertising the CWPP was needed, Chris would provide.
- The committee reviewed the summarized public survey responses and discussed the results. Some of the survey responders were confused on which fire district they lived in. In general, the survey indicated that the public felt Benton County had a high risk of wildfire and that there is good effort to undertake mitigation activities.
- Additional data on fire ignitions will be gathered from the State Fire Marshals office in Salem to add to the county wildfire ignition profile section 4.2.1.
- Other large fires that occurred near Benton County will be added in addition to the Tillamook Burn. These include Shady Lane Fire in 87 and the Rock House Fire in Polk County.
- A question was asked if ingress and egress described in section 4.6.4.2 and 4.6.5.2 adequately described the situation in those SPAs. This issue will be discussed at the Fire Defense Board meeting.
- Section 4.7.3 identified current fire district contacts. It was decided that the contacts for the various fire departments would be moved to the appendix section of the plan in a table to allow for ease of looking up information and updating.
- Information on county extension programs and education programs will be added to section 4.9.
- Benton County Planning Dept will be handling future CWPP maintenance and monitoring as described in section 5.1.
- Jeff Powers, Benton County Natural Areas and Parks Dept will provide information on prescribed burning that will be conducted for habitat conservation and requests that it fit within the context of the plan.
- Inclusion of other info. Comment was received on the significance of False Brome as critical wildland fuel type. Although False Brome is present in the county, it is part of the overall grass fuels complex unlike Cheat Grass that occurs in other western states. It was decided that False Brome is not a significant fuel type in Benton County and should not be included in the plan as a risk.

Agenda Item #4 – Prioritization of Projects:

The committee went through a lengthy process of reviewing and identifying responsible organizations and timelines for the various action items identified in Chapter 5 of the CWPP.

Agenda Item #5 – Public Review:

The committee decided that the Commissioners needed to review the plan before it would go out for public review. Depending on receiving comments back from the commissioners, scheduling for public review will be decided at the next meeting.

Agenda Item #6 – Task List and Assignments:

Information can be sent to Tera King at NMI.*

1. Send NMI remaining Fire District Summaries - Blodgett/Summit RFPD
2. Send NMI department/agency logos - Committee
3. Review draft CWPP and send comments by November 14 – Committee
4. Review draft CWPP with Commissioners and ask for comments – Chris Bentley
5. Send NMI list of the media outlets – Chris Bentley
6. Complete prioritization spreadsheet and send to committee – NMI

Agenda Item #7 – Adjournment:

The meeting was adjourned at 4:05 pm. The next meeting will be held on November 19th at the same location at 2pm.

November 19th, 2008 – Benton County Community Development Office

Agenda Item #1 – Introduction:

Chris Bentley, Benton County Community Development opened the meeting and asked for introduction of people in attendance. Jen Warren, ODF, was a new addition to the committee.

Chris indicated that the CWPP website has been updated with photographs submitted by committee members. She also noted that funding recently became available for Fire Wise Communities and CWPP project implementation. Specifically, funds will be available for education, outreach and fuels treatment projects.

Agenda Item #2 – CWPP & Appendices Draft Review:

NMI handed out complete copies of the draft CWPP and accompanying appendices incorporating all suggestions and changes to date.

NMI went over review of the draft and the various changes made based on recent comments submitted by committee members. Major revisions made or suggested by the committee included:

- Shortened Table of contents
- Identify all fire departments as subheading under the Benton County Fire Defense Board
- Add Western Oregon Protective Association as member of the committee, and add description in document
- Add narrative at beginning of document on “how to use this plan”
- NMI is in process of acquiring OSFM historical fire data, and will add it to chapter 4 along with ODF fire history data.
- Narrative of Tillamook and 1987 wild fires should show, in addition to acres burned, square miles burned, in order for the reader to put the size in perspective.
- In the Historic Fire Regime section, explain what HFR is, and put the existing narrative on the process in the appendix.

- Rewrite fire department summaries to gain consistency
- Add the process used for risk assessment.
- Reformat SPA section to include a little map showing the SPA under discussion. Do this also with the fire districts summary and add the district logo.

Agenda Item #3 – Prioritization of Projects:

The committee reviewed the action items and made a few minor changes. It was also determined that the specific project types and locations identified in each SPA were vague and needed to be more specifically identified. NMI will request additional information from each fire chief to determine the specific location and project identified.

Agenda Item #4 – Public Review Process:

A copy of the public review press release was handed out for committee to review. No changes had been made to it since it was handed out at the last meeting. The anticipated public review process is tentatively set to begin in early January and run for 1 month.

Agenda Item #5 – Adjournment:

The meeting was adjourned at 3:35 pm. The next meeting will be held in January.

January 14th, 2009 – Benton County Community Development Office

Agenda Item #1 – Introduction:

Chris Bentley, Benton County Community Development opened the meeting and asked for introductions of people in attendance. Braydon Bigam, Corvallis Fire Department, was a new addition to the committee.

Agenda Item #2 – CWPP & Appendices Draft Review:

Tera briefly reviewed the major changes in the CWPP and Appendices and asked for comments, particularly on the format changes. Andrew Monaco explained the Public Works Access Improvement Projects, which were added to Chapter 6.

NMI handed out revised versions of Chapter 6 of the CWPP document. The committee reviewed the projects discussed in Tables 6.3, 6.4, and 6.5. Several committee members emailed Tera their project ranking preferences for each of these tables, which were compiled and shown on the overhead. The committee proceeded to discuss each action item and SPA project and rank them in order of priority for the county.

Agenda Item #3 – Public Review Process:

The committee briefly reviewed the plan for public review of the document. Chris Bentley will provide a list of the venues to which the hardcopies will be mailed. She will also be responsible for sending electronic versions to other entities as well as posting the document on the county's website. NMI will email Chris a template for the press release announcing the public review process and the venues where the document is available.

Agenda Item #4 – Adjournment:

The meeting was adjourned at 5:00 pm.

Record of Published Articles

The following articles were published in local newspapers and newsletters during the course of the CWPP planning process.

Editorial published in the *Gazette Times* on July 30th, 2008.

www.gazettetimes.com

Publisher: Mike McManly, 758-9502 City editor: Theresa Novak, 758-9527

Wednesday, July 30, 2008
Corvallis Gazette-Times, Corvallis, Ore. **A9**

Sometimes it's best to let wildfires burn

For decades, U.S. Forest Service firefighters worked hard to live by a "10 a.m." policy, which stipulated that a fire was to be contained and controlled by 10 a.m. following the report of a fire. If that didn't work, the policy called for control by 10 a.m. the next day, and so on.

It was a policy that shaped the ethos of the Forest Service. It also was a policy that failed to understand the important role that fire plays in our forests, and perhaps has helped to fuel some of the spectacularly hot fires that have torn across the western United States in recent years.

The Forest Service and other firefighting agencies say today that they have a deeper appreciation for the fact that fire is a healthy and essential part of the forest. Nevertheless, they're still hard at work

putting out just about every fire that starts to burn on our wildlands: As a recent news story from McClatchy Newspapers showed, of the roughly 80,000 fires that start every year, only a few more than 300 are allowed to burn.

However, research is starting to show that fighting fires on public lands to protect homes isn't an effective strategy. In fact, the research suggests, a far more effective way of protecting homes is to clear brush and other flammables from around homes and install fireproof roofs.

But because we're still so focused on extinguishing fires, money that could be put to use thinning forests and helping homeowners clear out fuels from around their homes is still going to battle fires that we likely don't have to fight. We're talking about billions of dollars. Worst of all, it's likely that we're putting firefighters in harm's way fighting those same fires.

In Benton County, there's good news on this front: Work is under way on programs to spread the word to homeowners who live in what foresters like to call the "wild-land-urban interface." Meetings are being scheduled for September all over the county to start talks to develop a county-wide Community Wildfire Protection Plan.

Already, two smaller developments in the county — Marys River Estates and

Vineyard Mountain Estates — have finished work on their own plans. The goal is to have a countywide plan in place by next March, said Chris Bentley, the Benton County associate planner who's coordinating the project.

If you want a sneak peek of what the project process will look like — or if you're just looking for information on how to protect your home from wildfire — stop by the county's booth at the Benton County Fair, which begins today and runs through Sunday.

Of course, Benton County's plan by itself won't turn the tide on what increasingly looks like a wrongheaded approach toward fire suppression across the United States' wildlands. But it could be a single spark — and that's how fires grow.

Announcement published in the *Alsea Valley Voice* in the Sept/Oct. 2008 edition.

**Schedule of events at the
Alsea Community
Library**

Three important events in the Alsea Library Community Room in September! Your input is critical. Please come and voice your concerns & offer information.

Tuesday, Sept 16 - 6:00pm, Benton County Wildfire Protection Plan
Monday, Sept 22 - 7:00pm, Benton County Water Project
Tuesday, Sept. 23 - 5:30 - 7:00pm, Town Hall Meeting on a Long-Range Plan for the Library—light supper will be provided.

Help identify future community needs that can be met by our library. How can the Corvallis-Benton County Public Library improve services for Alsea? Visit the Library on Saturdays for a viewing pleasure—Alsea Valley Artisans Gallery of Gifts—Browsing is encouraged!

Editorial published in the *Gazette Times* on September 14th, 2008.

Talk now about rural fire protection

EDITORIAL

Last week, Benton County kicked off a series of important community meetings on water. This week, the county is launching what could be an equally important series of meetings on wildfire protection. "Fire and Rain": It's almost as the county is taking its planning cues from the James Taylor songbook.

Actually, both the water and the wildfire efforts share a common genesis — and it's not tied to popular music. The sessions on ensuring adequate groundwater and this week's wildfire meetings are important, in part, because we assume that our soggy climate insulates us from both drought and wildfire.

Neither is a safe assumption any more. In the words of Chris Bentley of the Benton County Community Development office,

one of the leaders in the fire effort, people make this assumption: "We live in Oregon. Fires don't happen here."

But fires do happen here. And as we increasingly build houses in the area where forested land meets houses — the area foresters call the "wildland-urban interface" — we court danger.

The meetings give members of the public a chance to weigh in as the county and its consultants continue work on a Community Wildfire Protection Plan. Bentley says the plan, when finished, should propose workable solutions to help reduce wildfire risk. It will identify areas of inadequate fire protection — and possibly even areas that have no organized fire protection at all. And it should offer landowners strategies to make their properties less vulnerable to wildfire.

The plan also is likely to address related issues, including how firefighters and their equipment can even get to structures at risk of wildfire.

As an example, Bentley talks about the challenges firefighters face when they're trying to back an engine some 600 feet down a narrow driveway that offers no place to turn around. That type of driveway isn't uncommon in Benton County. But the main goal is to get this conversation going before the fires do. As Bentley says: "So many communities wait until after the fact, and then they say, 'Dang. We should have thought about this.'"

IF YOU GO

Here's the schedule for this week's Community Wildfire Protection Plan community meetings:

Today: Monroe Fire Station, 680 Commercial St., 6:30 p.m.
Tuesday: Alsea Community Library, 19192 Alsea Highway, 6:30 p.m.
Wednesday: Wren, Community Hall, 35515 Kings Valley Highway, 6:30 p.m.
Thursday: Corvallis Public Library, 645 N.W. Monroe Ave., 2 p.m.
Thursday: Adair Village Officers' Clubhouse, 6097 N.E. Ebony Lane, 6:30 p.m.

Can't make any of the meetings? For more information, call Chris Bentley at 541-765-6293.

Announcement published in the *Gazette Times* on September 14th, 2008.

County to look at holes in wildfire coverage

BY MATT NEZANSKI
CORVALLIS GAZETTE-TIMES

As more people seek to live in places wild and remote, that area where the forest ends and housing begins can become troublesome when it comes to wildfires.

