Stevens County, Washington

Community Wildfire Protection Plan

Volume II

May 30th, 2008

Vision: *Institutionalize and promote a countywide hazard wildfire mitigation ethic through leadership, professionalism, and excellence, leading the way to a safe, sustainable Stevens County.*

Wildfire near Wrights Mountain September 2007

This plan was developed by the Stevens County Community Wildfire Protection Plan Planning committee in cooperation with Northwest Management, Inc., 233 E. Palouse River Dr., P.O. Box 9748, Moscow, ID, 83843, Tel: 208-883-4488, www.Consulting-Foresters.com

Acknowledgments

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

Stevens County Commissioners
and the employees of Stevens County

Washington State Department of Natural Resources

USDI Bureau of Land Management

USDA Forest Service

USDI Bureau of Indian Affairs

USDI Fish & Wildlife Service

Spokane Indian Reservation

Department of Ecology

Federal Emergency Management Agency

Washington Military Department
Emergency Management Division

USDI National Park Service

City of Colville

City of Kettle Falls

Town of Northport
Town of Marcus
City of Chewelah
Town of Springdale

Stevens County Fire Districts

American Red Cross

Chewelah Fire Department
Colville Fire Department
Kettle Falls Fire Department
Marcus Fire Department
Northport Fire Department
Springdale Fire Department

U.S. Border Patrol

Northeast Washington Forestry Coalition

Stevens County Sheriff's Department
Stevens County Conservation District
&
Local Businesses and Citizens of Stevens County

To obtain copies of this plan contact:

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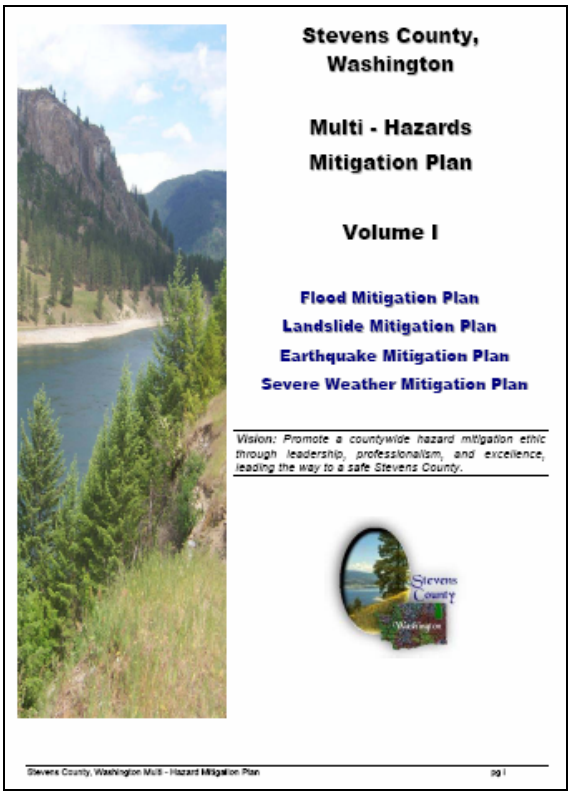
Foreword

The **Stevens County Community Wildfire Protection Plan** was developed during 2007 by the Stevens County CWPP Planning Committee in cooperation with Northwest Management, Inc. of Moscow, Idaho. The Community Wildfire Protection Plan was produced as one chapter of the Stevens County Multi-Hazard Mitigation Plan. Four bound documents have been produced as part of this planning effort. They include:

- Volume I: Multi - Hazard Mitigation Plan including chapters of;
  - Flood Mitigation Plan
  - Landslide Mitigation Plan
  - Earthquake Mitigation Plan
  - Severe Weather Mitigation Plan
- Volume II: Community Wildfire Protection Plan*
- Volume III: Community Wildfire Protection Plan Appendices
- Volume IV: Terrorism and Civil Unrest Mitigation Plan *(limited distribution)*

The Stevens County Community Wildfire Protection Plan has been published as a separate document, but is hereby incorporated as Volume II of the Stevens County Multi-Hazard Mitigation Plan.


Stevens County, Washington

Multi - Hazards Mitigation Plan

Volume I

Flood Mitigation Plan
Landslide Mitigation Plan
Earthquake Mitigation Plan
Severe Weather Mitigation Plan

Vision: Promote a countywide hazard mitigation ethic through leadership, professionalism, and excellence, leading the way to a safe Stevens County.

Stevens County, Washington Multi - Hazard Mitigation Plan pg i


Stevens County, Washington

Terrorism & Civil Unrest Mitigation Plan

Volume IV

Multi - Hazard Mitigation Plan Vision Statement: Promote a countywide hazard mitigation ethic through leadership, professionalism, and excellence, leading the way to a safe Stevens County.

This plan was developed by the Stevens County Hazards Mitigation Planning Core Team in cooperation with Northwest Management, Inc., 233 E. Palouse River Dr. P.O. Box 9748, Moscow, Idaho 83843, Phone: (208) 883-4488, Fax: (208) 883-1098, www.Consulting-Foresters.com

Chapter I

1 Overview of this Plan and its Development

This Community Wildfire Protection Plan (CWPP) for Stevens County, Washington, is the result of analyses, professional cooperation and collaboration, assessments of wildfire risks and other factors considered with the intent to reduce the potential for wildfires to threaten people, structures, infrastructure, and unique ecosystems in Stevens County, Washington. The planning committee responsible for implementing this project was led by the Stevens County Commissioners. Agencies and organizations that participated in the planning process included:

- 49° North Ski Resort
- City of Chewelah
- City of Chewelah Fire Department
- City of Colville
- City of Colville Fire Department
- City of Kettle Falls
- National Forest Foundation
- Northeast Washington Forestry Coalition
- Northwest Management, Inc.
- Spokane Indian Reservation
- Stevens County Commissioners and County Departments
- Stevens County Conservation District
- Stevens County Fire Districts and Departments
- Town of Marcus
- Town of Northport
- Town of Springdale
- U.S. Border Patrol
- USDA Forest Service
- USDI Fish and Wildlife Service
- USDI National Park Service
- USDI Bureau of Indian Affairs
- Washington Department of Ecology
- Washington Department of Natural Resources
- Washington Military Department, Emergency Management Division

In March of 2007, Stevens County solicited competitive bids from companies to provide the service of leading the assessment, developing the data, and writing the **Stevens County Multi - Hazard Mitigation Plan** as well as the completion of the **Stevens County Community Wildfire Protection Plan**. Northwest Management, Inc. was selected to provide this service to the County. Northwest Management, Inc. is a professional natural resources consulting firm located in Moscow, Idaho. Established in 1984 NMI provides natural resource management services across the USA. The Project Co-Managers from Northwest Management, Inc. were Mr. Vaiden Bloch and Mrs. Tera R. King.

1.1 Goals and Guiding Principles

1.1.1 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 program 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). Draft versions of local Hazard Mitigation Plans are not reviewed by FEMA. 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

In Washington the SHMO is:

Mark Stewart
Washington Military Department
Emergency Management Division
Building 20, M/S: TA-20
Camp Murray, WA 98430-5122

The Stevens County Community Wildfire Protection Plan fulfills all of the requirements for a wildfire chapter of a local hazard mitigation plan.

1.1.2 United States Government Accounting Office (GAO)

Since 1984, wildland fires have burned an average of more than 850 homes each year in the United States and, because more people are moving into fire-prone areas bordering wildlands, the number of homes at risk is likely to grow. The primary responsibility for ensuring that preventative steps are taken to protect homes lies with homeowners and state and local governments, not the federal government. Although losses from wildland fires made up only 2 percent of all insured catastrophic losses from 1983 to 2002, fires can result in billions of dollars in damages.

Once a wildland fire starts, various parties can be mobilized to fight it including federal, state, local, and tribal firefighting agencies and, in some cases, the military. The ability to communicate among all parties - known as interoperability - is essential but, as GAO reported previously, is hampered because different public safety agencies operate on different radio frequencies or use incompatible communications equipment (GAO 2005).

GAO was asked to assess, among other issues, (1) measures that can help protect structures from wildland fires, (2) factors affecting use of protective measures, and (3) the role technology plays in improving firefighting agencies' ability to communicate during wildland fires.

The two most effective measures for protecting structures from wildland fires are: (1) creating and maintaining a buffer, called defensible space, from 30 to 100 feet wide around a structure, where vegetation and other flammable objects are reduced or eliminated; and (2) using fire-resistant roofs and vents. In addition to roofs and vents, other technologies – such as fire-resistant windows and building materials, chemical agents, sprinklers, and geographic information systems mapping – can help in protecting structures and communities, but they play a secondary role.

Although protective measures are available, many property owners have not adopted them because of the time or expense involved, competing concerns such as aesthetics or privacy, misperceptions about wildland fire risks, and lack of awareness of their shared responsibility for fire protection. Federal, state, and local governments, as well as other organizations, are attempting to increase property owners' use of protective measures through education, direct monetary assistance, and laws requiring such measures. In addition, some insurance companies have begun to direct property owners in high risk areas to take protective steps.

Existing technologies, such as audio switches, can help link incompatible communication systems, and new technologies, such as software-defined radios, are being developed following common standards or with enhanced capabilities to overcome incompatibility barriers. Technology alone, however, cannot solve communications problems for those responding to wildland fires. Rather, planning and coordination among federal, state, and local public safety agencies is needed to resolve issues such as which technologies to adopt, cost sharing, operating procedures, training , and maintenance. The Department of Homeland Security is leading federal efforts to improve communications interoperability across all levels of government. In addition to federal efforts, several states and local jurisdictions are pursuing initiatives to improve communications interoperability.

1.1.3 Additional State and Federal Guidelines Adopted

This Community Wildfire Protection Plan will include compatibility with the guidelines proposed in the National Fire Plan, the Washington Statewide Implementation Plan, and the Healthy Forests Restoration Act (2004). This Community Wildfire Protection Plan has been prepared in compliance with:

- The National Fire Plan; A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment 10-Year Comprehensive Strategy Implementation Plan–May 2002.
- The Washington Statewide Implementation Strategy for the National Fire Plan–July 2002.
- Healthy Forests Restoration Act (2004)

"When implemented, the 10-Year Comprehensive Strategy will contribute to reducing the risks of wildfire to communities and the environment by building collaboration at all levels of government."
- The NFP 10-Year Comprehensive Strategy August 2001

The objective of combining these three complimentary guidelines is to facilitate an integrated wildland fire risk assessment, identify pre-hazard mitigation activities, and prioritize activities and efforts to achieve the protection of people, structures, the environment, and significant infrastructure in Stevens County while facilitating new opportunities for pre-disaster mitigation funding and cooperation.

1.1.3.1 National Fire Plan

The goals of this Community Wildfire Protection Plan include:

1. Improve Fire Prevention and Suppression
2. Reduce Hazardous Fuels
3. Restore Fire-Adapted Ecosystems
4. Promote Community Assistance

Its three guiding principles are:

1. Priority setting that emphasizes the protection of communities and important watersheds at-risk.
2. Collaboration among governments and broadly representative stakeholders
3. Accountability through performance measures and monitoring for results.

This Community Wildfire Protection Plan fulfills the National Fire Plan's 10-Year Comprehensive Strategy and the Washington Statewide Implementation Strategy for the National Fire Plan. 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, State, and tribal agencies.

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

- Firefighter and public safety continuing as the highest priority.
- A sustained, long-term and cost-effective investment of resources by all public and private parties, recognizing overall budget parameters affecting Federal, State, Tribal, 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 on the unique needs of cross-boundary efforts and the importance of funding on-the-ground activities.
- Communities and individuals in the wildland-urban interface to initiate personal stewardship and volunteer actions that will reduce wildland fire risks.
- Management activities, both in the wildland-urban interface and in at-risk areas across the broader landscape.
- Active forestland and rangeland management, including thinning that produces commercial or pre-commercial products, biomass removal and utilization, prescribed fire and other fuels reduction tools to simultaneously meet long-term ecological, economic, and community objectives.

The National Fire Plan identifies a three-tiered organization 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 Tribal representatives, 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 representative, is a primary source of planning, project prioritization, and resource allocation and coordination at the local level. The role of the private citizen is not to be under estimated, as their input and contribution to all phases of risk assessments, mitigation activities, and project implementation is greatly facilitated by their involvement.

1.1.3.2 Washington Statewide Implementation Strategy

The Strategy adopted by the State of Washington is to provide a framework for an organized and coordinated approach to the implementation of the National Fire Plan, specifically the national "10-Year Comprehensive Strategy Implementation Plan".

Emphasis is on a collaborative approach at the following levels:

- County
- State

Within the State of Washington, the counties, with the assistance of State and Federal agencies and local expert advice, will develop a risk assessment and mitigation plan to identify local vulnerabilities to wildland fire. A Statewide group will provide oversight and prioritization as needed on a statewide scale.

This strategy is not intended to circumvent any work done to date and individual counties should not delay implementing any National Fire Plan projects to develop this county plan. Rather, counties are encouraged to identify priority needs quickly and begin whatever actions necessary to mitigate those vulnerabilities.

It is recognized that implementation activities such as; hazardous fuel treatment, equipment purchases, training, home owner education, community wildland fire mitigation planning, and other activities, will be occurring concurrently with this countywide planning effort.

1.1.3.2.1 County Wildland Fire Interagency Group

Each county within the State has been requested to write a Wildland Fire Mitigation Plan. These plans should contain at least the following five elements:

1) Documentation of the process used to develop the mitigation plan. How the plan was developed, who was involved and how the public was involved.
2) A risk assessment to identify vulnerabilities to wildfire in the wildland-urban interface (WUI).
3) A prioritized mitigation strategy that addresses each of the risks. Examples of these strategies could be: training for fire departments, public education, hazardous fuel treatments, equipment, communications, additional planning, new facilities, infrastructure improvements, code and/or ordinance revision, volunteer efforts, evacuation plans, etc.
4) A process for maintenance of the plan which will include monitoring and evaluation of mitigation activities
5) Documentation that the plan has been formally adopted by the involved agencies. Basically a signature page of all involved officials.

This five-element plan is an abbreviated version of the FEMA mitigation plan and will begin to meet the requirements for that plan.

1.1.3.3 National Association of State Foresters

1.1.3.3.1 Identifying and Prioritizing Communities at Risk

This plan is written with the intent to provide the information necessary for decision makers (elected officials) to make informed decisions in order to prioritize projects across the entire county. These decisions may be made from within the council of Commissioners, or through the recommendations of ad hoc groups tasked with making prioritized lists of projects. It is not necessary to rank 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 of prioritizing treatments between communities.

Purpose: To provide national, uniform guidance for implementing the provisions of the "Collaborative Fuels Treatment" 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)).

1.1.3.3.2 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 nation-wide, 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 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 MOU "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, focus on the zone of highest overall risk but consider 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, set 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 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*".

Similarly, scattered, individual homes that complete projects to create defensible space could be "counted" as "households at reduced risk". This would be a way to report progress in reducing risk to scattered homes in areas of low priority for large-scale fuels treatment projects.

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 – federal, state, local, and tribal – taking an active role.

1.1.3.4 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.

Among other things the Healthy Forests Restoration Act (HFRA):

- 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 Stevens County Community Wildfire Protection Plan is developed to adhere to the principles of the HFRA while providing recommendations consistent with the policy document which should assist the federal land management agencies (US Forest Service and Bureau of Land Management) with implementing wildfire mitigation projects in Stevens County that incorporate public involvement and the input from a wide spectrum of fire and emergency services providers in the region.

1.1.4 Planning Philosophy and Goals

1.1.4.1 Stevens County Fire Mitigation Planning Effort and Philosophy

The goals of this planning process include the integration of the National Fire Plan, the Washington Statewide Implementation Strategy, and the Healthy Forests Restoration Act. This effort will utilize the best and most appropriate science from all partners and integrate local and regional knowledge about wildfire risks and fire behavior while meeting the needs of local citizens, the regional economy, and the significance of this region to the rest of Washington and the Inland West.

The Stevens County Community Wildfire Protection Plan is an out growth of earlier efforts starting with the Chewelah Community Wildfire Protection Plan and the Lower Kettle River Community Wildfire Protection Plan.

The Chewelah CWPP began in the fall of 2003 when the Northeast Washington Forestry Coalition (NEWFC), formerly the Colville Community Forestry Coalition, the Forest Service (FS), and the Washington Department of Natural Resources (DNR) were discussing the high fire danger throughout the Colville National Forest and the surrounding private and state forest lands. The Chewelah area was identified as a high priority area. Initial funding for the Chewelah CWPP project was awarded via a Secure Rural Schools and Community Self Determination Act of 2000 and Resource Advisory Committee grant to NEWFC. The Chewelah CWPP process was completed and approved May 12, 2005.

The Lower Kettle River CWPP, also identified as a high priority area, was initiated in the summer 2004 and progressed to June of 2005. The Ferry County CWPP was initiated at this time and the Ferry County portion of the Lower Kettle River CWPP was incorporated into that Plan. The Stevens County portion is incorporated into this Stevens County Community Wildfire Protection Plan.

During the summer and fall of 2005 discussions regarding a Stevens County CWPP, took place with the Stevens County Board of Commissioners, NEWFC, the Forest Service, the DNR, and the Stevens County Conservation District. The Forest Service was interested in completing a CWPP that would cover their remaining Stevens County ownership. The NEWFC was interested in expediting the CWPP process by submitting for a National Forest Foundation (NFF) grant and raise matching funds. The DNR was supportive and submitted a National Fire Plan (NFP) grant request for CWPP planning funds on behalf of Stevens County. The Conservation District was willing to administer the grant and coordinate the planning process. Dick Dunton, NEWFC member and wildland fire safety consultant; and Peter Griessmann of the Stevens County Conservation District, were named as co-chairs for the Plan's development. A core group was developed and met in the fall of 2005 and throughout 2006. Presentations and updates were given to the Stevens County Fire Users Group (fire chiefs) and the Stevens County Fire District Commissioners at quarterly meetings. Each fire district chief or commissioners were asked to provide a district assessment, identify problem areas and mitigation needed, list needed resources, and review the strategic planning area assessments as they were developed. Public information meetings were held in Onion Creek, Northport,

Little Pend Oreille Lakes, and Arden in April and May of 2006 hosted by the respective fire district. The information gathered and developed during this time has been incorporated into this Stevens County Community Wildfire Protection Plan. The core group initially developed during this process is still actively providing information and guidance on the development of the Stevens County Community Wildfire Protection Plan.

1.1.4.1.1 Mission Statement

The Stevens County Community Wildfire Protection Plan is meant to identify wildfire response capability, educate homeowners as to what actions can be taken to reduce the ignitability of structures, and evaluate critical infrastructure throughout the county. To identify prioritized areas for hazardous fuel reduction treatments on Federal, State, and Private land and to build on existing efforts to restore healthy forest conditions within the county. This plan will clarify and refine our priorities for the protection of life, property, critical infrastructure, and identify wildland-urban interface areas.

1.1.4.1.2 Vision Statement

Institutionalize and promote a countywide hazard wildfire mitigation ethic through leadership, professionalism, and excellence, leading the way to a safe, sustainable Stevens County.

1.1.4.1.3 Planning Goals

- To reduce the area of the Wildland-Urban Interface (WUI) land burned and losses experienced because of wildfires,where these fires threaten communities in the wildland-urban interface.Prioritize the protection of people, structures, infrastructure, and unique ecosystems that contribute to our way of life and the sustainability of the local and regional economy.
- To provide a Wildland-Urban Interface Wildfire Mitigation Plan that will not diminish the private property rights of landowners in Stevens County.
- Educate communities about the unique challenges of wildfire in the Wildland -Urban Interface.
- Establish mitigation priorities and develop mitigation strategies in Stevens County.
- Strategically locate and plan fuel reduction projects.
- Provide recommendations for alternative treatment methods.
- Meet National Fire Plan and FEMA requirements for a county level Fire Mitigation Plan.

1.1.5 Integration with Other Local Planning Documents

During the development of this Community Wildfire Protection Plan several planning and management documents were reviewed in order to avoid conflicting goals and objectives. Existing programs and policies were reviewed in order to identify those that may weaken or enhance the wildfire hazard mitigation objectives outlined in this document. The following narratives help identify and briefly describe some of the existing Stevens County planning documents and ordinances considered during the development of this plan.

1.1.5.1 Lower Kettle River Community Wildfire Protection Plan

The Lower Kettle River area was chosen as one of the first areas for a Community Wildfire Protection Plan in the Colville National Forest area with planning efforts beginning in the

summer of 2004. A very active community participated in the planning process as well as Joint Fire Protection District #3 (Ferry County) and #8 (Stevens County), representatives from the U.S. Forest Service and Washington Department of Natural Resources, and private individuals. This CWPP provides an overall view of the watershed and its relationship with fire. It suggests ways the relationship can be improved; individually and as a community. It also provides direction to local agency land managers and concerned landowners who want to work with their neighbors in developing hazardous fuel reduction strategies.

The Lower Kettle River CWPP was finalized in December of 2005. Representative from the core team that worked on the Lower Kettle River CWPP have been invited to the table and are actively participating in the development of the Stevens County Community Wildfire Protection Plan. Specific components of the Lower Kettle River CWPP are being incorporated into the Stevens County CWPP to ensure that the County's Plan smoothly dovetails with the assessments, goals, and mitigation measures outlined in the Lower Kettle River Plan.

1.1.5.2 Chewelah Community Wildfire Protection Plan

The Chewelah Community Wildfire Protection Plan was developed collaboratively by local citizens, state agencies, and federal agencies starting in the fall of 2003 and progressing through the winter of 2005. The Chewelah area was chosen as one of the first areas for a fire plan in the Colville National Forest. The Chewelah CWPP provides an overall view of the watershed and its relationship with fire. It suggests ways this relationship can be improved and provides direction to local agency land managers and concerned landowners who want to work with their state and federal neighbors in developing fuel reduction strategies. The Chewelah CWPP addresses the main components of wilfire and separates the approximate 150,000-acre project area into twelve strategic planning areas with individual descriptions and recommendations.

The Chewelah CWPP was finalized in 2005. Representatives from the core team that worked on the Chewelah CWPP have been invited to the table and are actively participating in the development of the Stevens County Community Wildfire Protection Plan. Specific components of the Chewelah CWPP are being incorporated into the Stevens County CWPP to ensure that the County's Plan smoothly dovetails with the assessments, goals, and mitigation measures outlined in the Chewelah CWPP.

1.1.5.3 Spokane Indian Reservation Fire Management Plan 2005

This Fire Management Plan outlines those actions that will be taken by The Bureau of Indian Affairs, Branch of Fire Management, Spokane Agency in meeting the fire management goals for the Spokane Indian Reservation. This plan conforms to all requirements outlined in the BIA's "Guidelines for Fire Management Planning in Indian Country."

The purpose of the Spokane Reservation Fire Management Plan (FMP) is to integrate all national wildland fire management guidance, direction, and activities required to implement national fire policy while achieving the Spokane Indian Reservation's overall resource management objectives.

This Spokane Fire Management Plan is tiered to a number of pre-existing plan documents, including the 2005 Spokane and Kalispel Reservation Wildfire Prevention Plan, the 1995 Spokane Indian Reservation Forest Management Plan 1993-2002, and the Integrated Resource Management Plan for the Spokane Indian Reservation dated February 26 of 1996 (referred to as the IRMP of 1996). The IRMP of 1996 and the 1995 Forest Management Plan are currently in the process of being revised and should be completed by late 2005 or early 2006.

Management actions proposed within this Fire Management Plan are based on resource protection guidelines described in the preferred alternative of the IRMP of 1996. However, this Fire Management Plan is dynamic and will reflect changes in resource management direction as defined in the revised IRMP.

The Spokane Indian Reservation Fire Management Plan provides programmatic direction in managing wildland fire on the Spokane Indian Reservation while ensuring protection of the valued cultural and natural resources. The Fire Management Plan is designed to allow the Spokane Agency and its partners to:

- Provide for and improve firefighter and public safety.
- Address fire management strategies and tactics.
- Address values to be protected.
- Educate the communities concerning fire safety, fuels reduction and fire ecology.
- Establish mitigation priorities and develop mitigation strategies.
- Develop a tactical fire response plan.
- Strategically locate and plan fuel reduction projects.
- Reintroduce fire through prescribed burning program.

1.1.5.4 Little Pend Oreille National Wildlife Refuge Wildland Fire Management Plan

The development of the Little Pend Oreille National Wildlife Refuge Fire Management Plan (FMP) was undertaken both to manage fire in a manner compatible with the purpose of the Refuge, incorporate the latest fire management policy directives (DOI 1995) as delineated in the Federal Wildland Fire Management Policy and Program Review , Final Report- 12/18/95, and satisfy requirements of 910 DM 1-3 and 621 FW 1.1. It also serves to update the existing FMP to meet present U.S. Fish and Wildlife Service policy requirements and refuge management objectives. Service policy requires that all refuges with vegetation capable of sustaining a fire will develop a FMP. In addition, all Service lands using prescribed fire must have an FMP in place.

The FMP includes cooperative efforts in wildland fire and prescribed fire with the Colville National Forest, Washington Department of Natural Resources, and other federal, state, and private wildland fire organizations.

1.1.5.5 Colville National Forest Fire Management Plan 2005

The Colville National Forest Fire Management Plan (FMP) details fire managmenet strategies and operations for the 1.1 million acre Colville National Forest. The purpose of the Colville National Forest Fire Management Plan is to identify and integrate all wildland fire management guidance, direction, and activities required to implement national fire policy and fire management direction from: *Federal Wildland Fire Management Policy and Program Review – 1995 and 2001; The Interagency Fire Management Plan Template;* the *Forest Service Manual,* and *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10 Year Comprehensive Strategy Implementation Plan.*

The FMP was developed around the Forest fire management program and addresses all aspects of it, including wildland urban interface (WUI), rural fire assistance, prescribed fire, fuels

management, prevention, and response to wildland fire or response to unplanned fire. The FMP identifies a fire program that meets identified fire management objectives.

The Forest's annual fire management plan is reviewed, updated, and approved as needed each year to:

- Formally document the Forest's fire program elements, objectives, strategies, and resource considerations based on the Forest land and resource management plan.
- Provide the fire manager specific guidelines for implementing fire-related direction on the ground.
- Interpret strategic land and resource management plan direction into specific fire management direction.
- Set out a specific, detailed fire program that most efficiently meets fire management direction annually, including organization, facilities, equipment, staffing needs, activities, timing, locations, and related costs.

The fire management plan does not document fire management decisions, rather it provides the operational parameters whereby fire managers implement the goals and objectives in the Forest Land and Resource Management Plan or land management decisions. The FMP is a working document and is updated annually or as policy or Land and Resource Management Plans are updated.

1.1.5.6 Stevens County Comprehensive Land Use Plan 2006

The Stevens County Land Use Comprehensive Plan was developed to provide a framework of policies which will guide the development of a regulatory environment that will enhance the opportunity to realize the County's vision. It is intended to be a guide for the government of the citizens of Stevens County in identifying and respecting the customs, culture, economic viability, social stability, and quality of life, and then applying those values to growth and development as it occurs in the County.

The Stevens County Community Wildfire Protection Plan will be incorporated as a tool for decision makers to further their knowledge of wildland fire risk areas in order to make more informed decisions on how future development should occur in high risk areas. Although land use designations are expected to be revised over time, specific recommendations regarding the vulnerability or potential dollar losses of future buildings, infrastructure, and critical facilities is not possible at this time.

1.1.5.7 Stevens County Comprehensive Emergency Management Plan (CEMP)

The purpose of the Stevens County Comprehensive Emergency Management Plan (CEMP) is to guide organizational behavior before, during and after a disaster. The CEMP develops and describes comprehensive programs that define who does what, when, where, and how, in order to mitigate, prepare for, respond to, and recover from the effects of all types of disasters. The CEMP is intended to minimize the impacts of emergencies and disasters on the people, property, environment, and economy of Stevens County.

1.1.5.8 City of Colville Comprehensive Growth Management Plan

The Colville Comprehensive Plan and implementing Zoning and Land Division Ordinances adopted in 1997 clearly states Colville's vision of the future and the process of managing growth

that will be followed to achieve it and, to define a coordinated approach to growth and development that will protect the quality of life enjoyed by all residents.

The Colville Comprehensive Growth Management Plan includes information on the history of the city and a description of existing land uses, public facilities and services, housing, and natural resources. The focus of the plan; however, is the goals, standards, and plan maps that will guide the city government's actions over the next twenty years.

1.1.5.9 City of Colville Hazard Identification and Vulnerability Assessment

The City of Colville has completed a Hazard Identification and Vulnerability Assessment (HIVA), which documents the types of hazards that may reasonably be expected to affect the city. A detailed profile of each hazard and a vulnerability assessment that looks at the number of people, structures, and critical facilities potentially vulnerable to a hazard event has been compiled. The HIVA is initial step in the emergency management process that leads to mitigation against, preparedness for, response to, and recovery from hazards within the city.

1.1.5.10 City of Colville Comprehensive Emergency Management Plan

The City of Colville is currently working on the development of a Comprehensive Emergency Management Plan (CEMP). The City of Colville CEMP will define the planned response to emergency situations associated with natural and man-made disasters, technological incidents, and national security emergencies in or affecting the City of Colville. The CEMP will establish a flexible framework to implement the emergency management systems for the City of Colville.

1.1.5.11 Town of Marcus Comprehensive Growth Management Plan

The Marcus Comprehensive Growth Management Plan and implementing Unified Development Ordinance adopted in 1997 was prepared for two primary reasons:

- to clearly state Marcus' vision of the future and the process that will be followed to achieve it; and,
- to ensure a coordinated approach to growth and development in Stevens County that will protect the quality of life of both urban and rural residents.

The Marcus Comprehensive Growth Management Plan includes information on the history of the town and a description of existing conditions vis-à-vis land use, public facilities and services, housing, shorelines, and natural resources. The focus of the plan, however, is the goals, policies, standards, and plan maps that will guide the town government's actions over the next twenty years.

Chapter 2

2 Documenting the Planning Process

Documentation of the planning process, including public involvement, is required to meet FEMA's DMA 2000 (44CFR§201.4(c)(1) and §201.6(c)(1)). This section includes a description of the planning process used to develop this plan, including how it was prepared, who was involved in the process, and how all of the involved agencies participated.

2.1 Description of the Planning Process

The Stevens County Community Wildfire Protection Plan was developed through a collaborative process involving all of the organizations and agencies detailed in Chapter 1 of this document. The planning process included five distinct phases which were in some cases sequential (step 1 then step 2) and in some cases intermixed (step 4 completed throughout the process):

1. **Collection of Data** about the extent and periodicity of hazards in and around Stevens County. This included areas encompassing Stevens, Ferry, and Pend Oreille County to ensure a robust dataset for making inferences about wildfires in Stevens County specifically.
2. **Field Observations and Estimations** about risks, juxtaposition of structures and infrastructure to risk areas, access, and potential treatments.
3. **Mapping** of data relevant to pre-disaster mitigation control and treatments, structures, resource values, infrastructure, risk assessments, and related data.
4. **Facilitation of Public Involvement** from the formation of the planning committee, to a public mail survey, news releases, public meetings, public review of draft documents, and acknowledgement of the final plan by the signatory representatives.
5. **Analysis and Drafting of the Report** to integrate the results of the planning process, providing ample review and integration of committee and public input, followed by signing of the final document.

2.2 The Planning Team

Leading planning efforts from Stevens County was Stevens County Land Director, Clay White. Northwest Management Project Co-Managers were Tera R. King, B.S. and Vaiden Bloch M.S. Mrs. King received a Bachelor of Science degree in natural resource management from the University of Idaho and Mr. Bloch has earned a Master of Science degree in forest products and a Bachelor of Science degree in forest management from the University of Idaho.

These individuals led a team of resource professionals that included Stevens County government, incorporated city officials, fire protection districts, law enforcement, Washington Department of Natural Resources, conservation districts, hospital and school district representatives, the US Forest Service, National Park Service, the Northeast Washington Forestry Coalition, resource management professionals, and hazard mitigation experts.

The planning team met with many residents of the County during inspections of the communities and infrastructure. This methodology, when coupled with the other approaches in this process, worked adequately to integrate a wide spectrum of observations and interpretations about the project.

The planning philosophy employed in this project included the open and free sharing of information with interested parties. Information from federal and state agencies was integrated into the database of knowledge used in this project. Meetings with the committee were held throughout the planning process to facilitate a sharing of information between cooperators.

When the public meetings were held, many of the committee members were in attendance and shared their support and experiences with the planning process and their interpretations of the results.

2.2.1 Multi-Jurisdictional Participation

CFR requirement §201.6(a)(3) calls for multi-jurisdictional planning in the development of Hazard Mitigation Plans which impact multiple jurisdictions. This Multi - Hazard Mitigation Plan is applicable to the following jurisdictions:

- Stevens County, Washington
- City of Chewlah
- City of Colville
- City of Kettle Falls
- Town of Marcus
- Town of Springdale
- Town of Northport
- Stevens County Fire District #1
- Stevens County Fire District #2
- Stevens County Fire District #3
- Stevens County Fire District #4
- Stevens County Fire District #5
- Stevens County Fire District #6
- Stevens County Conservation District
- Colville Fire Department
- Kettle Falls Fire Department
- Chewelah Fire Department
- Marcus Fire Department
- Northport Fire Department
- Springdale Fire Department
- Stevens County Fire District #7
- Stevens County Fire District #8
- Stevens County Fire District #9
- Stevens County Fire District #10
- Stevens County Fire District #11
- Stevens County Fire District #12
- Stevens County Public Utilities District
- Spokane Indian Reservation

These jurisdictions were represented on the planning committee, in public meetings, and participated in the development of hazard profiles, risk assessments, and mitigation measures. The monthly planning committee meetings were the primary venue for authenticating the planning recoRoad However, additional input was gathered from each jurisdiction in a combination of the following ways:

- Planning committee leadership visits to scheduled municipality public meetings (e.g., County Commissioner meetings, City Hall meetings) where planning updates were provided and information was exchanged.
- One-on-one visits between the planning committee leadership and the representatives of the municipalities (e.g., meetings with County Commissioners, cities, fire districts, or communities).
- Special meetings at each jurisdiction by the planning committee leadership requested by the municipality involving elected officials (mayor and County Commissioners), appointed officials (e.g., County Assessor, Sheriff, City Police), municipality employees, local volunteers, business community representatives, and local citizenry.
- Written correspondence was provided monthly between the planning committee leadership and each municipality updating the cooperators in the planning process, making requests for information, and facilitating feedback.

Planning committee leadership (referenced above) included: Stevens County Land Services Director, Clay White, and Tera King, and Vaiden Bloch of Northwest Management, Inc.

Like other rural areas of Washington and the USA, Stevens County's human resources have many demands put on them in terms of time and availability. Several of the elected officials (County Commissioners and City Mayors) do not serve in a full-time capacity; some of them have other employment and serve the community through a convention of community service. Recognizing this, many of the jurisdictions decided to identify a representative to cooperate on the planning committee and then report back to the remainder of their organization on the process and serve as a conduit between the planning committee and the jurisdiction. In the case of the Stevens County Commissioners, Stevens County Land Services Director, Clay White, was a regular attendee of the planning committee meetings and reported to the Board on the progress of the Stevens County MHMP.

2.3 Planning Committee Meetings

The following list of people who participated in the planning committee meetings, volunteered time, or responded to elements of the Stevens County Community Wildfire Protection Plan's preparation.

NAME	ORGANIZATION
Arne Johnson	Washington DNR
Bob Hinds	Washington DNR
Bruce Garcia	Stevens County GIS
Charlie Kessler	County Conservation District
Clay White	Stevens County Land Services
Dan Brauner	U.S. Fish and Wildlife Service
Dennis Jenson	Town of Marcus
Dick Dunton	Northeast Washington Forestry Coalition
Don Strand	Washington DNR
Fran Bolt	Town of Marcus
Guy Gifford	Washington DNR
Janean Creighton	WSU Stevens County Extension
John Eminger	49 Degrees North
Les Schneiter	Fire District #5
Lloyd McGee	Vaagen Bros & Northeast Washington Forestry Coalition
Matt Castle	Washington DNR
Matt Dauehnauer	U.S. Forest Service
Melinda Lee	City of Colville
Merrill Ott	Stevens County Commissioner
Michael Mace	Fire District #7
Mike Almas	U.S. Forest Service
Misty Seaboldt	USDA Natural Resource Conservation Service
Ron Gray	Avista Utilities
Russ Larson	Stevens County PLAC
Steve Harris	Washington DNR
Steve Rawlings	U.S. Forest Service
Tad Masterson	Fire District #11
Ted Olson	Washington Department of Ecology
Tera King	Northwest Management, Inc.

- Tim VanDoren……..Fire District #4
- Tracy Ferrell .....City of Chewelah
- Vaiden Bloch .....Northwest Management, Inc.

2.3.1.1 Committee Meeting Minutes

The planning committee began meeting in 2005 to lay the ground work for the Stevens County CWPP. Northwest Management, Inc. was hired and began attending regular planning committee meetings in May of 2007.

2.3.1.1.1 May 24th, 2007 – USDA Service Center

Agenda Item #1 – Introduction:

Clay called the meeting to order by making introductions and giving some background on the Community Wildfire Protection Plan (CWPP) project up to this point. Tera asked for a round table introduction to help her become more familiar with the committee. Tera explained how the CWPP will dovetail with the Multi – Hazard Mitigation Plan (MHMP) project. Both planning projects will be conducted concurrently with the CWPP committee meeting in the morning and the MHMP meeting in the afternoon. Many of the projects' tasks will overlap; thus, it is hoped that both planning groups will be able to follow a similar timeline. This may mean that the CWPP group will not meet every month. Tera handed out the tentative timeline showing a completion date in either December or January.