City dwellers are used to expecting fire trucks to arrive when property is threatened by flames. But that's not necessarily the case out in the county, where forest firefighting crews aren't prepared or required to protect buildings.

"There's a misconception that the Department of Forestry will protect their property," said County Commissioner Jay Dixon. "They aren't legally able to enter a structure and they aren't equipped to do that kind of work, either."

This week, Benton County will hold a series of community-out-

reach meetings all around the county to gather public input on a wildfire-protection plan being developed for the county.

At each, fire experts and county planners will talk about fire risks and the particular dangers of living in areas that border forest lands. Residents will also be asked to comment on parts of the plan that have been created and to sound off on their biggest issues.

But while people living in the forest might get some help from firefighters, grass fires this summer along Highway 99W south of Corvallis have highlighted troubles that occur when fires start beyond the jurisdiction of fire-protection districts.

"There's also the concern that we have some areas of the county where there's absolutely no fire protection whatsoever, most notably between Greenberry and Monroe," Dixon said. "Seed farmers there provide their own protection but if you're not one of them you're left out."

So far, the county has teamed up with local fire-protection districts and departments, as well as with property managers, particularly federal agencies. Those groups have helped to map out areas that are at risk for property damage in case of wildfire and have identified places where fire protection does not reach.

After the meetings, planners will begin crafting a countywide plan to limit property damage due to fire, which might lead to some changes in where the county allows people to live.

"Do we want to let people build in places where there is no protection?" he said. "This is early in the process, but ultimately there may be some code changes."

IF YOU GO

What: Wildfire protection plan meeting

MONROE

When: 6:30 p.m. Monday
Where: Monroe Fire Station, 680 Commercial St.

ALSEA

When: 6:30 p.m. Tuesday
Where: Alsea Community Library, 19192 Alsea Highway

WREN

When: 6:30 p.m. Wednesday
Where: Community Hall, 35515 Kings Valley Highway

CORVALLIS

When: 2 p.m. Thursday
Where: Corvallis Public Library, 645 N.W. Monroe Ave.

ADAIR VILLAGE

When: 6:30 p.m. Thursday
Where: Officer's Clubhouse, 6097 N.E. Ebony Lane

Public Meeting Presentation

The following slideshow was presented at each of the public meetings by Tera King and Vaiden Bloch of Northwest Management, Inc. In addition, where possible, a fire district or other planning committee representative opened the meeting with a brief introduction.

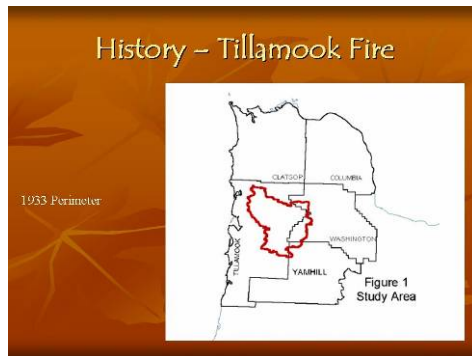
Slide 1



Slide 2



Slide 3



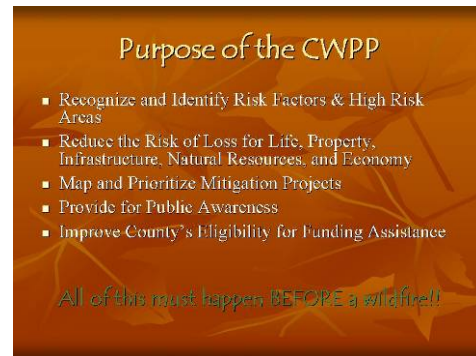
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Slide 6



Slide 7



Slide 8



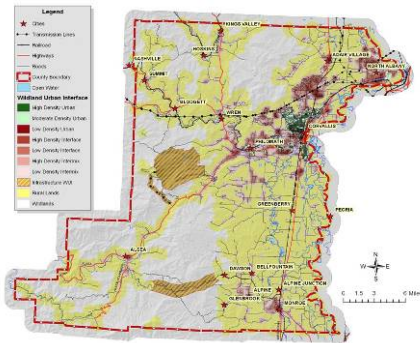
Slide 9



Slide 10



Slide 11



Slide 12

Preparedness

- Emergency Services
- City and Rural Fire Protection
- Wildland Fire Protection
- Local Government
- Local Organizations

Slide 13



Slide 14

How prepared are you (really)?

- Construction Materials?
- Landscaping Techniques?
- Access Issues?
- Power lines?
- Propane Tanks, Wood Piles, etc.?

Slide 15

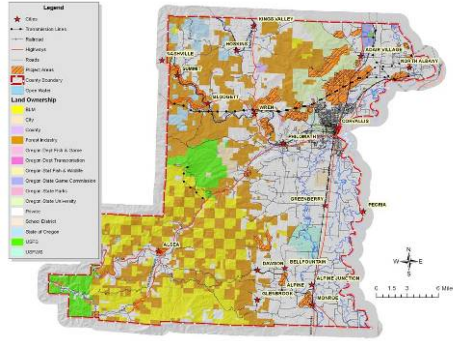


Slide 16

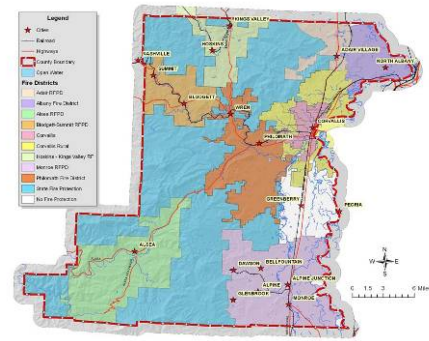
Types of Projects

- Defensible Space
 - Thinning, pruning, mowing, construction materials, types of landscaping, wood piles, propane tanks, awareness, etc.
- Roadside Fuels Treatments
- Access Issues
 - Bridges, turnouts, road width, turnarounds, overhangs, etc.
- Emergency Response Needs
 - Training, equipment, recruitment, PPEs, water resources, etc.
- Policy Issues
 - WUI building codes, road standards, public education, fire district creation/annexation, watershed protection, etc.
- Pre-planning Efforts in High Risk Areas

Slide 17



Slide 18



Slide 19

Recommendations?

- Safety & Policy
- People, Structures, and Livelihoods
- Infrastructure
- Resources & Capabilities
- Regional Land Management Recommendations

Are we accomplishing these goals?

Slide 20


Public Involvement

- Press Releases about planning efforts
- Informational flyers
- Public Mail Survey was sent to about 309 households in the county – 23% Response Rate
- Public Meetings X5
- Public Review of the DRAFT Plans will be facilitated once all sections have been completed and reviewed by the committee
- Website Link: <http://www.co.benton.or.us>

Slide 21

Your Input

- Maps on the Walls – Mark them up!
- Talk to one of the planning committee members.
- Let us know your ideas and concerns.
- Make this YOUR Plan!
- Thank you for attending and participating! Please visit with us.



Slide 22



1500 Road Fire – Polk County 2007

Benton County, Oregon
Community Wildfire Protection Plan

Northwest Management, Inc.
Tara R. King, B.S.
Valdon Block, M.S.

Appendix 3

Public Mail Survey

The following materials were distributed as part of the public mail survey.

Survey Letter #1



BOARD OF COMMISSIONERS

408 SW Monroe Ave., Suite 111
P.O. Box 3020
Corvallis, OR 97339-3020
(541) 766-6800
FAX (541) 766-6893

Benton County Community Wildfire Protection Plan Survey

Date

«Name»
«Address»
«City», ID «Zip»

Dear Benton County Resident:

Thank you for taking a few minutes of your time to read and respond to this short wildfire protection survey. As a resident of Benton County, I'm sure you know that many areas in the urban-rural interface are at risk from wildland fires. We would like you to join us in taking a proactive role in mitigating future wildfire-caused casualty losses.

The Benton County Community Wildfire Protection Plan (CWPP) planning committee, which is comprised of a host of fire protection and land management organizations, is working with the Oregon Department of Forestry and the County's Board of Commissioners, to develop a Benton County **Community Wildfire Protection Plan**. Benton County has contracted with Northwest Management, Inc. to work with the planning committee to prepare the plan and assist with public involvement.

Northwest Management's work will include developing improved fire predictive models, locating and identifying high risk landscape characteristics, proposing improved land management practices to reduce fire risk, and making recommendations for rural and urban-interface property owners about the creation of wildland fire defensible zones around homes and other buildings. It is with the last of these efforts that your help is requested.

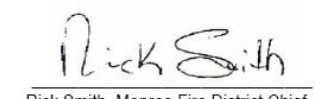
Please complete the attached survey about your home's defensible space in the case of wildland fire. The questionnaire will help us identify key factors that could potentially place your home and other buildings at risk and assist with development of wildfire mitigation strategies and actions that may lead to reducing the risk to your home and the broader community. Your response will be used to guide development of wildfire mitigation strategies and released only in aggregated form.

During development of the plan, Northwest Management, Inc. will be completing some very advanced mapping of Benton County. The mapping effort will include aerial photography. ***We would be pleased to send you a FREE 11" x 17" aerial photograph of Benton County*** as a small token of our appreciation for your assistance with the project. The photograph will be printed in high resolution and sent directly to you! When you complete your survey, simply check the "Yes, send me a photograph!" box on the back page and we will custom color print the photograph and send it at no charge.

Thank you for your assistance. If you have any questions about the project or the survey please contact Chris Bentley, Benton County Community Development office, (541) 766-6819; or Tera R. King at Northwest Management, Inc., (208) 883-4488 or king@consulting-foresters.com.

Sincerely,


Jay Nixon
Benton County Commissioner


Rick Smith, Monroe Fire District Chief
Chair, Benton County Fire Defense Board

Survey Letter #2

September 4, 2008

Dear Benton County Resident:

About a week ago, we mailed you a letter and a brief survey concerning the wildfire situation in your community. That survey is instrumental to the success of the Community Wildfire Protection Plan we are developing in conjunction with the Oregon Department of Forestry and Benton County Fire Defense Board. We have received responses from many families in the area and we wish to extend our thanks and appreciation to everyone who has participated. However, we still have not received completed surveys from many homes in the region. If you have not returned the completed survey to us yet, please take a few minutes to complete the survey and return it in the self-addressed envelope provided with the letter.

Your responses are very important to this effort, which will recommend the location and type of fire mitigation projects to be implemented in the area of your home. If you have any questions about this project or this survey please contact Chris Bentley, Benton County Community Development office (541) 766-6819 or contact Tera King at Northwest Management, Inc. in Moscow, Idaho at (208) 883-4488. If you did not receive my original letter, or if you misplaced your survey, you can request a new one at one of the numbers above.

Thank you for your time and your assistance with this project!
Jay Dixon
Benton County Board of Commissioners

Survey Letter #3



BOARD OF COMMISSIONERS
408 SW Monroe Ave., Suite 111
P.O. Box 3020
Corvallis, OR 97339-3020
(541) 766-6800
FAX (541) 766-6893

Benton County Community Wildfire Protection Plan Survey

Date

<Name>

<Address>

Dear Benton County Resident:

Thank you for taking some of your time to read and respond to this short inquiry. About two weeks ago, we sent you a letter and package of materials much like this one. In it, we asked if you would please assist our efforts by reading, filling out, and returning a survey concerning the **Benton County Community Wildfire Protection Plan**. As a resident of Benton County, I'm sure you know that many areas in the urban-rural interface are at risk from wildland fires. We would like you to join us in taking a proactive role in mitigating future wildfire-caused casualty losses.

The Benton County Community Wildfire Protection Plan (CWPP) planning committee, which is comprised of a host of fire protection and land management organizations, is working with the Oregon Department of Forestry and the County's Board of Commissioners, to develop a Benton County **Community Wildfire Protection Plan**. Benton County has contracted with Northwest Management, Inc. to work with the planning committee to prepare the plan and assist with public involvement.

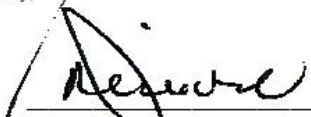
Northwest Management's work will include developing improved fire predictive models, locating and identifying high risk landscape characteristics, proposing improved land management practices to reduce fire risk, and making recommendations for rural and urban-interface property owners about the creation of wildland fire defensible zones around homes and other buildings. It is with the last of these efforts that your help is requested.

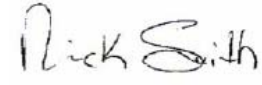
Please complete the attached survey about your home's defensible space in the case of wildland fire. The questionnaire will help us identify key factors that could potentially place your home and other buildings at risk and assist with development of wildfire mitigation strategies and actions that may lead to reducing the risk to your home and the broader community. Your response will be used to guide development of wildfire mitigation strategies and released only in aggregated form.

During development of the plan, Northwest Management, Inc. will be completing some very advanced mapping of Benton County. The mapping effort will include aerial photography. **We would be pleased to send you a FREE 11" x 17" aerial photograph of Benton County** as a small token of our appreciation for your assistance with the project. The photograph will be printed in high resolution and sent directly to you! When you complete your survey, simply check the "Yes, send me a photograph!" box on the back page and we will custom color print the photograph and send it at no charge.

Thank you for your assistance. If you have any questions about the project or the survey please contact Chris Bentley, Benton County Community Development office, (541) 766-6819; or Tera R. King at Northwest Management, Inc., (208) 883-4488 or king@consulting-foresters.com.

Sincerely,


Jay Dixon
Benton County Commissioner


Rick Smith, Monroe Fire District Chief
Chair, Benton County Fire Defense Board

Survey Questionnaire

Community Wildfire Protection Plan Public Survey

1. Does your property in Benton County contain a home or other structures?
 - Yes
 - No

2. If so, is this your primary residence?
 - Yes
 - No
 - Not applicable

3. Which community do you live closest to?

4. Does your property have telephone service (landline and/or cellular)?
 - Yes
 - No

5. Is your home protected by a rural or city fire department?
 - No
 - Yes, if yes in what fire protection district or department does your property reside?

 - Not applicable

6. What type of roof does your home have (please mark one):
 - Composite
 - Wooden shake (shingles)
 - Ceramic tiles
 - Aluminum, tin, or other metal
 - Other (please indicate: _____)
 - Not applicable

7. How many trees are within 200 feet of your home?
 - None
 - less than 10
 - Between 10 and 25
 - More than 25
 - Not applicable

8. Do you have a lawn surrounding your home and adjacent structures?
 - No
 - Yes, if yes is it kept green and trimmed all summer?
 - No
 - Yes
 - Not applicable

9. How long is your driveway, from the main road to your home parking area?
Please indicate distance units in feet or miles or mark N/A.

_____ Feet
 Miles

10. If your driveway is over 300 feet long, does it have turnouts that would allow two large trucks to pass each other?

- No
- Yes
- Not applicable

11. If your driveway is over 150 feet long, is there an area large enough for a large truck to turnaround at your homesite?

- No
- Yes
- Not applicable

12. What type of surfacing does your driveway have?

- Dirt
- Gravel/rock
- Paved

13. If the primary access to your property were cut off by a wildfire, would you have an alternative vehicular escape route?

- No
- Yes
- Not applicable

14. Please indicate which of the following items you have available at or near your home or property that could be used in fighting a wildland fire (mark all that apply).

- Hand tools (shovel, axe, etc.)
- Portable water tank
- Stationery water tank
- Pond, lake, or stream water supply close
- Water pump and fire hose
- Well or cistern
- Equipment suitable for creating fire breaks (bulldozer, farm tractor, etc.)

15. Use the exercise below to assess your property's fire risk rating:

Circle the ratings in each category that best describes your home.

Fuel Hazard Rating Worksheet		Rating
Fuel Hazard (within 200 feet of structures)	Small, light fuels (grasses, non-woody plants, weeds, shrubs)	1
	Medium size fuels (brush, large shrubs, small trees)	2
	Heavy, large fuels (woodlands, timber, heavy brush)	3
Slope Hazard (within 200 feet of structures)	Mild slopes (0-5%)	1
	Moderate slope (6-20%)	2
	Steep Slopes (21-40%)	3
	Extreme slopes (41% and greater)	4
Structure Hazard	Noncombustible roof and noncombustible siding materials	1
	Noncombustible roof and combustible siding material	3
	Combustible roof and noncombustible siding material	7
	Combustible roof and combustible siding materials	10
Additional Factors	Rough topography that contains several steep canyons or ridges	+2
	Areas having history of higher than average fire occurrence	+3
	Areas exposed to severe fire weather and strong winds	+4
	Areas with existing fuel modifications or usable fire breaks	-3
	Areas with local facilities (water systems, rural fire districts, dozers)	-3

Calculate Your Risk Rating:

Fuel hazard _____ x Slope Hazard _____ = _____
 Structural hazard + _____
 Additional factors (+ or -) _____
 Total Hazard Points = _____

Extreme Risk = 26 + points
High Risk = 16–25 points
Moderate Risk = 6–15 points
Low Risk = 6 or less points

16. Do you conduct a periodic fuels reduction program such as clearing and removing brush or trimming trees near your home and adjacent buildings?

- No
- Yes
- Not applicable

17. Do livestock (cattle, horses, sheep, llamas, goats, etc.) graze the grasses and shrubs around your home and adjacent buildings?

- No
- Yes

18. If offered in your area, would members of your household attend a free, or low cost, half-day training seminar designed to teach homeowners in fire prone areas how to improve the defensible space surrounding their home and adjacent outbuildings?

- No
- Yes

19. How do you feel wildfire mitigation projects should be funded in the areas surrounding homes, communities, and infrastructure such as power lines and major roads?

	Mark the box that best applies to your preference		
	100% Public Funding	Cost-Share (Public & Private)	Privately Funded (Owner or Company)
Home Defensibility Projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community Defensibility Projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Infrastructure Projects (i.e. roads, bridges, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fuels Reduction or Forest Health Projects on Private Lands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. Do you have any suggestions for fire prevention projects or endeavors that would improve wildfire safety in neighborhoods, communities, or in Benton County? Please indicate.

Thank you very much for completing this survey and sending it back to us. This information will be combined with other data to assess the greatest threats to defending homes and adjacent buildings where hazards are common.

Please place the completed survey in the self-addressed envelope and place it in the mail for return to us. As a token of appreciation for completing and returning this survey, we would like to send you a detailed aerial photograph of Benton County. Please indicate below if you would like to receive a **free** photograph!

- Yes, please send me a photograph!
- No, thank you.

Our records indicate your address is: Name Address City, ID ZIP	Please make corrections here: <hr/> <hr/> <hr/>
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Appendix 4

Risk Analysis Models

Historic Fire Regime

A natural fire regime is a general classification of the role fire would play across a landscape in the absence of modern human mechanical intervention, but including the influence of aboriginal burning (Agee 1993, Brown 1995). Coarse-scale definitions for natural (historical) fire regimes have been developed by Hardy et al. (2001) and Schmidt et al. (2002) and interpreted for fire and fuels management by Hann and Bunnell (2001). The five natural (historical) fire regimes are classified based on average number of years between fires (fire frequency) combined with the severity (amount of replacement) of the fire on the dominant overstory vegetation. These five regimes include: I – 0-35 year frequency and low (surface fires most common) to mixed severity (less than 75% of the dominant overstory vegetation replaced); II – 0-35 year frequency and high (stand replacement) severity (greater than 75% of the dominant overstory vegetation replaced); III – 35-100+ year frequency and mixed severity (less than 75% of the dominant overstory vegetation replaced); IV – 35-100+ year frequency and high (stand replacement) severity (greater than 75% of the dominant overstory vegetation replaced); V – 200+ year frequency and high (stand replacement) severity.

A database of fire history studies in Oregon was used to develop modeling rules for predicting historical fire regimes (HFRs). Tabular fire-history data and spatial data was stratified into ecoregions, potential natural vegetation types (PNVs), slope classes, and aspect classes to derive rule sets which were then modeled spatially. Expert opinion was substituted for a stratum when empirical data was not available.

Fire is one of the dominant disturbance processes that manipulate vegetation patterns in Oregon. The HFR data were prepared to supplement other data necessary to assess integrated risks and opportunities at regional and subregional scales. The HFR theme was derived specifically to estimate an index of the relative change of a disturbance process, and the subsequent patterns of vegetation composition and structure.

These data were derived using fire history data from a variety of different sources. These data were designed to characterize broad scale patterns of historical fire regimes for use in regional and subregional assessments. Any decisions based on these data should be supported with field verification, especially at scales finer than 1:100,000. Because the resolution of the HFR theme is 30 meter cell size, the expected accuracy does not warrant their use for analyses of areas smaller than about 10,000 acres (for example, assessments that typically require 1:24,000 data).

Fire Regime Condition Class

Fire Regime Condition Class (FRCC) is an interagency, standardized tool for determining the degree of departure from reference condition vegetation, fuels, and disturbance regimes. Assessing FRCC can help guide management objectives and set priorities for treatments.

As scale of application becomes finer the five historic fire regimes may be defined with more detail, or any one class may be split into finer classes, but the hierarchy to the coarse scale

definitions should be retained. Coarse-scale FRCC classes have been defined and mapped by Hardy et al. (2001) and Schmidt et al. (2001). They include three condition classes for each historic fire regime. The classification is based on a relative measure describing the degree of departure from the historical natural fire regime. This departure results in changes to one (or more) of the following ecological components: vegetation characteristics (species composition, structural stages, stand age, canopy closure, and mosaic pattern); fuel composition; fire frequency, severity, and pattern; and other associated disturbances (e.g. insect and diseased mortality, grazing, and drought). There are no wildland vegetation and fuel conditions or wildland fire situations that do not fit within one of the three classes.

The three classes are based on low (FRCC 1), moderate (FRCC 2), and high (FRCC 3) departure from the central tendency of the natural (historical) regime (Hann and Bunnell 2001, Hardy et al. 2001, Schmidt et al. 2002). The central tendency is a composite estimate of vegetation characteristics (species composition, structural stages, stand age, canopy closure, and mosaic pattern); fuel composition; fire frequency, severity, and pattern; and other associated natural disturbances. Low departure is considered to be within the natural (historical) range of variability, while moderate and high departures are outside.

Characteristic vegetation and fuel conditions are considered to be those that occurred within the natural (historical) fire regime. Uncharacteristic conditions are considered to be those that did not occur within the natural (historical) fire regime, such as invasive species (e.g. weeds, insects, and diseases), “high graded” forest composition and structure (e.g. large trees removed in a frequent surface fire regime), or repeated annual grazing that maintains grassy fuels across relatively large areas at levels that will not carry a surface fire.

Determination of amount of departure is based on comparison of a composite measure of fire regime attributes (vegetation characteristics; fuel composition; fire frequency, severity and pattern) to the central tendency of the natural (historical) fire regime. The amount of departure is then classified to determine the fire regime condition class. A simplified description of the fire regime condition classes and associated potential risks follow.