Agenda Item #2 – Discuss Existing Mission, Vision, and Goals Statements:

Tera handed out copies of the Mission, Vision, and Goals statements already developed by the committee. She asked the committee to briefly review the statements. These items may be added to at any time during the planning process.

Agenda Item #3 – Public Survey and Press Release:

Rough drafts of the first press release and public survey were handed out. Tera would like to send the press release to local media outlets within the next two weeks; thus, any comments or suggestions should be sent to her immediately. Clay noted that he had a good working list of media contacts. He thought he may be able to improve the press release by adding a quote from the Commissioners.

Tera explained the intent of the public survey. This document as well as the press release were written to provide information for both the CWPP and the MHMP. The survey will be distributed to a random sample of the County based on an equal percentage from each of the three Commissioner's districts. There will be a series of three mailings. Respondents will receive a free color aerial photograph of Stevens County. Clay agreed to provide the County's letterhead and Commissioner's signature. Tera asked that any revisions or suggestions to the survey be sent to her by the next committee meeting.

Agenda Item #4 – Fire Department Summaries:

Tera handed out and briefly reviewed the existing fire department summaries. She asked that each fire department and agency take a quick look at the summaries to make sure they are still accurate. She also noted that any department needs should be clearly listed.

Agenda Item #5 – SPA Risk Assessments:

Each Strategic Planning Zone in the existing CWPP has a 1 or 2 page risk assessment. Tera noted that the group may add information to these assessments at any time, but the current

information was sufficient. Tera asked how the SPA boundaries were determined. In particular, how were the existing Kettle Falls Plan SPAs and Chewelah Plan SPAs incorporated? The committee noted that Dick Dunton had drawn most of the SPA boundaries on the map. Tera will work with Dick to come up with an accurate description of the methodology used.

Agenda Item #6 – Past, Ongoing, or Proposed Mitigation Activities:

Tera pointed out that it was important to discuss mitigation activities or programs already occurring in the County in the CWPP. Any information the committee has regarding recently past, ongoing, or planned mitigation projects (educational, fuels reduction, policy, existing CWPPs, etc) needs to be sent to NMI including timber sales, etc being conducted by agencies.

Agenda Item #7 – Wildland Urban Interface:

Referring to the wall maps, Tera asked the committee how the Wildland Urban Interface boundary had been determined. She then explained some of the other methodologies being used and the ramifications of each technique. Tera noted that the existing WUI boundary could be construed as biased and challenged in court; however, if this was the best way to represent wildland urban interface in Stevens County, the final decision is up to the committee. The group agreed they would like to revisit this issue at the next meeting with maps of the WUI methodology used in neighboring counties, which is solely population based.

Agenda Item #8 – Review Wall Maps:

Tera brought several wall maps including representations of land ownership, 2006 aerial photography, and fire prone landscapes. She asked that the committee take a minute to review the information on the maps for accuracy of names, roads, ownership, etc.

Agenda Item #9 – Open Discussion:

At the last CWPP meeting, the committee decided that the monthly meetings should be held on the 4th Thursday of each month. Tera explained that the public meetings would likely be scheduled for the first part of August.

Agenda Item #10 – Task List and Assignments:

Information can be sent to Tera King at king@consulting-foresters.com.*

1. Send NMI info on existing mitigation programs, plans, etc – Committee
2. Reserve meeting room for June 28th – Clay
3. Review/send additions to Mission, Vision, and Goals Statements by next meeting – Committee
4. Review public survey and send edits to NMI by June 28th – Committee
5. Write description of SPA boundary methodology – Dick
6. Send committee all review materials electronically – Tera
7. Develop risk analysis maps - NMI
8. Bring maps of Pend Oreille and Ferry County WUI to next meeting - Tera
9. Send NMI revisions/edits to Fire Department summaries by June 28th – Fire Depts & Agencies
10. Send NMI organization logos by the next meeting - Committee

Agenda Item #11 – Adjournment:

Tera adjourned the meeting at approximately 11:15; however, she asked that the committee take a look at some of the wall maps before they leave.

Next Meeting: June 28th at 11:30 in the USDA Service Center (same location). Lunch will be provided.

2.3.1.1.2 June 28th, 2007 – USDA Service Center

Agenda Item #1 – Introduction:

Clay began the meeting by welcoming the attendees and passing around the sign in sheets. Tera thanked all the members for their continued participation

Agenda Item #2 – Housekeeping Items:

Tera briefly noted that there had been one question added to the public mail survey regarding the flooding hazaRoad She asked if the committee had any additional edits before the survey was finalized and approved by the Commissioners. There was one additional change to the cover letter. Tad thought that the phrase "defensible" should be changed to "survivable" and the committee agreed. NMI was still waiting on the names and addresses database, but as soon as it is received, the survey will begin the first of three mailings. The committee also requested that the free map offered to respondents be zoomed in to the respective Commissioner's district. Tera will check with Vaiden to make sure, but this shouldn't be a problem.

Tera reiterated the importance of including information on current or ongoing mitigation projects in the plan. So far she has not received any project information. She asked that the committee please start sending this information as soon as possible.

Agenda Item #3 – Wildland Urban Interface:

During the discussion of the Wildland Urban Interface at the last meeting, Tera agreed to bring a draft population density map to be compared side-by-side with the current WUI designation boundary. With the two maps available, there was an in-depth discussion of the meaning of the WUI and how it would affect current projects if it were changed. Dick noted that except for the islands of non-WUI in the middle of the existing map, the population density model was actually fairly similar. Tera reiterated that changing the WUI boundary would not affect the Strategic Planning Area boundaries. The committee would like to see the SPA boundaries superimposed on the population density WUI model. There was also some discussion on how the WUI designation would affect Roadless Areas. Tera didn't think that having WUI within a Roadless Area would be a problem because the CWPP doesn't override any existing forest management policies. Steve Rawlings with the Forest Service was going to research the subject.

Agenda Item #4 – Public Meetings:

The public meeting dates have been set for August 7th through the 9th. After much discussion, the committee agreed the best locales for the evening meetings would be: Spokane Lake (Suncrest Middle School), Chewelah (City Hall), and Kettle Falls (American Legion). Two additional daytime meetings will be held in Onion Creek and Hunters. Clay and Janean were going to work on scheduling the venues and nailing down times. Tera handed out a draft flyer/press release. The committee liked the flyer, but agreed that it should have a wildfire picture as well.

Agenda Item #5 – Project Mapping:

After the remaining business had been discussed, Tera asked the committee to gather around the ownership map on the table and begin drawing in potential projects while they ate lunch. Projects ranged from home defensible space to roadside fuels management to general forest health. NMI will digitized and map the proposed projects. These projects will be presented at the public meetings in August.

Agenda Item #6 – Task List and Assignments:

Information can be sent to Tera King at king@consulting-foresters.com.*

1. Send NMI info on existing mitigation programs, plans, etc – Committee
2. Confirm public meeting venues and times – Clay, Janean, and NMI
3. Finalize public meeting flyer – NMI
4. Send NMI names and address database for survey – Bruce
5. Digitize and map proposed projects - NMI
6. Develop WUI/SPA map - NMI
7. Send NMI organization logos by the next meeting - Committee

Agenda Item #8 – Adjournment:

Tera adjourned the meeting at approximately 1 pm. The committee will not meet in July.

Next Meeting: TBA

2.3.1.1.3 August 23rd, 2007 – USDA Service Center

Agenda Item #1 – Introduction:

Vaiden and Clay began the meeting by welcoming the committee members and passing around the sign in sheet. This is an joint meeting of the CWPP and MHMP committees with the main purpose of distributing rough draft documents completed to date.

Agenda Item #2 – Housekeeping Items:

For the most part, the public survey has been completed. Approximately 34% of the surveys were returned. Last week a final reminder was sent out to solicit the return of any outstanding surveys. Clay White indicated that he has talked to several people that received the survey and would be returning them. Vaiden also reviewed the map incentive, which is an aerial photograph of a particular Commissioner district of their choosing. The free maps will be sent out near the completion date of the plan.

The public meetings were held August 7-9 at 5 locations across the county. Tera King conducted the meetings with a short slide presentation and valuable assistance from several committee members. Clay White reported that attendance was mixed, but very good comments, ideas, treatment areas, and additional mitigation measures came out of the meetings. The public comments will be incorporated into the plan and discussed with the committee.

Agenda Item #3 – Community Wildfire Protection Plan:

Draft copies of the plan containing completed and near completed sections of the CWPP were handed out to the committee for review, edit, and comment. Vaiden reviewed and discusses specific sections of the draft that needed clarification or additional information. Portions of several chapters are currently being compiled. All committee edits and review comments need to be returned to Tera by September 19th in order for them to be incorporated into the committee review draft for the next meeting. The September committee meeting will be very important for all committee members to attend as Tera will have the draft plan completed as well as action items prioritized for discussion and refinement.

A question was asked if the County Highway Department Resources and Capabilities should be included in section 4.8 since the county plays a role in traffic control, etc. during a wildfire or other incident. It was the general consensus that this information be added to the plan. NMI will contact Jason Heart, County Road Department, for the information.

Agenda Item #4 – Multi-Hazard Mitigation Plan:

Draft copies of the plan containing completed and near completed sections of the MHMP were handed out to the committee for review, edit, and comment. Vaiden reviewed and discusses specific sections of the draft that needed clarification or additional information. Portions of several chapters are currently being compiled. All committee edits and comments need to be returned to Tera by September 19th in order for them to be incorporated into the committee review draft for the next meeting. The September committee meeting will be very important for all committee members to attend as Tera will have the draft plan completed as well as action items prioritized for discussion and refinement.

Agenda Item #5 – Terrorism & Civil Unrest Worksheets:

Several of the TCU worksheets were incomplete or needed additional detail after the last meeting. Vaiden went through the incomplete stack to see if any of the additional attendees could assist with the completion of these forms. NMI will contact the remaining districts entities directly to obtain this information. A summary of completed Vulnerability Assessments from the last meeting was circulated for the committee to review. Once all the TUC worksheets are completed they will be summarized, presented to the committee, and incorporated into the plan.

Agenda Item #6 – Project Chart:

Vaiden presented a wall chart containing all the mitigation measures developed by the planning committee to date as well as measures identified at the public meetings. A copy of this chart will be sent out to all committee members with the meeting notes for further review.

Agenda Item #7– Adjournment:

Copies of the draft plans will be made available to committee members that were unable to attend this meeting via the Northwest Management FTP site. Information for accessing the site will be provided via email. All comments and edits need to be sent to Tera by September 19th in order to be included in the committee draft. Please send edits via email, fax, or US Mail. If you wish to just describe the change in an email, please include the section and paragraph reference since page numbers often change as the document is revised. Vaiden adjourned the meeting at approximately 3 pm.

The next MHMP meeting will be held on September 27th at 1 pm at the USDA Service Center in Colville (same place).

2.3.1.1.4 September 27th, 2007 – USDA Service Center

Agenda Item #1 – Introduction:

Tera began the meeting by welcoming the committee members and passing around the sign in sheet and review materials.

Agenda Item #2 – Community Wildfire Protection Plan Draft Review:

Tera walked the committee through the new sections of the draft CWPP. At this point the document is fairly complete, so it is important that the committee begin providing comments as to the accuracy of the information compiled. Dick noted that there were several completed mitigation projects that should be highlighted in Chapter 4. Steve Harris should have information on these projects as well as new ones. Tera asked that the committee read through the hazard chapters and provide comments by October 19th.

Prioritization of the projects is a key component in the development of the CWPP. Tera provided an example of a numerical scoring system as one possible method. She also explained that it was the committee's decision on how to go about prioritizing projects. After an in-depth discussion and working through a couple examples, the committee agreed that a

numerical scoring system would be better than a more subjective method. Tera said she would work on prioritizing all of the projects for review at the October meeting.

Tera will also have the Appendices and Executive Summary prepared for review at the October meeting.

Agenda Item #3 – Schedule:

Tera explained that most of the information gathering phase was complete. It was now the committee's job to review the document and provide edits. In order to complete the plan ahead of the 2008 grant deadline, Tera explained that the committee would have to stick to a fairly tight schedule outlined as follows:

Committee Review Ends – October 25th

Public Review Phase – October 29th – November 23rd

Submit to EMD – December 1st

Agenda Item #4 – Adjournment:

The meeting was adjourned at approximately 3 pm.

The next MHMP meeting will be held on October 25th at 1 pm at the USDA Service Center in Colville (same place).

The next CWPP meeting will be held on October 25th at 10 am at the USDA Service Center in Colville (same place).

2.3.1.1.5 October 25th, 2007 – USDA Service Center

Agenda Item #1 – Introduction:

Tera began the meeting by welcoming the committee members and passing around the sign in sheet and review materials.

Agenda Item #2 – Community Wildfire Protection Plan Draft Review:

Tera walked through the all of the new information in the draft plan since the last meeting. The biggest addition was the inclusion of the prioritization rankings and the completed Appendices containing all of the maps. Tera asked that the committee to spend some time reviewing the projects and checking to see if they agree with the way they were ranked. All comments need to be sent to Tera immediately.

Agenda Item #3 – Public Review:

Tera reviewed the public review process and handed out a draft press release. The committee decided that hardcopies of the drafts would be sent to all of the county libraries as well as city halls and the County Land Services office. Clay will also be posting the documents on the county website. Tera and Clay will work on sending a letter to all of the original committee members letting them know that the public review phase has started and the documents are open for any comments. The letter will also contain information on how to obtain a copy if they wish to have their own.

Tera will revise the press release based on the committee's comments and send it to Clay for distribution to all of the county media outlets.

Agenda Item #4 – Schedule:

The committee revised the completion schedule slightly to adjust for Thanksgiving and other meetings.

Committee Review Ends – October 25th

Public Review Phase – October 31st – November 30th

Submit to EMD – December 7th

Agenda Item #5 – Adjournment:

The meeting was adjourned at approximately 11am

The next meeting will occur jointly with the MHMP committee and will be held on December 5th at 1 pm at the USDA Service Center in Colville (same place).

2.4 Public Involvement

Public involvement in this plan was made a priority from the inception of the project. There were a number of ways that public involvement was sought and facilitated. In some cases this led to members of the public providing information and seeking an active role in protecting their own homes and businesses, while in other cases it led to the public becoming more aware of the process without becoming directly involved in the planning.

2.4.1 News Releases

Under the auspices of the Stevens County planning committee, news releases were submitted to the *Deer Park Tribune*, the *Huckleberry Press*, *The Outpost*, the *Statesman Examiner*, and *The Independent*. Informative flyers were also distributed around towns and to local offices within the communities.

Figure 2.1. Press Release sent on May 31st, 2007.

Stevens County Multi - Hazard Mitigation Project Underway!

The planning process has been launched to complete a Multi - Hazard Mitigation Plan for Stevens County as part of the FEMA Pre-Disaster Mitigation program. The Stevens County Multi - Hazard Mitigation Plan will include risk analysis at the community level with predictive models for where disasters such as floods, landslides, wildfire, earthquakes, severe weather, and terrorism are likely to occur. The project, entirely funded by a grant from the State of Washington and FEMA, will enable Stevens County to be eligible for grant dollars in the future to implement projects and mitigation identified in the MHMP. The completion of this Plan will also enable the county and cites in Stevens County to be eligible for monies in the event of a disaster. Although not a regulatory document, it will provide valuable information as we plan for the future.

Northwest Management, Inc. has been retained by Stevens County to provide risk assessments, mapping, field inspections, interviews, and to collaborate with the committee to author the plan. The coordinating team includes fire districts, land managers, elected officials, county departments, local agencies, community members and others. Northwest Management will conduct analyses and work with the committee to formulate recommendations for potential treatments that will mitigate loss potential from various natural and man-made hazards.

One of the first steps in gathering information about risk in the county is to conduct a homeowner's survey. The planning committee will be mailing a brief survey to randomly selected homeowners in the county seeking details about home construction and

landscape materials, proximity to water sources, and past experiences with hazards in the county. This survey is very important to the success of the plan and will only be sent to a small sample of county residents. Those homes that receive a survey are asked to please take the time to complete it thereby benefiting the community overall.

The planning team will also be conducting public meetings to discuss preliminary findings and to seek public involvement in the planning process. For more information on the Multi - Hazard Mitigation Plan project in Stevens County contact Stevens County Land Services Director, Clay White, at (509) 684-8325.

2.4.2 Public Mail Survey

In order to collect a broad base of perceptions about a variety of hazards and individual risk factors of homeowners in Stevens County, a mail survey was conducted. This survey included wildland fire as well as flood, landslide, earthquake, severe weather, and terrorism. Approximately 264 residents of Stevens County were randomly selected to receive a mail survey.

The public mail survey developed for this project has been used in the past by Northwest Management, Inc., during the execution of other Mitigation Plans. The survey used The Total Design Method (Dillman 1978) as a model to schedule the timing and content of letters sent to the selected recipients. Copies of each cover letter, mail survey, and communication are included in Appendix II.

The first in the series of mailings was sent July 26, 2007, and included a cover letter, a survey, and an offer of receiving a custom GIS map of the area of their selection in Stevens County if they would complete and return the survey. The free map incentive was tied into assisting their community and helping their interests by participating in this process. Each letter also informed residents about the planning process. A return self-addressed envelope was included in each packet. A postcard reminder was sent to the non-respondents on August 7, 2007, encouraging their response. A final mailing, with a revised cover letter pleading with them to participate, was sent to non-respondents on August 15, 2007.

Surveys were returned during the months of July, August, and September. A total of 110 residents responded to the survey as of September 24, 2007. The effective response rate for this survey was 42%. Statistically, this response rate allows the interpretation of all of the response variables significantly at the 99% confidence level.

2.4.2.1 Survey Results

A summary of the survey's results will be presented here and then referred back to during the ensuing discussions on the need for various treatments, education, and other information.

Of the 110 respondents in the survey, about 65% said their property in Stevens County was their primary residence. Approximately 20% of respondents were from the Suncrest area, 16% were from both Colville and Chewelah, 14% were from Loon Lake, 7% were from Kettle Falls, and 4% were from each of Tum Tum, Valley, Arden, and Ford with the remaining from other communities in Stevens County at a rate of approximately 1-2%.

The vast majority of the respondents (97%) correctly identified that they have emergency telephone 911 services in their area. Approximately 84% responded that their property is within a city or rural fire department, 4% said they were not protected by a fire department, and 12% said they didn't know if they were or not.

The average driveway length of respondents to the survey was 1,279 feet long (0.2 miles). The longest reported was 6 miles. 62% of respondents said that they maintain a plowed driveway of an average width of 14.5 feet in the winter time. Of those respondents (32%) having a driveway with an overhead obstruction, the average height of the obstruction was approximately 17.4 feet. The lowest obstruction reported was 10 feet. 55% of respondents indicated that their driveways were mostly flat; however, 39% indicated a moderate grade and 6% said their driveway was steep enough to require 4-wheel drive during adverse conditions. Of those respondents (36%) with a driveway over a quarter of a mile long, 12% do not have turnouts allowing two vehicles to pass. When asked what type of surfacing material was on their driveways, 20% responded that their driveway was paved, 55% said gravel, and 25% indicated dirt. Only 5% of respondents said that their driveway crossed a water source and 69% said that they had an alternative escape route if their primary access route was cut off due to a hazard.

Approximately 69% of the respondents indicated their address was clearly visible from the nearest public road and 13% said that they had a water source such as a pond or stream on their property.

Survey recipients were asked to report emergency services training received by members of the household. Their responses are summarized in Table 2.1.

Table 2.1. Emergency Services Training received by household.

Type of Training	Percent of Households
Wildland Firefighting	20%
City or Rural Firefighting	9%
EMT (Emergency Medical Technician)	10%
Basic FirstAid/ CPR	69%
Search and Rescue	13%

When asked if their home, property, or business was located in a place that put it at risk to a hazard, 73% indicated that their property was at risk from wildfires, 7% were at risk from floods, 33% were at risk from earthquakes, 11% were at risk from landslides, 72% were at risk from severe weather, and 15% were at risk from terrorism or civil unrest. Several respondents also listed power lines, neighbors, train derailment, and trees as potential hazards. When asked if their property was in a FEMA designate Flood Hazard Area, only 2% of respondents said that it was.

Residents were asked to indicate which, if any, of the disasters listed in Table 2.2 have affected their home, property, or business within Stevens County during the past 10 years.

Table 2.2. Disasters affecting homes in Stevens County.

↓Hazard↓	Percent of respondents reporting hazard occurrence during the period 1996-2006, near their home.	If YES, Complete these questions…	Percent of respondents reporting damage to their home.	Percent of respondents reporting damage to their property.	Percent of respondents reporting damage to their business.	Approximate average damage caused by each hazard (during the period 1993-2003)
Wildfire	19%	→	47%	58%	11%	$3,000
Flood	1%	→	0%	100%	0%	$0
Earthquake	3%	→	67%	33%	0%	$0
Landslide	3%	→	33%	67%	0%	$1,900

Severe Weather	32%	→	38%	53%	0%	$3,129
Terrorism / Civil Unrest	2%	→	0%	100%	0%	$0

Respondents were asked if their phone service was disabled, would they have an alternate form of communication; 69% said they did. Of those, 99% said they had cell phone, 11% had a satellite phone, 21% had a CB, and 30% had two radios. Additionally, respondents were asked if they had an alternate power source in the event that their electrical service was interrupted; 36% said they did.

When asked how long respondents expected emergency service to respond to their homes, the average response for medical services was 17 minutes, the average response time for fire protection services was 15 minutes, and the average response for law enforcement was 20 minutes.

Finally, respondents were asked "If offered in your area, would members of your household attend a free or low cost, one-day training seminar designed to share with homeowners how to reduce the potential for casualty loss surrounding your home?" Almost half, 49% of respondents indicated a desire to participate in this type of training with 54% preferring a weekday rather than a weekend.

Homeowners were also asked, "How Hazard Mitigation projects should be funded in the areas surrounding homes, communities, and infrastructure such as power lines and major roads?" Responses are summarized in Table 2.3.

Table 2.3. Public Opinion of Hazard Mitigation Funding Preferences.

	100% Public Funding	Cost-Share (Public & Private)	Privately Funded (Owner or Company)
Home Defensibility Projects →	23%	42%	33%
Community Defensibility Projects →	53%	36%	10%
Infrastructure Projects Roads, Bridges, Power Lines, Etc. →	71%	18%	11%

2.4.3 Public Meetings

Public meetings were scheduled in a variety of communities in Stevens County during the hazard assessment phase of the planning process. Public meetings were scheduled to share information on the planning process, inform details of the hazard assessments, and discuss potential mitigation treatments. Attendees at the public meetings were asked to give their impressions of the accuracy of the information generated and provide their opinions of potential treatments.

The initial schedule of public meetings included five locations in the County and were attended by a number of individuals on the committee and from the general public. Total attendance was as follows: 4 at Hunters, 3 at Chewelah, 11 at Marble, 10 at Kettle Falls, and 10 at Clayton. The public meeting announcement was sent to the local newspapers and distributed by committee members. A sample of the flyer is included below in Figure 2.2.

Figure 2.2. Public meeting announcement for August 2007 meetings.

Stevens County, Washington

Multi - Hazard Mitigation Plan

Public Meetings!

August 7th: Hunters - Columbia School Cafeteria at 1 pm (4961 B Hunters Shop Road)
Chewelah - City Hall at 6 pm (302 East Clay)

August 8th: Marble - Marble Community Church Building at 1 pm (3383 Highway 25 North)
Kettle Falls - American Legion Hall at 6 pm (1057 Highway 395 North)

August 9th: Clayton - Fire District #1 Station at 6 pm (4532 Railroad Avenue)

The Stevens County Multi - Hazard Mitigation Plan steering committee is holding public meetings throughout the County to obtain YOUR input and knowledge about the potential risks of hazards that may affect your community. This will aid in the County's effort to identify hazard mitigation treatments, resource enhancement, and preparedness for disasters. In addition, the meetings will include a slideshow presentation on the planning process and identified hazards as well as one-on-one time with hazard mitigation specialsts and the committee members.

Each meeting will last approximately 1.5 hours.

Learn about the assessments of flood, landslides, earthquake, severe weather, wildfire, and terrorism/civil unrest in Stevens County. Discuss ***YOUR*** priorities for how our communities can best mitigate these risks.

Strong public involvement will result in an effective Stevens County Plan. Please come and participate!

For more information on the Multi - Hazard Mitigation Plan project in Stevens County, contact the Stevens County Land Services Director, Clay White, at (509) 684-8325 or Tera King at Northwest Management, Inc. (208) 883-4488.

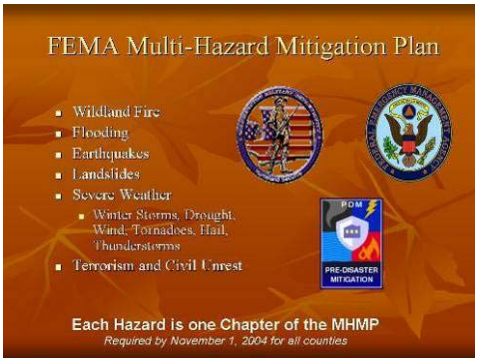
The following slideshow was presented at each of the public meetings by Tera King of Northwest Management, Inc. In addition, where possible, a fire district or other planning committee representative opened the meeting with a brief introduction.

Table 2.4. Public meeting slide show.

Slide 1

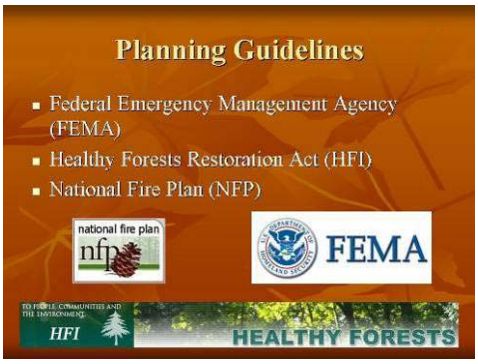
Slide 2

Slide 3



Slide 4

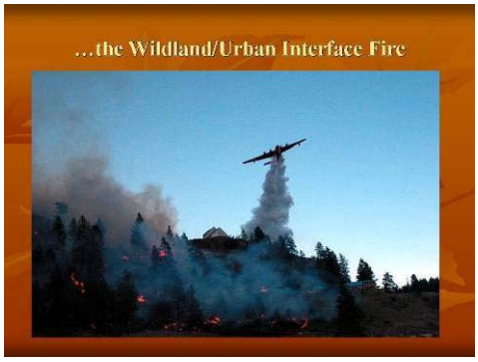
Slide 5



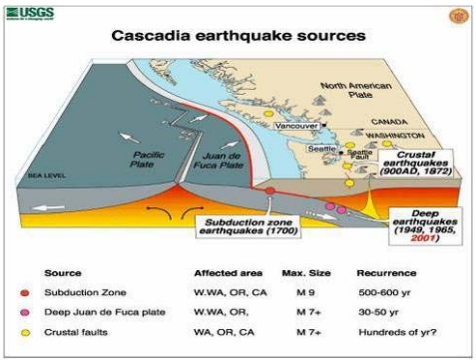
Slide 6

Slide 7

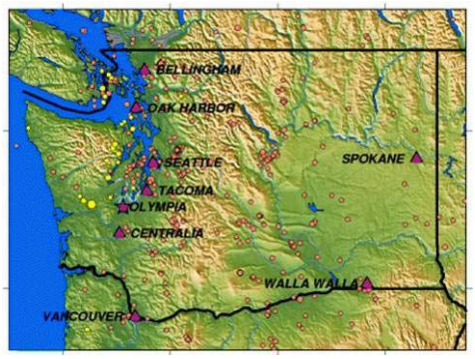
Slide 8



Slide 9

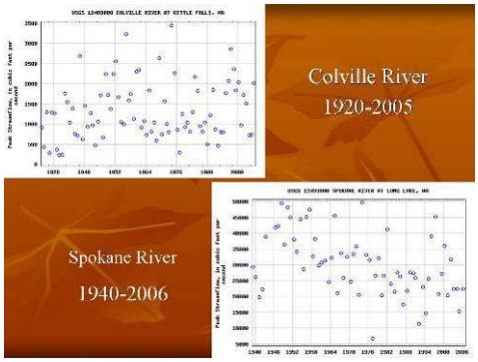


Slide 10



Slide 11

Slide 12

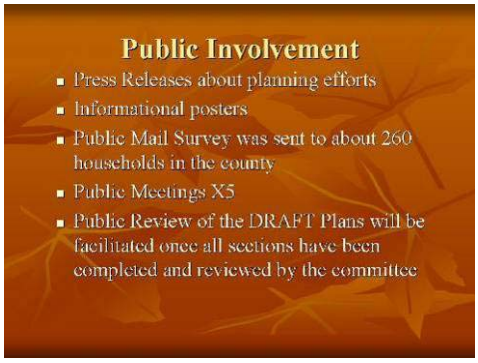


Slide 13

Slide 14

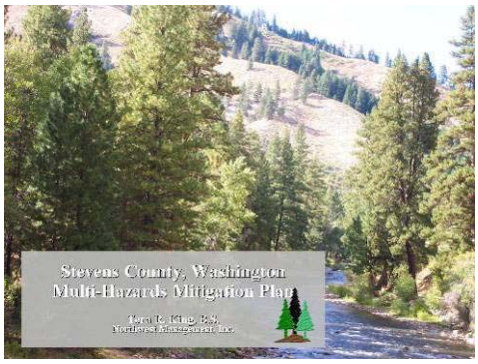
Slide 15

Slide 16



Slide 17

Slide 18



2.4.4 Documented Review Process

Review and comment on this plan has been provided through a number of avenues for the committee members as well as the members of the general public.

During regularly scheduled committee meetings in 2007, the committee met to discuss findings, review mapping and analysis, and provide written comments on draft sections of the document. During the public meetings, attendees observed map analyses, photographic collections, discussed general findings from the community assessments, and made recommendations on potential project areas.

The first draft of the document was prepared after the public meetings and presented to the committee at the August 23rd, 2007 meeting for full committee review. The completed draft document was released for public review on October 31st, 2007. The public review period remained open until November 30th, 2007.

2.4.5 Continued Public Involvement

Stevens County is dedicated to involving the public directly in review and updates of this Community Wildfire Protection Plan. The Stevens County Commissioners, through the CWPP Steering Committee, are responsible for the annual review and update of the plan as recommended in the "Administration and Implementation Strategy" section of this document.

The public will have the opportunity to provide feedback about the Plan annually on the anniversary of the adoption of this plan at a meeting of the County Commissioners. Copies of the Plan will be kept at the Stevens County Building Department. The Plan also includes the address and phone number of the County Land Services Director, responsible for keeping track of public comments on the Plan.

A public meeting will also be held as part of each annual evaluation or when deemed necessary by the Steering Committee. The meetings will provide the public a forum for which they can express concerns, opinions, or ideas about the Plan. The County Commissioner's Office will be responsible for using County resources to publicize the annual meetings and maintain public involvement through the County webpage and newspapers.

Chapter 3

3 Stevens County Characteristics

3.1 Demographics

Stevens County reported an increase in total population from 30,948 in 1990 to 40,066 in 2000 with approximately 17,599 households. The Washington State Office of Financial Management completed population projects for every five year period using the 2000 Census as a base for each county in the State. This report projected the 2005 population in Stevens County to be approximately 42,105 and the 2010 population to be approximately 46,585.

Stevens County has six incorporated communities, City of Chewelah (pop. 2,186), City of Colville (pop. 4,988), City of Kettle Falls (pop. 1,527), Town of Marcus (pop. 196), Town of Northport (pop. 336), and the Town of Springdale (pop. 283).

Table 3.1 summarizes some relevant demographic statistics for Stevens County.

Table 3.1. Selected demographic statistics for Stevens County, Washington, from Census 2000.

Subject	Number	Percent
Total population	**40,066**	**100.0**
SEX AND AGE		
Male	19,940	49.8
Female	20,126	50.2
Under 5 years	2,425	6.1
5 to 9 years	3,113	7.8
10 to 14 years	3,612	9.0
15 to 19 years	3,368	8.4
20 to 24 years	1,554	3.9
25 to 34 years	3,710	9.3
35 to 44 years	6,259	15.6
45 to 54 years	6,462	16.1
55 to 59 years	2,444	6.1
60 to 64 years	1,959	4.9
65 to 74 years	2,840	7.1
75 to 84 years	1,679	4.2
85 years and over	641	1.6
Median age (years)	39.2	(X)
18 years and over	28,569	71.3
Male	14,041	35.0
Female	14,528	36.3
21 years and over	27,222	67.9

Table 3.1. Selected demographic statistics for Stevens County, Washington, from Census 2000.

Subject	Number	Percent
62 years and over	6,293	15.7
65 years and over	5,160	12.9
Male	2,385	6.0
Female	2,775	6.9

3.2 Socioeconomics

Stevens County had a total of 15,017 occupied housing units reported in the 2000 Census. Ethnicity in Stevens County is distributed: white 90%, black or African American 0.3%, American Indian or Alaskan Native 5.7%, Asian 0.5%, Hispanic or Latino 1.8%, two or more races 2.7%, and some other race 0.7%.

Specific economic data for individual communities is collected by the US Census; in Stevens County this information is limited to the incorporated cities. City of Chewelah households earn a median income of $25,238 annually, City of Colville earns $27,988, and City of Kettle Falls earns $27,031 annually. The Town of Marcus earns a median income of $27,500, Town of Northport earned $21,719, and Town of Springdale earned $28,333 annually. The Stevens County median income during the same period was $34,673. Table 3.2 shows the dispersal of households in various income categories in Stevens County.

Table 3.2. Income in 1999.	**Stevens County**	
	Number	**Percent**
Households	**15,048**	**100.0**
Less than $10,000	1,793	11.9
$10,000 to $14,999	1,219	8.1
$15,000 to $24,999	2,481	16.5
$25,000 to $34,999	2,089	13.9
$35,000 to $49,999	2,937	19.5
$50,000 to $74,999	2,736	18.2
$75,000 to $99,999	1,147	7.6
$100,000 to $149,999	433	2.9
$150,000 to $199,999	100	0.7
$200,000 or more	113	0.8
Median household income (dollars)	34,673	(X)

(Census 2000)

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, directs federal agencies to identify and address any disproportionately high adverse human health or environmental effects of its projects on minority or low-income populations. In Stevens County, a significant number, 11.5%, of families are at or below the poverty level (Table 3.3).

Table 3.3. Poverty Status in 1999 (below poverty level).	**Stevens County**	
	Number	**Percent**
Families	**1,278**	**(X)**
Percent below poverty level	(X)	11.5

Table 3.3. Poverty Status in 1999 (below poverty level).	Stevens County	
	Number	Percent
With related children under 18 years	918	(X)
Percent below poverty level	(X)	16.5
With related children under 5 years	379	(X)
Percent below poverty level	(X)	21.8
Families with female householder, no husband present	**433**	**(X)**
Percent below poverty level	(X)	33.6
With related children under 18 years	392	(X)
Percent below poverty level	(X)	40.7
With related children under 5 years	152	(X)
Percent below poverty level	(X)	60.6
Individuals	**6,316**	**(X)**
Percent below poverty level	(X)	15.9
18 years and over	3,967	(X)
Percent below poverty level	(X)	14.0
65 years and over	587	(X)
Percent below poverty level	(X)	11.9
Related children under 18 years	2,228	(X)
Percent below poverty level	(X)	19.8
Related children 5 to 17 years	1,673	(X)
Percent below poverty level	(X)	19.0
Unrelated individuals 15 years and over	1,806	(X)
Percent below poverty level	(X)	32.1

(Census 2000)

The unemployment rate was 5.7% in Stevens County in 1999, compared to 4.4% nationally during the same period. Approximately 7.5% of the Stevens County employed population worked in natural resources, with much of the indirect employment relying on the employment created through these natural resource occupations.

Table 3.4. Employment and Industry.	Stevens County	
	Number	Percent
Employed civilian population 16 years and over	15,568	100.0
OCCUPATION		
Management, professional, and related occupations	4,652	29.9
Service occupations	2,631	16.9
Sales and office occupations	3,392	21.8
Farming, fishing, and forestry occupations	473	3.0
Construction, extraction, and maintenance occupations	1,802	11.6
Production, transportation, and material moving occupations	2,618	16.8
INDUSTRY		
Agriculture, forestry, fishing and hunting, and mining	1,162	7.5
Construction	1,205	7.7

Table 3.4. Employment and Industry.	Stevens County	
	Number	Percent
Manufacturing	2,177	14.0
Wholesale trade	381	2.4
Retail trade	1,808	11.6
Transportation and warehousing, and utilities	857	5.5
Information	202	1.3
Finance, insurance, real estate, and rental and leasing	565	3.6
Professional, scientific, management, administrative, and waste management services	621	4.0
Educational, health and social services	3,520	22.6
Arts, entertainment, recreation, accommodation and food services	1,320	8.5
Other services (except public administration)	878	5.6
Public administration	872	5.6

(Census 2000)

Approximately 67% of Stevens County's employed persons are private wage and salary workers, while around 21% are government workers (Table 3.5).

Table 3.5. Class of Worker.	Stevens County	
	Number	Percent
Private wage and salary workers	10,445	67.1
Government workers	3,195	20.5
Self-employed workers in own not incorporated business	1,764	11.3
Unpaid family workers	164	1.1

(Census 2000)

3.2.1 Description of Stevens County

Adapted from the Stevens County Comprehensive Land Use Plan of July 2006 and the official Stevens County, Washington website.

Stevens County was named for Washington's first territorial governor, Isaac I. Stevens. When the new Washington territory was formed on March 2, 1853, Stevens applied to President Pierce for the governorship. Pierce selected Stevens for the post which carried with it the title of Superintendent of Indian Affairs.

The Stevens Territory represented an area covering what are now 13 counties in eastern Washington, all of northern Idaho and much of western Montana. Before the advent of white settlement, Kettle Falls on the Columbia River was a gathering place for 14 tribes that fished there for salmon. In 1811, white explorers embarked downriver from Kettle Falls to what became the Fort Colville trading post. Established in 1825, it was the principal outpost for Hudson's Bay Company operations stretching from the Mississippi River to the Cascade Mountains.

Stevens County is large in area (5th largest in Washington) and in the middle one-third in population size. Its low population density (16 people per square mile) is widely dispersed with almost 77% living in unincorporated areas. About 40% of the total land area is owned by the federal government, state government, or the Spokane Tribe. There are six incorporated cities and twenty developed places, which provide a wide range of retail, commercial, and community

services to the surrounding population. These vary in size and may appear as either rural or urban/suburban in character. Some are small rural villages with homes, a general store, gas station/auto repair, and meeting facility, while others are large suburban subdivisions with commercial areas.

3.2.1.1 Resource Dependency

Historically, resource based industries – agriculture, forestry, and mining – have been strong drivers of the county's economy. While there are some large/corporate landowners and operators, small, independent farms predominate in terms of total number. Recreation and tourism are significant and growing components of the economy; access to skiing, hunting, fishing, hiking, and other recreational pursuits is fueling the growth of local resorts and sales of recreational property and homes. Nevertheless, the County recently ranked next to last in terms of per-capita income statewide and shows a negative trend as compared to the statewide trend of increasing per capita income.

3.2.1.2 Recreation

There are numerous recreational opportunities in Stevens County. The 49 Degrees North Ski Resort located ten miles east of Chewelah is one of the premier downhill and crosscountry ski locations in the northwest. The resort also features a terrain park, a lodge with restaurant and bar, and is in the process of constructing a resort community complete with retail shops, overnight accommodations, and privately owned cabins.

Much of Stevens County's western boundary along the Columbia River is part of the Lake Roosevelt National Recreation Area managed by the National Park Service. The NRA draws many tourists to the County in search of some of the best boating, fishing, camping, and hiking opportunities in Washington.

A large percentage of Stevens County's land base is held within the Colville National Forest. The Forest has many developed camp sites, hiking trails, and motorized vehicle use trails. The Forest also maintains several hundred miles of snow access trails for crosscountry skiing and snowmobile use. The Colville National Forest is also a popular hunting destination.

3.3 Cultural Resources

The United States has a unique legal relationship with Indian tribal governments defined in history, the U.S. Constitution, treaties, statutes, Executive Orders, and court decisions. Since the formation of the union, the United States has recognized Indian tribes as domestic dependent nations under its protection. The Federal Government has enacted numerous regulations that establish and define a trust relationship with Indian tribes.

The relationship between Federal agencies and sovereign tribes is defined by several laws and regulations addressing the requirement of Federal agencies to notify or consult with Native American groups or otherwise consider their interests when planning and implementing Federal undertakings, among these are:

- **EO 13175, November 6, 2000**, Consultation and Coordination with Indian Tribal Governments.
- **Presidential Memorandum, April, 1994**. Government-Government Relations with Tribal Governments (Supplements EO 13175). Agencies must consult with federally recognized tribes in the development of Federal Policies that have tribal implications.

- **EO 13007, Sacred sites, May 24, 1996**. Requires that in managing Federal lands, agencies must accommodate access and ceremonial use of sacred sites and must avoid adversely affecting the physical integrity of these sites.
- **EO 12875, Enhancing Intergovernmental Partnerships, October 26, 1993**. Mainly concerned with unfunded mandates caused by agency regulations. Also states the intention of establishing "regular and meaningful consultation and collaboration with state, local and tribal governments on matters that significantly or uniquely affect their communities."
- **Native American Graves Protection and Repatriation Act (NAGPRA) of 1989**. Specifies that an agency must take reasonable steps to determine whether a planned activity may result in the excavation of human remains, funerary objects, sacred objects and items of cultural patrimony from Federal lands. NAGPRA also has specified requirements for notifying and consulting tribes.
- **Archaeological Resources Protection Act (ARPA), 1979**. Requires that Federal permits be obtained before cultural resource investigations begin on Federal land. It also requires that investigators consult with the appropriate Native American tribe prior to initiating archaeological studies on sites of Native American origin.
- **American Indian Religious Freedom Act (AIRFA), 1978**. Sets the policy of the US to protect and preserve for Native Americans their inherent rights of freedom to believe, express, and exercise the traditional religions of the American Indian . . . including, but not limited to access to sacred sites, use and possession of sacred objects, and the freedom to worship through ceremonies and traditional rites.
- **National Environmental Policy Act (NEPA), 1969**. Lead agency shall invite participation of affected Federal, State, and local agencies and any affected Indian Tribe(s).
- **National Historic Preservation Act (NHPA), 1966**. Requires agencies to consult with Native American tribes if a proposed Federal action may affect properties to which they attach religious and cultural significance. (Bulletin 38 of the act, identification of TCPs, this can only be done by tribes.)
- Treaties (supreme law of the land) in which tribes were reserved certain rights for hunting, fishing and gathering and other stipulations of the treaty.
- Unsettled aboriginal title to the land, un-extinguished rights of tribes.

3.3.1 Spokane Indian Reservation

In the early existence of the Spokane Tribe, over three million acres of land were lived upon, protected and respected by the Spokane Indians. The Spokane Indians fished the Spokane River and used the grand Spokane Falls as a gathering place of family and friends. The Spokanes lived along the river in three bands known as the Upper, Middle and Lower Spokane Indians. Depending upon the season of the year, traditional camp sites were lived in.

In January of 1881, President Rutherford B. Hayes, by executive order, formally declared the Spokane Indian Reservation the new and smaller home of the Spokane Indians. The tree bands of Indians were split up and some found new homes which are now known as the Coeur d'Alene Indian Reservation, the Flathead Indian Reservation, and the Colville Indian Reservation. Today, the Spokane Indian Reservation is 157,376 acres in size. Tribal membership as of

January 2006 is 2441, strong and growing. As in the past, national resources are protected by the Spokane Indians. Today, the Spokane Indian Reservation has:

- 108,874 acres of forest land
- 8,552 acres of agricultural land
- 10,328 acres of lakes
- 25 maintained camp sites

3.3.2 National Register of Historic Places

The National Park Service maintains the National Register of Historical Places as a repository of information on significant cultural locale. These may be buildings, roads or trails, places where historical events took place, or other noteworthy sites. The NPS has recorded sites in its database. These sites are summarized in Table 3.6.

Table 3.6. National Register of Historic Places in Stevens County, Washington.

Item Number	Resource Name	Address	City	Listed	Architect, builder, or engineer
1	Clayton School	Corner of Parke Ave. and Swenson Rd.,	Clayton	2003	Wood, Charles R
2	Collins Building	S 202 Main	Colville	1998	Collins, J.H.
3	Columbia River Bridge at Northport	WA 25 over the Columbia R	Northport	1995	
4	Colville Flour Mill	466 W. First St.	Colville	1995	Lasswell Brothers
5	Hudsons Bay Gristmill Site on Colville River	Address Restricted	Kettle Falls	1982	
6	Keller House	700 N. Wynne St.,	Colville	1979	Kimple,D.H., Rand,Loren L.
7	Kettle Falls District	Address Restricted	Kettle Falls	1974	
8	Little Falls Hydroelectric Power Plant	Spokane River	Reardon	1988	Washington Water Power Co.
9	Long Lake Hydroelectric Power Plant	Spokane River	Ford	1988	Washington Water Power Co.
10	Long Lake Pictographs	Address Restricted	Ford	1976	
11	Loon Lake School	4000 Colville Rd.	Loon Lake	1992	
12	McCauley, H. M., House	285 Oak St.,	Colville	1975	Smith, Hiram F.
13	Meyers Falls Power Plant Historic District	.5 mi S of Kettle Falls, Juniper Street	Kettle Falls	1995	
14	Northport School	South and 7th St	Northport	1979	
15	Old Indian Agency	3rd Street	Chewelah	1974	Unknown
16	Opera House & IOOF Lodge	151 W 1st Ave	Colville	1997	Yanish, Frank A.
17	Orient Bridge	Richardson Rd	Orient	1982	C.G. Sheely Contracting Co, Manning, W.M.
18	Red Mountain RR Bridge	Spans Little Sheep Cr	Northport	1982	Columbia & Red Mountain RR Co
19	Rickey Block	230 S Main St	Colville	1995	Rickey, John et al
20	Spokane River Bridge at Long Lake Dam	Wa 231 over Spokane River	Rearden	1995	Hagman, Henry, State Dept of Hwys

Table 3.6. National Register of Historic Places in Stevens County, Washington.					
Item Number	Resource Name	Address	City	Listed	Architect, builder, or engineer
21	US Post Office	204 S Oak	Colville	1991	Fitzgerald, James Edmond, Simon, Louis A.
22	Winslow RR Bridge	S of Colville	Colville	1999	Winslow Lumber Manufacturing Co
23	Winslow, Colburn T. House	458 E 2nd Street	Colville	1990	Winslow, Colburn T.

(NRHP 2003)

Mitigation activities in and around these sites has the potential to affect historic places. In all cases, the mitigation work will be intended to reduce the potential of damaging the site. Areas where ground disturbance will occur will need to be inventoried depending on the location. Ground-disturbing actions may include, but are not limited to, constructed fire lines (hand line, mechanical line, etc.), new roads to creeks to fill water tankers, mechanical treatments, etc. Traditional Cultural Properties (TCPs) will also need to be identified. Potential impact to TCPs will depend on what values make the property important and will be assessed on an individual basis.

3.4 Transportation & Infrastructure

The transportation system within the County is comprised of a significant number of roads, several airports, a rail line and an extensive trail system. The road system is comprised of state highways, Washington State Department of Natural Resources (DNR) roads, County roads, USFS or BIA roads, and private roads. Roads are important in hazard mitigation planning because they provide a means of escape and emergency access.

Almost all of the roads in the County were originally built to facilitate logging and farming activities. As such, these roads can support the emergency response equipment referenced in this document. However, many of the new roads have been built for home site access, especially for new subdivisions. In many cases, these roads are adequate to facilitate emergency response equipment as they adhere to County road standards. Nevertheless, construction of substandard access roads, particularly in subdivisions, can become a major safety issue and severely hinder the ability of emergency response personnel.

Transportation networks in the County have been challenged because a number of communities have only one or two access points suitable for use during an emergency. The community of Northport is a prime example. Other communities that may be at risk because of limited access include Marble, Marcus, Tum Tum, Suncrest, and Wellpinit.

Primary and secondary access routes were identified by committee members and amended by the public during public meetings. These routes identify the primary access into and out of the county that are relied on during emergencies. As such, they often receive prioritized treatment when allocating resources for hazard abatement. There are 284 miles of primary access routes identified in Stevens County.

The Burlington Northern Santa Fe railroad parallels Highway 395 (Clayton to Loon Lake), Highway 292 (Loon Lake to Springdale), and Highway 231 (Springdale to south of Chewelah), then rejoins Highway 395. Just south of Chewelah, the line becomes the Kettle Falls International Railroad and continues paralleling Highway 395 north to the Canadian border in Ferry County. An active rail line still parallels Highway 25 from Kettle Falls to Northport and the Canadian border.

There are three public airports in Stevens County. The first is Sand Canyon Airport (single asphalt runway) located near Chewelah; the second is Colville Municipal Airport (single asphalt runway) located in Colville; and the third is Cross Winds Airport (two turf runways) located near Clayton. Additionally, there are several private airfields scattered throughout the county.

Stevens County has both significant infrastructure and unique ecosystems within its boundaries. Of note for this Multi - Hazard Mitigation Plan is the existence of US 395, State Routes 231, 292, and 25, and the presence of power lines supplying communities in Stevens County.

3.4.1 Communication Sites

Included in the assessment of critical infrastructure is the location of communication sites. Known items were identified and are summarized in Table 3.7.

Table 3.7. Communication Sites in Stevens County.

Name	Latitude	Longitude
Chewelah Peak	48.28432223590	48.28432223590
Calispell Peak	48.43682549850	48.43682549850
Monumental Mountain	48.49022399050	48.49022399050
KCVL Tower	48.51472027610	48.51472027610
Colville Mtn.	48.57283521110	48.57283521110
Old Dominion Mtn.	48.57982054510	48.57982054510
Finley Tower	48.60783098830	48.60783098830
Flagstaff Mountain	48.90849211420	48.90849211420
Stensgar Mtn	48.18129300840	48.18129300840
Chewelah Heine	48.26600031860	48.26600031860
Loon Lake/Deer Mountain	48.08247703630	48.08247703630
Red Top Mtn	48.96115687280	48.96115687280
First Thought Mountain	48.89243917490	48.89243917490
Bisbee Mountain	48.63409447900	48.63409447900
Talisman Mine	48.98686449130	48.98686449130
Chewelah Shop	48.25231652350	48.25231652350
Chewelah SCCS	48.27771079030	48.27771079030
Lookout Point	47.81329621610	47.81329621610
Loon Lake Substation	48.06115149800	48.06115149800
Colville SCCS Oak St	48.54637347450	48.54637347450
Scoop Mountain	47.94170987290	47.94170987290
WA DNR	48.54351671540	48.54351671540

3.5 Vegetation & Climate

Vegetation in Stevens County is a mix of forestland and agricultural ecosystems. An evaluation of satellite imagery of the region provides some insight to the composition of the vegetation of the area. The full extent of the County was evaluated for cover type by the USDA Forest Service in 2001 as determined from Landsat 7 ETM+ imagery in tabular format.

The most represented vegetated cover type is Evergreen Open Tree Canopy at approximately 46% of the total area. The next most common vegetation cover types represented are a Deciduous Shrublands at 21% and Perennial Graminoid Grassland at 16% (Table 3.8).

Table 3.8. Vegetative Cover Types in Stevens County.

Cover	Acres	Percent
Herbaceous – grassland	41,950	3%
Deciduous open tree canopy	687	0%
Deciduous shrubland	402	0%
Evergreen closed tree canopy	344,801	21%
Evergreen dwarf-shrubland	3,751	0%
Evergreen open tree canopy	743,775	46%
Evergreen shrubland	10,435	1%
Mixed evergreen – deciduous open tree canopy	69,530	4%
Mixed evergreen – deciduous shrubland	9,541	1%
No data	6,128	0%
No dominant lifeform	14,058	1%
Non-vegetated	40,453	2%
Perennial graminoid grassland	255,367	16%
Perennial graminoid steppe	81,971	5%
Sparsely vegetated	2,272	0%

Vegetative communities within the County follow the strong moisture and temperature gradient related to the major drainages. As moisture availability increases, so does the abundance of conifer species, with subalpine forest communities present in the highest elevations where precipitation and elevation provide more moisture during the growing season.

3.5.1 Monthly Climate Summaries in Stevens County

3.5.1.1 Northport, Washington

Period of Record : 1/ 1/1920 to 12/31/2005

Table 3.9. Monthly climate records for Northport, Stevens County, Washington.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	31.9	38.9	50.9	63.4	73.0	79.6	88.4	87.3	76.4	59.7	42.0	33.4	60.4
Average Min. Temperature (F)	19.8	22.6	28.3	34.6	41.6	47.8	51.2	49.9	43.1	35.8	29.1	23.1	35.6
Average Total Precipitation (in.)	2.09	1.40	1.44	1.42	1.81	2.06	1.05	1.04	1.14	1.51	2.06	2.44	19.45
Average Total SnowFall (in.)	18.6	8.6	2.5	0.1	0.0	0.0	0.0	0.0	0.0	0.1	6.3	17.5	53.7
Average Snow Depth (in.)	10	9	2	0	0	0	0	0	0	0	1	4	2

Percent of possible observations for period of record Max. Temp.: 89.3% Min. Temp.: 89.4% Precipitation: 89.8% Snowfall: 89.3% Snow Depth: 88.3%

3.5.1.2 Colville, Washington

Period of Record : 4/13/1917 to 8/31/2005

Table 3.10. Monthly climate records for Colville, Stevens County, Washington.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	31.4	39.4	51.7	64.1	72.1	78.3	87.5	85.8	76.0	60.6	42.1	33.6	60.2
Average Min. Temperature (F)	18.2	20.8	28.1	33.8	40.5	46.1	49.6	47.9	41.8	34.2	27.9	22.3	34.3
Average Total Precipitation (in.)	1.89	1.46	1.31	1.17	1.48	1.63	0.70	0.75	0.99	1.52	2.05	2.33	17.28
Average Total SnowFall (in.)	13.9	6.9	2.3	0.4	0.0	0.0	0.0	0.0	0.0	0.4	5.2	11.8	41.0
Average Snow Depth (in.)	6	6	1	0	0	0	0	0	0	0	1	3	1

Percent of possible observations for period of recoRoad Max. Temp.: 51.1% Min. Temp.: 51.1% Precipitation: 51.1% Snowfall: 51.2% Snow Depth: 50.9%

3.6 Ecosystems

Recent forest health assessments of dry ponderosa pine forests in the interior West indicate that fire and insect disturbance regimes and concomitant changes in stand and landscape characteristics have been significantly altered. These altered forests are increasingly susceptible to catastrophic fire events such as the 1988 55,000 acre Dinkleman Burn (Washington), the 1994 250,000 acre Foothill Burn (Idaho), and the 1994 140,000 acre Tyee Burn (Washington). These burns are characterized as catastrophic because they are outside the range of variability in burn intensity and extent of historical burns that occurred on these sites before Euro-settlement. Severe burns have the potential to adversely impact biological capacity and biological integrity of affected watersheds (Everett et al 1996).

Stevens County is a diverse ecosystem with a complex array of vegetation, wildlife, and fisheries that have developed with, and adapted to fire as a natural disturbance process. A century of wildland fire suppression coupled with past land-use practices (primarily timber harvesting, agriculture, and grazing) has altered plant community succession and has resulted in dramatic shifts in the fire regimes and species composition. As a result, forests and rangelands in Stevens County have become more susceptible to large-scale, high intensity fires posing a threat to life, property, and natural resources including wildlife and special status plant populations and habitats. High-intensity, stand-replacing fires have the potential to seriously damage soils and native vegetation. In addition, an increase in the number of large high intensity fires throughout the nation's forest and rangelands, has resulted in significant safety risks to firefighters and higher costs for fire suppression (House of Representatives, Committee on Agriculture, Washington, DC, 1997).

3.7 Air Quality

The primary means by which the protection and enhancement of air quality is accomplished is through implementation of National Ambient Air Quality Standards (NAAQS). These standards address six pollutants known to harm human health including ozone, carbon monoxide, particulate matter, sulfur dioxide, lead, and nitrogen oxides (USDA Forest Service 2000).

The Clean Air Act, passed in 1963 and amended in 1977, is the primary legal authority governing air resource management. The Clean Air Act provides the principal framework for national, state, and local efforts to protect air quality. Under the Clean Air Act, OAQPS (Organization for Air Quality Protection Standards) is responsible for setting standards, also known as national ambient air quality standards (NAAQS), for pollutants which are considered

harmful to people and the environment. OAQPS is also responsible for ensuring these air quality standards are met, or attained (in cooperation with state, Tribal, and local governments) through national standards and strategies to control pollutant emissions from automobiles, factories, and other sources (Louks 2001).

Smoke emissions from fires potentially affect an area and the airsheds that surround it. Climatic conditions affecting air quality in northeast Washington are governed by a combination of factors. Large-scale influences include latitude, altitude, prevailing hemispheric wind patterns, and mountain barriers. At a smaller scale, topography and vegetation cover also affect air movement patterns. Air quality in the area is generally moderate to good. However, locally adverse conditions can result from occasional wildland fires in the summer and fall, and prescribed fire and agricultural burning in the spring and fall. All major river drainages are subject to temperature inversions which trap smoke and affect dispersion, causing local air quality problems. This occurs most often during the summer and fall months and would potentially affect all communities in Stevens County.

3.7.1 Washington State Smoke Management Plan

The Department of Natural Resources (DNR), Department of Ecology (DOE), U.S. Forest Service (USFS), National Park Service (NPS), Bureau of Land Management (BLM), participating Indian nations, military installations (DOD), and small and large forest landowners have worked together to deal with the effect of outdoor burning on air.

Protection of public health and preservation of the natural attractions of the state are high priorities and can be accomplished along with a limited, but necessary, outdoor burning program. Public health, public safety, and forest health can all be served through the application of the provisions of Washington State law and this plan, and with the willingness of those who do outdoor burning on forest lands to further reduce the negative effects of their burning.

The Washington State Smoke Management Plan pertains to DNR-regulated silvicultural outdoor burning only and does not include agricultural outdoor burning or outdoor burning that occurs on improved property. Although the portion of total outdoor burning covered by this plan is less than 10 percent of the total air pollution in Washington, it remains a significant and visible source.

Background

Washington State has had a Smoke Management Plan in effect since 1969. After the enactment of the original plan, and with the addition of the 1975 plan, the number of smoke intrusions into designated population areas has dropped significantly every year.

The 1975 Smoke Management Plan has undergone several informal and semi-formal modifications since its adoption, mainly by agreement with the plan's signatories and other agencies. These modifications represent significant changes in DNR operating procedures and emphases.

The earlier Smoke Management Plans of 1969 and 1975 have done their job well. Today the Pacific Northwest is regarded as a leader in controlling smoke from outdoor burning on forest lands; many other states have used past plans as models in setting up their own smoke management programs.

Purpose

The purpose of the Washington State Smoke Management Plan is to coordinate and facilitate the statewide regulation of prescribed outdoor burning on lands protected by the DNR and on

unimproved, federally-managed forest lands and participating tribal lands. The plan is designed to meet the requirements of the Washington Clean Air Act.

Goals

- Protect human health and safety from the effects of outdoor burning
- Facilitate the enjoyment of the natural attractions of the state
- Provide a limited burning program for the people of this state
- Provide the opportunity for essential forest land burning while minimizing emissions
- Reduce emissions from silvicultural burning other than for forest health reasons first by 20 percent and later by 50 percent, as required by law
- Foster and encourage the development of alternative methods for disposing, of or reducing the amount of, organic refuse on forest lands
- Acknowledge the role of fire in forest ecosystems and allow the use of fire under controlled conditions to maintain healthy forests.

Scope

The plan provides regulatory direction, operating procedures, and advisory information regarding the management of smoke and fuels on the forest lands of Washington State. It applies to all persons, landowners, companies, state and federal land management agencies, and others who do outdoor burning in Washington State on lands where the DNR provides fire protection, or where such burning occurs on federally-managed, unimproved forest lands and tribal lands of participating Indian nations in the state.

The plan does not apply to agricultural outdoor burning and open burning as defined by Washington Administrative Code (WAC) 173-425-030 (1) and (2), nor to burning done "by rule" under WAC 332-24 or on non-forested wildlands (e.g., range lands). All future reference to burning in this plan will refer only to silvicultural burning unless otherwise indicated.

The plan does not address nor attempt to regulate prescribed natural fire in wilderness areas and national parks for several reasons: the amount of emissions caused by such burning in Washington is relatively small, it is impossible to "regulate" unforecastable natural ignitions, and it is nearly impossible to gather emission data efficiently in the areas where this type of burning generally takes place. Federal agencies that have adopted the use of prescribed natural fires will remain solely responsible for the administration of such programs.

Participation

Those who receive fire protection from the DNR, or from agencies contracted by the DNR, must abide by the requirements of this plan. This includes all burning done on private and state-managed lands that pay, or are subject to paying, Forest Protection Assessment.

Federal agencies that do outdoor burning on forest lands must participate in and abide by the requirements of this plan under the direction of the federal Clean Air Act. These agencies include, but are not limited to, the Forest Service (USFS), Park Service (NPS), Fish and Wildlife Service (F&WS), Bureau of Land Management (BLM), and Department of Defense (DOD).

Indian nations may choose to participate in all or portions of the plan. Participation would be by written agreement between the Indian nation and the DNR. Advantages of participation by Indian nations would include statewide coordination of burning, shared weather forecasting services, uniform data reporting and storage, better protection of the public through a unified

burn approval system, satisfaction of federal EPA requirements, and other services provided by either party to the other. Such future agreements would become appendices to this plan.

3.8 Hydrology

The Washington Department of Ecology & Water Resources Program is charged with the development of the Washington State Water Plan. Included in the State Water Plan are the statewide water policy plan, and component basin and water body plans which cover specific geographic areas of the state (WDOE 2005). The Washington Department of Ecology has prepared general lithologies of the major ground water flow systems in Washington.

The state may assign or designate beneficial uses for particular Washington water bodies to support. These beneficial uses are identified in section WAC 173-201A-200 of the Washington Surface Water Quality Standards (WQS). These uses include:

- **Aquatic Life Uses:** char; salmonid and trout spawning, rearing, and migration; nonanadromous interior redband trout, and indigenous warm water species
- **Recreational Uses:** primary (swimming) and secondary (boating) contact recreation
- **Water Supply Uses:** domestic, agricultural, and industrial; and stock watering

While there may be competing beneficial uses in streams, federal law requires protection of the most sensitive of these beneficial uses.

The geology and soils of this region lead to rapid to moderate moisture infiltration. Slopes are moderate to steep, however, headwater characteristics of the watersheds lead to a high degree of infiltration as opposed to a propensity for overland flow. Thus sediment delivery efficiency of first and third order streams is fairly low. The bedrock is typically well fractured and moderately soft. This fracturing allows excessive soil moisture to infiltrate into the rock and thus surface runoff is rare. Natural mass stability hazards associated with slides are low. Natural sediment yields are low for these watersheds. However, disrupted vegetation patterns from logging (soil compaction), farming, road construction, and wildland fire (especially hot fires that increase soil hydrophobic characteristics), can lead to increased surface runoff and debris flow to stream channels.

A correlation to mass wasting due to the removal of vegetation caused by high intensity wildland fire has been documented. Burned vegetation can result in changes in soil moisture and loss of rooting strength that can result in slope instability, especially on slopes greater than 30%. The greatest watershed impacts from increased sediment will be in the lower gradient, depositional stream reaches.

Of critical importance to Stevens County will be the maintenance of the domestic watershed supplies in the Colville River Watershed (Watershed Resources Inventory Area 59), Upper Lake Roosevelt Watershed (Watershed Resources Inventory Area 61), and the Middle Lake Roosevelt Watershed (Watershed Resources Inventory Area 58).

Timberlands in the region have been extensively harvested for the past several decades, therefore altering riparian function by removing streamside shade and changing historic sediment deposition. Riparian function and channel characteristics have been altered by ranch and residential areas as well. The current conditions of wetlands and floodplains are variable. Some wetlands and floodplains have been impacted by past management activities.

Chapter 4

4 Risk and Preparedness Assessments

4.1 Wildland Fire Characteristics

An informed discussion of fire mitigation is not complete until basic concepts that govern fire behavior are understood. In the broadest sense, wildland fire behavior describes how fires burn; the manner in which fuels ignite, how flames develop and how fire spreads across the landscape. The three major physical components that determine fire behavior are the fuels supporting the fire, topography in which the fire is burning, and the weather and atmospheric conditions during a fire event. At the landscape level, both topography and weather are beyond our control. We are powerless to control winds, temperature, relative humidity, atmospheric instability, slope, aspect, elevation, and landforms. It is beyond our control to alter these conditions, and thus impossible to alter fire behavior through their manipulation. When we attempt to alter how fires burn, we are left with manipulating the third component of the fire environment; fuels which support the fire. By altering fuel loading and fuel continuity across the landscape, we have the best opportunity to determine how fires burn.

A brief description of each of the fire environment elements follows in order to illustrate their effect on fire behavior.

4.1.1 Weather

Weather conditions contribute significantly to determining fire behavior. Wind, moisture, temperature, and relative humidity ultimately determine the rates at which fuels dry and vegetation cures, and whether fuel conditions become dry enough to sustain an ignition. Once conditions are capable of sustaining a fire, atmospheric stability and wind speed and direction can have a significant affect on fire behavior. Winds fan fires with oxygen, increasing the rate at which fire spreads across the landscape. Weather is the most unpredictable component governing fire behavior, constantly changing in time and across the landscape.

4.1.2 Topography

Fires burning in similar fuel conditions burn dramatically different under different topographic conditions. Topography alters heat transfer and localized weather conditions, which in turn influence vegetative growth and resulting fuels. Changes in slope and aspect can have significant influences on how fires burn. Generally speaking, north slopes tend to be cooler, wetter, more productive sites. This can lead to heavy fuel accumulations, with high fuel moistures, later curing of fuels, and lower rates of spread. In contrast, south and west slopes tend to receive more direct sun, and thus have the highest temperatures, lowest soil and fuel moistures, and lightest fuels. The combination of light fuels and dry sites lead to fires that typically display the highest rates of spread. These slopes also tend to be on the windward side of mountains. Thus these slopes tend to be “available to burn” a greater portion of the year.

Slope also plays a significant roll in fire spread, by allowing preheating of fuels upslope of the burning fire. As slope increases, rate of spread and flame lengths tend to increase. Therefore, we can expect the fastest rates of spread on steep, warm south and west slopes with fuels that are exposed to the wind.

4.1.3 Fuels

Fuel is any material that can ignite and burn. Fuels describe any organic material, dead or alive, found in the fire environment. Grasses, brush, branches, logs, logging slash, forest floor litter, conifer needles, and buildings are all examples. The physical properties and characteristics of fuels govern how fires burn. Fuel loading, size and shape, moisture content and continuity and arrangement all have an affect on fire behavior. Generally speaking, the smaller and finer the fuels, the faster the potential rate of fire spread. Small fuels such as grass, needle litter and other fuels less than a quarter inch in diameter are most responsible for fire spread. In fact, "fine" fuels, with high surface to volume ratios, are considered the primary carriers of surface fire. This is apparent to anyone who has ever witnessed the speed at which grass fires burn. As fuel size increases, the rate of spread tends to decrease, as surface to volume ratio decreases. Fires in large fuels generally burn at a slower rate, but release much more energy, burn with much greater intensity. This increased energy release, or intensity, makes these fires more difficult to control. Thus, it is much easier to control a fire burning in grass than to control a fire burning in timber.

When burning under a forest canopy, the increased intensities can lead to torching (single trees becoming completely involved) and potentially development of crown fire (fire carried from tree crown to tree crown). That is, they release much more energy. Fuels are found in combinations of types, amounts, sizes, shapes, and arrangements. It is the unique combination of these factors, along with the topography and weather, which determine how fires will burn.

The study of fire behavior recognizes the dramatic and often-unexpected affect small changes in any single component has on how fires burn. It is impossible to speak in specific terms when predicting how a fire will burn under any given set of conditions. However, through countless observations and repeated research, some of the principles that govern fire behavior have been identified and are recognized.

4.2 Wildfire Hazards

The severity of a fire season can usually be determined in the spring by how much precipitation is received, which in turn, determines how much fine fuel growth there is and how long it takes this growth to cure out. These factors, combined with annual wind events in late summer, drastically increase the chance a fire start will grow rapidly and resist suppression activities. Furthermore, harvest is also occurring at this time. Occasionally, harvesting equipment causes an ignition that can spread into populated areas and timberlands.

4.2.1 Wildfire Ignition Profile

Fire was once an integral function of the majority of ecosystems in eastern Washington. The seasonal cycling of fire across the landscape was as regular as the July, August and September lightning storms plying across the mountains. Depending on the plant community composition, structural configuration, and buildup of plant biomass, fire resulted from ignitions with varying intensities and extent across the landscape. Shorter return intervals between fire events often resulted in less dramatic changes in plant composition (Johnson 1998). The fires burned from 1 to 47 years apart, with most at 5- to 20-year intervals (Barrett 1979). With infrequent return intervals, plant communities tended to burn more severely and be replaced by vegetation different in composition, structure, and age (Johnson *et al.* 1994). Native plant communities in this region developed under the influence of fire, and adaptations to fire are evident at the species, community, and ecosystem levels. Fire history data (from fire scars and charcoal deposits) suggest fire has played an important role in shaping the vegetation in the Columbia Basin for thousands of years (Steele *et al.* 1986, Agee 1993).

Detailed records of fire ignitions and extents have been compiled by the larger land management agencies in Stevens County including the Washington Department of Natural Resources and United States Forest Service. However, the period of data collection from these agencies varies. Furthermore, several fires are reported by both agencies; thus rather than compiling the data from both sources, separate analyses must be considered. Using the data on past fire extents and ignition, the occurrence of wildland fires in the region of Stevens County has been evaluated.

4.2.1.1 Washington Department of Natural Resources

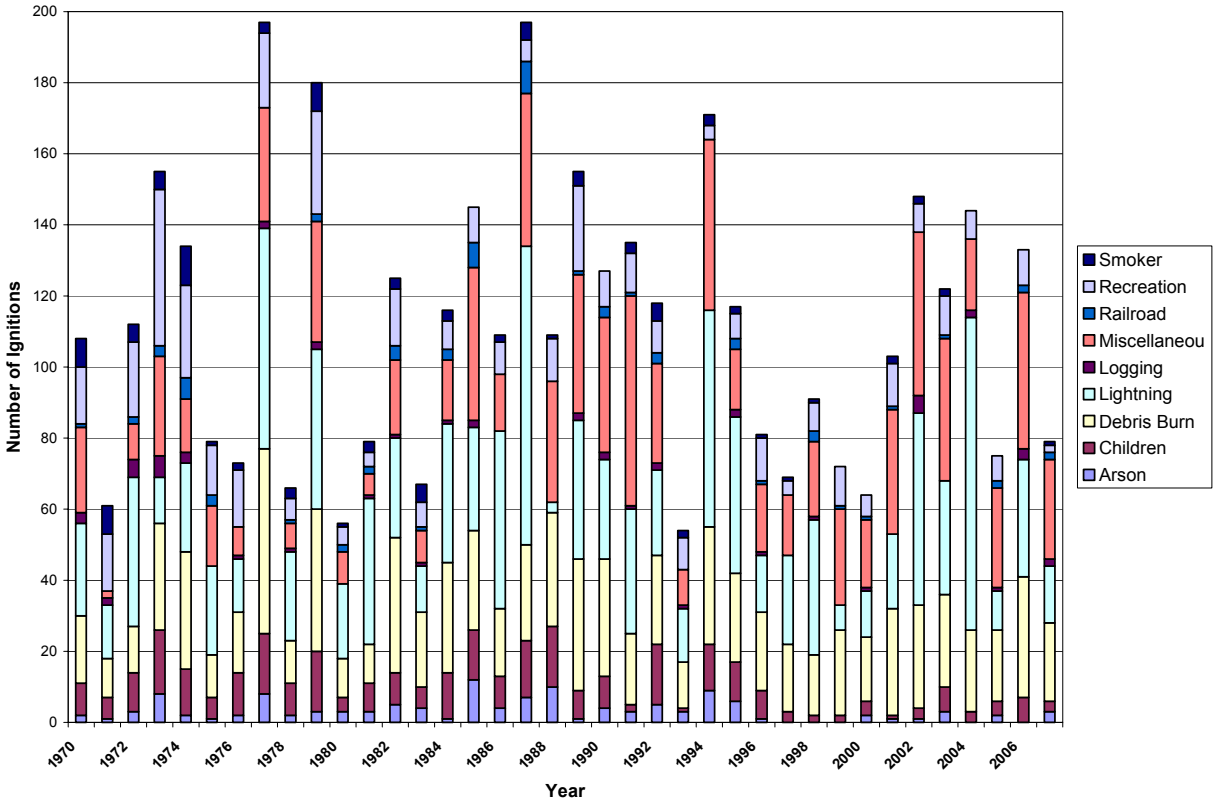
The Washington Department of Natural Resources database of wildfire ignitions includes ignition and extent data from 1970 through 2007 for wildfires occurring on DNR protected lands. An analysis of the DNR reported wildfire ignitions in Stevens County reveals that during this period approximately 27,913 acres burned as a result of 4,226 wildfire ignitions. Lightning resulted in the most number of ignitions followed closely by the miscellaneous category and debris burning. Comparatively, miscellaneous ignitions resulted in the vast majority of acres burned followed by debris burning. An average of 114 fires per year were recorded during this 37 year period.

Table 4.1. Summary of ignitions from Washington DNR database.

Cause	Acres Burned	Percent	Number of Ignitions	Percent
Arson	4,219	15%	125	3%
Children	536	2%	322	8%
Debris Burning	7,169	26%	927	22%
Lightning	1,189	4%	1,201	28%
Logging	297	1%	57	1%
Miscellaneous	12,842	46%	958	23%
Railroad	317	1%	71	2%
Recreation	779	3%	459	11%
Smoking	566	2%	106	3%
Total	**27,913**	**100%**	**4,226**	**100%**

The “Miscellaneous” category includes ignitions originating from structure fires, burning material from aircraft, burning material from auto (other than smoking), burning vehicle, electric fence, equipment crash, fireworks (other than children), hot ashes, power lines, sparks from auto exhaust, sparks from cutting torch or welder, sparks from farm tractors, spontaneous combustion (other than sawdust piles), use of fire (other than logging), woodcutting, and an “other” category.

Figure 4.1. Wildfire Ignitions recorded by Washington DNR 1970-2007.