Fire Regime Condition Class	Description	Potential Risks
Condition Class 1	Within the natural (historical) range of variability of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances.	<p>Fire behavior, effects, and other associated disturbances are similar to those that occurred prior to fire exclusion (suppression) and other types of management that do not mimic the natural fire regime and associated vegetation and fuel characteristics.</p> <p>Composition and structure of vegetation and fuels are similar to the natural (historical) regime.</p> <p>Risk of loss of key ecosystem components (e.g., native species, large trees, and soil) is low.</p>
Condition Class 2	Moderate departure from the natural (historical) regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances.	<p>Fire behavior, effects, and other associated disturbances are moderately departed (more or less severe).</p> <p>Composition and structure of vegetation and fuel are moderately altered.</p> <p>Uncharacteristic conditions range from low to moderate.</p> <p>Risk of loss of key ecosystem components is moderate.</p>
Condition Class 3	High departure from the natural (historical) regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances.	<p>Fire behavior, effects, and other associated disturbances are highly departed (more or less severe).</p> <p>Composition and structure of vegetation and fuel are highly altered.</p> <p>Uncharacteristic conditions range from moderate to high.</p> <p>Risk of loss of key ecosystem components is high.</p>

Benton County Relative Fire Risk Assessment

To identify relative fire risk within Benton County, Oregon, Northwest Management, Inc. performed a risk assessment based on inputs identified by the CWPP planning committee. This GIS based assessment attempts to model relative risk within the county based on the input variables of topography, vegetation and available fire protection. These variables were determined by the planning committee to be the most prominent factors leading to wildfire ignition risk and rate of spread.

Slope and aspect raster layers were generated in this analysis from USGS 10 meter digital elevation raster data using the “Surface” modeling tool in ArcGIS. Each raster layer was reclassified based on risk value and converted to 10 meter raster data sets where each 10 meter pixel value represented the slope or aspect risk value.

For this analysis a 30 meter raster land cover vegetation data layer developed by the Oregon GAP analysis program was used. General vegetation cover types were classified into four categories based on general contribution to wildfire risk. These four classifications are low (Non-vegetated or no dominant

life form), moderate (grass/crop/herbaceous), high (shrub/open tree canopy) and extreme (closed tree canopy). The reclassified vegetation layer was converted to a 30 meter raster data set where each 30 meter pixel value represented the vegetation risk value.

“Fire Protection” in this analysis identifies relative fire risk based on inclusion in a fire protection department or district. Protection variables range from low to high with low identified as areas within ¼ mile of a road and in a structural fire protection district, moderate risk is identified as areas greater than ¼ mile from a road within a structural fire protection district or within an ODF fire protection district, and high risk is identified for areas with no fire protection services. The reclassified protection layer was converted to a 30 meter raster data set where each 30 meter pixel value represented the protection risk value.

The overall wildfire risk analysis sums the risk variables geographically using GIS to produce a relative wildfire risk map. Each pixel value within this layer contains a value that is the sum of the pixel values from the four risk layers within the same geographic location. Low fire risk would be characteristic of areas with low pixel values for slope, aspect, protection and vegetation. High wildfire risk would be identified in areas that have high risk slopes, aspects, protection and vegetation. Combinations of low, moderate and high risk factors identifies areas with moderate wildfire risk.

The risk category values developed in this analysis should be considered **ordinal data**, that is, while the values presented have a meaningful ranking, they neither have a true zero point nor scale between numbers. Rating in the “4” range is not necessarily twice as “risky” as rating in the “2” range. These category values also do not correspond to a rate of fire spread, a fuel loading indicator, or measurable potential fire intensity. Each of those scales is greatly influenced by weather, seasonal and daily variations in moisture (relative humidity), solar radiation, and other factors. The risk rating presented here serves to identify where certain constant variables are present, aiding in identifying where fires typically spread into the largest fires across the landscape.

Appendix 5

Project Prioritization

The mitigation recommendations in Chapter 6 of the Community Wildfire Protection Plan were prioritized according to one of two schemes. The action items in Table 6.1 and Table 6.2 were prioritized using Scheme One, which is a numerical scoring system suited to more general projects. All other action items and proposed project areas identified in Chapter 6 of the main document were prioritized using Scheme Two, which was a hierarchical ranking process completed by the committee members.

Prioritization Schemes One and Two are explained in Chapter 6. Additional information on Scheme One is included in the following sections.

Benefit / Cost (BC)

The analysis process will include summaries as appropriate for each project as well as benefit / cost analysis results. Projects with a negative BC analysis result will be ranked as a 0. Projects with a positive BC analysis will receive a score equal to the project's BC analysis results divided by 50. Therefore a project with a BC ratio of 250:1 would receive 5 points; a project with a BC ratio of 500:1 (or higher) would receive the maximum points of 10.

Population Benefit

Population benefit relates to the ability of the project to prevent the loss of life or injuries. A ranking of 10 has the potential to impact 90% or more of the people in the municipality (county, city, or district). A ranking of 5 has the potential to impact 50% of the people, and a ranking of 1 will not impact the population. The calculated score will be the percent of the population impacted positively multiplied by 10. In some cases, a project may not directly provide population benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly affects the population, but should not be considered to have no population benefit.

Property Benefit

Property benefit relates to the prevention of physical losses to structures, infrastructure, and personal property. These losses can be attributed to potential dollar losses. Similar to cost, a ranking of 10 has the potential to save \$500,000,000 or more in losses. Property benefit of less than \$500,000,000 will receive a score of the benefit divided by \$500,000,000, times 10. Therefore, a property benefit of \$100,000,000 would receive a score of 2 ($[100,000,000 \div 500,000,000] \times 10 = 2$). In some cases, a project may not directly provide property benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly affects property, but should not be considered to have no property benefit.

The property benefits used to prioritize Benton County action items were calculated based on average assessed values of improvements provided by the Benton County Assessor's office.

Economic Benefit

Economic benefit is related to the savings from mitigation to the economy. This benefit includes reduction of losses in revenues, jobs, and facility shut downs. Since this benefit can be difficult to evaluate, a ranking of 10 would prevent a total economic collapse, a ranking of 5 would prevent losses to about half the economy, and a ranking of 1 would not prevent any economic losses. In some cases, a project may not directly provide economic benefits, but may lead to actions that do, such as in the case of

a study. Those projects will not receive as high of a rating as one that directly affects the economy, but should not be considered to have no economic benefit.

Vulnerability to the Community

For planning projects, the vulnerability of the community is considered. A community with higher vulnerability than other jurisdictions to a hazard or hazards being studied or planned for will receive a higher score. A community that is the most vulnerable would receive a score of 10, and one that is the least, a score of 1.

Project Feasibility (Environmentally, Physically, and Socially)

Project feasibility relates to the likelihood that such a project could be completed. Projects with low feasibility would include projects with significant environmental concerns or public opposition. A project with high feasibility has public and political support without environmental concerns. Those projects with very high feasibility would receive a ranking of 5 and those with very low would receive a ranking of 1.

Hazard Magnitude/Frequency

The hazard magnitude/frequency rating is a combination of the recurrence period and magnitude of a hazard. The severity of the hazard being mitigated and the frequency of that event must both be considered. For example, a project mitigating a 10-year event that causes significant damage would receive a higher rating than one that mitigates a 500-year event that causes minimal damage. For a ranking of 5, the project mitigates a high frequency, high magnitude event. A 1 ranking is for a low frequency, low magnitude event. Note that only the damages being mitigated should be considered here, not the entire losses from that event.

Potential for Repetitive Loss

Those projects that mitigate repetitive losses receive priority consideration here. Common sense dictates that losses that occur frequently will continue to do so until the hazard is mitigated. Projects that would reduce losses that have occurred more than three times receive a rating of 5. Those that do not address repetitive losses receive a rating of 1.

Potential to Mitigate Hazards for Future Development

Proposed actions that can have a direct impact on the vulnerability of future development are given additional consideration. If hazards can be mitigated at the onset of the development, the County will be less vulnerable in the future. Projects that would have a significant effect on all future development receive a rating of 5. Those that do not affect development should receive a rating of 1.

Potential Project Effectiveness and Sustainability

Two important aspects of all projects are effectiveness and sustainability. For a project to be worthwhile, it needs to be effective and actually mitigate the hazard. A project that is questionable in its effectiveness will score lower in this category. Sustainability is the ability for the project to be maintained. Can the project sustain itself after grant funding is spent? Is maintenance required? If so, are or will the resources be in place to maintain the project. An action that is highly effective and sustainable would receive a ranking of 5. A project with effectiveness that is highly questionable and not easily sustained would receive a ranking of 1.

Final Scoring

Upon ranking a project in each of these categories, a total score can be derived by adding together each of the scores. The project can then be ranked high, medium, or low based on the following:

Project Ranking Priority Score - Non-Planning Projects

- High 40-65
- Medium 25-39
- Low 1-24

Project Ranking Priority Score - Planning Projects

- High 26-30
- Medium 21-25
- Low 1-20

X.X. Example Action Item for a Planning Project.		
Project Type: Planning Project		
Item	Criteria	Score
1	Benefit/Cost	10
2	Vulnerability of the community or communities	10
3	Potential for repetitive loss reduction	5
4	Potential to mitigate hazards to future development	5
Total		30
Project Ranking Priority Score		High

X.X. Example Action Item for a Non-Planning Project.

X.X. Example Action Item for a Non-Planning Project.		
Project Type: Implementation Project (Non-Planning)		
Item	Criteria	Score
	Project Cost	\$ 307,000
	Property Benefit	\$ 10,728,200
1	Benefit / Cost Score	10
2	Population Benefit	10
3	Property Benefit Score	10
4	Economic Benefit	10
5	Project Feasibility (environmentally, politically, socially)	5
6	Hazard Magnitude/Frequency	5
7	Potential for repetitive loss reduction	5
8	Potential to mitigate hazards to future development	5
9	Potential project effectiveness and sustainability	5
Total		65
Project Ranking Priority Score		High

Prioritization of Action Items

Prioritization of action items the Community Wildfire Protection Plan occurs at the end of the committee planning process. All recommendations for action items have been carefully reviewed by the committee and then presented to the public. The following table is a summary of action item scores resulting from

the prioritization of action items using Scheme One as outlined in Chapter 6 of the Community Wildfire Protection Plan and this Appendix.

Planning Projects

Summary of Prioritization Scores for CWPP Planning Projects

Prioritization Factors →	Point Values				Total	Ranking
	Benefit / Cost	Vulnerability of Communities	Potential for Repetitive Loss Reduction	Potential to mitigate for Future Development		
↓ Action Item ↓						
6.1.a	10	8	4	5	27	High
6.1.b	10	8	5	5	28	High
6.1.c	10	10	5	5	30	High
6.1.e	10	10	5	5	30	High
6.1.f	10	9	3	2	24	Medium
6.1.g	10	5	4	1	20	Low
6.1.h	10	4	2	2	18	Low
6.1.i	10	10	5	5	30	High
6.1.j	10	10	5	5	30	High
6.1.k	10	7	2	5	24	Medium
6.1.l	10	7	3	5	25	Medium
6.1.m	9	7	2	4	22	Medium
6.2.g	9	8	3	2	22	Medium
6.2.h	10	7	3	1	21	Medium
6.2.i	10	7	3	1	21	Medium

Non-Planning Projects

Summary of Prioritization Scores for CWPP Non-Planning Action Items.