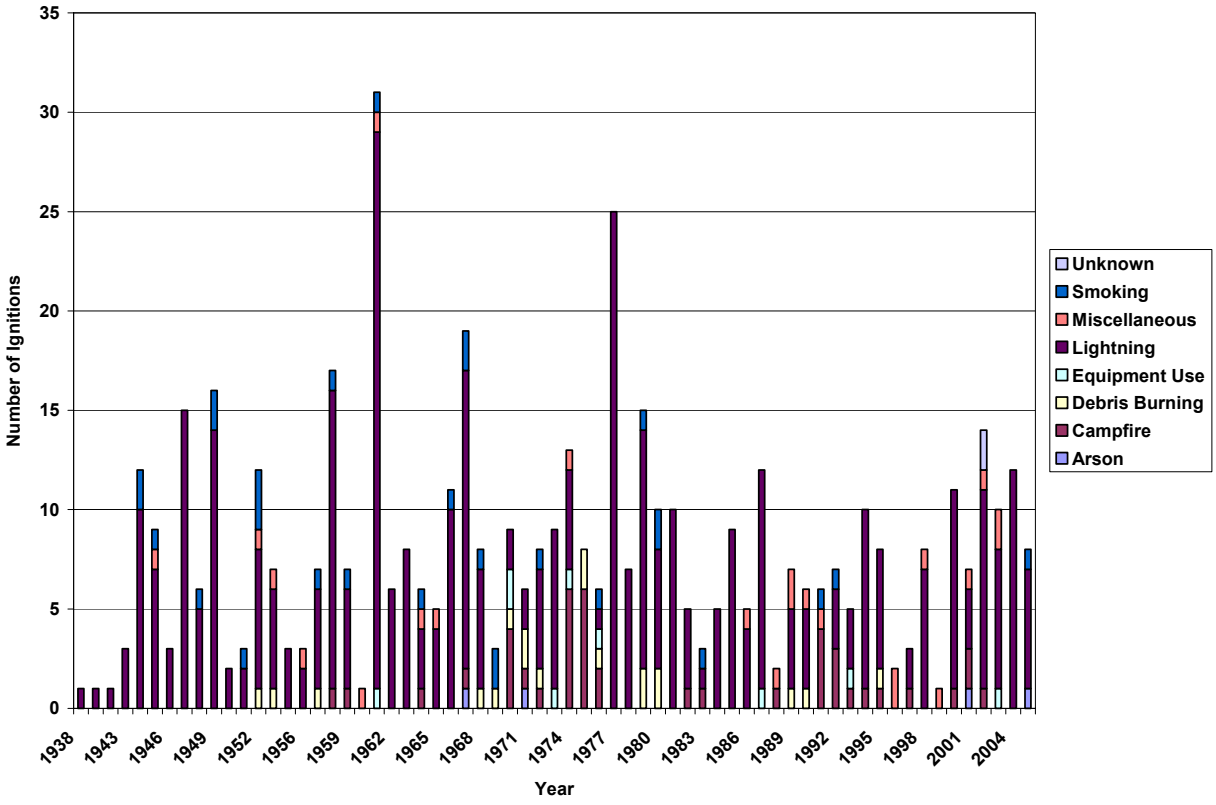
4.2.1.2 U.S. Forest Service

The U.S. Forest Service has maintained an extensive wildfire database for the period of 1938 – 2005 for fires responded to by the Forest Service. According to this database, lightning is by far the most common source of ignitions as well as a significant factor in the number of acres burned. A cigarette ignited fire in 1951 reportedly burned over 9,200 acres, which somewhat skews the statistics. An average of 8 fires per year were recorded over this 66 year period.

Table 4.2. Summary of ignitions from U.S. Forest Service database.

Cause	Acres Burned	Percent	Number of Ignitions	Percent
Arson	1	0%	4	1%
Campfire	41	0%	42	8%
Debris Burning	349	3%	19	4%
Equipment	659	6%	9	2%
Lightning	525	5%	389	75%
Miscellaneous	387	3%	23	4%
Smoking	9,396	83%	30	6%
Unknown	0	0%	2	0%
Total	**11,359**	**100%**	**518**	**100%**

Figure 4.2. Wildfire Ignitions recorded by U.S. Forest Service 1938 to 2005.



Both databases show that lightning results in by far the most number of ignitions; however, human caused fires tend to burn the most acreage each year. Debris burning, equipment fires, and arson also result in numerous ignitions and acres burned each year. This data demonstrates that the aggressive initial attack policy employed by both wildfire agencies and local fire agencies keeps most fires from growing over one acre in size.

4.2.2 Wildfire Extent Profile

Across the west, wildfires have been increasing in extent and cost of control. The National Interagency Fire Center (2007) reported over 96,000 wildfires in 2006 which burned a total of 9.9 million acres and cost over $900 million in containment.

Due to recent fires across the Northwest, local firefighting agencies and residents believe that they are at very high risk to a large wildfire occurrence. Active fuels management programs coupled with public awareness campaigns are a high priority for lessening this risk.

Figure 4.3. Acres burned as recorded by the Washington DNR 1970-2007.

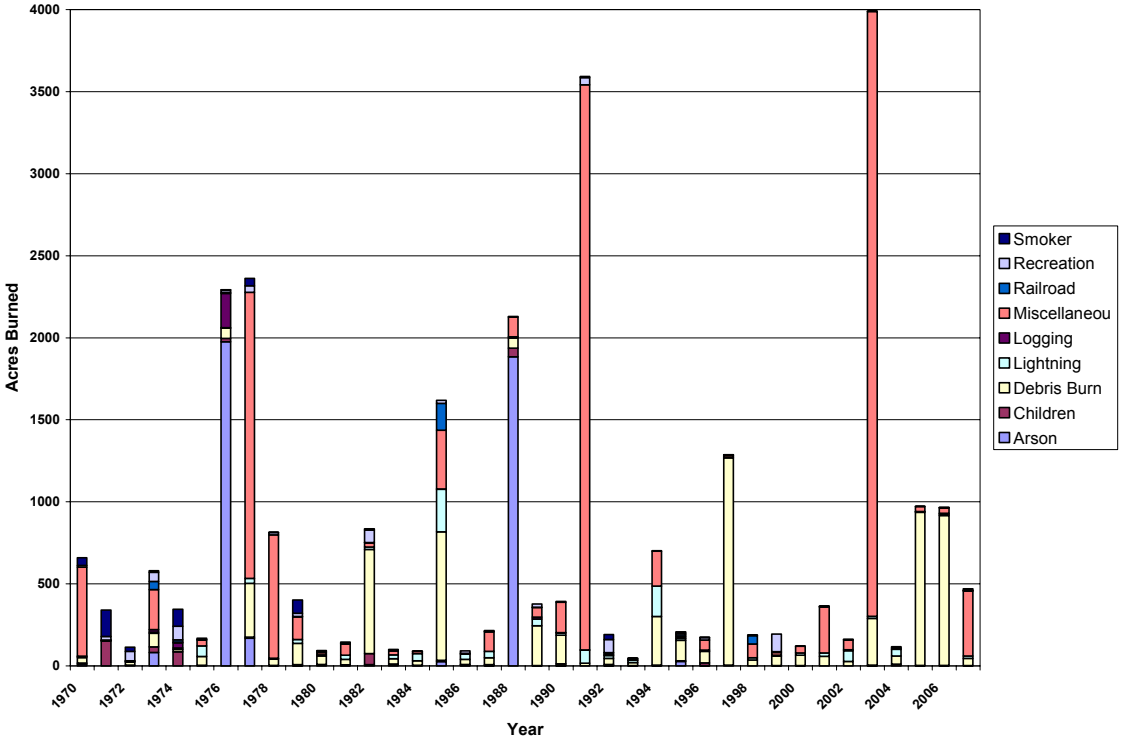
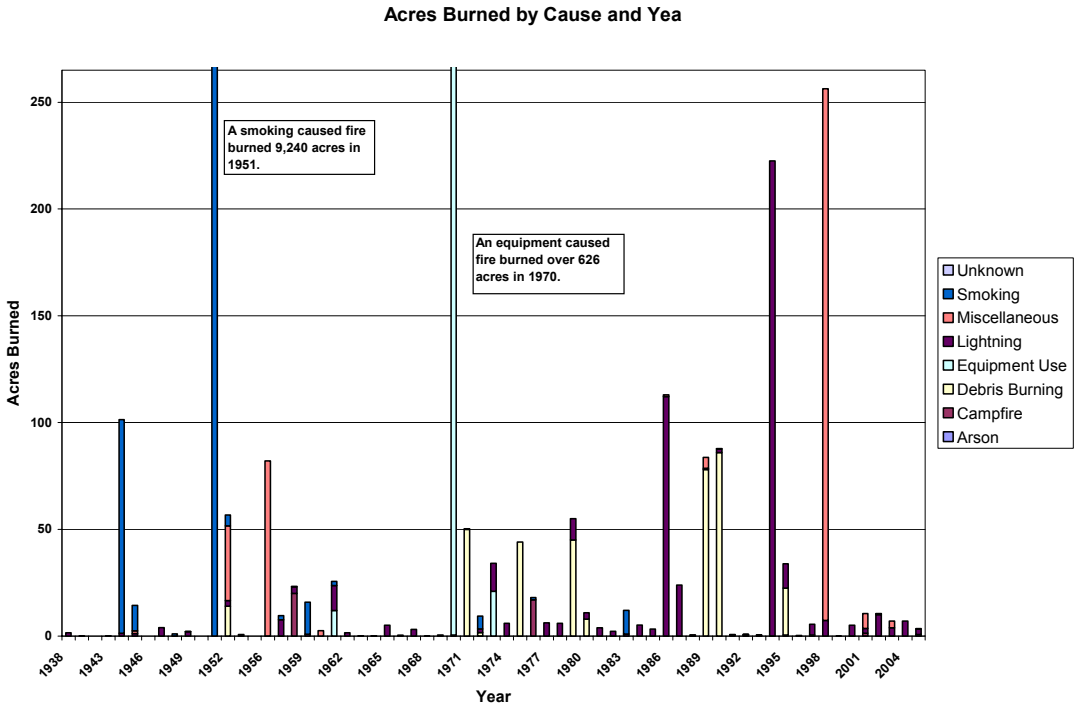


Figure 4.4. Acres Burned as recorded by U.S. Forest Service 1938-2005.



4.3 Wildfire Hazard Assessment

Stevens County and the adjacent counties of Ferry County and Pend Oreille County were analyzed using a variety of techniques, managed on a GIS system (ArcGIS 9.1). Physical features of this region were represented by data layers including roads, streams, soils, elevation, and remotely sensed images. Field visits were conducted by specialists from Northwest Management, Inc., and others. Discussions with area residents and fire control specialists augmented field visits and provided insights to forest health issues and treatment options.

This information was analyzed and combined to develop an assessment of wildland fire risk in the region.

4.3.1 Historic Fire Regime

In the fire-adapted ecosystems of Washington, fire is undoubtedly the dominant process in terrestrial systems that constrain vegetation patterns, habitats, and ultimately, species composition. Land managers need to understand historical fire regimes (that is, fire frequency and fire severity prior to settlement by Euro-Americans) to be able to define ecologically appropriate goals and objectives for an area. Moreover, managers need spatially explicit knowledge of how historical fire regimes vary across the landscape.

Many ecological assessments are enhanced by the characterization of the historical range of variability which helps managers understand: (1) how the driving ecosystem processes vary from site to site; (2) how these processes affected ecosystems in the past; and (3) how these processes might affect the ecosystems of today and the future. Obviously, historical fire regimes are a critical component for characterizing the historical range of variability in the fire-adapted ecosystems of Washington. Furthermore, understanding ecosystem departures provides the necessary context for managing sustainable ecosystems. Land managers need to understand how ecosystem processes and functions have changed prior to developing strategies to maintain or restore sustainable systems. In addition, the concept of departure is a key factor for assessing risks to ecosystem components. For example, the departure from historical fire regimes may serve as a useful proxy for the potential of severe fire effects from an ecological perspective.

A database of fire history studies in the region 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 (USFS 2000).

Fire is the dominant disturbance process that manipulates vegetation patterns in Washington. 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.

4.3.1.1 Historic Fire Function

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.

As scale of application becomes finer these five classes 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.

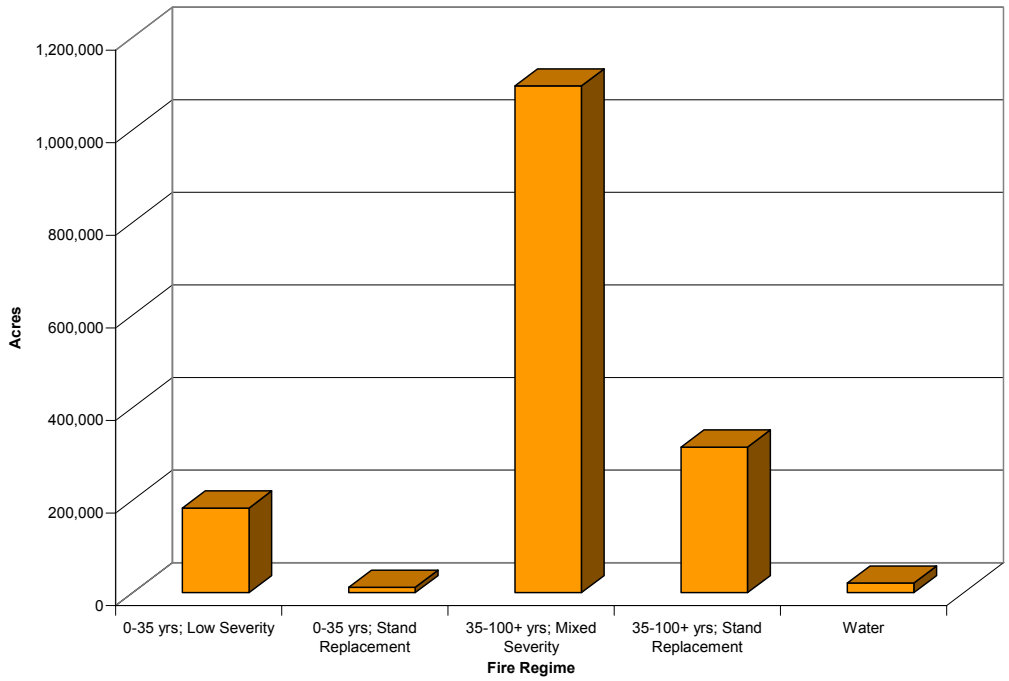
These data were derived using fire history data from a variety of different sources. These data were designed to characterize broad scale patterns of historical fire regimes for use in regional and subregional assessments. Any decisions based on these data should be supported with field verification, especially at scales finer than 1:100,000.

The data used in this planning document was developed by the U.S. Forest Service, Rocky Mountain Research Station Fire Sciences Laboratory in 2000. These coarse-scale data were developed for national-level planning. Summaries of the data were restricted to state or Forest Service regional scales. The data were not intended to be used at finer spatial scales (USFS 2000).

Table 4.3. Assessment of Historic Fire Regimes in Stevens County (2000).

Regime	Description	Acres	Percent
1	0-35 yrs; Low Severity	183,172	11%
2	0-35 yrs; Stand Replacement	11,639	1%
3	35-100+ yrs; Mixed Severity	1,094,735	67%
4	35-100+ yrs; Stand Replacement	314,680	19%
7	Water	20,893	1%
Total		**1,625,119**	**100%**

Figure 4.5. Historic Fire Regimes in Stevens County (2000).



A map of the Historic Fire Regimes in Stevens County is included in Appendix I.

4.3.2 Fire Regime Condition Class

A fire regime condition class (FRCC) is a classification of the amount of departure from the natural regime (Hann and Bunnell 2001). Coarse-scale FRCC classes have been defined and mapped by Hardy *et al.* (2001) and Schmidt *et al.* (2001) (FRCC). They include three condition classes for each 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 the 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 are presented in Table 4.4. Maps depicting Fire Regime and Condition Class are presented in Appendix I.

Table 4.4. Fire Regime Condition Class Definitions.

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.	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. Composition and structure of vegetation and fuels are similar to the natural (historical) regime. Risk of loss of key ecosystem components (e.g. native species, large trees, and soil) is low.
Condition Class 2	Moderate departure from the natural (historical) regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances.	Fire behavior, effects, and other associated disturbances are moderately departed (more or less severe). Composition and structure of vegetation and fuel are moderately altered. Uncharacteristic conditions range from low to moderate. Risk of loss of key ecosystem components is moderate.
Condition Class 3	High departure from the natural (historical) regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances.	Fire behavior, effects, and other associated disturbances are highly departed (more or less severe). Composition and structure of vegetation and fuel are highly altered. Uncharacteristic conditions range from moderate to high. Risk of loss of key ecosystem components is high.

The data used in this planning document was developed by the U.S. Forest Service, Rocky Mountain Research Station Fire Sciences Laboratory in 2000. These coarse-scale data were developed for national-level planning. Summaries of the data were restricted to state or Forest Service regional scales. The data were not intended to be used at finer spatial scales (USFS 2000).

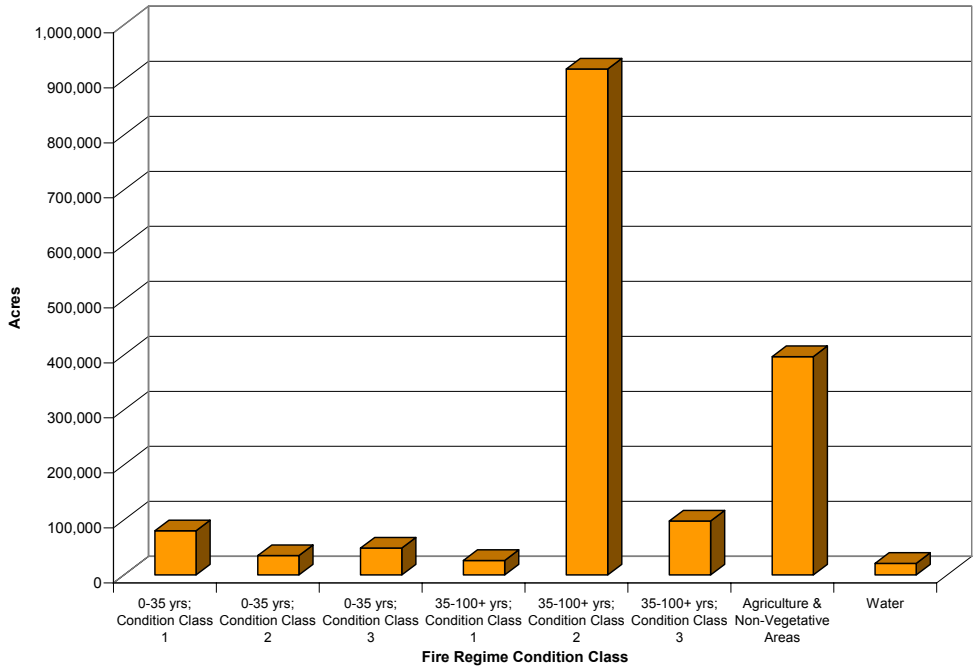
An analysis of Fire Regime Condition Class in Stevens County shows that only about 7% of the county is in Condition Class 1 (low departure), approximately 59% is in Condition Class 2 (moderate departure), with 9% of the area in Condition Class 3 (Table 4.5). Water and agricultural land is considered separately because they cannot be compared to historic fire regimes.

Table 4.5. Assessment of Current Condition Class in Stevens County (2000).

	Acres	Percent of Area
0 to 35 years: Condition Class 1	80,153	5%
0 to 35 years: Condition Class 2	35,119	2%

Table 4.5. Assessment of Current Condition Class in Stevens County (2000).		
	Acres	Percent of Area
0 to 35 years: Condition Class 3	48,628	3%
35 to 100+ years: Condition Class 1	26,210	2%
35 to 100+ years: Condition Class 2	919,494	57%
35 to 100+ years: Condition Class 3	97,898	6%
Agriculture	396,725	24%
Water	20,893	1%
Total	1,625,119	100%

Figure 4.6. Fire Regime Condition in Stevens County (2000).



The Stevens County Fire Regime Condition Class Map is included in Appendix I.

4.4 Stevens County Conditions

Stevens County's fire history is a mixture of events of varying size, severity, and frequency. In the dry ponderosa pine and Douglas-fir forests dominant in the lower elevations, on south slopes, along the Columbia River, and in much of the southern half of Stevens County, fire regimes have changed from frequent, low-severity fires to less frequent, high severity or stand replacing fires. In the more mesic, mixed conifer forests (grand fir, cedar, hemlock) typical of the higher elevations, on north slopes, and dominating much of the northern half of Stevens County, fires were historically less frequent, but much larger. Fire severity in these landscapes was varied with infrequent stand replacing fires.

The planning committee identified and prioritized four major contributors to the fire hazard in Stevens County:

1. Although lightning is responsible for the majority of the ignitions in the County, human caused fires reportedly result in the greater number of acres burned. Reducing the number of human caused ignitions will reduce the potential for a catastrophic wildfire.
2. Years of successful fire suppression have resulted in thousands of acres of overcrowded forestlands that are 'ripe' to burn if an ignition occurs. In many of these areas, a wildfire would be difficult or impossible to stop, particularly during extreme weather conditions.
3. Hundreds of homes have been built in the rural interface. Many have narrow or steep access roads or driveways with dense, encroaching, or overhanging vegetation, inadequate clearances for fire engines, and a lack of possible turnaround sites. In a wildfire situation, most firefighters would be reluctant to save such a home for fear of being trapped by the fire.
4. Many homes have been built in areas with no capacity for alternative electronic communication, particularly if power were interrupted. Nevertheless, Stevens County communities need to establish a good communication network in order to share home and life saving information.

Population growth rates have been steadily increasing throughout the County and the region. The growing appreciation for seclusion has led to significant development in the most accessible forests. Frequently, this development is in the dry ponderosa pine – Douglas-fir forest types where grass, needle, and brush surface litter create forest fuel conditions that are at a high propensity for fire occurrence. Human use is strongly correlated with fire frequency, with increasing numbers of fires as use increases. Discarded cigarettes, tire fires, and hot catalytic converters increase the potential for fire starts along roadways. Careless and unsupervised use of fireworks also contributes to unwanted and unexpected wildland fires. Further contributing to ignition sources are the debris burners (burn barrels) and "sport burners" who use fire to rid ditches of weeds and other burnable materials. Farming and logging equipment have also been a source of accidental ignitions. The increased potential for fire starts and the fire prone landscapes in which homes have been constructed greatly increases the potential for fires in interface areas.

4.5 Stevens County's Wildland-Urban Interface

The Wildland-Urban Interface has gained attention through efforts targeted at wildfire mitigation; however, this analysis technique is also useful when considering other hazards because the concept looks at where people and structures are concentrated in any particular region. For Stevens County, the WUI shows the relative concentrations of structures scattered across the county.

A key component in meeting the underlying need for protection of people and structures is the protection and treatment of hazards in the wildland-urban interface. The wildland-urban interface refers to areas where wildland vegetation meets urban developments, or where forest fuels meet urban fuels in the case of wildfires (such as houses). These areas encompass not only the interface (areas immediately adjacent to urban development), but also the continuous slopes that lead directly to a risk to urban developments be it from wildfire, landslides, or floods. Reducing the hazard in the wildland-urban interface requires the efforts of federal, state, and local agencies and private individuals (Norton 2002). "The role of [most] federal agencies in the wildland-urban interface includes wildland firefighting, hazard fuels reduction, cooperative prevention and education and technical experience. Structural fire protection [during a wildfire] in the wildland urban interface is [largely] the responsibility of Tribal, state, and local governments" (USFS 2001). Property owners share a responsibility to protect their residences and businesses and minimize danger by creating defensible areas around them and taking

other measures to minimize the risks to their structures (USFS 2001). With treatment, a wildland-urban interface can provide firefighters a defensible area from which to suppress wildland fires or defend communities against other hazard risks. In addition, a wildland-urban interface that is properly thinned will be less likely to sustain a crown fire that enters or originates within it (Norton 2002).

By reducing hazardous fuel loads, ladder fuels, and tree densities, and creating new and reinforcing defensible space, landowners would protect the wildland-urban interface, the biological resources of the management area, and adjacent property owners by:

- minimizing the potential of high-severity ground or crown fires entering or leaving the area;
- reducing the potential for firebrands (embers carried by the wind in front of the wildfire) impacting the WUI. Research indicates that flying sparks and embers (firebrands) from a crown fire can ignite additional wildfires as far as 1¼ miles away during periods of extreme fire weather and fire behavior (McCoy *et al.* 2001);
- improving defensible space in the immediate areas for suppression efforts in the event of wildland fire.

Three wildland-urban interface conditions have been identified (Federal Register 66(3), January 4, 2001) for use in wildfire control efforts. These include the Interface Condition, Intermix Condition, and Occluded Condition. Descriptions of each are as follows:

- **Interface Condition** – a situation where structures abut wildland fuels. There is a clear line of demarcation between the structures and the wildland fuels along roads or back fences. The development density for an interface condition is usually 3+ structures per acre;
- **Intermix Condition** – a situation where structures are scattered throughout a wildland area. There is no clear line of demarcation, the wildland fuels are continuous outside of and within the developed area. The development density in the intermix ranges from structures very close together to one structure per 40 acres;
- **Occluded Condition** – a situation, normally within a city, where structures abut an island of wildland fuels (park or open space). There is a clear line of demarcation between the structures and the wildland fuels along roads and fences. The development density for an occluded condition is usually similar to that found in the interface condition and the occluded area is usually less than 1,000 acres in size; and

In addition to these classifications detailed in the Federal Register, four additional classifications of population density have been included to augment these categories:

- **Rural Condition** – a situation where the scattered small clusters of structures (ranches, farms, resorts, or summer cabins) are exposed to wildland fuels. There may be miles between these clusters. The condition of the WUI connects these clusters into a relatively homogenous area.
- **High Density Urban Areas** – those areas generally identified by the population density consistent with the location of larger incorporated cities, however, the boundary is not necessarily set by the location of city boundaries: it is set by very high population densities (more than 15-30 structures per acre or more). Many counties and reservations in the west do not have high density urban areas. Stevens County, Washington, was determined not to have any areas of high density urban based on current (2006)

structure locations. However, in nearby Spokane County, Washington, Spokane is representative of a high density urban condition.

- **Infrastructure Area WUI** – those locations where critical and identified infrastructure are located outside of populated regions and may include high tension power line corridors, critical escape or primary access corridors, municipal watersheds, areas immediately adjacent to facilities in the wildland such as radio repeater towers or fire lookouts. These are identified by county or reservation level core teams.
- **Non-WUI Condition** - a situation where the above definitions do not apply because of a lack of structures in an area or the absence of critical infrastructure crossing these unpopulated regions. This classification is not WUI.

In summary, the designation of areas by the Stevens County core team includes:

- High Density Urban Areas: WUI
- Interface Condition: WUI
- Intermix Condition: WUI
- Occluded Condition: Not Present
- Rural Condition: WUI
- Infrastructure Areas: WUI
- Non-WUI Condition: Not WUI, but present in Stevens County

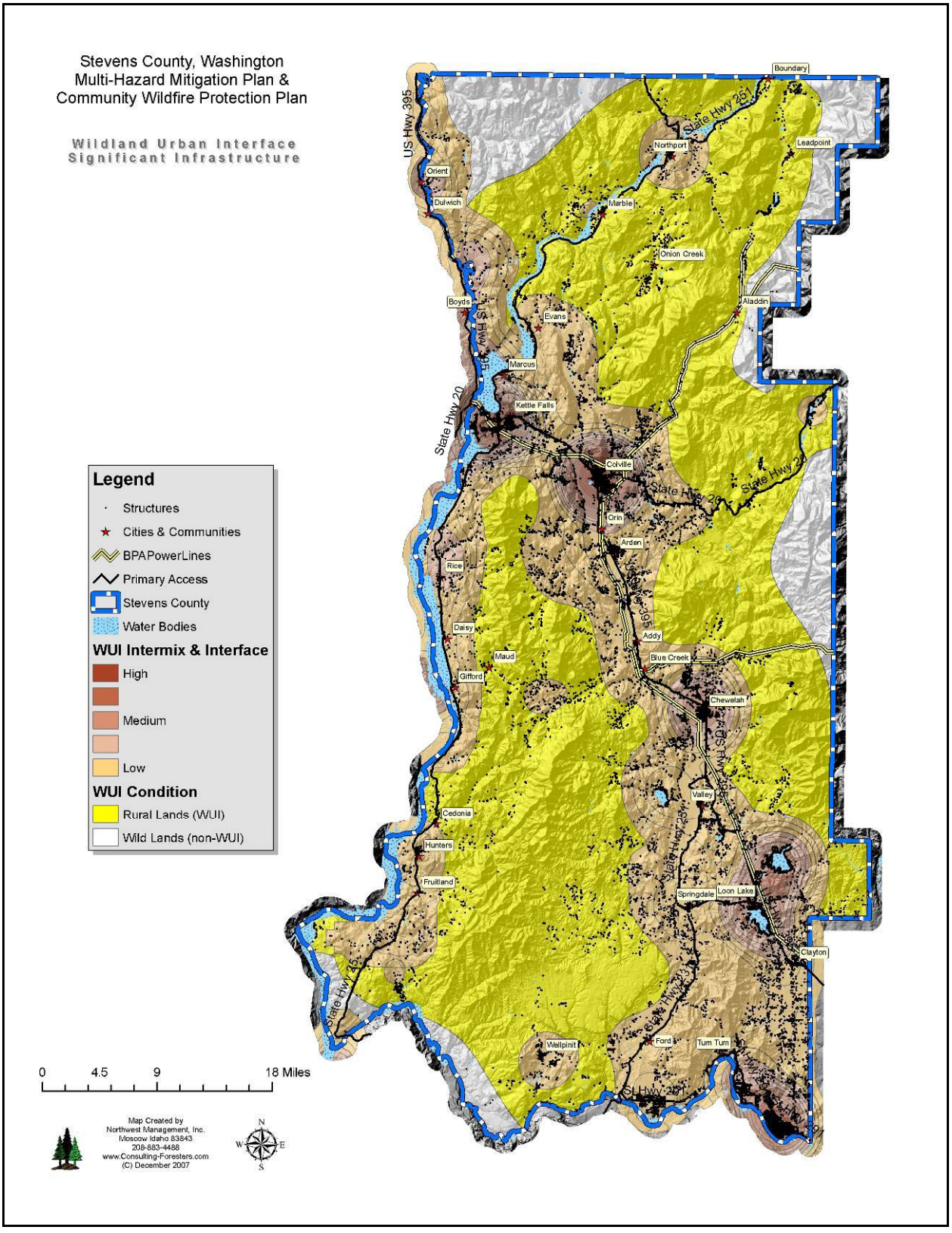
The locations of structures in Stevens County have been mapped and are presented on a variety of maps in this analysis document; specifically in Appendix I. The Stevens County GIS department provided data on the location of structures in the County based on electrical service. The Farm Services Agency, working with states, counties, tribes, and the state and federal government, has contracted to acquire and make available NAIP color imagery. These aerial photographs are 1 meter resolution (very high quality), and show land based features with acceptable resolution and quality. County level mosaics were obtained for Stevens County and adjacent counties, and were used to supplement the County's structure location data.

All structures are represented by a "dot" on the map. No differentiation is made between a garage and a home, or a business and a storage building. The density of structures and their specific locations in this management area are critical in defining where the potential exists for casualty loss in the event of a disaster in the region.

By evaluating this structure density, we can define WUI areas on maps by using mathematical formulae and population density indexes to define the WUI based on where structures are located. The resulting population density indexes create concentric circles showing high density areas of high density urban, Interface and Intermix Condition WUI, as well as Rural Condition WUI (as defined above). This portion of the analysis allows us to "see" where the highest concentrations of structures are located in reference to high risk landscapes, limiting infrastructure, and other points of concern. The WUI, as defined here, is unbiased, consistent, allows for edge matching with other counties and most important – it addresses all of the county, not just identified communities. It is a planning tool showing where homes and businesses are located and the density of those structures leading to identified WUI categories. It can be determined again in the future, using the same criteria, to show how the WUI has changed in response to increasing population densities. It uses a repeatable and reliable analysis process that is unbiased. This mapping procedure was followed and is presented in the maps included in the Appendix I.

The Healthy Forests Restoration Act makes a clear designation that the location of the WUI is at the determination of the County or Reservation when a formal and adopted Community Wildfire Protection Plan is in place. It further states that the federal agencies are obligated to use this WUI designation for all Healthy Forests Restoration Act purposes. The Stevens County Community Wildfire Protection Plan core team evaluated a variety of different approaches to determining the WUI for the County and selected this approach and has adopted it for these purposes. In addition to a formal WUI map for use with the federal agencies, it is hoped that it will serve as a planning tool for the county and local fire districts.

Figure 4.7. Wildland Urban Interface Map in Stevens County.



4.5.1 Potential WUI Treatments

The definition and mapping of the WUI is the creation of a planning tool to identify where structures, people, and infrastructure are located in reference to each other. This analysis tool does not include a component of fuels risk. There are a number of reasons to map and analyze these two components separately (population density vs. fire risk analysis). The primary among these reasons is the fact that population growth often occurs independent from changes in fire risk, fuel loading, and infrastructure development. Thus, making the definition of the WUI dependant on all of them would eliminate populated places with a perceived low level of fire risk today, which may in a year become an area at high risk due to forest health issues or other concerns.

By examining these two tools separately the planner is able to evaluate these layers of information to see where the combination of population density overlays on top of areas of high current fire risk and then take mitigative actions to reduce the fuels, improve readiness, directly address factors of structure ignitability, improve initial attack success, mitigate resistance to control factors, or (more often) a combination of many approaches.

It should not be assumed that just because an area is identified as WUI, that it will therefore receive treatments because of this identification alone. Nor should it be implicit that all WUI treatments will be the application of the same prescription. Instead, each location targeted for treatments must be evaluated on its own merits: factors of structural ignitability, access, resistance to control, population density, resources and capabilities of firefighting personnel, and other site specific factors.

It should also not be assumed that WUI designation on national forest lands automatically equates to a treatment area. The Forest Service is still obligated to manage according to the Standards and Guides listed in the Colville National Forest Land and Resource Management Plan (Forest Plan). The Forest Plan has legal precedence over the WUI designation until such a time that the Forest Plan is revised to reflect updated priorities.

All planning in relation to wildfire mitigation must be taken in light of the existing regulatory and environmental laws in place. This will be determined by the owner of the parcel implementing the treatment. Thus, if proposed activities are to occur on federal lands, then the National Environmental Policy Act (NEPA) will determine environmental protection measures. Similarly, if the proposed action is to occur on state lands or private lands, then the Forest Practices Act and SEPA would govern environmental impacts. We have not diminished private property rights through the development of this document. Environmental protection is inherent to all projects because of the existing regulatory environment in Washington State.

Most treatments may begin with the home evaluation, and the implicit factors of structural ignitability (roofing, siding, deck materials), and vegetation within the treatment area of the structure. However, treatments in the low population areas of rural lands (mapped as yellow) may look closely at access (two ways in and out) and communications through means other than land based telephones. On the other hand, the subdivision with densely packed homes (mapped as brown – interface areas) surrounded by forests and dense underbrush, may receive more time and effort implementing fuels treatments beyond the immediate home site to reduce the probability of a crown fire entering the subdivision.

4.6 Stevens County Communities At Risk

Individual community assessments have been completed for all of the populated places in the county. The following summaries include these descriptions and observations. Local place names identified during this plan's development include:

Table 4.6. Stevens County Federal Register Communities At Risk.

Community Name	Planning Description	Vegetative Community	Federal Register Community At Risk?[1]
Addy	Community	Grassland	Yes
Aladdin	Place Name	Grassland / Forestland	No
Arden	Community	Grassland	No
Bluecreek	Community	Grassland	No
Cedonia	Place Name	Grassland / Forestland	No
Chewelah	City	Grassland	Yes
Clayton	Community	Grassland / Forestland	No
Colville	City	Grassland	Yes
Daisy	Place Name	Grassland / Forestland	No
Deer Lake	Community	Grassland / Forestland	No
Echo	Place Name	Forestland	No
Enterprise	Place Name	Grassland / Forestland	No
Evans	Place Name	Forestland	No
Ford	Place Name	Grassland / Forestland	Yes
Fort Spokane	Community	Grassland / Forestland	No
Fruitland	Place Name	Grassland / Forestland	Yes
Gifford	Place Name	Grassland / Forestland	No
Hunters	Community	Grassland / Forestland	Yes
Kettle Falls	City	Grassland / Forestland	Yes
Loon Lake	Community	Grassland	No
Marble	Community	Grassland / Forestland	No
Marcus	City	Forestland	Yes
Northport	City	Forestland	No
Onion Creek	Community	Grassland / Forestland	No
Orin	Place Name	Grassland	No
Springdale	City	Grassland / Forestland	No
Tum Tum	Community	Grassland / Forestland	No
Valley	Community	Grassland / Forestland	No
Waitts	Community	Forestland	No
Wellpinit	Community	Forestland	Yes
West Kettle Falls	Place Name	Grassland / Forestland	No

[1]Those communities with a "Yes" in the Federal Register Community at Risk column are included in the Federal Register, Vol. 66, Number 160, Friday, August 17, 2001, as "Urban Wildland Interface Communities within the vicinity of Federal Lands that are at high risk from wildfires". All of these communities have been evaluated as part of this plan's assessment.

Because the Wildland Urban Interface map for Stevens County was based primarily on population density as described above, all of these communities and the populated areas surrounding them are within the Stevens County Wildland-Urban Interface.

4.7 Strategic Planning Areas in Stevens County

In order to facilitate the mutual understanding of wildfire risks specific to commonly referred to areas in Stevens County, the planning committee identified sub-regions on a map they felt not

only had similar fuel conditions, but also would render similar initial attack techniques. These sub-regions are called strategic planning areas (SPA). Typically, SPA boundaries lie along local fire district boundaries or known anchor points such as roads or ridgelines. All of the strategic planning areas lie within or mostly within the Wildland Urban Interface and will typically include several Communities At Risk. Where the Wildland Urban Interface boundaries are primarily based on population density, the SPA boundaries are strategic boundaries based on fire suppression capabilities.

Table 4.7. Acreage Breakdown of Strategic Planning Areas.

Strategic Planning Area	Total WUI Acres	Non-WUI Acres	USFS WUI Acres	DNR WUI Acres	Other Gov't WUI Acres	Private WUI Acres	Total Acres
SPA 1: Sheep Creek	37,613	14,456	4,113	3,006	608	29,885	52,069
SPA 2: Boundary – Northport - Deer Creek	36,452	0	0	5,249	2,504	28,699	36,452
SPA 3: Aladdin - Deep Lake – Cedar Creek	64,088	42,153	16,405	6,218	1,644	39,821	106,241
SPA 4: 15 Mile – Flat Creek – Crown Creek	35,868	6,423	6,936	5,497	2,819	20,616	42,291
SPA 5: Onion Creek	50,686	0	1,941	4,857	1,799	42,089	50,686
SPA 6: Williams Lake Road	59,672	0	1,207	12,264	3,384	42,817	59,672
SPA 7: Kettle Falls	42,992	0	0	4,575	7,874	30,544	42,992
SPA 8: Colville	61,796	0	2,120	9,941	2	49,733	61,796
SPA 9: Aladdin – Mill Creek - Little Pend Oreille Lakes	70,881	1,123	38,612	16,692	206	15,371	72,003
SPA 10: Arden	34,076	0	0	7,656	406	26,015	34,076
SPA 11: Rice	64,890	0	0	5,307	8,929	50,644	64,890
SPA 12: Addy	109,849	0	0	19,882	1,256	88,711	109,849
SPA 13: Huckleberry Mountains	71,119	0	0	12,892	6,932	51,296	71,119
SPA 14: Hunters	102,358	6,425	0	10,615	21,670	70,073	108,784
SPA 15: Ten Mile – Calispell Creek	16,439	1,846	8,601	530	0	7,308	18,285
SPA 16: Loon Lake – Deer Lake	55,633	0	0	2,675	0	52,958	55,633
SPA 17: Springdale	64,695	0	0	12,224	4	52,468	64,695
SPA 18: Ford	41,912	0	0	5,692	62	36,158	41,912
SPA 19: Clayton – Tum Tum - Suncrest	60,474	0	0	6,471	50	53,953	60,474
SPA 20: Little Pend Oreille Wildlife Refuge	36,705	22,783	85	5,247	27,933	3,440	59,488
SPA 21: Spokane Indian Reservation	124,026	16,089	0	8	121,332	2,686	140,114
*LKR SPA 2: Summit – Pierre – Toulou	26,640	29,554	5,079	6,640	0	14,921	56,194
*LKR SPA 4 - Kelly Hill	31,147	0	0	1,683	4,315	25,149	31,147
**Ch SPA 1: West Iron Mountain	9,693	0	7,104	630	117	1,841	9,693
**Ch SPA 2: West-North Fork Chewelah Creek	17,198	0	11,196	430	551	5,021	17,198
**Ch SPA 3: East – North Fork Chewelah Creek	7,525	10,323	7,202	0	7	316	17,848

Table 4.7. Acreage Breakdown of Strategic Planning Areas.

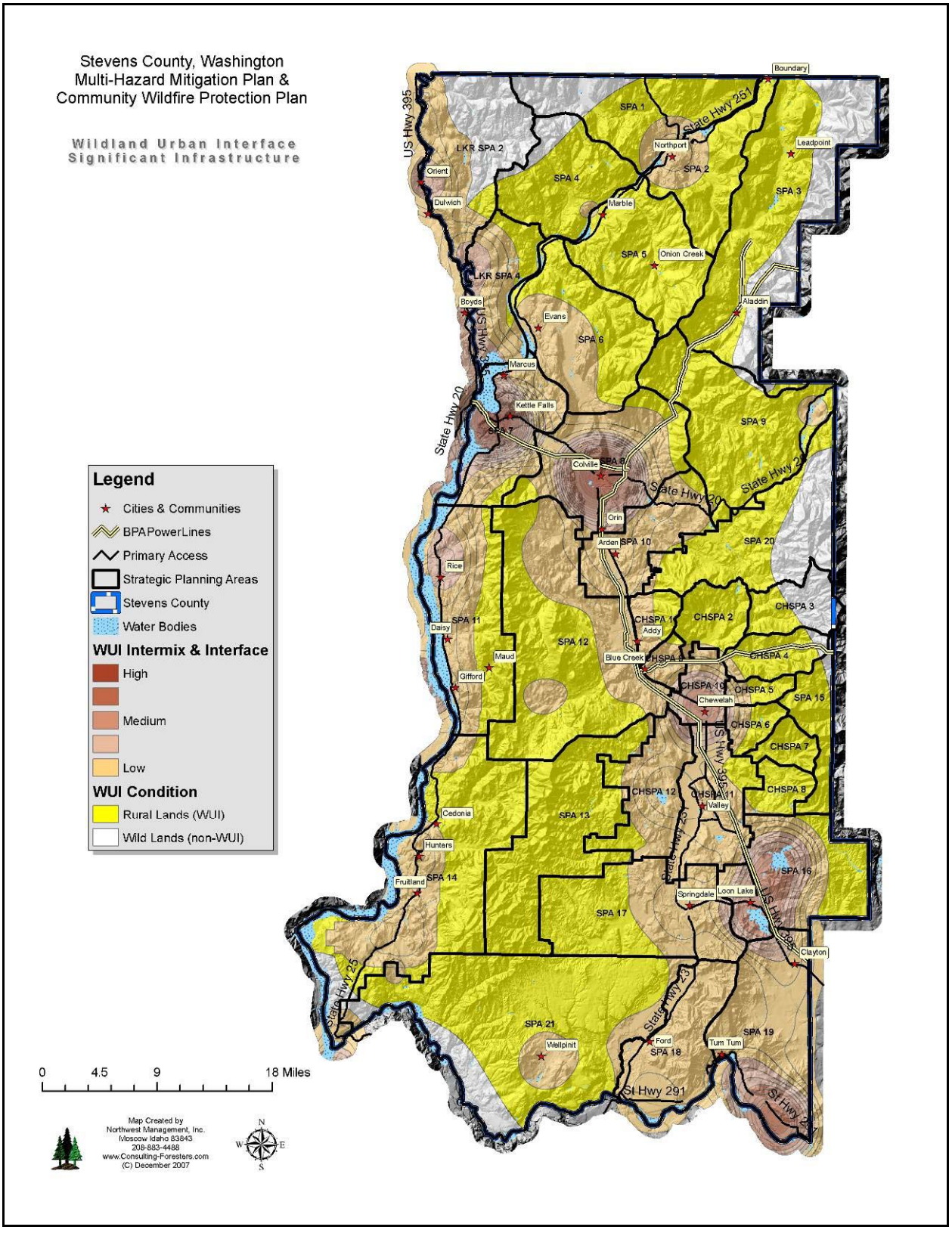
Strategic Planning Area	Total WUI Acres	Non-WUI Acres	USFS WUI Acres	DNR WUI Acres	Other Gov't WUI Acres	Private WUI Acres	Total Acres
**Ch SPA 4: South Fork Chewelah Creek	14,475	1,400	10,628	40	0	3,807	15,875
**Ch SPA 5: Thomasan Creek	6,325	0	3,480	1,169	216	1,460	6,325
**Ch SPA 6: Sherwood Creek – Horseshoe Lake	8,695	0	3,257	1,002	174	4,262	8,695
**Ch SPA 7: Betts Meadow	8,812	0	5,380	1,805	0	1,627	8,812
**Ch SPA 8: Upper Cottonwood Creek	10,945	0	0	2,720	0	8,225	10,945
**Ch SPA 9: Gold Hill – Immel Road	6,335	0	1,611	238	221	4,265	6,335
**Ch SPA 10: Fire District #4 North	13,410	0	16	1,437	192	11,766	13,410
**Ch SPA 11: Fire District #4 South	36,369	0	0	1,322	42	35,006	36,369
**Ch SPA 12: Fire District #4 West	32,925	0	0	2,528	305	30,092	32,925
Total	**1,473,500**	**152,575**	**134,972**	**179,921**	**215,564**	**943,043**	**1,626,075**

**LKR – SPA's were adapted from the Lower Kettle River Community Wildfire Protection Plan*

*** Ch – SPAs were adapted from the Chewelah Community Wildfire Protection Plan*

This breakdown of Strategic Planning Areas by acreage shows that 90.6% of Stevens County is currently within the Wildland Urban Interface as defined in Section 4.5. Furthermore, 8.3% of the mapped WUI is owned by the U.S. Forest Service, 11.1% is Washington Department of Natural Resources property, 58% is private ownership, and the remaining 13.3% is owned by other government entities including the Bureau of Land Management, Bureau of Reclamation, the Spokane Indian Reservation, the National Park Service, U.S. Fish and Wildlife Service, Stevens County, or city governments.

Figure 4.8. Strategic Planning Areas.



4.7.1 Vegetative Associations

Vegetative structure and composition in Stevens County is closely related to elevation, aspect, and precipitation. Relatively mild and dry environments characterize the undulating topography of the region which transitions from the Colville River and Lake Roosevelt riparian plant communities to the forest ecosystems that characterize the vast majority of the land area in Stevens County. These forest communities contain high fuel accumulations that have the potential to burn at moderate to high intensities. Highly variable topography coupled with dry, windy weather conditions typical of the region is likely to create extreme fire behavior.

The transition between developed agricultural land and timberlands occurs somewhat abruptly, usually along toe slopes or distinct property boundaries. At higher elevation mountainous regions, moisture becomes less limiting due to a combination of higher precipitation and reduced solar radiation. Vegetative patterns shift from forested communities dominated by ponderosa pine, western larch, grand fir, and Douglas-fir at the lower elevations to lodgepole pine and subalpine fir at the higher elevations. Engelmann spruce and western red cedar are commonly found in moist draws and frost pockets. These forested conditions possess a greater quantity of both dead and down fuels as well as live fuels. Rates of fire spread tend to be lower than those in the grasslands; however, intensities can escalate dramatically, especially under the effect of slope and wind. These conditions can lead to control problems and potentially threaten lives, structures and other valued resources.

As elevation and aspect increase available moisture, forest composition transitions to moister habitat types. Increases in moisture keep forest fuels unavailable to burn for longer periods during the summer. This increases the time between fire events, resulting in varying degrees of fuel accumulation. When these fuels do become available to burn, they typically burn in a mosaic pattern at mid elevations, where accumulations of forest fuels result in either single or group tree torching, and in some instances, short crown fire runs. At the highest elevations, fire events are typically stand replacing, as years of accumulation fuel large, intense wildfires.

Insects and disease can cause widespread mortality of forest stands in a very short amount of time. Pine bark beetle populations have continued to increase at epidemic levels throughout Washington State; however, mortality increases are most pronounced in eastern Washington. Ponderosa pine and lodgepole pine seem to be the most affected species at all elevations in Stevens County. The occurrence of Ips beetles, Douglas-fir beetle, Douglas-fir tussock moth, and root disease have also been recorded in eastern Washington (Washington Department of Natural Resources 2006). Insects and disease often focus and cause the most mortality in forest stands that are overcrowded or otherwise stressed by drought, recent fires, or other factors. Large areas of dead trees are a significant fire hazard Oftentimes, dry, dead needles hang on the killed trees for several years making them prime for a potential ignition and subsequent crown fire. Thinning overcrowded stands can help reduce stress on individual trees allowing them to better withstand insect attacks. Planting of appropriate species for the site and continual management can also help ward off future outbreaks.

Many lower elevation forested areas throughout Stevens County are highly valued for their scenic qualities as well as for their proximity to travel corridors. These attributes have led to increased recreational home development and residential home construction in and around forest fuel complexes. The juxtaposition of highly flammable forest types and rapid home development will continue to challenge the ability to manage wildland fires in the wildland-urban interface.

4.7.2 Overall Community Assessment

Based on the numerous fuels analysis models conducted, the Wildland Urban Interface map, and local experience, it is clear that all of Stevens County has some level of fire risk. One of the County's most challenging issues is the very scattered nature of the population across nearly all of the land area coupled with highly variable topography and generally poor access. All of the area's critical infrastructure components including the highways, communication towers, and powerlines have a high risk of damage or closure due to wildland fire. Most of the County's critical facilities are located within the more densely populated communities, thus, the wildfire risk is lower, but certainly not non-existent. At this time, Stevens County has not identified any repetitive loss structures specifically for wildland fire.

Using the County's parcel database, estimates of building values in each SPA are included in Table 4.8. This information represents the potential dollar loss to each area if every structure was burned by wildland fire.

Table 4.8. Total Value of Buildings by SPA.

Strategic Planning Area	Total Number of Buildings	Total Value of Buildings
SPA 1: Sheep Creek	113	$5,226,420
SPA 2: Boundary – Northport - Deer Creek	411	$17,932,545
SPA 3: Aladdin - Deep Lake – Cedar Creek	319	$16,212,930
SPA 4: 15 Mile – Flat Creek – Crown Creek	128	$6,712,120
SPA 5: Onion Creek	302	$15,826,075
SPA 6: Williams Lake Road	456	$33,260,355
SPA 7: Kettle Falls	1,456	$139,871,771
SPA 8: Colville	2,922	$331,118,952
SPA 9: Aladdin – Mill Creek - Little Pend Oreille Lakes	382	$21,402,585
SPA 10: Arden	757	$66,707,295
SPA 11: Rice	497	$29,007,037
SPA 12: Addy	1,195	$75,095,818
SPA 13: Huckleberry Mountains	11	$381,034
SPA 14: Hunters	559	$23,339,246
SPA 15: Ten Mile – Calispell Creek	0	$0
SPA 16: Loon Lake – Deer Lake	2,025	$137,232,588
SPA 17: Springdale	886	$35,406,135
SPA 18: Ford	459	$17,511,848
SPA 19: Clayton – Tum Tum - Suncrest	3,146	$372,363,094
SPA 20: Little Pend Oreille Wildlife Refuge	28	$1,950,080
SPA 21: Spokane Indian Reservation	49	$2,001,489
*LKR SPA 2: Summit – Pierre – Toulou	190	$9,532,605
*LKR SPA 4 - Kelly Hill	161	$9,732,470
**Ch SPA 1: West Iron Mountain	62	$4,382,275
**Ch SPA 2: West-North Fork Chewelah Creek	30	$2,164,575
**Ch SPA 3: East – North Fork Chewelah Creek	0	$0
**Ch SPA 4: South Fork Chewelah Creek	47	$3,521,160
**Ch SPA 5: Thomasan Creek	38	$2,941,124
**Ch SPA 6: Sherwood Creek – Horseshoe Lake	17	$659,928

Table 4.8. Total Value of Buildings by SPA.

Strategic Planning Area	Total Number of Buildings	Total Value of Buildings
**Ch SPA 7: Betts Meadow	0	$0
**Ch SPA 8: Upper Cottonwood Creek	62	$2,742,977
**Ch SPA 9: Gold Hill – Immel Road	31	$2,545,825
**Ch SPA 10: Fire District #4 North	2,626	$238,118,576
**Ch SPA 11: Fire District #4 South	718	$40,057,022
**Ch SPA 12: Fire District #4 West	732	$34,054,244
Total	**20,815**	**$21,402,585**

The steep topography and relatively low moisture availability across much of Stevens County does not permit extensive farming operations; however, there are some areas within the Colville River Valley that are flat enough to make small to medium scale farming operations feasible. Agricultural fields infrequently serve to fuel a fire after curing; burning in much the same manner as consistent low grassy fuels. Fires in grass and rangeland fuel types tend to burn at relatively low intensities, with moderate flame lengths and only short-range spotting. Suppression resources are generally quite effective in such fuels. Homes and other improvements can be easily protected from the direct flame contact and radiant heat through adoption of precautionary measures around the structure. Although fires in these fuels may not present the same control problems as those associated with large, high intensity fires in timber fuel types, they can cause significant damage if precautionary measures have not taken place prior to a fire event. Wind driven fires in these short grass fuel types spread rapidly and can be difficult to control. During extreme drought and pushed by high winds, fires in grassland fuel types can exhibit extreme rates of spread, thwarting suppression efforts.

Northeast Washington is a patch-work of dry Douglas-fir and ponderosa pine forests that, in many areas, have become overstocked, resulting in multistoried conditions with abundant ladder fuels. During pre-settlement times, much of this area was characterized by low intensity fires due to the relatively light fuel loading, which mostly consisted of small diameter fuels. Frequent, low intensity fires generally kept stands open; free of fire intolerant species and maintained seral species such as ponderosa pine as well as larger diameter fire resistant Douglas-fir. In some areas, low intensity fires stimulated shrubs and grasses, maintaining vigorous browse and forage. The shrub layer could either inhibit or contribute to potential fire behavior, depending on weather and live fuel moisture conditions at the time of the burn.

In general, large fires in the Colville National Forest start high in elevation and move downhill. As fires move down in elevation, they encounter drier and flashier fuels. Rolling embers and spot fires are a common method of downhill fire spread. Spot fires ignited on slopes trigger uphill runs that throw more spot fires, expanding the downward fire progression. Modifying fuels to reduce the likelihood of torching and crowning trees will in turn reduce the likelihood of spot fires.

Increased activities by pathogens will continue to increase levels of dead and down fuel, as host trees succumb to insect attack and stand level mortality increases. Overstocked, multi-layered stands and the abundance of ladder fuels lead to horizontal and vertical fuel continuity. These conditions, combined with an arid and often windy environment, can encourage the development of a stand replacing fire. These fires can burn with very high intensities and generate large flame lengths and fire brands that can be lofted long distances. Such fires present significant control problems for suppression resources, often developing into large, destructive wildland fires.

A probability that needs to be planned for is the likelihood of extended spot fires. Large fires may easily produce spot fires from ½ to 2 miles away from the main fire. How fire suppression forces respond to spot fires is largely dependent upon the fuels in which they ignite. Stands of timber that are managed for fire resilience are much less likely to sustain torching and crowning behavior that produces more spot fires. The objective of fuel reduction thinning is to change the fuels in a way that will moderate potential fire behavior. If fire intensity can be moderated by vegetation treatments, then ground and air firefighting resources can be much more effective.

4.7.3 Overall Mitigation Activities

There are many specific actions that will help improve the safety in a particular area; however, there are also many potential mitigation activities that apply to all residents and all fuel types. General mitigation activities that apply to all of Stevens County are discussed below while area specific mitigation activities are discussed within the individual community assessments.

The safest, easiest, and most economical way to mitigate unwanted fires is to stop them before they start. Generally, prevention actions attempt to prevent human-caused fires. Campaigns designed to reduce the number and sources of ignitions can be quite effective. Prevention campaigns can take many forms. Traditional “Smokey Bear” type campaigns that spread the message passively through signage can be quite effective. Signs that remind folks of the dangers of careless use of fireworks, burning when windy, and leaving unattended campfires can be quite effective. It’s impossible to say just how effective such efforts actually are, however the low costs associated with posting of a few signs is inconsequential compared to the potential cost of fighting a fire.

Slightly more active prevention techniques may involve mass media, such as radio or the local newspaper. Fire districts in other counties have contributed to the reduction in human-caused ignitions by running a weekly “run blotter,” similar to a police blotter, each week in the paper. The blotter briefly describes the runs of the week and is followed by a “tip of the week” to reduce the threat from wildland and structure fires. The federal government has been a champion of prevention, and could provide ideas for such tips. When fire conditions become high, brief public service messages could warn of the hazards of misuse of fire or any other incendiary device. Such a campaign would require coordination and cooperation with local media outlets. However, the effort is likely to be worth the efforts, costs and risks associated with fighting unwanted fires.

Fire Reporting: The success of the Enhanced – 911 (E-911) emergency reporting system can be measured at the frequency that fire calls route to the county emergency centers. Some wildland firefighting agencies maintain direct Forest Fire Reporting numbers, but the bulk of fire reports go to the Communication Centers.

When a fire call comes into Stevens County E-911 Communication Center, the local fire protection districts are paged out to respond. Then the Communication Center staff calls the appropriate wildland agency (usually WA DNR) and relays the fire report info along with the reporting party’s phone number.

Fire Reporting Numbers:

- Stevens County - 911
- WA DNR 1-800-562-6010
- Bureau of Indian Affairs, Spokane Agency – 509-258-5466
- USFS Colville National Forest Dispatch Center – 509-684-7218

Burn Permits: Washington State Department of Natural Resources is the prime agency issuing burn permits in forested areas of Stevens County. Washington DNR burn permits regulate silvicultural burning.

Washington Department of Ecology (DOE) is the primary agency issuing burn permits for improved property and agricultural lands. All DOE burn permits are subject to fire restrictions in place with WA DNR & local Fire Protection Districts.

Washington DNR has a general burning period referred to as "Rule Burn" wherein a written burn permit is not required in low to some moderate fire dangers.

The timeframes for the Rule Burn are from October 16th to June 30th. Washington DNR allows for Rule Burns to be ten foot (10') piles of forest, yard, and garden debris. From July 1st to October 15th if Rule Burns are allowed, they are limited to four foot (4') piles.

Stevens County does allow open burning. As part of their standard operating procedures, the Stevens County E-911 Communication Center, who handles the Fire Restriction calls for the Stevens County Sheriff's Office, asks that all burners call the Communication Center business number and report the location and when the burning is complete.

The E-911 Communication Center number is 509-684-2555.

Defensible Space: Effective mitigation strategies begin with public awareness campaigns designed to educate homeowners of the risks associated with living in a flammable environment. Residents of Stevens County must be made aware that home defensibility starts with the homeowner. Once a fire has started and is moving toward a structure or other valued resources, the probability of that structure surviving is largely dependent on the structural and landscaping characteristics of the home. "Living with Fire, A Guide for the Homeowner" is an excellent tool for educating homeowners as to the steps to take in order to create an effective defensible space. Residents of Stevens County should be encouraged to work with local fire departments and fire management agencies within the county to complete individual home site evaluations. Home defensibility steps should be enacted based on the results of these evaluations. Beyond the homes, forest management efforts must be considered to slow the approach of a fire that threatens a community.

Evacuation Plans: Development of community evacuation plans is necessary to assure an orderly evacuation in the event of a threatening wildland fire. Designation and posting of escape routes would reduce chaos and escape times for fleeing residents. Community safety zones should also be established in the event of compromised evacuations. Efforts should be made to educate homeowners through existing homeowners associations or creation of such organizations to act as conduits for this information.

Accessibility: Also of vital importance is the accessibility of the homes to emergency apparatus. If a home cannot be protected safely, firefighting resources will not jeopardize lives to protect a structure. Thus, the fate of the home will largely be determined by homeowner actions prior to the event. In many cases, homes' survivability can be greatly enhanced by following a few simple guidelines to increase accessibility such as widening or pruning driveways and creating a turnaround area for large vehicles.

Fuels Reduction: Recreational facilities such as the boat launches along the Lake Roosevelt shoreline or in the surrounding forest and range lands should be kept clean and maintained. In order to mitigate the risk of an escaped campfire, escape proof fire rings and barbeque pits should be installed and maintained. Surface fuel accumulations in nearby forests can also be kept to a minimum by periodically conducting pre-commercial thinning, pruning and limbing, and possibly controlled burns.

Other actions that would reduce the fire hazard would be thinning and pruning timbered areas, creating a fire resistant buffer along roads and power line corridors, and strictly enforcing fire-use regulations. The high tension power lines crisscrossing the county are primary electrical power supplies to much of the state and region; thus, protecting this corridor should be a high priority. Ensuring that the area beneath the line has been cleared of potential high risk fuels and making sure that the buffer between the surrounding forest lands is wide enough to adequately protect the poles as well as the lines is imperative.

Emergency Response: Once a fire has started, how much and how large it burns is often dependent on the availability of suppression resources. In most cases, rural fire departments are the first to respond and have the best opportunity to halt the spread of a wildland fire. For many districts, the ability to reach these suppression objectives is largely dependent on the availability of functional resources and trained individuals. Increasing the capacity of departments through funding and equipment acquisition can improve response times and subsequently reduce the potential for resource loss.

Rural Addressing: In order to assure a quick and efficient response to an event, emergency responders need to know specifically where emergency services are needed. Continued improvement and updating of the rural addressing system is necessary to maximize the effectiveness of a response.

Other Activities: Other specific mitigation activities are likely to include improvement of emergency water supplies and management of trees and vegetation along roads and power line right-of-ways. Furthermore, building codes should be revised to provide for more fire conscious construction techniques such as using fire resistant siding, roofing, and decking.

4.7.4 Individual SPA Risk Assessments

Nearly every community in Stevens County has a moderate to high risk of experiencing a wildland fire. The following are detailed assessments of the potential risk, resources, and mitigation measures for individual areas. All of the adopting jurisdictions were evaluated during the development of the individual SPA risk assessments. Unless specifically referenced in the SPA assessments, there are no differences in the location, extent, occurrence of past events, or probability of future occurrence specifically affecting properties within the jurisdictions of any of the adopting cities, fire districts or departments, Conservation District, Public Utilities District, or the Spokane Indian Reservation. These jurisdictions, including all of their assets and/or critical facilities, have the same level of vulnerability and risk to wildland fire as the Strategic Planning Area in which it has property.

4.7.4.1 SPA #1: Sheep Creek Strategic Planning Area

The Sheep Creek SPA is bounded on the southeast by the Columbia River, the north by the Canadian border, and the west and south by the Colville National Forest boundary. Major drainages include Big Sheep Creek and Little Sheep Creek. Moraski and Mitchell Flats are above the Columbia River to the northeast.

Fuel loading is highly variable with lighter flashy grass, brush with some dense thickets, ponderosa pine, and birch on the flats above the Columbia River. Some of this area, especially east facing slopes, shows residual effects from the old Northport Smelter, which historically caused tree mortality resulting in brush fields. Upper drainages tend to have extensive stands of second growth Douglas-fir, western larch, and lodgepole pine. Grand fir occurs on north slopes and western red cedar is found in moist draws. Black cottonwood occurs along the mid

and lower reaches of Big Sheep Creek and along the Columbia River. Much of the Big and Little Sheep Creek drainages were burned by a large fire in 1926.

Sheep Creek is a large drainage of mostly industrial, DNR, and Forest Service ownership that has sustained harvest operations for many years. Sheep Creek Falls has a privately operated power generation plant. Big Sheep Creek is used extensively for recreation with the DNR maintained Sheep Creek Camp Ground and scattered primitive sites up the drainage. This area is accessed by Sheep Creek Road to the Colville National Forest boundary. Hunters use this area extensively as it provides access to a large area of federal ownership. Little Sheep Creek is accessed by State Route 25 with some single lane primitive roads accessing residences.

Most of the structures in the Sheep Creek SPA are within Stevens County Fire District #11 along the Northport-Flat Creek Road, which runs parallel to and above the Columbia River, along lower Sheep Creek where State Route 25 crosses, and then along Big and Little Sheep Creek to the Canadian border. Several structures are accessed by Black Bear Way. There are also a few structures located approximately four miles up Sheep Creek Road outside of District 11's protection. Ingress/egress is limited for some residences with only one access route to State Route 25.

Mitchell Road and Moraski Flats are east of State Route 25 with scattered residences along Mitchell Road for approximately five miles to the Moraski Flats neighborhood. This area is dominated by a mix of agricultural and forested lands with dense ponderosa pine and brush.

Many residences in this area have a defensible space around structures. There are several loop roads on Mitchell and Moraski Flats; however, Mitchell Road is the only route accessing State Route 25.

The primary concerns for the Sheep Creek SPA are defensible space, forests fuels buildup, and lack of access. The fire risk rating in this area is moderate.

Recommendations: Assess and map individual structures for implementation of defensible space projects and roads for emergency access. Reduce fuels around homes and create buffers along roads. Assess adjacent forestland for fuel reduction needs and implement project plans.

4.7.4.2 SPA #2: Boundary – Northport – Deep Creek Strategic Planning Area

The Boundary – Northport – Deep Creek SPA is bounded on the west by the Columbia River, the north by the Canadian border, the east by the high ridgeline from Stone Mountain - Lime Mountain to Aladdin Road, and the south by the Deep Creek drainage.

Northport to Boundary - Most of the residences from Northport north to the Canadian border are scattered throughout the Northport-Boundary Road corridor and are within the jurisdiction of Stevens County Fire District #11. There is a mix of agricultural and forestland with heavy fuel buildup along the road and on the slopes above. The area is dominated by a mix of species including ponderosa pine and Douglas-fir with grand fir and cedar in the wetter drainages. Grass Mountain and Stone Mountain rise steeply to the east with mostly industrial forest and state forest land. The area has supported timber harvest operations for many years and has an existing road system. In 1988, the 1,873 acre Grass Mountain Fire burned from Becker Flats to the top of Grass Mountain. Several evacuation routes exist extending in all directions including Highway 25, Aladdin Road, Sheep Creek Road, and Northport - Boundary Road.

Northport is an incorporated city with an approximate population of 336. Northport has improved property fire protection with volunteer fire department and mutual aid agreements with

District 11. Northport's infrastructure provides water and sewer facilities, a medical clinic, fuel, restaurants, taverns, and recreation on the Columbia River. Fire risk is low in this area.

Becker Flats & Stroh Hill: Scattered residences along the flat with benches above and east of the Columbia River. There are several residences that have adequate access and a good defensible space around their homesite, but adjacent forestlands exhibit higher risk fuel loads. The fire risk in this area is moderate.

Waneta Flats & North Stone Mountain Way: Scattered residences, most on agricultural ground, with defensible space. Some homes are located in forested areas with fuels adjacent to structures and narrow roads. Risk is low to moderate

Northport, Deep Creek, Black Canyon: Most residences are located along Aladdin Road with the remaining off of Broderious Road, Trombetta Road, Stoddard Mountain Road, Heather Lane, and Black Canyon Road. All are located within Fire District 11 in the west and Fire District 10 to the east. This area is a mix of forest (mostly ponderosa pine and Douglas-fir) with some agricultural lands. Heavy fuels are found in some upland areas. Access varies from good to poor. Risk is low to moderate.

The Black Canyon Fire burned 2,283 acres in 2003 threatening 9 homes in the immediate area and 203 to the east and northeast along the Deep Creek drainage to Cedar Lake.

Risk Rating: The primary concerns for the Boundary – Northport – Deep Creek SPA are defensible space, forests fuels buildup, and lack of access. The planning committee has given this SPA a **low to moderate** risk rating.

Recommendations: Assess and map individual structures for defensible space and roads for ingress and egress. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forest land for fuel reduction needs and implement proposed projects.

4.7.4.3 SPA #3: Aladdin - Deep Lake – Cedar Creek Strategic Planning Area

This SPA is bounded on the west by the high ridgeline from Stone Mountain - Lime Mountain to the Green Mountain - Rogers Mountain - Gillette Mountain ridgeline in the south, the north by the Canadian border, the east by the Pend Oreille County line, and the south by Bon Ayre Ridge excluding the Mill Creek and Cy Creek drainages.

The main access and evacuation routes through this area are Aladdin Road from Spirit Junction south to Colville or west to Northport and the Deep Lake-Boundary Road from Spirit Junction to Boundary, then to Northport or the Waneta border crossing. A secondary route is east over Smackout Pass from Spirit Junction. A major transmission line runs along Aladdin Road. There is a mix of agricultural lands along the main valleys with steep, forested slopes rising on either side. A history of mining, logging, and cattle ranching has resulted in road and trail systems accessing most of the privately owned forests. There is federal ownership to the east of the Deep Lake area and on both sides of lower Aladdin Road. There is a mix of coniferous species with lodgepole pine in the Rocky Creek vicinity, ponderosa pine on most southern and lower exposures, mixed Douglas-fir and larch on mid to upper elevations, and grand fir and cedar in the wetter draws. Stevens County Fire District 10 protects nearly all of the improved property in this SPA.

During the 2003 Black Canyon Fire, a Structural Protection Plan and an Evacuation Contingency Plan, was developed by the Incident Management team. 213 structures or groups of structures within Fire District 10, were assessed and mapped for defensible space needs. According to this assessment, 75 structures were considered "Defendable", 101 were considered "Defendable with Preparation Work", 31 were considered "Possibly Defendable with

Preparation Work", and 6 were "Not Defendable". Some homeowners subsequently received assistance in establishing defensible space around their homes.

Cedar Creek - This is a neighborhood of approximately 35 residences accessed by Cedar and Old Garvey Roads. Some are located on agricultural land; however, many are surrounded by forests. Some of these homes have defensible space, but more work is needed. The main roads are adequate; however many of the secondary access routes would not meet fire code standards. Most of residents in the Cedar Creek area recently joined Fire District 10, but many of these are nearly 11 miles from the fire hall. The fire risk in this area is low to moderate.

Leadpoint - Residences along and off of Deep Lake - Boundary Road, and Silver Creek Road; on both agricultural land on valley bottom, and forest land to the east. Residences on agricultural lands generally have defensible space. The fire risk is low to moderate.

Deep Lake – The Deep Lake area is dominated by seasonal residences surrounding most of Deep Lake with additional camp grounds and fishing accesses. This area is accessed by Deep Lake - Boundary Road. Heavy forestland fuels rise behind residences and roads on either side of the lake. Most residences along the lake have a defensible space. A few residences, located away from the lake and south along Deep Lake - Boundary Road, have adjacent fuel issues. Risk in this area is low.

Spirit Junction - Aladdin – This area has scattered residences along Aladdin Road as well as along lower Harrier, Meadow, and Rocky Creek Roads. There is a mix of agricultural land in the valley and forest land on the adjacent slopes. Residences surrounded by agricultural lands generally have an adequate defensible space. The fire risk is low to moderate.

Risk Rating: The primary concerns for the Boundary – Northport – Deep Creek SPA are defensible space, forests fuels buildup, and lack of access. The planning committee has given this SPA a **low to moderate** risk rating.

Recommendations: Assess and map individual structures for defensible space and roads for access concerns. Reduce fuels around homes and create buffers along roadways. Assess adjacent WUI forest land for fuel reduction needs and implement proposed.

4.7.4.4 SPA #4: 15 Mile – Flat Creek – Crown Creek Strategic Planning Area

This SPA is bounded on the south and east by the Columbia River, the north by the Sheep Creek drainage divide, and the west by the Wedge. This SPA includes the Fifteen Mile, Flat Creek, and Crown Creek drainages as well as the Moore Road, Larkspur Way, and Bowen Lake areas.

The Northport - Flat Creek Road is the only access route through this SPA; however, Crown Creek Road provides a route north into Sheep Creek. All other roads are one way in and out. There is a mix of agricultural land along the Northport - Flat Creek Road and lower Flat and Crown Creek with forest land on the slopes to the west. Lower drainage ownership is private forest land, but the upper drainages are State and US Forest Service. There is a mix of dense forest and brush between the Northport - Flat Creek Road and the Columbia River to the east. Upper slopes are comprised of a mix of ponderosa pine, Douglas-fir, and larch, with grand fir and cedar in the wetter creek bottoms and on northerly exposures. The southern and southeastern aspects are drier and subject to the harsh river winds. A 1,000 acre wind driven fire burned in the Crown Creek drainage in 1977 and a 304 acre fire occurred in Flat Creek in 1991. This SPA is located outside of any fire protection districts.

Fifteen Mile, Flat Creek, Crown Creek - Residences are located along the Northport - Flat Creek Road and the lower areas of Fifteen, Flat, and Crown Creeks. Most are on agricultural

land and have defensible space, but face ingress/egress issues. Residences located on forest land typically have issues with the lack of defensible space and appropriate access. The risk in this area is moderate to high.

Moore Road, Bowen Lake - Residences are generally situated along limited access roads, some with forest fuels immediately surrounding. This area is located above the Columbia River, and not as subject to the harsh river winds. The fire risk in this area is moderate to high.

Recommendations: Assess and map individual structures for defensible space and roads for access problems. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forest land for fuel reduction needs and implement proposed projects.

4.7.4.5 SPA #5: Onion Creek Strategic Planning Area

The Onion Creek SPA is bounded on the northwest by the Columbia River, the northeast by the Deep Creek - Onion Creek drainage divide, the east by the Green Mountain - Rogers Mountain ridge line, and the south by the Clugston - Onion Creek divide to Staghorn Mountain, to Look Out Mountain, and finally, to China Bend on the Columbia River.

The Clugston - Onion Creek Road is the north-south access with some loop roads within the Onion Creek drainage (Hawks Road to Flora Road or out of Onion Creek and Quinns Meadow Road over Harrier Creek). Highway 25 runs through the western portion parallel to the Columbia River. This area is predominately forested with some agricultural lands in the valleys, on cleared benches within the minor drainages, and along the Columbia River. Forest ownership is primarily private and state, which has supported long-term harvest operations and the associated road system. Forest stands are a mix of Douglas-fir, western larch, and ponderosa pine on southern and southwestern exposures and grand fir and western red cedar on northern exposures and in the wetter draws and creek bottoms. There are many thick stands of regeneration scattered throughout the harvested areas and reclaimed agricultural lands. Mining has been a significant presence in the area; thus, several old mines remain in the area. The Onion Creek Store and Onion Creek School provide community services. Most of this SPA is within Fire District 11's jurisdiction.

Marble – The Marble community is situated on agricultural land adjacent to and above the Columbia River just off of Highway 25. A store, Lone Pine Hardware, provides local community services. There is very little threat of wildfire in this area.

Quinns Meadow Road - Bodie Mountain Road - This area consists of scattered residences over a road system with varying degrees of usability and compliance with road standards. Some resident's homes are located on agricultural lands, but most are surrounded by forestland with varying amounts of fuel loading. A 330 acre wildfire burned through this area in August of 2006 threatening 20 residential structures. Fire risk in this area is moderate.

Hawks Road – Hawks Road has scattered residences throughout a mixture of agricultural and forestland. Fire risk in this area is moderate.

Lotze Creek Road – This area consists of scattered residences surrounded by a mixture of agriculture and forestland along Lotze Creek Road. The fire risk in this area is moderate.