Prioritization Factors →	Point Values									Total	Ranking
	Benefit / Cost	Population Benefit	Property Benefit	Economic Benefit	Project Feasibility	Magnitude / Frequency	Repetitive Loss Reduction	Mitigation Hazards for Future Development	Effectiveness / Sustainability		
↓ Action Item ↓											
6.1.d	10	1	1	1	5	3	2	4	4	31	Medium
6.2.a	10	1	5	2	5	3	3	3	4	36	Medium
6.2.b	10	2	10	3	4	4	3	1	3	40	High
6.2.c	10	3	10	3	3	4	3	1	3	40	High
6.2.d	0	2	10	4	3	4	4	2	3	32	Medium
6.2.e	1	1	10	4	3	4	4	2	3	32	Medium
6.2.f	1	2	10	2	3	4	4	2	3	31	Medium

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Appendix 6

Fire Services Information

Adair Rural Fire Protection District:

Chief: Chuck Harris
Telephone: 541-745-7212 Cell 541-990-8954
e-Mail: adairrfd@aol.com
Address: 6021 NE Marcus Harris Ave.
Adair Village, OR 97330

Albany Fire Department:

Chief: John Bradner
Telephone: 541-917-7701
e-Mail: john.bradner@cityofalbany.net
Address: P.O. Box 490
Albany, OR 97321

Alsea Rural Fire Protection District:

Chief: George Foster
Telephone:
Address: PO Box 81
Alsea, Or 97324

**City of Corvallis Fire Department and
Corvallis Rural Fire Protection District:**

Chief: Roy Emery
Telephone: 541 766 6961
e-Mail: roy.emery@ci.corvallis.or.us
Address: 400 NW Harrison Blvd
Corvallis, OR 97330-4816

**Hoskins-Kings Valley Rural Fire Protection
District:**

Chief: Dave Evans
Telephone: (541) 929-2907
e-Mail: hkv510@peak.org
Address: 22659 Hoskins Rd
Philomath, OR 97370

Monroe Rural Fire Protection District:

Chief: Rick Smith
Telephone: 541-847-5170
e-Mail: monroefire@monroetel.com
Address: P.O. Box 411
Monroe, Oregon 97456

Philomath Fire and Rescue:

Chief: Tom Phelps
Telephone: 541-929-3002
e-Mail: tom.phelps@philomathfire.com
Address: 1035 Main Street/PO Box 247
Philomath, Oregon 97370

Blogett-Summit Rural Fire District:

Chief: Ed Young
Telephone: 541-456-4006
e-Mail: eyblodgettd@casco.net
Address: 36847 Happy Hollow Road
Blodgett, Oregon 97326

Oregon Department of Forestry:

District Forester: Steve Laam
Telephone: 541-929-9152
e-Mail: slaam@odf.state.or.us

Asst District Forester: Mike Totey
Telephone: 541-929-9151
e-Mail: mtotey@odf.state.or.us

Protection Supervisor: Ted Erdmann
Telephone: 541-929-9156
e-Mail: erdmann@odf.state.or.us

Address: 24533 Alsea Hwy
Philomath, OR 97370

Siuslaw National Forest:

Fire Staff Officer: Carl West
Telephone: 541-520-4764
e-Mail: cwest@fs.fed.us
Address: Siuslaw NF, 4077 SW Research Way
Corvallis OR 97333

Siuslaw Fire Management Officer (FMO): Terri Brown
Telephone: 503-392-5133
e-mail: tlbrown@fs.fed.us
Address: Siuslaw NF, 4077 SW Research Way
Corvallis, OR 97333

Starker Forests, Inc.:

Company Representative: Randy Hereford
Telephone: 541-929-2477
Address: 7240 SW Philomath Blvd
Corvallis OR 97339

Fire Services Resource List

	Radio #	Kind	ICS Type	Tank Gallons	Pump GPM	Station #	Station Name	Year	Make/Model	Laden Wt.
Corvallis Fire Department	131	Structure Engine	1	950	1250	101	Downtown	2006	HME / Silver Fox	39,000
	139	Structure Engine	1	500	1250	101	Downtown	1991	HME / Grumman	31,700
	141	Tender	2	3000	1000	101	Downtown	1997	Central States	54,500
	161	Brush Engine	3	500	300	101	Downtown	1975	International / B&Z	20,200
	132	Structure Engine	1	950	1250	102	Campus	2005	HME / Silver Fox	39,000
	142	Tender	3	2000	1400	102	Campus	1977	American General	45,220
	162	Brush Engine	3	500	300	102	Campus	1977	Chevy / CDF	20,200
	133	Structure Engine	1	500	1250	103	Circle	1994	HME / Central States	38,700
	143	Tender	2	3000	500	103	Circle	1989	Freightliner / Western States	53,350
	163	Brush Engine	3	500	300	103	Circle	1979	GMC / CDF	20,200
	134	Interface Engine	1	500	1250	104	Tunison	1995	Central States	30,080
	135	Structure Engine	1	1000	1000	105	Walnut	1997	Central States	30,240
	165	Brush Engine	6	300	400	105	Walnut	1994	Ford	12,700
	136	Interface Engine	1	500	1250	106	Lewisburg	1994	Freightliner / Central States	28,300
	146	Tender	2	3000	500	106	Lewisburg	2005	International 7600	56,000
166	Brush Engine	6	200	150	106	Lewisburg	1991	Ford	11,200	

Philomath Fire & Rescue	231	Interface Engine	1	1000	1250	201	Philomath	2001	HME / BME	42,200
	234	Interface Engine	1	1000	1250	201	Philomath	2001	HME / BME	42,200
	241	Tender	2	3000	1000	201	Philomath	2007	Kenworth / BME	56,500
	244	Tender	2	3000	1000	201	Philomath	2007	Kenworth / BME	56,500
	261	Brush Engine	6	200	150	201	Philomath	1990	GMC / ODF	9,600
	265	Brush Engine	3	500	150	201	Philomath	1990	International / BME	22,000
	232	Interface Engine	2	500	750	202	Wren	1986	International / Marion	24,400
	262	Brush Engine	6	200	150	202	Wren	1986	Chevy / ODF	9,340
	233	Interface Engine	1	750	1250	203	Inavale	2008	International / BME	
263	Brush Engine	6	200	150	203	Inavale	1986	Chevy / ODF	10,000	
Hoskins – Kings Valley RFPD	531	Engine	1	1000	1000	500	Kings Valley	1974	Ford / Western States	
	541	Tender	2	3000	1000	500	Kings Valley	2001	Freightliner / Central States	
	561	Brush Engine	6	200	35	500	Kings Valley	1985	Chevrolet / ODF	
	562	Brush Engine	6	200	50	500	Kings Valley	1997	Ford / USFS	
Blodgett – Summit RFPD	631	Structure Engine	1	1000	750	600	Blodgett	1983	GMC / Utah LaGrange	
	642	Tender	2	1500	250	600	Blodgett	1990	International	
	632	Structure Engine	1	1000	1000	601	Summit	1969	Ford	
	643	Tender	2	1500	750	601	Summit	1989	Ford F-8000	
	664	Brush Engine	6	250	250	601	Summit	1989	Ford F-350 4x4	
Alsea RFPD	731	Structure Engine	1	700	1250	700	Alsea		Ford 8000	
	734	Interface Engine	2	600	700	700	Alsea		International	
	741	Tender	2	3000	1000	700	Alsea		International	
	742	Tender	3	1000	500	700	Alsea		International	
	791	Brush Engine	6	125	50	700	Alsea		Ford f-350 4X4 Crew Cab	
	732	Structure Engine	1	500	1100	701	Lobster		Ford 8000	

Adair RFPD	1431	Structure Engine	1	1000	1000	1401	Adair	2002	HME / Central States	
	1441	Tender	2	3000	1000	1401	Adair	1987	GMC / Brigadier	
	1462	Brush Engine	6	200	250	1401	Adair	2005	Ford F-550 4x4	
	1430	Structure Engine	1	1000	1000	1402	Soap Creek	1994	Freightliner / Central States	
	1463	Brush Engine	6	325	180	1402	Soap Creek	1992	Chevy / GSA 4x4	
Monroe RFPD	1711	Structure Engine	1	1000	1250	1	Monroe	1995	H&W	31,000
	1712	Structure Engine	1	1250	1250	1	Monroe	1975	Western States	44,000
	1713	Tender	2	3000	1000	1	Monroe	1990	Western States	54,000
	1714	Brush Engine	6	300	80	1	Monroe	1990	WaJax	11,000
	1721	Structure Engine	1	1000	750	2	Alpine	1969	Western States	26,000
	1725	Brush Engine	6	250	80	2	Alpine	2006	WaJax	15,000
	1731	Structure Engine	1	1500	750	3	Belfountain	1964	Western States	36,000
	1733	Tender	2	2800	1250	3	Belfountain	1998	H&W	48,000
1735	Brush Engine	6	300	80	3	Belfountain	2006	MBMF	15,000	
ODF	61	Brush Engine	6	300	100	55100	Philomath	2002	Ford F-550 4x4	15,000
	62	Brush Engine	6	300	100	55100	Philomath	2004	Ford F-550 4x4	15,000
	41	Brush Engine	4	1000	120	55100	Philomath	2000	International 4900	25,000
	42	Brush Engine	4	1000	120	55100	Philomath	2006	International 4400	25,000
USFS	301	Brush Engine	4	1000	350	300	Alsea			
	302	Brush Engine	6	200	75	300	Alsea			

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Appendix 7

State and Federal CWPP Guidance

National Fire Plan

The National Fire Plan (NFP) was developed by the U.S. Departments of Interior and Agriculture and their land management agencies in August 2000, following a landmark wildland fire season, with the intent of actively responding to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future. The NFP addresses five key points: Firefighting, Rehabilitation, Hazardous Fuels Reduction, Community Assistance, and Accountability. The National Fire Plan continues to provide invaluable technical, financial, and resource guidance and support for wildland fire management across the United States. Together, the USDA Forest Service and the Department of the Interior are working to successfully implement the key points outlined in the National Fire Plan.

This Community Wildfire Protection Plan fulfills the National Fire Plan's 10-Year Comprehensive Strategy Implementation Plan (WFLC 2006). The projects and activities recommended under this plan are in addition to other federal, state, and private / corporate forest and rangeland management activities. The implementation plan does not alter, diminish, or expand the existing jurisdiction, statutory and regulatory responsibilities and authorities or budget processes of participating federal and state agencies.

The NFP goals of this Community Wildfire Protection Plan include:

1. Improve Fire Prevention and Suppression
2. Reduce Hazardous Fuels
3. Restoration and Post-Fire Recovery of Fire-Adapted Ecosystems
4. Promote Community Assistance

By endorsing this implementation plan, all signed parties agree that reducing the threat of wildland fire to people, communities, and ecosystems will require:

- Maintaining firefighter and public safety continuing as the highest priority.
- Communities and individuals in the wildland-urban interface to initiate personal stewardship and volunteer actions that will reduce wildland fire risks.
- A sustained, long-term and cost-effective investment of resources by all public and private parties, recognizing overall budget parameters affecting federal, state, county, and local governments.
- A unified effort to implement the collaborative framework called for in the strategy in a manner that ensures timely decisions at each level.
- Accountability for measuring and monitoring performance and outcomes, and a commitment to factoring findings into future decision making activities.

- The achievement of national goals through action at the local level with particular attention to the unique needs of cross-boundary efforts and the importance of funding on-the-ground activities.
- Management activities, both in the wildland-urban interface and in at-risk areas across the broader landscape.
- Active forestland management, including thinning that produces commercial or pre-commercial products, biomass removal and utilization, prescribed fire and other fuels reduction activities to simultaneously meet long-term ecological, economic, and community objectives.

The National Fire Plan identifies a three-tiered organizational structure including 1) the local level, 2) state/regional and tribal level, and 3) the national level. This plan adheres to the collaboration and outcomes consistent with a local level plan. Local level collaboration involves participants with direct responsibility for management decisions affecting public and/or private land and resources, fire protection responsibilities, or good working knowledge and interest in local resources. Participants in this planning process include local representatives from federal and state agencies, local governments, landowners and other stakeholders, and community-based groups with a demonstrated commitment to achieving the strategy's four goals. Existing resource advisory committees, watershed councils, or other collaborative entities may serve to achieve coordination at this level. Local involvement, expected to be broadly represented, is a primary source of planning, project prioritization, and resource allocation and coordination. The role of the private citizen should not be underestimated as all phases of risk assessment, mitigation, and project implementation are greatly facilitated by their involvement.