West Fork Onion Creek – The West Fork Onion Creek are is predominantly scattered residences along upper Clugston - Onion Creek Road, Flora Road, and Chuck Hole Lane. This area is made up of a mix of agricultural and forestland. Fire risk is moderate.

Recommendations: Assess and map individual structures for defensible space projects and roads to address access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forest land for fuel reduction needs and implement proposed projects.

4.7.4.6 SPA #6: Williams Lake Road Strategic Planning Area

The Williams Lake Road SPA is bounded on the west by the Columbia River and Gillette Ridge - Douglas Mountain on the east. This SPA includes the Gillette Creek, Clugston Creek, and Bruce Creek drainages. The communities and neighborhoods of Bossburg, Evans, Lake City, Echo, Peterson Swamp, Williams Lake, and Evans Cutoff Road are within this SPA. Agricultural fields are predominant in the valley and on many of the upper benches while stands of ponderosa pine, Douglas-fir, and grand fir occur on the slopes. Forest ownership is mostly private and State with very little Federal. National Park Service (NPS) has jurisdiction along the Lake Roosevelt shoreline. Timber harvest operations have occurred over much of this SPA with many of the associated roads still in use. Residences are scattered throughout the area with access varying from county roads to primitive driveways. Highway 25, Williams Lake Road, Clugston Creek Road, and Evans Cutoff Road are the primary access and evacuation routes. Most of the major drainages have adequate travel routes out both ends. Several power transmission lines traverse this SPA and a Burlington Northern-Santa Fe railroad parallels Highway 25 and the Columbia River to Canada. The state maintains a campground at Williams Lake and the National Park Service has a campground near Evans.

None of this SPA is within a fire protection district; thus, there is no organized structural fire protection. The Washington Department of Natural Resources is responsible for wildland fire protection in the forested areas.

Bossburg - Evans – This area has many residences located along Highway 25 and Lake Roosevelt, most of which are surrounded by agricultural and forestland. Defensible space, lack of access, and increasing fuels are a significant concern; however, the fire risk is relatively low.

Williams Lake, Swede Pass, Evans Cutoff Road – This area consists of scattered residences mixed with agricultural and forestland. Access is somewhat limited with primitive alternative roads. Some homeowners have created a defensible space on their property, but continuation of this trend is a concern. The fire risk in this area is low to moderate.

Lake City, Echo – This area has many scattered residences mixed with both agricultural lands and adjacent forestland. There are many small lakes and potholes available for water access. The fire risk in this area is low to moderate.

Peterson Swamp, Clugston Creek, Gillette Creek, Bruce Creek - This area consists of scattered residences mixed with both agricultural and adjacent forestlands. There is limited access, but most of the existing travel corridors are through roads. The lack of access and defensible space around homes are significant concerns. The fire risk in this area is low to moderate.

Recommendations: Assess and map individual structures for potential defensible space projects and roads for access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forestland for fuel reduction needs and implement proposed projects. Begin researching potential options to address the need organizing a fire protection district.

4.7.4.7 SPA #7: Kettle Falls Strategic Planning Area

The Kettle Falls SPA is bounded on the west by the Columbia River (Lake Roosevelt) and includes the Pingston Creek and Highlands Creek drainages on the north end and the Mingo Creek, Hallam Creek, and Ricky Creek drainages on the south end. Fire District #6 is completely encompassed by this SPA as well as the communities of Kettle Falls, Old Kettle Falls, and Marcus. Some areas in this SPA are not within District 6's boundaries, and therefore,

do not have structural protection. Vegetation is a mix of agricultural land in the valley and some higher benches and forestland on the steeper aspects and in creek drainages. The south aspect slopes above Kettle Falls are covered by open grass and brush with ponderosa pine and Douglas-fir in the upper reaches. Several fires have burned on these slopes over the years, which helps keep them relatively free of brush. North aspects are heavily forested with Douglas-fir, ponderosa pine, grand fir, and western red cedar. Most of the forestlands are privately and State owned with most having sustained some harvest activity. The main access routes are US Highway 395, State Highway 25, Pingston Creek Road, and Mingo Mountain Road, which are all through roads. An electrical transmission line parallels US Highway 395. The Burlington Northern Santa Fe railroad parallels US Highway 395 and Highway 25 farther north. The National Park Service has facilities and a campground along Lake Roosevelt at Bradbury Beach, Old Kettle Marina, Saint Paul's Mission, and Marcus Island.

Kettle Falls- Kettle Falls is an incorporated city with an approximate population of 1,600. Improved property fire protection is by volunteer fire department with mutual aid agreements with Fire Protection District #6, which also houses some fire equipment with the city. Kettle Falls' infrastructure provides fire hydrants, water, sewer, a medical clinic, fuel, restaurants, taverns, grocery stores, and railroad switching. The fire risk in this area is low.

Marcus – Marcus is an incorporated town with an approximate population of 120. The town is located along Highway 25 on the Lake Roosevelt shoreline with adjacent forest stands to the south and east. Improved property fire protection is provided by volunteer fire department with mutual aid agreements with Fire Protection District #6. Marcus' infrastructure includes sewer, water, and a convenience store. The fire risk in this area is low.

Old Kettle Falls, Hawks Nest – This area is located south of US Highway 395, west of State Highway 25, and north of the Colville River. There are several developments and scattered residences above National Park Service managed property along Lake Roosevelt as well as along Old Kettle Road, Peachcrest Road, Boise Cascade Road, State Highway 25, and US Highway 395. There is a mixture of industrial and agricultural properties, orchards, the Stevens County landfill, and forestland. Ponderosa pine is predominant with stands of varying density. Some areas have heavily regenerating stands; however, many have been precommericially thinned, which helps lessen the fuel loading. Most of this area is covered by Fire Protection District #6. Sandy soils have been known to adversely impact access, particularly with heavy equipment. Many homeowners have created a defensible space around their structures; however, this is still a significant concern. Fire risk in this area ranges from low to high.

Singer's Junction to St. Paul's Mission – This area is north of US Highway 395, west of State Highway 25, and bordered by Lake Roosevelt. There are several developments and scattered residences as well as BPA high tension transmission lines, a historical museum, and the Christian Youth Academy on many of the available benches. Steep, timbered slopes occur above the shores of Lake Roosevelt to the north. Access is a mix of public roads, St. Paul's Mission Road, Fumi Circle, Pine Bluff Road, and numerous narrow, dead end private roads. The slopes are vegetated primarily by ponderosa pine stands of varying densities depending on moisture availability. This area has structural fire protection provided by Fire Protection District #6 and even a few fire hydrants. The sandy soils frequently impede access with heavy equipment. Many homeowners have created defensible spaces around their structures; however, this is still a significant concern. Forest fuels on the steep slopes above Lake Roosevelt are also a cause of concern. The fire risk in this area ranges from low to high.

Pingston Creek, Hill Lake, Mission Lake, Furman Lake, Highland Loop, Gold Hill – This area consists of scattered residences along Pingston Creek Road., Vanesse Road, Highland Loop, and Gold Edge Mine Road. Many homes are located on one way in and out, primitive,

roads accessed from these county roads. Much of the area is privately or state owned forestland. Some of the south slopes are covered with flashy grass fuels while much of the forestland is overcrowded with large amounts of dead and down debris. Some areas are within Fire Protection District 6, but many homes are outside of the fire district protection. The Department of Natural Resources provides wildland fire protection on forestlands. There are several small lakes available for limited dipping and drafting. Some residents have created defensible space around their structures. The fire risk in this area is moderate to high.

Greenwood Loop, Mingo Mountain Road, Ricky Canyon Road , State Highway 25 south – The arrangement of residences in this area varies from scattered to clustered on mostly agricultural lands in the Greenwood and lower Mingo Mountain Road areas. Homes are also found in the forestlands to the south and west with a few orchards in the Ricky Canyon area. The area is bordered to the west by National Park Service managed lands and Lake Roosevelt. The Colville River forms the north border of the Greenwood area and Mingo Mountain defines the southern border. Ricky Canyon lies to the west and creates the southern flank of Mingo Mountain. Some southern slopes are covered by flashy grass fuels. Forestlands are experiencing a buildup of fuels. The main access routes are typically through roads, but numerous residences are located off of more primitive, one way in one way out driveways. Much of this area is within the boundaries of Fire District #6. Homes surrounded by agricultural lands have adequate defensible space, but many homeowners in the forested areas need to establish a better defensible space. Fire risk in this area ranges from low to high.

Recommendations: Assess and map individual structures for defensible space projects and roads to identify access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forestland for fuel reduction needs and implement proposed projects. Address the need to expand the current fire protection district boundary to include currently unprotected areas.

4.7.4.8 SPA #8: Colville Strategic Planning Area

The Colville SPA is bounded on the north by Colville Mountain and Douglas Falls, Prouty Corners and White Mud Lake in the east, Orin in the south, and Gold Creek Loop, Palmer Siding, and Williams Lake Road in the west. This SPA includes Colville and vicinity, all of Fire District #3, parts of Fire District #5, and adjacent areas outside these fire district boundaries. Agricultural land dominates the Colville River valley, as well as other surrounding valleys and the higher benches. The surrounding forestland is a mix of ponderosa pine on drier south slopes, Douglas-fir and grand fir on other aspects, and western red cedar and some hardwoods in the wetter drainages.

Highway 395, Highway 20, Douglas Falls Road, Aladdin Road, Williams Lake Road, Hotchiss Road, Graham Road, Orin-Rice Road, Gold Creek Loop Road, and Valley-Westside Road; provide multi-direction evacuation routes. The Burlington Northern Santa Fe railroad parallels Highway 395 through Colville. Several power transmission and distribution lines traverse this SPA.

Colville - Colville is the Stevens County seat and largest incorporated city with an approximate population of 5,000. Fire protection is provided by the Colville Volunteer Fire Department, which is co-located with Fire District #3. As the county seat, Colville provides all government services, including Federal and State, municipal services, and manufacturing businesses. Fire risk in this area is low.

Pinkney City, Douglas Falls Road, Aladdin Road, Mill Creek – This area has scattered residences along of the county roads. Much of this area is dominated by various agricultural

lands in the lower and upper valleys; therefore most homes have an adequate defensible space. Structural fire protection is provided by Fire District #3. Fire risk is low.

Dry Gulch Road, Finley Gulch Road, Lawson Road – This area has scattered residences as well as a housing development on a mixture of forest and agricultural lands, much of which is outside of fire district protection. Forest stands are a mix of ponderosa pine and grass on the southern aspects and Douglas-fir on other aspects. Access roads are typically one way in one way out and numerous primitive driveways. Many of the homes in this area have adequate defensible space, particularly those surrounded by agricultural fields. Fire risk in this area ranges from low to high.

Colville East: Prouty Corners, Old dominion Road, Dolomite Road, White Mud Lake - This area has scattered residences and developments along all of the county roads surrounded by a mix of agricultural and forestlands. South slopes are generally dominated by flashy grass and brush fuels. Ponderosa pine and lodgepole are found on drier aspects while Douglas-fir, larch, and grand fir dominate other aspects. Homes located amongst the forest fuels need additional defensible space work as well as fuels reduction on adjacent properties. Only part of this area falls within the boundaries of Fire District #3. Fire risk ranges from low to high.

Colville South: Graham Road, Hotchkiss Road, Rocky Lake, Orin, Valley-Westside Road – This area has scattered residences and developments along all of the county roads surrounded by a mix of agricultural and forestlands. South slopes are generally dominated by flashy grass and brush fuels. Ponderosa pine and lodgepole are found on drier aspects while Douglas-fir, larch, and grand fir dominate other aspects. Homes located amongst the forest fuels need additional defensible space work as well as fuels reduction on adjacent properties. Most of this area falls within the boundaries of Fire District #3. Fire risk in this area ranges from low to high.

Colville West: Gold Creek Loop Road, Palmer Siding, Valley-Westside Road – This area has scattered residences and developments along all of the county roads surrounded by a mix of agricultural and forestlands. South slopes are generally dominated by flashy grass and brush fuels. Ponderosa pine and lodgepole are found on drier aspects while Douglas-fir, larch, and grand fir dominate other aspects. Homes located amongst the forest fuels need additional defensible space work as well as fuels reduction on adjacent properties. Most of this area falls within the boundaries of Fire District #3. Fire risk in this area ranges from low to moderate.

Recommendations: Assess and map individual structures for defensible space projects and roads to identify access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forestland for fuel reduction needs and implement proposed projects. Address the need to expand the existing fire protection district boundaries to include currently unprotected areas.

4.7.4.9 SPA #9: Aladdin – Mill Creek - Little Pend Oreille Lakes Strategic Planning Area

This SPA is bounded on the west by the Gillette Mountain ridge above Aladdin Road, the east by Pend Oreille County, and the south by the Little Pend Oreille Wildlife Refuge. This SPA includes all of the Mill Creek drainages, Little Twin Lakes, Black Lake, the Little Pend Oreille Lakes (Coffin Lake, Lake Sherry, Lake Gillette, Lake Thomas, Heritage Lake, and Lake Leo), Park Rapids, and Beaver Lodge Resort.

Most of the land base in this SPA is owned by the Forest Service and the State. Much of this area burned in a series of large fires in 1926, 1929, and 1931 resulting in dense stands of

lodgepole pine. These stands have received some thinning treatments in the past, but fuel loading, both horizontally and vertically, is still very high and is becoming susceptible to mountain pine beetles. The remaining mix of Douglas-fir, ponderosa pine, larch, grand fir, and cedar are aspect and drainage specific. Selective harvest operations have occurred on most of the state managed forest land. The Forest Service has pursued an active timber management program including harvest in this area.

Highway 20 traverses the lower portion of the SPA and the Mill Creek Road travels in an east-west direction through the center. The Aladdin Road provides access on the west side. Power lines parallel Highway 20 and the Aladdin Road

There are six public campgrounds on Forest Service and State-owned lands as well as an extensive ORV trail system that attracts recreational users throughout the summer and fall. The Beaver Lodge Resort provides minimal services to the Little Pend Oreille Lakes area.

Aladdin Road – There are a few scattered residences mostly surrounded by agricultural ground, which provides for a defensible space. This area is outside of and organized fire district. The fire risk in this area is low to moderate.

Highway 20, Little Twin Lakes Road, Bohanan Road, Black Lake, and Park Rapids – This area is characterized by scattered homes and clusters of residences along the main road corridors. Some of these homes occur in agricultural areas, but most are surrounded by forestlands. This area is outside of an organized fire protection district. Overall forest health and fuels buildup, particularly on federal and state forests is a significant concern. The fire risk is moderate.

Little Pend Oreille Lakes – This area consists of many seasonal and permanent residences clustered along the shorelines. All of this area has fire protection provided by Fire District 9. Private ground around the lakes is heavily timbered all the way to the water's edge. State and Forest Service land surrounding the lakes is also heavily timbered on mountainous terrain.

Some residences have established defensible space and reduced adjacent high risk forest fuels; however many have not. Many of the private driveways are dead end access routes. The Forest Service is conducting a fuels reduction project in this area. This area would benefit from individual home risk assessments and mapping. Fire risk in this area is moderate to high.

Recommendations: Assess and map individual structures for potential defensible space projects and roads for identifying access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forest land for fuel reduction needs and implement proposed projects. Address the need for the formation or expansion of a fire protection district.

4.7.4.10 SPA #10: Arden Strategic Planning Area

The Arden SPA covers the Colville River valley and adjacent areas from south of Orin to Slide Creek and Twelve Mile Creek. It includes either side of the Artman-Gibson Road to include the Kitt-Narcisse Road area, which is adjacent to the Little Pend Oreille Wildlife Area to the east.

Highway 395, Artman-Gibson Road, and the Kitt-Narcisse Road provide access routes with some loop roads in the more populated areas. The Burlington Northern Santa Fe railroad parallels Highway 395 and power transmission lines traverse this SPA.

The Colville River valley is dominated by agricultural fields with dense forests of ponderosa pine to both the east and west. Much of the forestland has experience some degree of past logging activity and exhibits the associated road systems. There are numerous residences scattered throughout the area, many on primitive roads. Most of the Arden SPA is within the boundaries of Fire District 7.

Arden - The community center is made up of several developments, a mobile home park, and scattered residences surrounded by agricultural lands along the Little Pend Oreille River. There are also scattered residences on forestland to the west (Arden Hills) and east (Arden Butte) that are vulnerable to wildfire due to fuels, slopes, and access. The Arden area provides local services including fuel, quick stop groceries, a tavern, and several businesses including the Stimson Saw Mill and Fogle Equipment. The Fire District 7 station is also located in the Arden community. Fire risk near the community of Arden is low; however, the adjacent forestlands have a low to moderate risk rating.

Artman-Gibson Road, Kitt-Narcisse Road, Mahony Road, Hotchkiss Road – This area has scattered residences surrounded by a mix of agricultural and forestland along the county roads. There is relatively good access, but many long, single lane, private driveways. Fuels are typically light and flashy on south slopes with a mix of ponderosa pine on drier sites and south aspects. Douglas-fir is more common on north aspects. The Little Pend Oreille River flows from the northeast through this area with dense hard woods and brush along the banks. The majority of this SPA is within Fire District 7. The Little Pend Oreille Wildlife Refuge lies along the southern boundary. Most of the homes surrounded by agricultural ground have an adequate defensible space; however, homes in the forested areas would benefit from additional fuels reduction and defensible space work. Additionally, the lack of or restricted access to some homes is a significant concern. Fire risk in this area is low to moderate.

Moran Creek, Slide Creek – This area has scattered residences along the county roads surrounded by a mix of agricultural and forestland. Forest fuels consist of ponderosa pine on flat and south aspects, Douglas-fir and larch on north aspects, and birch and brush in the creek drainages. Some homes have already conducted defensible space projects. Main roads have restrictive access due to narrow running surfaces and overgrown vegetation in addition to dead end private driveways. Fire risk in this area low to moderate.

Recommendation: Assess and map individual structures for potential defensible space projects and roads to identify access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forestland for fuel reduction needs and implement proposed projects.

4.7.4.11 SPA #11: Rice Strategic Planning Area

The Rice SPA is bounded on the west by the Columbia River (Lake Roosevelt) and includes the Quillisascut Drainage (Pleasant Valley) and the communities of Rice, Daisy, Gifford, and surrounding neighborhoods. All of Fire District 12 is within this SPA. There is a mix of agricultural lands (orchards, hay) along the bench above Lake Roosevelt with many open south slopes dominated by grass and brush intermixed with forests at higher elevations to the east. Forest species consist mostly of ponderosa pine along Lake Roosevelt and a mix of ponderosa pine and Douglas-fir at higher elevations and on north slopes. Much of the terrain is heavily dissected with high valley drainages surrounded by mountains. The eastern portion of this SPA consists of higher elevation forest types owned primarily by industrial forest companies and the State. These areas have supported past harvest operations and their associated roads. Strong winds are common throughout this SPA. There is also record of several large fires including the East Rice Fire - 130 acres in 1973, the Quartz Mountain Fire - 100 acres in 1974; the Pleasant Valley Fire - 80 acres in 1989; and the Martin Road Fire - 890 acres in 2005.

The National Park Service (NPS) manages Lake Roosevelt and adjacent uplands including the Cloverleaf and Gifford campgrounds near Gifford.

Highway 25 provides the main north-south access, but there are also several east-west routes such as the Orin-Rice Road, Addy-Gifford Road; Pleasant Valley Road, McKern Road, and Daisy Mine Road. The Inchelium-Gifford Ferry is operated by the Colville Confederated Tribe.

Rice Area - The Rice area includes developments above Lake Roosevelt (Chalk Grade Flat, Eagle River Way, Rotter Bay), Orin-Rice Road, Heidegger Road, Chamberlin Road, Pleasant Valley, and Mckern Road. There are scattered residences along Highway 25 and county roads surrounded by a mix of agricultural and forest land. Some homes are located on top of hills with flashy grass and brush fuels on the slopes below. Many of these residences are located on one way in, one way out roads. Some homes have established a defensible space, but many others have not. Adjacent forestlands have a moderate amount of fuel build ups. The Fire District #12 station is located at Rice. This area has a moderate to high fire risk.

Daisy Area – The Daisy area includes the Daisy vicinity on Lake Roosevelt Highway 24, the Daisy Mine Road, Scott Road, and Beck Road. There are scattered residences along Highway 25 and several of the county roads surrounded by a mix of agricultural and forest land. Many homes are located on one way in, one way out roads and driveways. Some homes have established a defensible space, but many others have not. Adjacent forestlands have a moderate amount of fuel build ups. Fire risk in this area is moderate to high.

Gifford Area – The Gifford are includes homes and county roads accessed from the Addy-Gifford Road (i.e. Miles Road, Anderson Road, and Beck Road) and from Highway 25 (i.e. Martin Road and Cameron Road). There are scattered residences along Highway 25 and several of the county roads surrounded by a mix of agricultural and forest land. Many homes are located on one way in, one way out driveways. Some homes have established a defensible space, but many others have not. Adjacent forestlands have a moderate amount of fuel build ups. Fire risk in this area is moderate to high. Fire District #12 has a station near the Gifford Elementary School.

Recommendation: Assess and map individual structures for potential defensible space projects and roads to identify access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forestland for fuel reduction needs and implement proposed projects.

4.7.4.12 SPA #12: Addy Strategic Planning Area

This SPA is bounded on the north by the Monumental Mountain - Paradis Peak ridge west of Orin, on the west by the eastern slopes of Monumental Mountain; on the south by the north slopes of the Huckleberry Mountains, and on the east by the Colville River valley. It covers North Basin, Middle Basin, South Basin, Marble Valley, Swiss Valley, Addy, Summit Valley to Schmid Meadows, and Dry Creek in the southeast. Fire District #5 covers most of this SPA. Land use is a mix of agricultural (hay, pasture) and forest land accessed by a county road network that connects various drainages. Ownership is primarily State and private. Much of the forest land has sustained some level of past logging activity and its associated road network. Vegetation consists of primarily ponderosa pine at the lower elevations and on some south slopes with mix of Douglas-fir, larch, and lodgepole pine at higher elevations and grand fir, western red cedar, and some hardwoods on wetter northern aspects and in creek drainages. Numerous homes are scattered throughout the SPA, many of which are accessed by primitive roads. Most of these residences are protected by Fire District #5.

Highway 395, the Burlington Northern Santa Fe railroad, a BPA power line, and a gas pipe line, traverse the southern half of the SPA. The Orin-Rice Road provides east-west access across

the northern half. The Addy- Gifford and Blue Creek Roads provide east-west access in the south. A major power substation is located west of the community of Addy.

Basin Area - The Basin area has scattered residences and building throughout the North, Middle, and South Basin and the Upper Marble Valley. Some of these homes are accessed from county loop roads (Lindsey Road, Orin-Rice Road, Marble Valley Basin Road, South Basin Road, Middle Basin Road, Matson Road, and Old CC Road), and dead end roads (Bently Road, Wonch Road, Naff Road, and Blue Point Road), and private driveways. Some homes are located on agricultural ground with reasonable defensible space, but others are on forestland with more extensive defensible space needs and limited access. Fuels have also begun to build up on the adjacent forest land. Fire District #5's Station No. 6 is located on Marble Valley Road and Station No. 2 is on Naff Road. The fire risk in this area is low to moderate.

Addy Area – The Addy area includes the vicinity of 12 Mile, Lower Marble Valley, Swiss Valley, Blue Creek East, and the town of Addy. There are scattered residences along several county roads surrounded by a mix of agricultural and forest land. Many homes are located on one way in, one way out roads and driveways. Some homes have established a defensible space, but many others have not. Adjacent forestlands have a moderate amount of fuel build ups. Highway 395 and the Addy-Gifford Road are primary transportation routes. Fire District #5's Station No. 1 is located in Addy. The fire risk in this area is low to moderate.

Summit Valley Area – The Summit Valley area includes Summit Valley (Summit Valley Road, Addy-Gifford Road, Old CC Road, Grimm Road, and Egland Road) and Schmid Meadows (Addy-Cedonia Road, Locke Road, Gibson Road, and Clark Lake Road). There are scattered residences along several county roads surrounded by a mix of agricultural and forest land. Many homes are located on one way in, one way out roads and driveways. Some homes have established a defensible space, but many others have not. Adjacent forestlands have a moderate amount of fuel build ups. The Addy-Cedonia Road is the primary east-west transportation route. Fire District #5's Station No. 3 is located at the junction of Addy-Cedonia and Egland Road. The fire risk in this area is low to moderate.

Dry Creek Area – The Dry Creek area includes Dry Creek Road, Duncan Road, Heine Road, and lower Blue Creek. There are scattered residences along several county roads surrounded by a mix of agricultural and forest land. Many homes are located on one way in, one way out roads and driveways. Some homes have established a defensible space, but many others have not. Adjacent forestlands have a moderate amount of fuel build ups. Fire District #5 is building Station No. 4 on lower Dry Creek Road. Fire risk in this area is low to moderate.

Recommendation: Assess and map individual structures for potential defensible space projects and roads to identify access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forestland for fuel reduction needs and implement proposed projects.

4.7.4.13 SPA #13: Huckleberry Mountains Strategic Planning Area

Primarily private industrial, State, and Bureau of Land Management (BLM) forestlands, the Huckleberry Mountains SPA stretches from Upper Dry Creek in the north to the Spokane Indian Reservation in the south. Approximate elevations range from 2,600 feet to 5,700 feet.

There is a diverse mix of conifer species that are typically aspect and elevation dependent with western red cedars and hemlock in wetter draws and on lower north slopes. A mix of grand fir, Douglas-fir, larch, and ponderosa pine occur on the south and western slopes giving way to lodgepole pine and subalpine fir at the higher elevations. Most of this forestland has supported some level of harvest activities including the associated roads. This area has old mining claims,

quarries, and residual structures scattered throughout the mountains; however, there are no permanently occupied residences. Critical infrastructure includes several communication sites on Stensgar Mountain. This SPA is outside of any fire protection district with wildfire protection provided by the Washington Department of Natural Resources and the U.S. Forest Service by an agreement with the BLM.

4.7.4.14 SPA #14: Hunters Strategic Planning Area

The Hunters SPA is bounded on the west by the Columbia River (Lake Roosevelt), the Clark Lake and Bissel area to the north, the lower slopes of the Huckleberry Mountains to the east, and the Spokane Indian Reservation and the Spokane River in the south. It includes the areas around Bissel - Clark Lake, Cedonia, Hunters, Fruitland, and Enterprise to the Spokane River. There is a mix of agricultural lands (orchards, hay, grain) along the benches above Lake Roosevelt with many open south and southwest slopes of grass and brush intermixed with forested draws on the higher elevation north aspects to the east. Forest species consist mostly of ponderosa pine along Lake Roosevelt and a mix of ponderosa pine, Douglas-fir, larch, and lodgepole pine at higher elevations and on the north aspects. The terrain is broken with high valleys surrounded by steep sided mountains. The eastern portion of this SPA is higher in elevation and primarily owned by industrial forest companies or the State. These areas have supported past harvest operations and the associated road systems. The Hunters SPA includes all of Fire District #2. The National Park Service (NPS) manages the Lake Roosevelt shoreline and adjacent uplands including the Hunters Campground and Camp Naborlee near Enterprise. This area is hot and dry in the summers, subject to river winds, and has experienced large fires in the past (i.e. Hunters Fire - 750 acres in 1978, Harvey Creek Fire - 86 acres in 1979, Hunters Wheat Fire - 100 acres in 1990, and Mudget Lake Fire - 154 acres in 1991).

Highway 25 provides north-south access while Cedonia - Addy Road, Hunters -Springdale Highway; Bissell Road, Harvey Creek Road, and West End Road provide access to the east and west.

Cedonia, Bissell, Clark Lake area – This area includes scattered homes and structures accessed from Highway 25, Bissel Road, Clark Lake Road, Cedonia - Addy Road, and Harvey Creek Road. Many of these properties are accessed by one way in, one way out roads and driveways. Vegetation is a mix of grass and brushy covered slopes and mixed forest stands of ponderosa pine and Douglas-fir. This area consists mostly of private ownership with some State and BLM parcels. Most of the forestland has supported some kind of past harvest activities and their associated roads. Many of the homes located on open ground have an adequate defensible space; however, many of the homes surrounded by forestland are in need of defensible space and adjacent forest fuels treatments. Fire District #2's Station F220 is located at 3571 Harvey Creek Road. This area has a moderate to high fire risk.

Hunters Area – There numerous houses in and around the town of Hunters as well as scattered along Highway 25, Springdale - Hunters Road, and the Hunters Campground Road. Away from the townsite, vegetation is mostly open agricultural ground with flashy grass and brush on south slopes and ponderosa pine and Douglas-fir dominant on north aspects. This area is mostly private ownership with some State and BLM parcels. Most of the forestland has supported some past harvest activity with the associated roads. Many of the homes located on open ground have an adequate defensible space; however, many of the homes surrounded by forestland are in need of defensible space and adjacent forest fuels treatments. Fire District #2's Station F210 is located in Hunters. This area has a moderate to high fire risk.

Fruitland Area – This area includes scattered homes and structures accessed from Highway 25, Lantzy Road, the Fruitland Valley Road, and east to Turk. This area is mostly open, agricultural lands with flashy grass and brush fuels on south slopes and ponderosa pine above Lake Roosevelt and on north aspects to the east and south of the Fruitland Valley. This area is mostly private ownership with some State and BLM parcels. Most of the forestland has supported some past harvest activity with the associated roads. Many of the homes located on open ground have an adequate defensible space; however, many of the homes surrounded by forestland are in need of defensible space and adjacent forest fuels treatments. Fire District #2's Station F230 is located at 5633 Fruitland Valley Road. This area has a moderate to high fire risk.

Enterprise Area – The Enterprise are includes scattered homes and structures accessed from Highway 25, Mudgett Lake Road, Coyote Canyon Road, West End Road, Emerson Road, Enterprise Road, and the Castle Creek, Peters, and Kieffer roads on the Spokane Indian Reservation. It also includes the Spokane Tribe's Two Rivers Casino and RV Park area. This SPA is consists mostly of agricultural lands in the Enterprise Valley with a mix of agricultural and forestland surrounding it. The Spokane Indian Reservation owns approximately 15,000 acres in this SPA with the remainder in private, state, or BLM ownership. Forested areas are mostly ponderosa pine, Douglas-fir, and lodgepole pine. Many of the homes located on open ground have an adequate defensible space; however, many of the homes surrounded by forestland are in need of defensible space and adjacent forest fuels treatments. Fire District #2's Station F240 is located at 5984 Highway 25. This area has a moderate to high fire risk.

Recommendation: Assess and map individual structures for potential defensible space projects and roads to identify access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forestland for fuel reduction needs and implement proposed projects.

4.7.4.15 SPA #15: 10 Mile – Calispel Creek Strategic Planning Area

The 10 Mile – Calispel Creek SPA is bounded on the east by the Pend Oreille County line including Goddards and Chewelah Peak, upper Ten Mile Creek, and upper North-Fork Calispel Creek. The 49° North Ski Resort (designated a Master Planned Resort in the new Comprehensive Plan (July 11, 2006)), the Chewelah Peak Learning Center (CPLC), and the Flowery Trail Community Association sub-division are incorporated into this SPA. There is a mix of USFS, State and private forestland ranging in elevation from 3,500 feet to 5,800 feet. There is a diverse mix of conifer species including western red cedar and hemlock in wetter draws and on lower north slopes. A mix of grand fir, Douglas-fir, larch, and a few ponderosa pines give way to lodgepole pine and subalpine fir at the higher elevations. Mountain alder is prolific in open areas and along road cut and fill slopes. Nearly all of the private forestland and some of the State and Forest Service ownerships have supported forest management activities; however, forest health issues and fuel build up due to overcrowding are significant issues, particularly near the Chewelah Peak Learning Center and 49° North Ski Resort. Some of the ski runs and access roads could be used as shaded fuel breaks. This area is outside of a fire district with wildland fire resource protection provided by the Washington Department of Natural Resources and the U.S. Forest Service. The Flowery Trail Highway provides an east-west access route. Chewelah Peak is a significant communications site.

Heavy forest fuels and access issues are the primary concern in this SPA. Due to the high concentration of people, structures, and infrastructure in an alpine environment, the fire risk in this area is moderate to high.

Recommendation: Create buffers along roads. Assess adjacent WUI forestland for fuel reduction needs and implement proposed projects.

4.7.4.16 SPA #16: Loon Lake – Deer Lake Strategic Planning Area

The Loon Lake – Deer Lake SPA consists of the neighborhoods around, adjacent, and between Loon Lake and Deer Lake and east near Garden Spot Road. This includes the densely clustered homes around the lakes and the scattered homes on adjacent forestland. This area is accessed from North Deer Lake Road, East Deer Lake Road, Southwood Shores Road, Garden Spot Road, Larson Beach Road, Shore Acres Road, and East Jump Off Road The topography is mostly flat or gently rolling forestland intermixed with agricultural fields and pastures near the lakeshores. Areas in between the lakes consist of moderate to steep sloped mountains and predominantly forest fuels of varying age, density, and health conditions. Forest stands consist of ponderosa pine and lodgepole pine around Loon Lake and Douglas-fir, larch, ponderosa pine, lodgepole pine, grand fir, hemlock and cedar around Deer Lake.. Ownership is mostly small privately held parcels with significant industrially owned forest land (Forest Capital) and state land. Much of the forestland has supported past harvest activity with the associated road systems. Highway 395 provides north-south egress and Highway 292 and Garden Spot Road provide access to the east and west. Most of the shoreline access roads are one way in, one way out. A BPA power line parallels Highway 395 and a communication site is located at the peak of Deer Lake Mountain. Most improved property is within Fire District #1 protection with wildland fire protection provided by the district and the DNR. Fire District #1's station #5 is located near the southeast corner of Deer Lake and station #2 is at Loon Lake. Several homes around Loon Lake have completed fuels reduction and defensible space projects. The fire risk in this area is moderate to high.

Recommendation: Assess and map individual structures for potential defensible space projects and roads to identify access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forestland for fuel reduction needs and implement proposed projects.

4.7.4.17 SPA #17: Springdale Strategic Planning Area

The Springdale SPA consists of the neighborhoods in and around the town of Springdale. There are scattered homes and structures west of East Jump Off Road as well as along Jepson Road, West Jump Off Road, Hesseltine Road, Luther Road, Lyons Hill, Chamokane Creek; and north of the Spokane Indian Reservation. A mix of agricultural and forest land is present in the valleys with forestland in the surrounding hills and mountains. There is a mix of small forest landowners, industrial forest land, and state property, especially to the west. Forest are predominantly ponderosa pine and lodgepole pine on the lower elevations with mixed stands of ponderosa pine, Douglas-fir, and larch at higher elevations to the west. Grand fir and western red cedar are in some of the wetter drainages and on north aspects. Most of the forestland has supported some level of harvest operations; however, many stands are overstocked and in need of thinning and fuels reduction. This area has had multiple large fires including the Springdale Fire – 160 acres in 1977, the Silver Bit Fire – 250 acres in 1977, the East Springdale Fire – 160 acres in 1985, Springdale Fire - 625 acres in 1990, Jepsen Road Fire - 50 acres in 2002. Most of the improved property is within Fire District #1 with the exception of the upper Chamokane Creek forks (north, middle, south) area to the west and Deer Meadows to the northwest. The district's has station #7 in Springdale provides protection to the community and surrounding area. Wildland protection is provided by Fire District #1 and the DNR. Highway 231 provides access to the north and south while Highway 292 and the Springdale-Hunters

Road is the principle east-west egress. Many of the county roads provide loop access, however numerous homes are located on dead end roads with limited fire apparatus access. Some homes have defensible space, but many are still in need of treatments. Additionally, adjacent forestlands have high fuel loads. The fire risk in this area is moderate to high.

Recommendation: Assess and map individual structures for potential defensible space projects and roads to identify access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forestland for fuel reduction needs and implement proposed projects.

4.7.4.18 SPA #18: Ford Strategic Planning Area

This SPA is bounded on the west by the Spokane Indian Reservation and the western slopes of the Five Sisters - Scoop Mountain ridge line to Tum Tum in the east and Long lake to Tum Tum in the south. Scattered and clustered homes are found along Highway 231, Rail Canyon Road, Happy Hill Road, and Cork Screw Canyon Road. There are increasingly dense developments in the south along Highway 291. Vegetation is a mix of agricultural and forestland along the Chamokane Creek valley and terraces above the Spokane River. Drier ponderosa pine stands, with flashy grass understory are prominent to the south with ponderosa pine and some Douglas-fir to the north. This area is mostly small private parcels with some industrial and state ownership. Much of the forestland has supported past harvest activities. Past large fires include the Happy Hills Fire – 398 acres in 1991, the Long-Corkscrew Fire – 185 acres in 1994, the Rail Canyon Fire – 80 acres in 1994, and the Red Lake Fire – 1,151 in 2001. This SPA is completely encompassed by Fire District #1, which has their station #6 at Ford and station #4 at Tum Tum. Wildland protection is provided by the district and the DNR with mutual aid agreements with the BIA, Spokane Agency. Some homes have defensible space; however, many residences are adjacent to higher risk forest fuels. Highway 231 provides north-south access along the western corridor and Highway 291 provides east-west access along through the southern portion. Cork Screw Canyon Road, Rail Canyon Road, and Happy Hill Road are loop roads. This area has moderate to high fire risk.

Recommendation: Assess and map individual structures for potential defensible space projects and roads to identify access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forestland for fuel reduction needs and implement proposed projects.

4.7.4.19 SPA #19: Clayton – Suncrest Strategic Planning Area

This SPA is bounded on the west by the eastern slopes of the Five Sisters - Scoop Mountain ridge line to Tum Tum, the Spokane County line to the east, the Loon Lake Summit to the north, and Long Lake from Tum Tum to Suncrest in the south.