National Association of State Foresters

This plan is written with the intent to provide decision makers (elected and appointed officials) the information they need to prioritize projects across the entire county. These decisions may be made by the Board of Commissioners or other elected body or through the recommendations of ad hoc groups tasked with making prioritized lists of communities at risk as well as project areas. It is not necessary to rank communities or projects numerically, although that is one approach. Rather, it may be possible to rank them categorically (high priority set, medium priority set, and so forth) and still accomplish the goals and objectives set forth in this planning document.

The following was prepared by the National Association of State Foresters (NASF), June 27, 2003, and is included here as a reference for the identification and prioritizing of treatments between communities.

Purpose: To provide national, uniform guidance for implementing the provisions of the “Collaborative Fuels Treatment” Memorandum of Understanding (MOU), and to satisfy the requirements of Task e, Goal 4 of the Implementation Plan for the 10-Year Comprehensive Strategy.

Intent: The intent is to establish broad, nationally compatible standards for identifying and prioritizing communities at risk, while allowing for maximum flexibility at the state and regional level. Three basic premises are:

- Include all lands and all ownerships.
- Use a collaborative process that is consistent with the complexity of land ownership patterns, resource management issues, and the number of interested stakeholders.
- Set priorities by evaluating projects, not by ranking communities.

The National Association of State Foresters (NASF) set forth the following guidelines in the Final Draft Concept Paper; Communities at Risk, December 2, 2002.

Task: Develop a definition for “communities at risk” and a process for prioritizing them, per the Implementation Plan for the 10-Year Comprehensive Strategy (Goal 4.e.). In addition, this definition will form the foundation for the NASF commitment to annually identify priority fuels reduction and ecosystem restoration projects in the proposed MOU with the federal agencies (section C.2 (b)).

Conceptual Approach

1. NASF fully supports the definition of the Wildland Urban Interface (WUI) previously published in the Federal Register. Further, proximity to federal lands should not be a consideration. The WUI is a set of conditions that exists on, or near, areas of wildland fuels nationwide, regardless of land ownership.
2. Communities at risk (or, alternately, landscapes of similar risk) should be identified on a state-by-state basis with the involvement of all agencies with wildland fire protection responsibilities: state, local, tribal, and federal.
3. It is neither reasonable nor feasible to attempt to prioritize communities on a rank order basis. Rather, communities (or landscapes) should be sorted into three, broad categories or zones of risk: high, medium, and low. Each state, in collaboration with its local partners, will develop the specific criteria it will use to sort communities or landscapes into the three categories. NASF recommends using the publication “Wildland/Urban Interface Fire Hazard Assessment Methodology” developed by the National Wildland/Urban Interface Fire Protection Program (circa 1998) as a reference guide. (This program, which has since evolved into the Firewise Program, is under the oversight of the National Wildfire Coordinating Group (NWCG)). At a minimum, states should consider the following factors when assessing the relative degree of exposure each community (landscape) faces.
 - **Risk:** Using historic fire occurrence records and other factors, assess the anticipated probability of a wildfire ignition.
 - **Hazard:** Assess the fuel conditions surrounding the community using a methodology such as fire condition class, or [other] process.
 - **Values Protected:** Evaluate the human values associated with the community or landscape, such as homes, businesses, and community infrastructure (e.g. water systems, utilities, transportation systems, critical care facilities, schools, manufacturing and industrial sites, and high value commercial timber lands).
 - **Protection Capabilities:** Assess the wildland fire protection capabilities of the agencies and local fire departments with jurisdiction.

4. Prioritize by project not by community. Annually prioritize projects within each state using the collaborative process defined in the national, interagency MOUs, “For the Development of a Collaborative Fuels Treatment Program.” Assign the highest priorities to projects that will provide the greatest benefits either on the landscape or to communities. Attempt to properly sequence treatments on the landscape by working first around and within communities, and then moving further out into the surrounding landscape. This will require:
 - First, focusing on the zone of highest overall risk but considering projects in all zones. Identify a set of projects that will effectively reduce the level of risk to communities within the zone.
 - Second, determining the community’s willingness and readiness to actively participate in an identified project.
 - Third, determining the willingness and ability of the owner of the surrounding land to undertake, and maintain, a complementary project.
 - Last, setting priorities by looking for projects that best meet the three criteria above. It is important to note that projects with the greatest potential to reduce risk to communities and the landscape may not be those in the highest risk zone, particularly if either the community or the surrounding landowner is not willing or able to actively participate.
5. It is important, and necessary, that we be able to demonstrate a local level of accomplishment that justifies to Congress the value of continuing the current level of appropriations for the National Fire Plan. Although appealing to appropriators and others, it is not likely that many communities (if any) will ever be removed from the list of communities at risk. Even after treatment, all communities will remain at some, albeit reduced, level of risk. However, by using a science-based system for measuring relative risk, we can likely show that, after treatment (or a series of treatments); communities are at “*reduced risk*.”

Using the concept described above, the NASF believes it is possible to accurately assess the relative risk that communities face from wildland fire. Recognizing that the condition of the vegetation (fuel) on the landscape is dynamic, assessments and re-assessments must be done on a state-by-state basis, using a process that allows for the integration of local knowledge, conditions, and circumstances, with science-based national guidelines. We must remember that it is not only important to lower the risk to communities, but once the risk has been reduced, to maintain those communities at a reduced risk.

Further, it is essential that both the assessment process and the prioritization of projects be done collaboratively, with all local agencies with fire protection jurisdiction taking an active role.

Healthy Forests Restoration Act

On December 3, 2003, President Bush signed into law the Healthy Forests Restoration Act of 2003 to reduce the threat of destructive wildfires while upholding environmental standards and encouraging early public input during review and planning processes. The legislation is based on sound science and helps further the President's Healthy Forests

Initiative pledge to care for America's forests and rangelands, reduce the risk of catastrophic fire to communities, help save the lives of firefighters and citizens, and protect threatened and endangered species.

The Healthy Forests Restoration Act (HFRA) seeks to:

- Strengthens public participation in developing high priority projects;
- Reduces the complexity of environmental analysis allowing federal land agencies to use the best science available to actively manage land under their protection;
- Creates a pre-decisional objections process encouraging early public participation in project planning; and
- Issues clear guidance for court action challenging HFRA projects.

The Benton County Community Wildfire Protection Plan was developed to adhere to the principles of the HFRA while providing recommendations consistent with the policy document. This should assist the federal land management agencies with implementing wildfire mitigation projects in Benton County that incorporate public involvement and the input from a wide spectrum of fire and emergency services providers in the region.

Federal Emergency Management Agency Philosophy

Effective November 1, 2004, a hazard mitigation plan approved by the Federal Emergency Management Agency (FEMA) is required for Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Program (PDM) eligibility. The HMGP and PDM programs provide funding, through state emergency management agencies, to support local mitigation planning and projects to reduce potential disaster damages.

The local hazard mitigation plan requirements for HMGP and PDM eligibility are based on the Disaster Mitigation Act (DMA) of 2000, which amended the Stafford Disaster Relief Act to promote an integrated, cost effective approach to mitigation. Local hazard mitigation plans must meet the minimum requirements of the Stafford Act-Section 322, as outlined in the criteria contained in 44 CFR Part 201. The plan criteria cover the planning process, risk assessment, mitigation strategy, plan maintenance, and adoption requirements.

FEMA only reviews a local hazard mitigation plan submitted through the appropriate State Hazard Mitigation Officer (SHMO). FEMA reviews the final version of a plan prior to local adoption to determine if the plan meets the criteria, but FEMA will not approve it prior to adoption.

A FEMA designed plan is evaluated on its adherence to a variety of criteria.

- Adoption by the Local Governing Body
- Multi-jurisdictional Plan Adoption
- Multi-jurisdictional Planning Participation
- Documentation of Planning Process
- Identifying Hazards
- Profiling Hazard Events
- Assessing Vulnerability: Identifying Assets
- Assessing Vulnerability: Estimating Potential Losses

- Assessing Vulnerability: Analyzing Development Trends
- Multi-jurisdictional Risk Assessment
- Local Hazard Mitigation Goals
- Identification and Analysis of Mitigation Measures
- Implementation of Mitigation Measures
- Multi-jurisdictional Mitigation Strategy
- Monitoring, Evaluating, and Updating the Plan
- Implementation through Existing Programs
- Continued Public Involvement

The Benton County Community Wildfire Protection Plan expands on the wildfire chapter of the Benton County Multi-Hazard Mitigation Plan, which was approved by FEMA in 2006. Although published as a separate document, the Community Wildfire Protection Plan should be considered a supplement to the wildfire chapter of the Benton County Multi-Hazard Mitigation Plan.

Local Planning Guidance

Benton County Multi-Hazard Mitigation Plan

The table below lists action items identified in the 2006 Multi-Hazard Mitigation Plan that specifically address wildfire in the wildland-urban interface.

Hazard	Action Item	Coordinating Organizations	Timeline	Mitigation Plan Goals Addressed				
				Life Safety	Critical Facilities and Emergency Services	Protect Property	Disaster Resilient Economy	Public Education, Outreach, Partnerships
Wildland/Urban Interface Fire Mitigation Action Items								
Short-Term #1	Identify specific parts of Benton County at high risk for urban/wildland urban interface fires because of fuel loading, topography and prevailing construction practices	Benton County GIS and Community Development, Benton County Fire Defense Board, fire agencies	1-2 Years	X	X	X	X	X
Short-Term #2	Identify evacuation routes and procedures for high risk areas and educate the public	Benton County Fire Defense Board, fire agencies, law enforcement, County Roads, public works	Ongoing	X	X	X		X
Short-Term #3	Develop Community Wildland Fire Protection Plans	Benton County Community Development, cities, fire agencies, ODF	1-2 Years	X	X	X	X	X
Short-Term #4	Collect statistics on non-ODF vegetation fires from local fire agencies	Benton County Fire Defense Board, GIS	1 year	X		X	X	X
Short-Term #5	Complete surveys of areas of special concern for Wildland/urban interface fires from remaining 1 fire agencies in Benton County along the lines of Table 9.5 above	Local Fire Departments, Benton County Emergency Services	1 year	X		X	X	X
Long-Term #1	Encourage fire-safe construction practices for existing and new construction in high risk areas	Benton County Community Development, city building departments, fire agencies	Ongoing	X	X	X	X	X

Benton County Comprehensive Plan (2007)

The following excerpts include guidance found in the Comprehensive Plan in the form of policies and findings relative to the hazard of wildfire.

Policies

- 7.6.1** Benton County shall work with the Oregon Department of Forestry and fire agencies to identify high wildfire hazard areas.
- 7.6.2** Benton County shall reduce fire risk to life and property, using non-regulatory and regulatory programs that respond to local and state uniform fire codes.
- 7.6.3** Benton County shall identify and map all areas within the county that are unprotected by structural fire protection agencies.
- 7.6.4** Benton County shall work together with Oregon Department of Forestry and the Benton County Fire Defense Board to develop a Wildfire Protection plan.
- 7.6.5** Benton County shall require that plans for new development adequately provide for fire protection.
- 7.6.6** Benton County shall adopt standards for wildfire protection of structures and resource land.

Findings and References

7.6.a Wildland fire is a growing concern in the urban interface and in rural or unincorporated areas. Areas of greatest concern for wildfire hazard are forested rural residential developments with limited access, steep and narrow roads, inappropriate building materials, limited water supply, and long periods of dry weather during the summer. Uncontrolled burning increases the risk of wildfire.

Benton County Hazard Analysis, 2002;
Background Report, Oregon
Technical Resource Guide, 2001

7.6.b During dry periods the potential for major wildfires is significant in Benton County. For the past five years of recorded wildfire incidents in Benton County, the database shows a sharp rise in the past two years. Incidents of wildfires reached 29 in Benton County in 2002, the highest in the database.