There are scattered and clustered homes and structures throughout the SPA with the major developments of Suncrest and Stone Lodge along Long Lake in the south. This area is primarily used for agricultural pruposes from Clayton south through Williams Valley with good access. The eastern part of the SPA is mostly forested with limited access. The Five Sisters – Scoop Mountains, Little Mountain, Twin Mountains, and Stoney Peak are the dominant terrain to the east. The southern region of the SPA is predominantly forested benches and breaks above Long Lake. Forest species are primarily ponderosa pine to the south and a mix of ponderosa pine and Douglas-fir at higher elevations. Fuels buildup in forested areas is a primary concern. The Clayton-Suncrest SPA is mostly small, private ownership with some industrial and state parcels. Much of the forestland has supported past harvest activities. Past large fires include

the Stoney Peak Fire – 250 acres in 1985. This SPA is completely encompassed by Fire District #1 with wildland fire protection provided by the district and DNR. Fire District #1's Station #1 is at Clayton, Station #3 is at Twin Mountains, Station #4 is at Tum Tum, and Station #8 is at Suncrest. Many homes have created an adequate defensible space on their own. Additionally, a major defensible space/fuels reduction project was completed in the Suncrest area in 2002. Highway 291 provides east - west access in the south and Swenson Road provides north-south access in the east. Several county roads tie into Highway 395 in the north and east through Spokane County. Fire risk in this area is moderate to high.

Recommendation: Assess and map individual structures for potential defensible space projects and roads to identify access issues. Reduce fuels around homes and create buffers along roads. Assess adjacent WUI forestland for fuel reduction needs and implement proposed projects.

4.7.4.20 SPA #20: Little Pend Oreille Wildlife Refuge

The existing Little Pend Oreille (LPO) National Wildlife Refuge Fire Management Plan (FMP) is an appendix contained within the Little Pend Oreille NWR Comprehensive Conservation Plan (CCP) and is essential as a guide in achieving the resource management objectives delineated in the CCP.

Fire management at LPO will include the use of prescribed fire and suppression of all wildland fires using appropriate management strategies. Efforts will be made to protect resources including the remnant stands of old growth ponderosa pine, sites containing Adder's Tongue (a rare plant species), structures of cultural significance, campgrounds, and whitetail deer habitat. Historic sites include the refuge office, Winslow Cabin, and the Christiansen Homestead. Adjacent property under other ownership will be protected from fires which occur on the refuge in accordance with Service policy.

The FMP will include cooperative efforts in wildland fire and prescribed fire with the Colville National Forest, Washington Department of Natural Resources, and other federal, state, and private wildland fire organizations.

The Stevens County Community Wildfire Protection Plan will defer to the existing Little Pend Oreille National Wildlife Refuge Fire Management Plan (2001) for direction on fire management policies and projects on the Refuge.

4.7.4.21 SPA #21: Spokane Indian Reservation

Spokane Indian Reservation adopted a Fire Management Plan for all tribal lands in 2005. The Fire Management Plan defines a program to manage wildland fires, prescribed fires, and fuels on the Reservation and outlines those actions that will be taken by The Bureau of Indian Affairs, Branch of Fire Management, Spokane Agency in meeting the fire management goals for the Spokane Indian Reservation.

The Stevens County Community Wildfire Protection Plan will defer to the existing Spokane Indian Reservation Fire Management Plan (2005) for direction on fire management policies and projects on the Reservation.

4.7.4.22 Lower Kettle River CWPP Strategic Planning Units

The existing Lower Kettle River Community Wildfire Protection Plan has previously identified Strategic Planning Units within their planning area, which includes sections of both Stevens and Ferry County. An assessment of the Lower Kettle River CWPP Strategic Planning Units in

Stevens County is included below in its original text. The Stevens County Community Wildfire Protection Plan incorporates the Lower Kettle River Strategic Planning Areas as they are written.

4.7.4.22.1 LKR SPA #2: Summit – Pierre – Toulou Strategic Planning Area

Bounded on the north by the Canadian border, the Kettle River on the west, and the western drainage break of the Wedge in the east, down to near the Barstow Bridge in the south. Residences are located along the Kettle River flats, along creek access routes, higher valley loop routes, most of which are in Stevens county Fire District #8. Forest land covers much of the SPA, with State, Industrial and NIPFL at lower elevations and in the southern portion. USFS forest land predominates the higher elevations in the north half and to the east. Access varies from good along county roads, to poor off of county roads. Water sources are limited. Forest heath and fuels buildup are issues impacting adjacent forest land.

Laurier East. - Scattered residences located on more open, agricultural type ground. Partially within FD #8. Most have Defensible Space.

CONCERNS: access possible problem. Low Risk

Sand Creek. - Scattered residences off of county road. Within FD #8.

CONCERNS: Defensible Space, and access/egress problems, substandard roads, adjacent fuels buildup. Moderate Risk

Nine Mine Road - Residences along minimum standard road. Within FD #8.

CONCERNS: Defensible Space, access/egress, adjacent fuels buildup. Moderate Risk.

Rock Cut north (Rock & Roll Road) has many homes, ingress/egress is bad road - will not support tender, one way in and out.

CONCERNS: Defensible Space, access/egress, adjacent fuels buildup. Moderate Risk

Rock Cut -. Scattered residences along county road. Within FD #8. More open agriculture ground.

CONCERNS: Some Defensible Space needs, fuels build up. Low Risk.

Pierre Lake - Scattered residences along and off of county road. Mostly within FD #8.

CONCERNS: Defensible Space, access/egress, and adjacent fuels build up. Moderate Risk.

Orient East - Scattered residences along county road. Within FD #8.

CONCERNS: Defensible Space, access/egress, fuels buildup. Moderate Risk.

Toulou South - Scattered residences along and off of county road. Most in FD #8. More open agricultural ground in South.

CONCERNS: Some Defensible Space needs, access/egress, adjacent fuels buildup. Moderate to Low Risk.

Recommendation: Assess and map individual structures for Defensible Space, and roads for access and egress. Reduce fuels around homes and create buffers along roads. Identify and install or improve water access points. Assess adjacent WUI forest land for fuel reduction needs, and implement.

4.7.4.22.2 LKR SPA #4: Kelly Hill Strategic Planning Area

Transitions from State, Industrial, NIPFL forest land in the north to private open south slopes with flashy fuels of grass and brush. Agricultural lands occur through out this area, but predominate the Central portion. A mix of drier forests, brush, and grass in the southern half, is aspect driven. The Columbia River boundaries the East and South, with the Kettle River on the West. The National Park Service manages shorelines up to the 3110 Elevation, which is to the Barstow Bridge on the Kettle River. Residences are scattered through out this SPA, located on both forest and agricultural lands. Residences on agricultural land are mostly Fire Safe, but some may have flashy fuels around them. Fire District #8 covers approximately half of this SPA, mostly in the north, central, western, and south-western portion. Many residences at risk, outside the Fire District, in the southern half.

Kelly Hill North - Scattered residences and structures mostly on agricultural lands, with Defensible Space. Portion within FD #8. Water sources scarce.

CONCERNS: Flashy fuels, Defensible Space, access/egress, adjacent forest land fuels. Risk Low.

Napoleon - Scattered residences along and off of the county River Road, on both agricultural and forest land.

CONCERNS: Defensible Space, access/egress, adjacent forest fuels buildup, water point access. Risk Moderate.

Kelly Hill South - Scattered residences on forest and agricultural lands. Conditions are flashy fuels, brush, forest fuels, poor roads, few water sources, and locked gates. Western portion along the Kettle River is in FD #8.

CONCERNS: Defensible Space, access/egress, flashy fuels, forest fuels buildup, and water sources. Risk High.

Recommendation: Assess and map individual structures for Defensible Space, and roads for access and egress. Reduce fuels around homes and create buffers along roads. Identify and install or improve water access points. Assess adjacent WUI forest land for fuel reduction needs, and implement.

4.7.4.23 Chewelah CWPP Strategic Planning Units

The existing Chewelah Community Wildfire Protection Plan has previously identified Strategic Planning Units within their identified planning area surrounding the community of Chewelah in Stevens County. An assessment of the Chewelah CWPP Strategic Planning Units in Stevens County is included below in its original text. The Stevens County Community Wildfire Protection Plan incorporates the Chewelah Strategic Planning Areas as they are written.

4.7.4.23.1 Chewelah SPA #1: West Iron Mountain

Description: This unit is also outside of the SDFD #4's boundary. Due to the heavy fuel loads our concern would be fuel reduction to prevent fire spread to District boundaries.

a. West Iron Mountain – Mostly USFS forestland, relatively well roaded, (many closed), with past timber harvest. Some forest heath issues. Bounded on North by the Little Pend Oreille Wildlife Refuge and private forestland, with varying density of structures in 12 Mile Creek area. The town of Addy, WA is on West Central edge. Few structures at risk because they are located at bottom of slopes. Low Risk.

Recommendations: Complete forest health assessment, however Low priority for fuels reduction, except adjacent to 12 Mile and Addy.

b. 12 Mile Scattered residences with access from Slide Creek Road., and Moran Creek Rd. Past harvests on private forestland have reduced some fuels. Within SCFD #5. Moderate Risk

Recommendation: Assess individual structures for Defensible Space, and roads for access and egress. Reduce fuels around homes and create buffers along roads. Assess adjacent private forestland for fuel reduction needs.

c. Addy – Few structures close to forestland. Some Private Industrial forestland managed well with fuels reduced. Some adjacent USFS forestland harvest activities have reduced risk. Within SCFD #5. Low Risk.

Recommendation: Assess both Private and USFS Forest land for fuels risk and plan/reduce fuels.

4.7.4.23.2 Chewelah SPA #2: West – North Fork Chewelah Creek

Description: This unit is outside of the SCFD #4's boundary. Due to the heavy fuel loads our concern would be fuel reduction to prevent fire spread to District Boundaries.

a. West – North Fork Chewelah Creek – Mostly USFS, with some industrial and NIPFL. Past timber harvests have roaded some areas. Some forest health issues. Bounded on North by Little Pend Oreille Wildlife Refuge. There are scattered structures along county road, Leslie Creek, and Major Rd. towards Bayley Lake, which is a recreation route. Outside of Fire District.

Recommendation: Assess and plan for needed forest health and fuels reduction, especially adjacent to lower Leslie Creek, and along lower Major Rd.

b. Leslie Creek – Major Rd. Some scattered structures in lower valley. Open agricultural ground and farming reduce risk. Some adjacent forestland. Moderate Risk.

Recommendation: Assess structures for Defensible space needs. Assess, plan for adjacent Private and USFS Forest land fuel reductions. Assess access and egress. Reduce fuels around home and create buffers along roads.

4.7.4.23.3 Chewelah SPA #3: East – North Fork Chewelah Creek

Description: This unit is also outside of the SCFD #4's boundary. Due to the heavy fuel loads our concern would be fuel reduction to prevent fire spread to Fire District boundaries.

All forestland, predominantly USFS. No structures, includes Seed Orchard. Moderate recreational use, with several primitive campgrounds. Heavy hunter use in fall. Some past harvest activities, with associated roads. Some forest health issues. Bounded on North by Little Pend Oreille Wildlife Game Refuge. A few private forestland inholdings. Relatively Low Risk to private resources.

Recommendation: Assess Federal Forest land for forest health and fuel reduction especially along travel corridors. Implement projects.

4.7.4.23.4 Chewelah SPA #4: South Fork Chewelah Creek

Description: South Fork Chewelah Creek and Burnt Valley areas have scattered structures. The Districts concern in this area is ingress, egress and structural mapping of the area. SCFD #4.

a. South Fork Chewelah Creek – Primarily USFS forestland, some managed industrial forestland, and NIFPL. Private agricultural, forests and home are located in lower half of drainage. Past harvest activities have extablished road systems, many closed off. Forest helath issues have been identified on USFS, with mechanical thinning, and prescribed fire, fuel reduction projects planned adjacent to private ownership.

Recommendation: Implement identified fuels reduction projects. Complete forest helath assessment, implement management projects.

b. Burnt Valley – Scattered structures, homes, accessed primarily from county road. Some set within forests, needing defensible space. Parcels of forestland need thinning and fuels reduction. Within SCFD #4. Moderate Risk.

Recommendation: Fund Fuels Reduction Grant to identify and establish Defensible Space around homes, structures; assess road access and egress adequacy; and identify and create fuel breaks needed on private forestland.

4.7.4.23.5 Chewelah SPA #5: Thomason Creek

Description: Thomasan Creek, Flowery Trail, and Six Mile areas, are very High risk areas for wildland fire. There are a moderate number of structures in this area. The districts concern for this area is its large concentration of fuels, defensible space, ingress, egress and structural mapping of the area. SCFD #4.

a. Thomasan Creek – Mixed forest ownership, of USFS, State, BLM, Industrial, and NIPFL. Forest Health issues and fuel build-ups exist on all forest ownership. USFS has had several timber sales, which are a start in reducing risk. The Flowery Trail Rd. is main access route the length of this drainage. There is high recreational as well as cross-mountain use of this road. The lower part of drainage is within SCFD #4 boundary. High Risk potential to upper drainage. Moderate risk lower drainage.

Recommedation: Assess and initiate fuels reduction projects to reduce risk to upper drainage. Complete forest health assessment, implement fuels reduction projects.

b. Flowery Trail Summit – The Flowery Trail Development, and the Chewelah Peak Learning Center (CPLC) are located inor just over the upper drainage. Some Defensible Space projects have been completed within the development and adjacent to the CPLC. Adjacent forest land has high fuel loading, as well as toptgraphic channeling that will move fire into the development. Two homes have burned in the past, but fires occurred during winter. 49° N Ski Area would also be at risk if fire moved into the area. Very High Risk.

Recommendation: Obtain Fuels Reduction Grant to identify, and establish Defensible Space around remaining homes, and identify and create fuel breaks needed on State, and USFS forest land.

c. Six Mile – Scattered homes and structures accessed from Flowery Trail Rd. and Six Mile Rd. Some are located adjacent and within forestland, with fuels build up. Lower Six Mile is located within SCFD #4. Flowery Trail to USFS boundary is without protection. High Risk.

Recommendation: Obtain Fuels Reduction grant to identify and establish Defensible Space around home, assess access and egress, and idnetify and implement forestland fuel breaks.

4.7.4.23.6 Chewelah SPA #6: Sherwood Creek – Horseshoe Lake

Description: This area has few structures. The Districts concern would be a high concentration of fuel in this unit, and the lack of structural mapping. SCFD #4.

A mix of USFS, State, Industrial, and NIPF forest land. All but the USFS have had past harvest activity and are roaded. USFS forest land stretches from Chewelah Peak to Quartzite Mt., with a few old harvest areas. There are some serious forest health issues, but harvest plans have been postponed or canceled. Some homes and structures are scattered in the lower drainage, with areas of agricultural fields. These structures are outside the SDFD boundary. Fuel buildup on USFS forestland is a threat to adjacent forestland, as well as a threat to 49° N Ski Area to the East. Risk to Structure is Moderate.

Recommendation: Assess forestland for fuel buildups threatening adjacent property or structures. Implement projects. Assess structures for Defensible Space needs and implement with grant funding.

4.7.4.23.7 Chewelah SPA #7: Betts Meadow

Description: There are no structures in this unit. The Districts concern would be fuel loads that promote fire spread into District structural areas. SCFD #4

A mix of USFS, State, Industrial, and NIPFL forest land. All but the USFS has had harvest activity on most of the forestland. Wetland restoration has occurred on private land adjacent to USFS. Several unimproved campsites exist on State land. Neither homes nor structures are in this SPA. Some forest health issues and fuel build-ups exist. Risk to improvements is Low.

Recommendation: Assess USFS and State forestland for forest health specifics, fuel build up, and implement projects.

4.7.4.23.8 Chewelah SPA #8: Upper Cottonwood Creek

Description: Grouse Creek and Buzzard Lake are areas the District has concerns with fuel loading, ingress, egress and structural mapping. The roads in this area are extremely difficult to navigate in the winter months. SCFD #4

a. Upper Cottonwood Creek – A mix of State, Industrial, and NIPF land. No federal lands in the SPA. Most forestland has had past harvest activity. Roads exist, with some closed off. Fuel build up exists on some ownership. Scattered homes/structures accessed off of Cottonwood Creek and Grouse Creek Roads. This SPA is outside a SCFD. Risk Threat to homes and property is Moderate.

b. Grouse Creek Junction – Scattered homes in the forests. Some with narrow driveways, amid fuel build up, needing Defensible Space.

c. Buzzard Lake – Scattered home along Buzzard Lake Rd. Some need Defensible Space, area needs fuel breaks, access and egress evaluated.

Recommendation: Obtain Fuels Reduction Grant to identify and establish Defensible Space, identify and establish fuel breaks, and identify and widen narrow access roads.

4.7.4.23.9 Chewelah SPA #9: Gold Hill – Immel Road

Description: The structures on Immel road have fairly good defensible space. The Districts concern is heavy fuels and structural mapping. SCFD #4

A mix of USFS, Industrial, BLM, and NIPFL forest land. Much forestland has had past harvest activity. Roads exist, with some blocked off. Forest health and fuel build up issues exists in some areas. Scattered homes access from Immel Rd. and off of HWY 395(#1763). This area

is partially within the SCFD#5 boundary. Access and egress are limited. Risk is Low from Immel Rd. Moderate risk on South slopes from HWY 395.

Recommendation: Secure grants to identify and establish Defensible Space, identify and establish fuel breaks, and identify and widen narrow access roads. Complete forest health assessments on forestland and implement projects.

4.7.4.23.10 Chewelah SPA #10: Fire District #4 North

Description: Well Head, and Golf Course areas are high structural areas with a low wildland urban interface. The districts concern in this area would be structural mapping. Lower Chewelah Creek – North Fork Chewelah Creek, Highline, Cozy Nook, and Embrey Hill: these areas have many structures that would require fuel reduction, ingress egress work. We would also like to see mapping of the structures in the area. SCFD #4

A mix of mostly NFPL, some State and BLM forestland, agricultural, and scattered home within SCFD #4 boundary. Most forestland has had past harvesting activity, with associated roads. The fire station is located in Chewelah, providing structural, improved property, and wildland fire protection along with the WADNR. Forest health, fuels buildup, Defensible Space, and access issues exist through out this SPA. Risk ranges from Low to High.

a. Well Head – Approximately 10 acres around the wellhead supplying the City of Chewelah. Fuels build up is a threat to the wellhead, as well as akjacent to the golf course sub-division to the North. Moderate Risk.

Recommendation: Secure grant for fuels reduction on this parcel, which will protect the wellhead, and act as shaded fuel break for the Chewelah Golf and Country.

b. Golf Course – Chewelah Golf and Country Club, sub-division in forest land setting part of but away from the city of Chewelah. Some lots, not all have Defensible Space. Fuel breaks around the sub-division are needed. Moderate Risk.

Recommendation: Secure grant to identify and reduce fuel build up within and adjacent to this sub-division are needed. Moderate Risk.

c. Lower – North Fork Chewelah Creek – Scattered homes within and adjacent to forestland. Defensible Space, access and aggress, and fuel buildup are issues. Moderate Risk.

d. Highline – Scattered homes on forest and agricultural lands. Defensible Space, access and egress and fuel buildup are issues. Low Risk.

e. Cozy Nook – Scattered home within and adjacent to forest and agricultural land. Defensible Space, fuel build up, access and egress are issues. High risk.

f. Embrey Hill – Scattered homes within and adjacent to forest and agricultural land. Accessed from Lower Burnt Valley Road, Eagle-Lamber Road and Lower Flowery Trail. Defensible Space, fuels build up, and access and egress are issues. Moderate Risk.

Recommendation: Secure grant to identify and establish Defensible Space for home, identify and establish fuel breaks, identify and widen access roads.

g. City of Chewelah – Residential neighborhoods around core business area. HWY 395 and SFBN railroad run through town. Little wild fire risk, but hazardous chemical spills and fires associated with transportation system are possible. The city of Chewelah Fire Department provides both structural and wildland fire protection to the City proper and the Chewelah Golf and Country Club 3 miles distant.

4.7.4.23.11 Chewelah SPA #11: Fire District #4 South

Description: Flyckt Road, Lower Cottonwood Creek Road, Skok Loop, Beity Lake Road, Jumpoff Joe Road, and Heine Road areas. These are structural areas, not quite as populated as in unit 12, but are also in close proximity to wildland urban interface. This unit concerns us because of a lack of defensible space, ingress and egress. SCFD #4.

A mix of NIPFL, industrial, and State forestland, with scattered homes and structures. This SPA is included within SCFD #4, with fire stations from Chewelah and Valley providing structure, improved property and wildland fire protection, along with the WADNR. Most forest land has had past harvesting activity, with associated roads. Risk ranges from Low to Moderate depening on proximity to fuels, aspect, and access.

a. Flyckt Road – Homes and structures mostly near either end of Flyckt Rd. Mixed forest and agriculture fields. Fuels build-up, Defensible Space, access and egress are issues. Low Risk around agriculture, Moderate Risk on forestland.

b. Lower Cottonwood Creek Road – Homes and structure located and accessed along four(4) miles of lower Cottonwood Creek Rd. Fuels build-up, Defensible Space, access and egress are issues. Low risk around agriculture and creek. Moderate Risk on forestland.

c. Skok Loop Vicinity – Homes and structures located on mixed forest and agricultural land. Defensible Space, Fuels build up on adjacent forestland, access and egress are issues. Low risk around agriculture and creek. Moderate Risk on forestland.

d. Beity Lake Road – Homes and structures accessed off of Beity Lake. Mostly forestland, with some agriculture. Access and egress, Fuels build up, and Defensible Space are issues. Low risk around agriculture and creek. Moderate Risk on forestland.

e. Jump Off Joe – Scattered homes in or adjacent to forestland. Some agricultural land. Defensible Space, fuels build-up, access and egress are issues. Low to Moderate Risk.

f. Heine Road – Scattered homes in and adjacent to forest and agricultural land. Defensible Space, fuels build-up, access and egress are issues. Low to Moderate Risk.

Recommendation: Secure grant to identify and establish Defensible Space for homes, identify and establish fuel breaks, identify and widen access roads and structural mapping of this unit.

4.7.4.23.12 Chewelah SPA #12: Fire District #4 West

Description: Waitts Lake, Little Sweden, Deer Creek and Red Marble – Mountain View areas are high structural areas that are in close proximity to wildland urban interface. These areas have a high potential for large fire growth. The roads in these areas are difficult to navigate in the winter months, creating a concern in ingress and egress. SCFD #4.

A mix of Industrial, NIPFL, State, and BLM forestland, with agricultural land in the valleys. Much of the forestland has had harvest activity over many years, with the associated roads (some closed), in place. Scattered homes are located in and adjacent to forestland in increasing numbers. This SPA is mostly included within SCFD #4, with fire stations from Chewelah and Valley providing structure, improved property and wildland fire protection, along with the WADNR.

a. Quarry Road/Browns Lake – Scattered homes, in and adjacent to forestland, off of the Quarry Rd. corridor to Browns Lake. Recreational use, and access route to Red Marble bring traffic count up. Fuels build-up, Defensible space, access and egress are issues. Moderate to High Risk.

b. Red Marble/Mountain View – Scattered homes in and adjacent to forestland. Some light fuels with agricultural lands. Access approximately Five (5) miles on Red Marble Rd. and three(3) mile on Mountain View Rd., with structures along and off of these roads. Fuel build-up, Defensible Space, access and egress are issues. Moderate to High Risk.

c. Waitts Lake – Homes all the way around the lake. Low Risk. Homes off Waitts Lake road are in and adjacent to forestland. Fuel build-up, Defensible Space, access and aggress are issues. Moderate to High Risk.

d. Carrs Corner – Outside of FRD. Scattered homes in and adjacent to forestland. Fuel build-up, Defensible Space, access and egress are issues. Moderate to High Risk.

e. Little Sweden – Homes inside and outside of RFD, in or adjacent to forestland. Approximately three (3) miles of access along Little Sweden Rd. Fuel build-up, Defensible Space, access and egress are issues.

f. Deer Creek – Homes inside and outside of SCFD along and off of Deer Creek Rd. Haviland Meadows agricultural area provides a natural fuel break, Defensible Space, fuel build-up, access and egress are issues. Low Risk in agricultural area. Moderate to High Risk on forestland.

Recommendation: Secure grant to identify and establish Defensible space for home, identify and establish fuel breaks, identify and widen access roads and some structural mapping of these areas.

4.8 Firefighting Resources and Capabilities

Fire district personnel are often the first responders during emergencies. In addition to structure fire protection, they are called on during wildland fires, floods, landslides, and other events. There are many individuals in Stevens County serving fire protection departments in various capacities. The following is a summary of the departments and their resources. A map of the fire protection organization's coverage areas is presented in Appendix I

The firefighting resources and capabilities information provided in this section is a summary of information provided by the fire chiefs or representatives of the wildland firefighting agencies listed. Each organization completed a survey with written responses. Their answers to a variety of questions are summarized here. These synopses indicate their perceptions and information summaries.

4.8.1 City of Colville Fire Department

Chief: Jeff Pitts
293 East 1st Avenue
Colville, WA 99114
509 684-5928

Agreements in place with and house SCFD #3 vehicles.

4.8.2 City of Kettle Falls Fire Department

Chief: Robert McIntosh
415 Larch St
P.O. Box 457
Kettle Falls, WA 99141
509 738-6821

Agreements in place with SCFD #6

4.8.3 City of Chewelah Fire Department

Chief: Doug Sassman
409 E Clay St
PO BOX 258
Chewelah, WA 99109
509 935-8311
fire@cityofchewelah.com

This is an all-volunteer fire department. It has one station in Chewelah, with one type 1 engine, 2 type 3 engines, and one type 6-brush engine. This fire hall is also STA 43 for SCFD #4. Mutual Aid Agreements are in place with SCFD #4.

4.8.4 Town of Marcus Fire Department

Chief: Doug Morrow
Town Hall, Hwy 25
P.O. Box 634
Marcus, WA 99151
509 684-3771 (Town Hall)
509 685-1720

Agreements in place with SCFD #6

4.8.5 Town of Northport Fire Department

Chief: Eric Middlesworth
P.O. Box 177
509 732-6675
Northport, WA 99157
509 732-4450 (City Hall)

Agreements in place with SCFD #11.

4.8.6 Town of Springdale

Fire protection is provided by Stevens County Fire District #1.

4.8.7 Stevens County Fire Protection District #1

Chief: Mark Beck
4532 Railroad Ave.
P.O. Box 246
Clayton, WA 99110
mbeck@scfpd1.com
509 262-9660

District Summary:

Stevens Fire #1 protects 375 square miles. It includes the communities of Lake Spokane (Suncrest to Tum Tum), Ford, Twin Mountain, Clayton, Loon Lake, Deer Lake and the City of Springdale (annexed into the district in 1994). The district has eight engines (plus one reserve), 10 brush/medical response vehicles, 7 tenders, one quick attack and six staff vehicles, two jeep plows and one support unit. The district has a career staff consisting of a chief, operations captain, two lieutenants (EMS, Public Education and Prevention), and three firefighters. This staff supports the 60 volunteer EMT/Firefighters. Approximately 59% of the district's firefighters

are EMT, 5% are EMT only and 28%Firefighters only and 8% Support. The district has eight stations and a district office in Clayton and a shop and one storage building. Over 60% of the assessed value of the district has hydrants but less than 70% of the land has a water source (hydrants). The district has mountains running through the middle of it with only 4-5 roads cutting through them. The population bases are Lake Spokane, Loon Lake and Deer Lake. The summer population is higher due to recreational opportunities. The year around population is over 12,000. The district averages about 1100 calls a year with about 70% of these being medical calls.

Priority Areas:

1. Residential Growth: Growth in district – GMA and passing Comprehensive Plan will increase population growth.
2. Wildland interface:
    a. Suncrest to Tum Tum
    b. Homestead Canyon
    c. Cummins Canyon
    d. Limekiln Area
    e. Ford – Springdale
3. Replacing apparatus –Three new type 1 engines placed in service in 07. A yearly program of replacing brush trucks started in 07.
4. Replacing Stations (Stations 2 and 8)
5. Hiring additional daytime responders
6. Resident Program
7. Reduce fire rating

Effective Mitigation

1. Increased career and volunteer staff (daytime in particular)
2. Areas of district that have been logged and defensive zones
3. Public Education
4. Increase in plan reviews and increasing fire flows/mitigation

Education:

1. Two sessions a month required. Each month one multi-station drill north and south, one EMS north and south, other training at station level. In district, in county and Region 9 are also used.
2. Ongoing medical and seasonal wildland and structural plus emergency response and safety training.

Cooperative Agreements:

All other Stevens County Fire Districts and departments, all Spokane County Fire Districts and Departments, BIA, National Park Service, Lincoln Fire 4 and working on National Forest Service.

Current Resources:

STATION 1 – CLAYTON – 4532 Railroad Avenue, Clayton, 99110

• E-1 Type 1 Engine, 1250 gpm, 750 gallons, extrication, BLS unit.
• B-1 Type 3 Brush Engine, 4x4, 150 gpm, 300 gallons, Foam class A or B, BLS unit.
• SU-1 Support Service Van, Air Supply, Support.
• T-1 Type 3 Water Tender, 750 gpm, 2000 gallons.

STATION 2 – LOON LAKE – 4009 N Cedar St. Loon Lake, 99148

• E-2 Type 1 Engine 1250 gpm, 1000 gallons, BLS unit.
• B-2 Type 6 Brush Engine, 4x4, 150 gpm, 300 gallons, Foam class A or B, BLS unit.
• P-2 Type 7 Jeep Plow, 4x4.
• T-2 Type 3 Water Tender, 350 gpm, 2000 gallons.

STATION 3 – TWIN MOUNTAIN – 5128 Swenson Rd, Deer Park, 99006

• E-3 Type 2 Engine, 500 gpm, 500 gallons, BLS unit.
• B-3 Type 6 Brush Engine, 4x4, 150 gpm, 300 gallons, BLS unit.
• T-3 Type 1 Water Tender, 300 gpm, 3000 gallons.

STATION 4 – TUM TUM – 6444 HWY 291, Nine Mile Falls, 99026

• E- 4 Type 1 Engine, 1250 gpm,1250 gpm, 750 gallons, Foam class A or B, BLS unit.
• B-4 Type 6 Brush Engine, 4x4 150 gpm, 400 gallons, foam class A or B, BLS unit.
• P-4 Type 7 Jeep Plow, 4x4.
• T-4 Type 3 Water Tender, 200 gpm, 3500 gallons.

STATION 5 - DEER LAKE – 4222 Southwood Shores, Loon Lake 99148

• E-5 Type 1 Engine, 1000 gpm, 700 gallons, 4x4, BLS unit.
• B-5 Type 6 Brush, 4x4, 150 gpm, 300 gallons, BLS unit.

STATION 6 – FORD – 5227 Main St, Ford 99013

• E-6 Type 1 Engine, 1000 gpm, 500 gallons.
• B-6 Type 6 Brush Engine, 4x4, 150 gpm, 300 gallons, extrication, BLS unit.
• T-6 Type 3 Water Tender, 500 gpm, 1500 gallons.

STATION 7 – SPRINGDALE – 52 W Aspen, Springdale, 99173

• E-7 Type 1 Engine, 1250 gpm, extrication,1000 gallons, BLS unit
• B-7 Type 3 Brush Engine, 4x4, 150 gpm, 300 gallons, BLS unit.
• T-7 Type 3 Water Tender, 200 gpm, 1800 gallons.
• T-7 Type 3 Water Tender 300 gpm, 6X6, 1000 gallons.

STATION 8 – SUNCREST – 5990 HWY 291, Nine Mile Falls, 99026

• E- 8 Type 1 Engine, 1250 gpm, 750 gallons, extrication, BLS unit.
• B-8 Type 6 Brush Engine, 4x4, 150 gpm, 500 gallons, Foam class A or B, BLS unit.
• A- 8 Type 1 Engine, 1250 gpm, 1000 gallons.

STAFF

• 4X4 Suburban Response
• 4X4 ¾ ton Ford Pick-up – North Response Cell 509-209-0065
• 4X4 Maintenance Truck
• 4X4 ¾ ton Ford Pick-up – South Response Cell 509-209-0066
• 4X4 Chevy Trailblazer

4.8.8 Stevens County Fire District #2

Rick Anderson
5030-B Lemon Ave
P.O. Box 86
Hunters, WA 99137-0086
scfd2@theofficenet.com
509 722-3100

Station Locations:

F210 Hunters – 5030B Lemon Avenue, Hunters

46.118024 (48 7 degrees 4.0)
-118.2001 (-118 12 seconds .051)

F220 Harvey Creek – 3571 Harvey Creek Road, Hunters

48.1787748 (48 10 degrees 43.0)
-118.07777 (-1189 seconds 40.67)

F230 Fruitland – 5633 Fruitland Valley Road, Fruitland

48.068723 (48 4 degrees 7.40)
-118.161299 (-1189 seconds 40.67)

F240 Enterprise – 5984 SR 25 South, Fruitland

48.006995 (48 0 degrees 7.4)
-118.267458 (-118 17 seconds 2.84)

Year	Make	Type	Tank	Pump	Axles	Rating
1985	Chevy	Brush	200	350	4x4	Type 6
1980	Intern	Brush	750	350	4x4	Type 6
1975	GMC	Tender	1800	350	Tandem Axle	Type 3 Tender
1982	Intern.	Engine	1500	500		Type 3 Tender
1995	Chevy	Tender	3000	900		Type 2 Tender
1989	Ford 1T	Brush	250	350	4x4	Type 6
1985	GMc	Engine	750	350		Type 4 Engine
1997	Ford	Brush	350	350	4x4	Type 6
1986	Chevy	Brush	200	250	4x4	Type 6

4.8.9 Stevens County Fire District #3

Chief: Jeff Pitts
261 E First Ave
P.O. Box 638
Colville, WA 99114
509 675-0015
jpitts@theofficenet.com

District Summary - Stevens County Fire #3 is roughly a 6 mile radius around the city of Colville. The District and the city have a very good relationship in the fact that the district hires the city to fight its fires. Although the district does have 5 fire fighting vehicles of their own, they do not employ firefighters, that is where the city comes in. The city has 32 firefighters that also respond to district fires. The district, back in the mid 1990's, purchased land and buildings adjacent to the existing City of Colville Fire Hall. Because of their relationship, there are 2 district vehicles stored in the city building, and the city has two vehicles stored in the district building, along with two more district trucks. The fifth district truck is stored in a unit just SE of the Colville City limits.

Cooperative agreements: Stevens County District #3 has an agreement with all other districts in the county for mutual aid.

Current Resources:

- 2001 4x4 Quick response (250 gallons w/foam)
- 1999 4x4 Quick response (250 gallons w/foam)
- 1969 Tender (1500 gallons)
- 2001 Tender (2000 Gallons)
- 1998 Tender (4000 Gallons)

In addition: The district also has 4 city pumpers available; 2 at 900 gallons and 2 at 1000 gallons.

4.8.10 Stevens County Fire District #4

Chief: Tim Vandoren
3060 3rd Ave
P.O. Box 190
Valley, WA 99181
509 937-2246
scfd4@centurytel.net

District Summary:

Stevens County Fire District # 4 (SCFD # 4) was formed in 1968 and at that time encompassed 13 square miles. Now it covers over 100 square miles, and has two (2) stations, with twelve (12) apparatus. We also lease space in the Chewelah Fire hall for three (3) apparatus. Currently we are in the process of building two storage facilities. One will be on Moser road, north of Chewelah, and the second at 3060 3 Ave. in the town of Valley. The annual operating budget of SCFD # 4 is $153,000.

The citizens served by SCFD # 4 are mainly low-income, rural families. Four adult family home care centers have opened and an elementary/middle school is within our jurisdiction. SCFD # 4 also provides fire suppression protection to the Chewelah Casino; a large multi-building complex owned by the Spokane Indian Nation.

SCFD # 4 provides both wildland and structural fire protection, along with vehicle extrication, ice water rescue, and are in the process of applying for our BLS medical license.

Priority Areas:

Our priorities at this time are to secure our medical license to provide first response emergence medical technicians to cover SCFD # 4. This will protect our residence as we continue to grow.

We have just purchased a new type 1 structural engine for the Chewelah area, and have received the Homeland Security Grant to provide extrication equipment for this engine. We will be working hard to get this apparatus in service as soon as possible.

We continue to provide K - 3rd grade education programs through the Valley School to help teach the youth of our community the importance of fire prevention.

Our plans for future projects are dry hydrant placement, and sub-stations strategically located through out the district

Mitigation Strategies:

Continue to educate the community, continued mutual aid agreements, pre-fire planning, and dry hydrant placement, along with wildland fuels reduction.

A priority of the District is to have top quality equipment in excellent working condition. We will continue to look to the future for new and improved techniques in providing fire suppression and rescue.

Education and Training:

We provide in house training in firefighting fundamentals using the fourth edition manual. We also teach extrication, ice water rescue, hazardous materials, and wildland training to the squad boss level. We also allow our people to train in Spokane in confined space and trench rescue. At the North Bend Fire Academy they learn live fire training. We have a few people trained in each different category to be prepared for any circumstance.

Cooperative Agreements:

Stevens County Fire District # 4 has signed the county wide mutual aid agreement with all of Stevens County. We also have signed agreements with Stevens County Fire District # 1 and the Washington State Department of Natural Recourses. We have a Lease agreement with the City of Chewelah to house 3 of our apparatus in the City Fire Hall.

Current Resources:

Station 41 Valley Station at 3282 Bulldog Creek Road

- E-41 1998 Freightliner FL-70 with a 1250 GPM pump and a 1000 gallon tank.
- T-41 1980 International S-2500 with a 500 GPM pump and a 3750 gallon tank.
- B-41 1986 Ford F-350 4X4 with a 300 GPM pump and a 250 gallon tank.