Background Report,
Benton County Hazard Analysis, 2002

7.6.c Locations reporting more than two wildfire incidents in the past five years include the Philomath vicinity (14), Alsea vicinity (7), Bellfountain Road (5), and Monroe vicinity (3).

Benton County Hazard Analysis, 2002

7.6.d Wildfire incidents have occurred at a number of parks and recreation areas in Benton County over the last five years with one incident reported at each of these locations: Alsea Falls, Bellfountain Park, Chip Ross Park, Finley Wildlife Refuge, Pioneer Playground, and McBee Park. Two incidents were reported at Fort Hoskins (Benton County Hazard Listing). With increased recreational use of public open space, there is a concern for greater risk of wildfire. Management plans for parks and natural areas provide an opportunity to develop fire protection programs and action strategies, and the ODF is willing to collaborate as a partner.

Benton County Emergency Services
Wildfire Data Base, 2004

7.6.e Much of the county's rural and suburban development has occurred in small valleys and gulches that run along creeks extending out from valley floors. These areas tend to have limited access, little water during the fire season, and severe fuel loading problems such as accumulation of brush, scrub oak, etc.

Background Report
1979 Benton Co. Comp Plan

7.6.f Some rural areas of Benton County are unprotected by structural fire protection agencies (approximately 234 houses or 3% of the total), and these areas should be identified and mapped.

Benton County Emergency Management

7.6.g Mapping of high fuel build-up areas in Benton County was done by the ODF several years ago, but did not result in an official map. Areas mapped included the hills surrounding Philomath and Corvallis, Kings Valley, the corridor to Alsea, and out to the coast. Areas considered to have the greatest risk for wildfire are hillsides with south and southeast aspect due to exposure to the sun and prevailing east and northeast winds in the fall.

Oregon Department of Forestry,
Philomath Office 2004

7.6.h Department of Environmental Quality (DEQ) is responsible for developing a Wildfire Natural Events Action Plan for Oregon, in response to the wildfire smoke that impacted Oregon cities during the summers of 2002 and 2003. Fuel buildup and fire hazard in the Wildland Urban Interface is one of the elements of the plan. Oregon Department of Forestry is the lead agency that is currently developing pilots for how to map the Wildland Urban Interface area.

DEQ Wildfire Website, 2004
DLCD, 2004

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Appendix 8

Potential CWPP Project Funding Sources

Assistance to Firefighters Grant

http://www.rkb.mipt.org/contentdetail.cfm?content_id=44122

To provide direct assistance, on a competitive basis, to fire departments of a State or tribal nation for the purpose of protecting the health and safety of the public and firefighting personnel against fire and fire-related hazards.

Buffer Zone Protection Program (BZPP)

http://www.rkb.mipt.org/contentdetail.cfm?content_id=135490

The FY 2006 BZPP provides funds to build capabilities at the state and local levels to prevent and protect against terrorist incidents primarily done through planning and equipment acquisition.

Chemical Sector Buffer Zone Protection Program (Chem-BZPP)

http://www.rkb.mipt.org/contentdetail.cfm?content_id=135466

The Chem-BZPP, provides funds to build capabilities at the State and local levels through planning and equipment acquisition.

Citizen Corps

http://www.rkb.mipt.org/contentdetail.cfm?content_id=56829

The purpose of the Citizen Corps Program is to supplement and assist State and local efforts to expand Citizen Corps. This includes Community Emergency Response Team (CERT) training, establishing Citizen Corps Councils, and supporting oversight and outreach..

Citizen Corps Support Program

http://www.rkb.mipt.org/contentdetail.cfm?content_id=135192

Support the mission to engage everyone in America in hometown security through the establishment and sustainment of Citizen Corps Councils throughout the United States and territories.

Commercial Equipment Direct Assistance Program (CEDAP) FY2006 Description and Application

http://www.rkb.mipt.org/contentdetail.cfm?content_id=83219

To ensure that law enforcement and emergency responder agencies, departments, and task forces can acquire, through direct assistance, the specialized equipment and training they require to meet their homeland security mission.

Community Disaster Loans

http://www.rkb.mipt.org/contentdetail.cfm?content_id=44126

To provide loans subject to Congressional loan authority, to any local government that has suffered substantial loss of tax and other revenue in an area in which the President designates a major disaster exists. The funds can only be used to maintain ...

Disposal of Federal Surplus Real Property

http://www.rkb.mipt.org/contentdetail.cfm?content_id=43990

To dispose of surplus real property by lease, permits, sale, exchange, or donation.

Emergency Management Institute (EMI) Independent Study Program

http://www.rkb.mipt.org/contentdetail.cfm?content_id=44100

To enhance public and selected audience knowledge of emergency management practices among State, local and tribal government managers in response to emergencies and disasters. The program currently consists of 32 courses. They include IS-1, Emergency

Emergency Management Institute (EMI) Resident Educational Program

http://www.rkb.mipt.org/contentdetail.cfm?content_id=44102

To improve emergency management practices among State, local and tribal government managers, and Federal officials as well, in response to emergencies and disasters. Programs embody the Comprehensive Emergency Management System by unifying the

Emergency Management Institute Training Assistance

http://www.rkb.mipt.org/contentdetail.cfm?content_id=44098

To defray travel and per diem expenses of State, local and tribal emergency management personnel who attend training courses conducted by the Emergency Management Institute, at the Emmitsburg, Maryland facility; Bluemont, Virginia facility; and

Fire Management Assistance Grant

http://www.rkb.mipt.org/contentdetail.cfm?content_id=44124

To provide grants to states, Indian tribal governments and local governments for the mitigation, management and control of any fire burning on publicly (nonfederal) or privately owned forest or grassland that threatens such destruction as would

Hazard Mitigation Grant Program

http://www.rkb.mipt.org/contentdetail.cfm?content_id=44130

To provide states and local governments financial assistance to implement measures that will permanently reduce or eliminate future damages and losses from natural hazards through safer building practices and improving existing structures and

Hazardous Materials Planning and Training

http://www.rkb.mipt.org/contentdetail.cfm?content_id=133349

Hazmat Planning and Training grants to state, territory and native American Tribal grantees.

Homeland Defense Equipment Reuse Program - HDER

http://www.rkb.mipt.org/contentdetail.cfm?content_id=83222

The goal of the HDER Program is to provide excess radiological detection instrumentation and other equipment, as well as training and long-term technical support, at no cost to emergency Responder agencies nationwide.

Homeland Security Grant Program (HSGP)

http://www.rkb.mipt.org/contentdetail.cfm?content_id=118605

Through the DHS National Preparedness Directorate, State and local organizations will receive approximately \$2.5 billion in grant funding to build capabilities that enhance homeland security.

Interagency National Fire Plan Community Assistance

www.nwfireplan.gov

This grant provides a collaborative process for awarding funds to hazardous fuels reduction projects on non-federal land in the Wildland-Urban Interface. Eligible projects must be adjacent to Federal Land and identified in a Community Wildfire Protection Plan (CWPP) completed by February 6, 2009. Collaborated CWPP projects must implement fuels treatments in the wildland-urban interface.

National Fire Academy Educational Program/Harvard Fellowship Grant

http://www.rkb.mipt.org/contentdetail.cfm?content_id=133343

Each fellowship enables a senior fire executive to attend and participate in the three-week "Senior Executives in State & Local Government Program" course that is held twice each year at Harvard University.

National Fire Academy Training Assistance

http://www.rkb.mipt.org/contentdetail.cfm?content_id=44104

To provide travel stipends to students attending Academy courses.

Pre-Disaster Mitigation Program

http://www.rkb.mipt.org/contentdetail.cfm?content_id=102626

The PDM program will provide funds to states, territories, Indian tribal governments, and communities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event.

Rural Fire Assistance (RFA)

http://www.rkb.mipt.org/contentdetail.cfm?content_id=97736

The RFA program provides cost-share grants for equipment, training, and fire prevention and mitigation activities for those rural/Volunteer fire departments (RFDs) that protect rural communities.

Staffing of Adequate Fire and Emergency Response (SAFER) Grant Program

http://www.rkb.mipt.org/contentdetail.cfm?content_id=133340

The purpose of the Staffing for Adequate Fire and Emergency Response (SAFER) grants is to help fire departments increase their cadre of firefighters.

State Fire Assistance Wildland Urban Interface Hazard Mitigation Grants

<http://egov.oregon.gov/ODF/FIRE/grantopps.shtml>

Funds are provided to reduce the threat of fire in the wildland urban interface including hazard mitigation, fuels and risk reduction, and information and education programs for homeowners and communities. This is a competitive grant process among the 17 western states and Pacific Island Territories.

Volunteer Fire Department Assistance

<http://egov.oregon.gov/ODF/FIRE/grantopps.shtml>

Provides financial assistance to volunteer fire departments for organizing, training, and equipping rural fire districts.

Western States Fire Managers Wildland Urban Interface Grant Program

<http://www.oregon.gov/ODF/FIRE/docs/PREV/CriteriaandInstructions.pdf>

The focus of much of this funding is mitigating risk in Wildland Urban Interface (WUI) areas. In the West, the State Fire Assistance (SFA) funding is available and awarded through a competitive process with emphasis on hazard fuel reduction, information and education, and community and homeowner action. This portion of the National Fire Plan was developed to assist interface communities manage the unique hazards they find around them. Long-term solutions to interface challenges require informing and educating people who live in these areas about what they and their local organizations can do to mitigate these hazards.

Wildland-Urban Interface Community and Rural Fire Assistance

http://www.rkb.mipt.org/contentdetail.cfm?content_id=43914

To implement the National Fire Plan and assist communities at risk from catastrophic wildland fires by providing assistance in the following areas: Provide community programs that develop local capability including; assessment and planning.

Appendix 9

Glossary of Terms

Biological Assessment - Information document prepared by or under the direction of the federal agency in compliance with U.S. Fish and Wildlife standards. The document analyzes potential effects of the proposed action on listed and proposed threatened and endangered species and proposed critical habitat that may be present in the action area.

Backfiring - When attack of a wildfire is indirect, intentionally setting fire to fuels inside the control line to contain a spreading fire. Backfiring provides a wider defensible perimeter, and may be further employed to change the force of the convection column.

Blackline - Denotes a condition where the fireline has been established by removal of burnable fuels.

Burning Out - When attack is direct, intentionally setting fire to fuels inside the control line to strengthen the line. Burning out is almost always done by the crew boss as a part of line construction; the control line is considered incomplete unless there is no fuel between the fire and the line.

British Thermal Unit (Btu) - A unit of energy used globally in the power, steam generation, and heating and air conditioning industries. In North America, Btu is used to describe the heat value (energy content) of fuels, and also to describe the power of heating and cooling systems, such as furnaces, stoves, barbecue grills, and air conditioners.

Contingency Plans - Provide for the timely recognition of approaching critical fire situations and for timely decisions establishing priorities to resolve those situations.

Control Line - An inclusive term for all constructed or natural fire barriers and treated fire edge used to control a fire.

Crew - An organized group of firefighters under the leadership of a crew boss or other designated official.

Crown Fire - A fire that advances from tree top to tree top more or less independently of the surface fire. Sometimes crown fires are classed as either running or dependent, to distinguish the degree of independence from the surface fire.

Disturbance - An event which affects the successional development of a plant community (examples: fire, insects, windthrow, and timber harvest).

Diversity - The relative distribution and abundance of different plant and animal communities as well as species within an area.

Duff - The partially decomposed organic material of the forest floor beneath the litter of freshly fallen twigs, needles, and leaves.

Ecosystem - An interacting system of interdependent organisms and the physical set of conditions upon which they are dependent and by which they are influenced.

Environmental Impact Statement (EIS) - According to the National Environmental Policy Act, whenever the US Federal Government takes a “major Federal action significantly affecting

the quality of the human environment” it must first consider the environmental impact in a document called an Environmental Impact Statement.

Exotic Plant Species - Plant species that are introduced and not native to the area.

Fire Adapted Ecosystem - An arrangement of populations that have made long-term genetic changes in response to the presence of fire in the environment.

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

Fire Behavior Forecast - Fire behavior predictions prepared for each shift by a fire behavior analyst to meet planning needs of the fire overhead organization. The forecast interprets fire calculations made, describes expected fire behavior by areas of the fire with special emphasis on personnel safety, and identifies hazards due to fire for ground and aircraft activities.

Fire Behavior Prediction Model - A set of mathematical equations that can be used to predict certain aspects of fire behavior when provided with an assessment of fuel and environmental conditions.

Fire Danger - A general term used to express an assessment of fixed and variable factors such as fire risk, fuels, weather, and topography which influence whether fires will start, spread, and do damage; also the degree of control difficulty to be expected.

Fire Ecology - The scientific study of fire’s effects on the environment, the interrelationships of plants, and the animals that live in such habitats.

Fire Exclusion - The disruption of a characteristic pattern of fire intensity and occurrence (primarily through fire suppression).

Fire Intensity Level - The rate of heat release (BTU/second) per unit of fire front. Four foot flame lengths or less are generally associated with low intensity burns and four to six foot flame lengths generally correspond to “moderate” intensity fire behavior. High intensity flame lengths are usually greater than eight feet and pose multiple control problems.

Fire Prone Landscapes – The expression of an area’s propensity to burn in a wildfire based on common denominators such as plant cover type, canopy closure, aspect, slope, road density, stream density, wind patterns, position on the hillside, and other factors.

Fireline - A loose term for any cleared strip used in control of a fire. That portion of a control line from which flammable materials have been removed by scraping or digging down to the mineral soil.

Fire Management - The integration of fire protection, prescribed fire and fire ecology into land use planning, administration, decision making, and other land management activities.

Fire Management Plan (FMP) - A strategic plan that defines a program to manage wildland and prescribed fires and documents the fire management program in the approved land use plan. This plan is supplemented by operational procedures such as preparedness, preplanned dispatch, burn plans, and prevention. The fire implementation schedule that documents the fire management program in the approved forest plan alternative.

Fire Management Unit (FMU) - Any land management area definable by objectives, topographic features, access, values-to-be-protected, political boundaries, fuel types, or major fire regimes, etc., that set it apart from management characteristics of an adjacent unit. FMU’s

are delineated in FMP's. These units may have dominant management objectives and preselected strategies assigned to accomplish these objectives.

Fire Occurrence - The number of wildland fires started in a given area over a given period of time. (Usually expressed as number per million acres.)

Fire Prevention - An active program in conjunction with other agencies to protect human life, prevent modification of the ecosystem by human-caused wildfires, and prevent damage to cultural resources or physical facilities. Activities directed at reducing fire occurrence, including public education, law enforcement, personal contact, and reduction of fire risks and hazards.

Fire Regime - The fire pattern across the landscape, characterized by occurrence interval and relative intensity. Fire regimes result from a unique combination of climate and vegetation. Fire regimes exist on a continuum from short-interval, low-intensity (stand maintenance) fires to long-interval, high-intensity (stand replacement) fires.

Fire Retardant - Any substance that by chemical or physical action reduces flareability of combustibles.

Fire Return Interval - The number of years between two successive fires documented in a designated area.

Fire Risk - The potential that a wildfire will start and spread as determined by the presence and activities of causative agents.

Fire Severity - The effects of fire on resources displayed in terms of benefit or loss.

Fire Use - The management of naturally ignited fires to accomplish specific prestated resource management objectives in predefined geographic areas.

Flashy Fuel - Quick drying twigs, needles, and grasses that are easily ignited and burn rapidly.

Forb - Any broad-leaved herbaceous plant that is not a grass, especially one that grows in a prairie or meadow

Fuel - The materials which are burned in a fire: duff, litter, grass, dead branchwood, snags, logs, etc.

Fuel Break - A natural or manmade change in fuel characteristics which affects fire behavior so that fires burning into them can be more readily controlled.

Fuel Loading - Amount of dead and live fuel present on a particular site at a given time; the percentage of it available for combustion changes with the season.

Fuel Model - Characterization of the different types of wildland fuels (trees, brush, grass, etc.) and their arrangement, used to predict fire behavior.

Fuel Type - An identifiable association of fuel elements of distinctive species; form, size, arrangement, or other characteristics, that will cause a predictable rate of fire spread or difficulty of control, under specified weather conditions.

Fuels Management - Manipulation or reduction of fuels to meet protection and management objectives, while preserving and enhancing environmental quality.

Gap Analysis Program (GAP) - Regional assessments of the conservation status of native vertebrate species and natural land cover types and to facilitate the application of this

information to land management activities. This is accomplished through the following five objectives:

1. Map the land cover of the United States.
2. Map predicted distributions of vertebrate species for the U.S.
3. Document the representation of vertebrate species and land cover types in areas managed for the long-term maintenance of biodiversity.
4. Provide this information to the public and those entities charged with land use research, policy, planning, and management.
5. Build institutional cooperation in the application of this information to state and regional management activities.

Habitat - A place that provides seasonal or year-round food, water, shelter, and other environmental conditions for an organism, community, or population of plants or animals.

Habitat Type - A group of habitats that have strongly marked and readily defined similarities that when defined by its predominant or indicator species incites a general description of the area; *e.g. a ponderosa pine habitat type*.

Heavy Fuels - Fuels of a large diameter, such as snags, logs, and large limbwood, which ignite and are consumed more slowly than flashy fuels.

Hydrophobic - Resistance to wetting exhibited by some soils also called water repellency. The phenomena may occur naturally or may be fire-induced. It may be determined by water drop penetration time, equilibrium liquid-contact angles, solid-air surface tension indices, or the characterization of dynamic wetting angles during infiltration.

Human-Caused Fires - Refers to fires ignited accidentally (from campfires, equipment, debris burning, or smoking) and by arsonists; does not include fires ignited intentionally by fire management personnel to fulfill approved, documented management objectives (prescribed fires).

Intensity - The rate of heat energy released during combustion per unit length of fire edge.

Inversion - Atmospheric condition in which temperature increases with altitude.

Ladder Fuels - Fuels which provide vertical continuity between strata, thereby allowing fire to carry from surface fuels into the crowns of trees with relative ease. They help initiate and assure the continuation of crowning.

Landsat Imagery - Land remote sensing, the collection of data which can be processed into imagery of surface features of the Earth from an unclassified satellite or satellites.

Landscape - All the natural features such as grasslands, hills, forest, and water, which distinguish one part of the earth's surface from another part; usually that portion of land which the eye can comprehend in a single view, including all its natural characteristics.

Lethal - Relating to or causing death.

Lethal Fires - A descriptor of fire response and effect in forested ecosystems of high-severity or severe fire that burns through the overstory and understory. These fires typically consume large woody surface fuels and may consume the entire duff layer, essentially destroying the stand.

Litter - The top layer of the forest floor composed of loose debris, including dead sticks, branches, twigs, and recently fallen leaves or needles, little altered in structure by decomposition.

Mitigation - Actions to avoid, minimize, reduce, eliminate, replace, or rectify the impact of a management practice.

Monitoring Team - Two or more individuals sent to a fire to observe, measure, and report its behavior, its effect on resources, and its adherence to or deviation from its prescription.

National Environmental Policy Act (NEPA) - An act establishing a national policy to encourage productive and enjoyable harmony between humans and their environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humankind; to enrich the understanding of important ecological systems and natural resources; and to establish a Council on Environmental Quality.

National Fire Management Analysis System (NFMAS) - The fire management analysis process, which provides input to forest planning and forest and regional fire program development and budgeting.

Native - Indigenous; living naturally within a given area.

Natural Ignition - A wildland fire ignited by a natural event such as lightning or volcanoes.

Noncommercial Thinning - Thinning by fire or mechanical methods of pre-commercial or commercial size timber, without recovering value, to meet state forest practice standards relating to the protection/enhancement of adjacent forest or other resource values.

Notice of Availability - A notice published in the Federal Register stating that an EIS has been prepared and is available for review and comment (for draft) and identifying where copies are available.

Notice of Intent - A notice published in the Federal Register stating that an Environmental Impact Statement (EIS) will be prepared and considered. This notice will describe the proposed action and possible alternatives and the proposed scoping process. It will also provide contact information for questions about the proposed action and EIS.

Noxious Weeds - Rapidly spreading plants that have been designated “noxious” by law which can cause a variety of major ecological impacts to both agricultural and wildlands.

Planned Ignition - A wildland fire ignited by management actions to meet specific objectives.

Prescribed Fire - Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist, and NEPA requirements must be met, prior to ignition.

Prescription - A set of measurable criteria that guides the selection of appropriate management strategies and actions. Prescription criteria may include safety, economic, public health, environmental, geographic, administrative, social, or legal considerations.

Programmatic Biological Assessment - Assesses the effects of fire management programs on federally listed species, not the individual projects that are implemented under these programs. A determination of effect on listed species is made for the programs, which is a valid assessment of the potential effects of the projects completed under these programs, if the projects are consistent with the design criteria and monitoring and reporting requirement contained in the project description and summaries.

Reburn - Subsequent burning of an area in which fire has previously burned but has left flareable light fuels that ignites when burning conditions are more favorable.

Road Density - The volume of roads in a given area (mile/square mile).

Scoping - Identifying at an early stage the significant environmental issues deserving of study and de-emphasizing insignificant issues, narrowing the scope of the environmental analysis accordingly.

Seral - Refers to the stages that plant communities go through during succession. Developmental stages have characteristic structure and plant species composition.

Serotinous - Storage of coniferous seeds in closed cones in the canopy of the tree. Serotinous cones of lodgepole pine do not open until subjected to temperatures of 113 to 122 degrees Fahrenheit causing the melting of the resin bond that seals the cone scales.

Stand Replacing Fire - A fire that kills most or all of a stand.

Surface Fire - Fire which moves through duff, litter, woody dead and down and standing shrubs, as opposed to a crown fire.

Watershed - The region draining into a river, river system, or body of water.

Wetline - Denotes a condition where the fireline has been established by wetting down the vegetation.

Wildland Fire - Any non-structure fire, other than prescribed fire, that occurs in the wildland.

Wildland Fire Implementation Plan (WFIP) - A progressively developed assessment and operational management plan that documents the analysis and selection of strategies and describes the appropriate management response for a wildland fire being managed for resource benefits. A full WFIP consists of three stages. Different levels of completion may occur for differing management strategies (e.g., fires managed for resource benefits will have two-three stages of the WFIP completed while some fires that receive a suppression response may only have a portion of Stage I completed).

Wildland Fire Use - The management of naturally ignited wildland fires to accomplish specific pre-stated resource management objectives in predefined geographic areas outlined in FMP's. Operational management is described in the WFIP. Wildland fire use is not to be confused with "fire use," which is a broader term encompassing more than just wildland fires.

Wildland Fire Use for Resource Benefit (WFURB) - A wildland fire ignited by a natural process (lightning), under specific conditions, relating to an acceptable range of fire behavior and managed to achieve specific resource objectives.

Wildland-Urban Interface (WUI) - For purposes of this plan, the wildland-urban interface is located defined in Section 4.5. In general, it is the area where structures and other human development meet or intermingle with undeveloped wildland.

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Northwest Management, Inc.
233 East Palouse River Drive
PO Box 9748
Moscow ID 83843

208-883-4488 Telephone
208-883-1098 Fax
NWManage@consulting-foresters.com
<http://www.Consulting-Foresters.com/>