Station 42 Waitts Lake Station at 3351 Thompson Road

- E-42 1981 Ford F-800 with a 1000 GPM pump and a 1000 gallon tank.
- T-42 1987 International S-2500 with a 750 GPM pump and a 2000 gallon tank.
- B-42 1990 Ford F-350 4X4 with a 95 GPM pump and a 250 gallon tank.

Station 43 Chewelah City Fire Hall on Clay Street

- E-43 1984 GMC 7000 with a 1000 GPM pump and a 1000 gallon tank.
- T-43 1978 International S-2500 with a 500 GPM pump and a 3750 gallon tank.
- B- 43 1987 Chevy C-30 4X4 with a 95 GPM pump and a 250 gallon tank

Station 44 Moser Road Station at 2720 Moser Road

- E-44 1982 Ford C-80 with a 1000 GPM pump and a 750 gallon tank.

Command Vehicle at 3099 Farm to Market

- C-401 1986 Chevy CD-30903 4X4 with a 125 GPM pump and a 250 gallon tank.

Waitts Lake

- S-41 1992 Chevy GC3 Ambulance as a Support Vehicle

4.8.11 Stevens County Fire District #5

Chief: Les Schneiter
PO Box 152
Addy, Washington 99101
(509) 935 - 8738

lschneiter@centurytel.net

DISTRICT SUMMARY:

Established in 1968, SCFD #5 covers 75 square miles of land area and has a growing population of just over 4,000 people. The department has 28 volunteer firefighters working out of four stations strategically located throughout the large land area covered by the district. Approximately 35 percent of the district is zoned for agriculture and the remainder is sparsely populated forest area. Our district is very mountainous and we are increasingly seeing new homes built in areas previously uninhabited creating a significant wildland urban interface challenge. Highway 395, a NAFTA route, runs the length of the district and is a major traffic corridor for trucking, logging, and hazardous materials transportation to and from eastern British Columbia and eastern Washington State. The Kettle Falls International Railway runs the length of the district transporting hazardous materials into and out of Canada in addition to other cargo. There is an 8" natural gas pipeline carrying 1 million cubic feet of natural gas at a pressure of 480psi throughout the district. Bonneville Power Administration's ultra high voltage line runs the length of the district and they have a substation at Addy. Avista Utilities also has one of their major regional transmission lines traversing the district.

During the last five years, SCFD #5 has averaged 65 calls per year with 50 percent structure fires, 40 percent wildland fires and 10 percent vehicle fires or other miscellaneous calls. The district has four volunteer fire departments immediately adjacent and responds to approximately five mutual aid requests each year. Additionally, SCFD #5 has a solid working relationship with the Northeast Region of the Washington State Department of Natural Resources. The last three years has seen an increase in call volume to 72 calls per year due to the increasing population within the districts boundaries and to the increased traffic on the Highway 395 corridor.

PRIORITY AREAS:

Residential Growth - Ten years ago there were 55 homes in the south end of our district. As of the end of 2005, there were more than 100 homes in this same area. In addition, to the increased number of homes in this area, it is also designated as a high risk area for catastrophic fire because of the terrain, housing density and distance from the nearest station. As a result of this development, SCFD #5 is planning to site a new station at this end of the district to meet the health and safety needs of this area more efficiently. We have seen a rise in incidents in this area from ten percent to 16 percent during the last 12 months.

Personnel - Stevens County Fire District #5 (SCFD 5) depends upon the volunteers in the department in order to provide its communities with safe and efficient responses to emergency situations. Historically, the department has maintained an average of 40 volunteers at any one time with approximately ten of the volunteers being fully active in the department's drills and emergency responses. There are three primary goals outlined in the District's strategic plan to aid in the retention and recruitment of volunteers.

The department will establish a system of recruiting new volunteers in order to maintain a level of no less than ten volunteers per station.

The department will utilize recognition programs and incentives to encourage at least half of these volunteers to be more active in their service by participating in a minimum of half of the annual departmental activities.

The program will help generate more commitment to the department among the volunteers and lead to longer length of service in the department.

Equipment - SCFD 5's strategic plan has identified a need and has implemented a long term plan to continuously update and upgrade the districts Personal Protective Equipment,

Apparatus, and fire fighting equipment. This is done through an annual review of the districts needs, annual purchases of new equipment to replace worn or outdated equipment. SCFD budgets for these annual expenditures and also has been successful in receiving grants to purchases apparatus and equipment that is beyond the normal capabilities of the district's annual budget for purchases.

EDUCATION AND TRAINING:

SCFD 5 has bi-monthly training in the district. Much of this training is taught by the districts own instructors. Outside instructors are invited to present classes several times per year. The district also provides instructors to other districts in the county to assist in their training programs. All district personnel are encouraged to attend training offered outside of the district by other agencies and organizations.

The District also presents fire safety information at two of the local elementary schools each year. The District has offered Wildland/Urban Interface, CPR, home fire safety, and other types of classes to the residents of the community.

COOPERATIVE AGREEMENTS:

Stevens County Fire District 5 has mutual aid agreements with all 11 of the other fire districts in Stevens County. SCFD 5 also has a mutual aid agreement with the Washington State Department of Natural Resources, and with the National Forrest Service, Bureau of Land Management and Fish and Wildlife Department through association with the DNR's agreements with those Federal Agencies.

HAZARD IDENTIFICATION and MITIGATION STRATEGIES:

Stevens County Fire District 5 has identified a few areas of concern in the Wildland/Urban Interface. One of those areas was identified in the Chewelah Fire Plan as being the area bordering National Forest Service lands in the Immel Road area. In addition there is great concern in the Dry Creek area due to the doubling of residences (over 100 homes on a road approximately 6 miles long) in that area in the last 10 years, the fuel types, topography and only one road into the area. Another area of concern is in the Basin, due to the large increase in new residences as it is becoming the bedroom community for Colville. Parts of Summit Valley, primarily the Old CC Road and Grimm Road areas are also experiencing rapid growth in residences and are areas of heavy fuels, limited access, and steep topography. The district has identified these areas as high risk and is hoping to present community outreach presentations to make the residents aware of the problems presented by the rapid residential growth in the areas. The district also has plans to send out community newsletters addressing these issues. It is hoped that once the community fire plan is written that it will aid the district in this effort.

Other Wildland hazards identified by the district are the large amounts of State and Federal forest land in the district. While the district comprises 75 square miles of privately owned, fire district protected land, that land is in areas surrounding Monumental, Dunn, Stranger, and Addy Mountains.

SCFD 5 has also identified the natural gas pipe line, Bonneville Power's ultra high voltage line, Avista Utilities high voltage line, Highway 395 and the Railroad line to all be areas of concern that increases risk to the residents of SCFD 5 and increases the number of responses and risk for the Districts volunteers. The rapidly increasing population through out the district has also increased the number of calls the district responds to and the types of those calls. The Districts Strategic Plan is addressing those issues through increasing the numbers of volunteers, improving and acquiring additional equipment, and community education.

Current Apparatus:

Vehicle #	Type	Gallons	Drive	Specifications	Location	Year	Make	Model
B511	6	210	4x4	350 gpm	Addy	1984	Chev	M1008
E51	1	1000	4x2	1250gpm/CAF	Addy	2005	Spartan	
T513	2	3500	6x4	1600/600gpm	Addy	1979	Chev	Titan
T514	2	3700	6x4	350 gpm	Addy	1978	Frtlnr	
E522	1	500	4x2	1500 gpm foam	Naff	1973	Crown	
T523	3	1200	4x4	60/160 gpm	Naff	1977	Int.	1700
B531	6	400	4x4	350	Smt Vly	1981	Dodge	W350
E532	1	750	4x2	1250gpm	Smt Vly	1973	Ford	F750
T533	3	1200	6x6	60/160gpm	Smt Vly	1973	AMC	
B541	6	300	4x4	210gpm	BlueCreek	1999	Ford	F350
B551	6	250	4x4	350gpm	Addy	1986	Chev	M1008
S553			4x2	Support	Addy	1990	Ford	Ranger
T554			6x4	Tractor	Addy	1979	GMC	Brigadeer
S555			4x2	Support	Basin	1987	Chev	3500
B561	6	400	4x4	350 gpm/CAF	Basin	1999	Ford	F550
E562	1	750	4x2	1500 gpm foam	Addy	1971	Amer/LaFr	Domineaux
T563	2	2500	4x2	150 gpm	Basin	1995	Volvo	
TRL 51		3000		160 gpm	Addy	1954	Columbia	

4.8.12 Stevens County Fire District #6

145 E Sixth Ave
P.O. Box 1268
Kettle Falls, WA 99141
fire6@plixtel.com
509 738-6664

Robert McIntosh, Kettle Falls City Fire Chief
509-738-6066 - work phone
509-738-6664 - msg. Phone

Chairman of Board of Commissioners Dale Chambers 509-738-2148

PRIORITY AREAS:

Residential growth - The Gold Edge Mine area is experiencing increased residence building in remote forested areas with low standard private road systems. This is creating some hazardous wildland/urban interface when mixed with fuel loading and poor access/egress issues. The Mission Ridge, Highland Loop, Pingston Creek area is not within SCFPD 6. The East end of the Greenwood Loop and the Hoffman road area are not within SCFPD 6. The Rickey Canyon Mingo Mountain forest fuel levels are potentially disastrous given the typical summer winds that come up in the afternoon in the Columbia drainage. All of the above areas have active new residential construction.

Communications - Fire department radios need to be reprogrammed to receive north and south frequencies. New radios will be needed to meet narrow band requirements. There are radio frequency blind spots that need to be addressed.

CURRENT RESOURCES:

Kettle Falls Station

Year	Make	Model	Tank Capacity	Pump Capacity
1982	Mack	Structural Ladder Engine	300 gal	1500 gpm
1975	Ford	Structural Engine	1000 gal	1000 gpm
1992	Spartan	Structural Engine	1000 gal	1250 gpm
2006	International	Brush Truck 4x4	1200 gal	300 gpm

District #6 Station #1

Year	Make	Model	Tank Capacity	Pump Capacity
1987	Mack	Structural Engine 4x4	1000 gal	1000 gpm
1985	Chevrolet	1st Response 4x4	250 gal	500 gpm

District #6 Station #2

Year	Make	Model	Tank Capacity	Pump Capacity
2000	International	Brush Truck 4x4	1200 gal	300 gpm
2002	International	Brush Truck 4x4	1200 gal	300 gpm
1977	International	Brush Truck	600 gal	300 gpm
1996	Freightliner	Tender	3000 gal	500 gpm
2006	International	Tender	3000 gal	500 gpm
1950	Ford	Structural Engine	300 gal	300 gpm
1987	Chevrolet	Suburban		

Future Considerations: Stevens County Fire Protection District will continue to annex surrounding areas as the opportunities arise. The need for satellite stations to adequately cover new areas is being considered. There seems to be a trend toward less farm land and more urban residential areas.

Needs: Better control of new access road standards. Emergency water sources as more distant areas acquire coverage. Education of land owners about defensible space. Reduction of forest fuel levels in the more hazardous areas. Updated and complete communications.

4.8.13 Stevens County Fire District #7

Chief: Joe Paccerelli
649 Elm Tree Drive
616 Hwy 395 S (Training Center)
Colville, WA 99114
509 685-9415
scfd7@theofficenet.com

District Summary:

Stevens County Fire District #7 was formed in 1976; covering eight (8) square miles around the community of Arden, located approximately seven (7) miles south of Colville. Currently the Fire District covers 68 square miles and is in the process of expanding to cover 75 square miles by annexation. The fire district abuts the Little Pend Oreille Wildlife refuge on its north and west boundaries.

This is an all volunteer district with 38 members. The district has three (3) structure engines, three (3) tenders, 11 wildland/urban interface engines, and three (3) EMS Aid units of which two

(2) are transport capable, located in three (3) stations. The district provides EMS First Response with EMT's, and First Responders with more EMS personnel being trained.

Priority Areas:

Residential Growth: The main area of growth is along the Highway 395 corridor with the area along Highway 20 East seeing an increase in population.

Wildland/Urban Interface: Approximately 80% of the structures in the district are in a wildland/urban interface area. With the greatest danger areas being the Little Pend Oreille River valley and the three (3) creek drainages to the east of Old Highway 12 Mile Road.

Firefighting Vehicles: The Fire District is in the process of trying to update its vehicles in order to reduce age of District's vehicles and meet the anticipated needs of the Fire District's residents.

Education and Training:

The Fire District holds meetings twice each month and other training sessions as needed.

All District personnel are trained as Wildland Firefighters. We have a Strike Team Leader, in addition to Single Resource Bosses, Firefighter I's, and Firefighter II's. The Fire District provides countywide training for Structural and Wildland firefighting.

Cooperative Agreements:

The Fire District has mutual aid agreements with all county fire districts, and State agencies such as DNR and WSP.

Current Resources:

Station 71 - 649 Elm Tree Dr

- E-71 Type 1 Engine, 4x2, 1250 gpm, 1000 gallons
- A-71 Type 5 Engine, 4x4, 350 gpm, 500 gallons, foam class A or B
- B-71 Type 6 Engine, 4x4, 350 gpm., 300 gallons, foam class A or B
- T-71 Type 2 Tender, 4x6, 350 gpm, 3000 gallons
- R-71 EMS BLS Aid unit, 4x4

Station 72- 1069 Kitt-Narcisse Road

- E-72 Type 1 Engine, 4x2, 1250 gpm, 1000 gallons
- A-72 Type 6 Engine, 4x4, 250 gpm, 250 gallons, foam class A or B
- B-72 Type 6 Engine, 4x4, 250 gpm, 250 gallons, foam class A or B
- T-72 Type 3 Tender, 4x2, 250 gpm, 1500 gallons, foam class A or B
- R-72 EMS BLS Aid unit, 4x4

Station 73- 658 Hall Road

- E-73 Type 2 Engine, 4x2, 700 gpm, 1000 gallons, foam class A or B
- A-73 Type 6 Engine, 4x4, 125 CFM CAF, 60 gallons, foam class A or B, BLS Aid unit
- A-731 Type 5 Engine, 4x4, 350 gpm, 500 gallons, foam class A or B
- B-73 Type 5 Engine, 4x2, 350 gpm, 500 gallons, foam class A or B
- T-73 Type 2 Tender, 4x2 250 gpm, 2500 gallons

Station 74- Mobilization Units

- E-74 Type 3 Engine, 6x6, 350 gpm, 1500 gallons, foam class A
- A-74 Type 6 Engine, 4x4, 350 gpm, 250 gallons, foam class A or B
- B-741 Type 7 Engine, 4x4, 90 gpm, 150 gallons, foam class A or B

- B-742 Type 6 Engine, 4x4, 135 CFM CAF, 90 gpm, 300 gallons, foam class A

Needs: District #7 is in need of new SCBA and PPE, a 3,000 gallon or higher capacity tender, and a 1,250 gpm or higher capacity Type 1 engine. District #7 would also like to remodel or replace Station 71 and build a training tower.

4.8.14 Stevens County Joint Fire District #8

Joint Fire District Ferry #3 & Stevens #8
25290 Hwy 395 N
Kettle Falls, WA 99141-9568
509 738-4591
fire3n8@msn.com

Joint Fire District #8 (Ferry #3) is an all-volunteer fire department with five stations, which also provides "First Responder" medical assistance.. Mutual Aid Agreements are in place between Ferry and Stevens County fire districts, and with the Washington Department of Natural Resources.

Current Resources:

Orient Station

ID #	Type	Make/Model	Year	Tank Size	GPM
3810	Transport	Dodge Caravan	1992		
3811	Brush	Dodge Custom 300 4x4	1978	300	90
3812	Brush	Ford F450	2005	500	90
3813	Brush	Chevy Cheyenne 4x2	May 1992	220	160
3814	Engine	Ford Darley	1981	1000	1006
3815	Rescue	Chevy Amulance	Dec 1976		
3818	Tender	White Westernstar	1973	4200	120
3819	Support	Chevy 4x4	1985		

Barney's Junction Station

ID #	Type	Make/Model	Year	Tank Size	GPM
3821	Brush	Dodge Power 350 4x4	July 1981	400	90
3824	Engine	Ford Pierce	1974	1000	1000
3828	Tender	White Transtar	1976	3000	600

Hagg's Cove Station

ID #	Type	Make/Model	Year	Tank Size	GPM
3831	Brush	Ford F350	2004	400	90
3835	Rescue	Ford Econoline	March 1988		

Barstow Station

ID #	Type	Make/Model	Year	Tank Size	GPM
3841	Brush	Humvee Hummer	1985	250	600
3842	Brush	Ford Super Duty 4x2	May 1991	220	160
3844	Engine	Mack Tele Squirt	1982	500	1250
3845	Rescue	Chevy Ambulance	1983		
3847	Tender	GMC General	1984	5000	800

ID #	Type	Make/Model	Year	Tank Size	GPM
3848	Tender	Ford F900	1980	5000	800
3849	Support	Chevy Custom 4x2			800
3849	Pump	Hale Pump			1000

Tipton Station

ID #	Type	Make/Model	Year	Tank Size	GPM
3851	Brush	Chevy Cheyenne 4x2	1992	220	160
3854	Engine	Ford Pierce	1985	750	
3857	Tender	Mack		5000	600
3859	Support	John Deere Pump Trailer			1000

4.8.15 Stevens County Fire District #9

Chief: Acting
2396 Lake Sherry Homes Drive
Colville, WA 99114
509 684-3375

Board of Commissioners:

Glen Thompson, Chairman *(509) 684-6153*
Don Kopcyznski *(509) 684-3645*
Brian McCollim (509) 684-7968
Dee Ann McCollim, Secretary *(509)* 684-7968

Location: NE Stevens County, Little Pend Oreille Lakes (LPO Lakes)

Size: 8 square miles

Tax Revenue: 2005: $17,450

Assessed property value: $29, 876, 235.

Topography: Private ground is heavily timbered to waters edge. The majority of structures are located at the waters edge. DNR and USFS land surrounding the lakes is heavily timbered, mountainous terrain.

Demographics: Owners of property on the LPO Lakes range from Full-Time residents, to residents that spend summers at the “lakes” and winters in warmer climates, to individuals that have “week-end” places that are used every week-end to once- in- awhile. There are 45-50 Full-time residents during the summer months. That number drops to about 25 during the winters. The majority of Full-time residents are retired and range in age from 55-80 years old.

Weekend residents are generally younger with children. During the summer months, week-end residents increase the population to over 220. Three very popular USFS campgrounds can raise the “population” to nearly 2,000 during summer week-ends.

Strategic Layout: FPD# 9 has one fire station located in mid district. The station is a 40’X60’ building with a 16’X60’ overhang. All trucks can be parked in heated space which enables the district to have 5,500 gallons of water on board during winter and summer months. A 1 ‘/2” water hydrant is located inside the station for refilling during the winter. A drafting access to the lake is available during summer months.

Current Resources:

Type	Resource	Gallons	Drive	GPM
3	Engine	600	4x2	750
2	Ender	3000	4x2	600
3	Tender	1100	4x2	600
6	Engine	300	4X4	120
6	Engine	300	4x4	120
	16' Boat	Lake		200
	14' Boat			75

Staffing: FPD# 9 is an all volunteer district. The station has no full time manning. Presently there are approximately 26 trained volunteers. The district can usually count on 6-10 responders at any given time. Three elected Commissioners provide direction and operating guidelines.

Fire Training Level: 80% of the volunteers have Fire Fundamental and EVAP training. Six individuals have Fundamentals, EVAP and Red CaRoad Two individuals also have Incident Command.

Responses: Annually 3-7 responses over the last ten years. Mostly wildland fires and illegal burning. Some vehicle accidents and off-road vehicle injuries.

Mutual Aid: Agreements in place with USFS, DNR, and FPD# 7

Jurisdiction Boundaries: Private lands surrounding the LPO Lakes. South boundary is Coffin Lake. North boundary is Stevens/Pend Orellie county line. District straddles SR 20 for approx *5* miles.

Fire Ignitions and Risk Assessment: Heavy timber throughout the district. Lightning storms are common during summer months. High density of structures in the area. Large number of campers during summer months.

District Goals:

1) Work closely with community to encourage and complete fire prevention projects. Work closely with up-coming Urban Interface project. (Three Rivers Project)

2) Recruit additional volunteer personnel and encourage "younger" individuals to participate.

District Critical needs: Due to the location of FPD# 9, Communications are very inadequate. Radio communication is very unreliable with the antiquated equipment we have. No Cell coverage is provided in the area. Hand held radios allow us to communicate with-in the district, but land line is our only means of communicating to dispatch or others. The alarm is presently sounded by E911 calling the siren. We are currently working to secure grant funding to improve our communication abilities.

4.8.16 Stevens County Fire District #10

Chief: Fred Fredrickson
2572 Smack Out Creek Rd
Colville, WA 99114
509 732-1112

Commissioners: Richard Johnson 509 732-4292
Eugene Cwalinski 509 732-8841
Robert Chipps 509 684-7678
Secretary: Rebecca Johnson 509 732-4292

District Summary:

The fire district covers a population of 920 and an area of 34 square miles. The fire district covers from Cedar Creek in the north, along Deep Lake-Boundary Rd . and Aladdin Road to Rocky Creek in the south, and west along Aladdin Road to include Black Canyon. During the Black canyon Fire in 2003, 213 structures in the Black Canyon (9), Aladdin Road (30), Deep Lake-Boundary Road (133), and Cedar Lake (41), areas were assessed and mapped. The Cedar Creek area has since been added.

Current Resources:

Smackout Station

Type	Resource	Tank Capacity	Axles	Other
6	Engine	300 gal	4x4	Foam
3	Engine	750 gal	4x2	WX 10
3	Engine	500 gal	4x2	
3	Tender	2000	4x2	250 gpm

4.8.17 Stevens County Fire District #11

P.O. Box 662
Northport, WA 99157
509 732-0262 (answering device)
scfd11@plix.com

Chief: Mark Burnell 732-6126/hm
Commissioners Bill Beusan 732-6211/hm
Daniel Gruener 732-1114/hm
George Terrill 732-4274/hm

DISTRICT SUMMARY:

Stevens County Fire Protection District #11 is an all-volunteer department with 25 volunteers. The district is comprised of 100 square miles in northern Stevens County. The Columbia River runs through the district and the northern boundary is the Canadian border. Much of the district is mountainous. Many areas are steep with unpaved roads that can be challenging if not impossible for large fire apparatus to access. During summer the days are long and hot. Lightning strikes can cause numerous wild fires.

The district was voted into existence in 1995. It began training and acquiring vehicles through the Federal Surplus Program in 1998. The volunteers' initial pagers and old bunker gear were recycled from other departments. Today, Fire District 11 has seven operational fire fighting vehicles that are spread out to four locations throughout the district. The District has three buildings at Station 1: a heated garage housing four vehicles, a meeting room/office and a building that some day may be a residence for volunteers, in an effort to reduce response time. Most of the District's fire fighters have new structure fire and wildfire turnout gear acquired largely through grant funding.

The small municipality of Northport is located within the district but it is not part of the district. Fire District 11 has an auto-aid contract with their fire department for them to respond to all district fires. This decreases response time to the north end of the district especially and provides the district with additional water and personnel. Fire District 11 has no hydrants in the district outside of the Marble Community (and Northport).

Jurisdictional boundaries: Generally speaking, in the north, the Colville National Forest land lies to the east and west of the district. In the south, the Colville National Forest land lies to the east and Washington State DNR land lies to the west of the district. There are significant timber industry holdings within the district.

Mutual aid agreements: Fire District 11 has agreements with all Stevens County Fire Districts in general and with Stevens County Fire District 10 in particular. The district also has a mutual aid agreement with the Washington State Department of Natural Resources. As mentioned in the Overview, Fire District 11 has an auto-aid contract with the Northport fire department for them to respond to all of Fire District 11 fires.

Current resources:

Year	Make	Model	Tank Capacity
1986	Chevrolet (MDL)	Quick Response 4x4	200 gal*
1963	International	Brush Truck	500 gal****
1986	Chevrolet	Quick Response	200 gal*
1984	GMC	Structure Engine	500 gal*
1982	GMC	Structure Engine	350 gal***
1972	MDL M35	Tender 6x6	1000 gal****
1981	GMC	Tender	1200 gal*
1992	Chevrolet	Tender	1800 gal**

District 11 currently has only one dedicated fire hall: Fire Station 1. The district has four vehicles that are housed at Station 1 in the south end of the district, SPA 5, (as indicated by a single asterisk (*) above), one tender parked in Northport (**), one engine parked at a commissioner's residence in the northeast corner of the district, SPA 1 (***), and two vehicles that are only in service during wildfire season (****) one brush truck of which is parked in the northwest corner of the district, SPA 2, and one tender parked at Station 1 during wildfire season (April through October).

Volunteer training: Fire District 11 has 25 volunteers including four under 18 or 18 years of age. Sixteen of the volunteers who are over 18 have had red card (basic wildland fire fighting) training. Over half the red-carded volunteers have had additional wildfire training. Over half of all the volunteers have also had basic National Incident Management System training. All but two of the volunteers over 18 have had basic structure fire fighting training.

Community outreach: Fire District 11 has put out a newsletter to reach as many of the residents of the district as possible encouraging fire prevention and emphasizing the importance of defensible/survivable space. Articles have also been submitted to, and printed in the two local school newsletters with similar but somewhat abbreviated messages along the same lines. The DNR gave a defensible space presentation early in the district's existence at the district's request, and the district gave a similar presentation during the summer of 2006.

PRIORITIES

Residential Growth – Ideally, all residents would have established "survivable" and/or "defensible" space around their homes. That is not the case at present. Ideally, relatively fire safe ingress and egress from residences (escape routes: more than one way in and out) would help assure the safety of residents in the event of a wildfire. Such is not the case currently and/or is not as certain in some areas due in part to a confusing maze of roads that would make it difficult to exit the area easily in the event of a wildfire. Ideally, the district would have an

inventory of all residences within the district in the event of a major wildfire that might be able to be defended by fire service personnel. That is not currently available for the whole district.

Areas within the district that are in most need of improving their ingress and egress (escape routes) due in part due to the high density of residents living along these relatively remote roads are: Quinns Meadow Road, Miller Road, Wynowick Road, Red Tail Way, as well as Mitchell Flats Road, Bodie Mountain Road, Hawks Road, and Flora Road. Roads within the district that should have fuels modified along them by at least eliminating ladder fuels to improve safe access in the event of a wildfire are: Quinns Meadow Road and Miller Road. Quinns Meadow Road is also too narrow for two-way traffic, which would be important in the event of a wildfire to allow residents to leave and fire fighting personnel access to the fire at the same time.

Communications: Communications in the District's fire fighting vehicles is satisfactory under most situations. The district's testing of hand held radios that are also pagers to better coordinate initial attack has proved to be disappointing.

Vehicles and fire stations: The district is always looking for used fire fighting vehicles that are within their budget limitations and government surplus vehicles that might be of use to the district. The district is also limited in where to house additional wildfire and/or structure fire vehicles. The current fire station is filled to capacity (4 vehicles) without altering the structure to accommodate additional resources. Plans are being made to open up one end of the present garage structure that is without an entrance door at Fire Station 1 in order to house two additional vehicles.

Burn ban regulations: In the past there has been a lack of communication between those who establish burn bans (the DNR and the county commissioners) and the fire district. That lack of information tended to be even worse amongst the district's residents. Recently, the DNR and the county have coordinated their fire restrictions and the district has been kept better informed of their coordinated burn bans during wildfire season.

EFFECTIVE MITIGATION STRATEGIES:

Continue to outreach to the public as much as possible to encourage FireWise landscaping and construction practices so that in the event of a wildfire the residents of the district have greater confidence that their homes will still be there to return to. While fuels modification (creating a survivable/defensible space) around one's home is essential for that outcome, managing the vegetation enroute to all the residences within the district is also very important for safe egress of residents in the event of a wildfire, but also for the safety of fire fighters access in such situations.

Continuing to recruit new volunteers and having them thoroughly trained in the basics of fire fighting is essential to keeping up an active core of fire fighting personnel to respond to emergency incidents. Continuing to encourage additional training above and beyond the basics is also important to keeping those volunteers as proficient as possible and in order to bring such additional training back to the rest of the volunteers to benefit from at the district's regular monthly meetings. Continuing to encourage professionalism as much as possible for a volunteer department also serves to enhance the effectiveness of the district's emergency response.

Acquiring additional vehicles and establishing satellite stations in the more remote areas of the district is an ongoing process in order to decrease response time to an incident any where in the district. Improving communications to better serve in responding to the incident as effectively and as efficiently as possible is also an ongoing process as is the development of water sources throughout the district through the establishment of dry hydrants where ever possible.

Continuing to network with other fire districts and emergency responders to improve the communication of significant information is very important even without the threat of a catastrophic wildfire. With that threat and/or event, it is absolutely essential. The more it can be done before a major incident, the more likely that the groundwork will have been laid for as successful and favorable outcome to such a catastrophe as might be possible.

In an effort to be better prepared in the event of a wildfire, the district is planning to outreach to it's residents to provide risk assessments for their homes to give the residents a better idea of their home's defensibility and/or survivability in the event of a wildfire. That project is scheduled to begin in 2007 with the training of the volunteers on how to assess the wildfire risk of a home as thoroughly as possible. Such information would be collected as the basis for wildfire planning in the future as well as a means to be sure the public has an objective evaluation of their home's wildfire preparedness.

FUTURE CONSIDERATIONS

Since the concerns of the district regarding residences are largely addressed in the County's Land Services Center Customer Service Bulletin #B-6 entitled Guide for Rural Residential Fire Protection Zones dated 4/4/2006 that is given to building permit applicants, it might be of some significant positive impact if such "guidelines" were made mandatory. Those guidelines address such extremely important items as: road access, defensible space, utilities, building construction, and address signage standards (in order for the residence to be located as efficiently as possible in the event of an emergency). Signage is particularly important within Fire District 11 because many residents live some distance from their mailboxes along a myriad of non-county roads that are common access for many of their neighbors without any signage whatsoever. A minimum standard for signage would be 3-4" reflective light colored letters on a dark background.

Since establishing escape routes and making them known to the residents is a concern for the district in the event of a wildfire, it might be of some benefit to residents to have placards along such escape routes. This is seen as significant at the end of Mitchell Road where a confusing tangle of old roads to the northeast might be difficult to navigate in the event of a wildfire.

As noted previously under "Effective Mitigation Strategies", it is the district's goal to establish smaller fire stations throughout the district where there are volunteers to maintain them. Three such locations are seen as priorities: 1) in the northwest corner of the district (SPA #2), 2) in the northeast corner of the district (SPA #1), 3) and in the south central part of the district where about 60% of the district's residents and a similar percentage of the district's volunteers reside.

4.8.18 Stevens County Fire District #12

Chief: William Murphy
2914 Hwy 25 S
Rice, WA 99167
509 738-6352
scfpd12@uitraplix.com

District Summary: Stevens County Fire District 12 is 75 square miles in size (48,000 acres) ,and encompasses 370 households, and serves approximately 1000 full-time residents. It is bordered on the West by Lake Roosevelt National Recreation Area which swells the summer population by thousands as tourists enjoy the recreational opportunities on the lake. State Hwy 25 runs North-South along the river and is a major traffic corridor for trucking, logging, and hazardous materials transportation to and from eastern British Columbia and eastern Washington State. We are bordered by Fire Dist. 2 on the south, Fire Dist *5* on the east, and Fire Dist. 6 on the north. Mutual Aid agreements exist with all Stevens County

Districts, as well as with the DNR, National Park Service, and the BLM. District 12 is responsible for fire protection for two developed NPS campgrounds, two boat ramps, State and County Highway facilities, an elementary school, and an electrical substation. Most of the Fire District consists of forested mountain slopes, rolling farmland, brush land, and many remote and rugged mountain canyons.

PRIORITY AREAS

Residential growth- Residents are increasingly choosing to live in difficult to reach, and defend, mountaintop homes. In the winter months these driveways may be too risky to negotiate with our fire apparatus.

Communications - Due to the rugged topography radio communications are not always possible.

Water sources development - Lack of hydrants in our district limits our ability to supply adequate water resources for wildlands and structure fires. Lake Roosevelt and its boat launches are not available throughout the year due to reservoir level changes.

Resources (people and apparatus) - Recruiting of firefighters is a constant priority due to natural attrition and a lack of younger community members willing to volunteer. We are constantly attempting to upgrade our vehicles, most of which are Government surplus vehicles, and maintenance is a constant priority.

Firefighting vehicles - Due to limited funding, the age and capabilities of our vehicles is a constant concern.

EDUCATION/TRAINING

Our fire district is committed to ongoing training with monthly drills and continuing education to improve our fire fighting skills. 90% of our personnel are trained in both structural and wildland (red card) fire fighting. This is a necessity in our district which has a great amount of urban/interface lands. As EMS First Response district, nine fire fighters are trained to respond to both trauma and medical emergencies within our boundaries.

FUTURE CONSIDERATIONS

1. Developing future water resources
2. Acquiring highly mobile firefighting vehicles that can manage the steep terrain within our Fire District.
3. Improving our ability to respond to emergencies and fires on and along our 17 mile border with Lake Roosevelt.
4. Construction of an additional station in the middle section of our district to improve response times.

CURRENT RESOURCES

Rice Station

Type	Call Number	Pump Size	Tank Size
International	Attack 1216	350 gpm	1000 gal
Ford	Engine 1211	1000 gpm	1000 gal
International	Tender 1211	400 gpm	2000 gal
Type 6	Brush 1211	100 gpm	200 gal
6x6	Brush 1213	200 gpm	1500 gal

Type	Call Number	Pump Size	Tank Size
Type 6	Brush 1219		
1st Response	Rescue 1218		

Gifford Station

Type	Call Number	Pump Size	Tank Size
Ford	Engine 1221	750 gpm	1000 gal
GMC	Tender 1221	400 gpm	2500 gal
6x6	Brush 1221	200 gpm	1200 gal
Chevrolet	Brush 1222	100 gpm	22 R gal
1st Response	Rescue 1228		

4.9 Wildland Fire Districts

4.9.1 Washington Department of Natural Resources

Northeast Region
Colville, WA 99114
509 684-7474

4.9.1.1 North Columbia District

North Columbia District provides fire suppression, fire prevention, burning regulation and enforcement on approximately 1.35 million acres of private and state trust land in portions of Stevens, Ferry and Pend Oreille counties. While most of our district lies within Stevens County, a portion of our district encompasses eastern Ferry County. Due to the fact that most state trust land lies within Stevens County, the majority of our fire personnel spend most of their time working on projects in Stevens County. In order to ensure adequate fire response, our district has a large staff of seasonal employees and the equipment necessary to support our firefighters.

Staffing

North Columbia District has eight full time employees. Two of these employees work primarily in the fire program. The district also has 33 seasonal employees that support the fire program. The majority of these individuals are only employed from June 16 to September 15 of any given year. A handful of seasonal employees, currently five, are employed for a longer period of time. This period of employment averages April to November 15. Most employees are qualified as wildland firefighters only, but some hold a variety of NWCG qualifications such a single resource boss, task force leader and division supervisor. Due to the fact that the North Columbia work center is co-located with the region office in Colville, we are often able to pull permanent staff from the main office to assist with fires as needed.

Resources and Crew Configurations

North Columbia Ten Person: This trail crew travels in two 4X4 type seven engines. Each one carries 150 gallons of water. Other equipment includes various hand tools, chainsaws, portable pumps, fire hose and various fittings.

Five Type 6 Engines: Each engine is 4X4, staffed with a crew of three. Each engine carries 240 gallons of water and assorted tools and equipment as above.

One Type 5 Engine: This engine is staffed with a crew of three. This two-wheel drive engine carries 620 gallons of water and is equipped as the other engines.

One Type 7 Engine: This 4X4 engine is staffed with crew of three, carries 150 gallons of water, and equipped as the other engines.

Two mop up trailers: These trailers are outfitted with several thousand feet of 11/2 and 1 inch fire hose, porta- tanks, pumps, various fittings, and other equipment.

One 2000 gallon water tender: This federal excess truck is used to shuttles water to fires as needed. It can be operated by a few employees who hold CDL endorsements. It carries some fire hose, fittings, and a porta-tank.

In addition to our own local resources, we have access to NE Region resources. Air resources include the 1500 gallon PBY air tanker based out of Deer Park, and several type 2 DNR helicopters based out of Ellensburg. One helicopter is usually moved to northeast Washington during times of high fire danger. We have access to federal air tankers, as well as Canadian air tankers. North Columbia District has fire response agreements with all rural fire districts in Stevens County. Through these agreements, DNR has the ability to hire fire districts resources to supplement DNR fire resources as needed. DNR also hire private contractors for hand crews, engines, water tenders, timber fallers, and dozers when needed.

4.9.1.2 Arcadia District

Work Center, Deer Park, WA

The Department of Natural Resources provides wildfire protection and suppression on privately owned forest land and state owned forest land in the state of Washington.

The Arcadia District of the DNR encompasses approximately 2.1 million acres of private and state lands in the counties of Spokane, Stevens, Lincoln and Pend Oreille in northeast Washington. Mutual Aid Agreements with 18 rural fire protection districts, the Colville National Forest, the Spokane Indian Agency, The Kalispel Indian Agency, US Fish and Wildlife Service, and the National Park Service provide for DNR assistance in fire protection assistance in and adjacent to the Arcadia District. The border of the Arcadia District includes all of Spokane County, the portion of Lincoln County north of US Hwy 2, the portion of Stevens County south 01 Deer Lake and east of the Hunters divide, and the portion of Pend Oreille County South of Tiger and Sullivan Lake.

Special features within the district include the Cities of Spokane and Spokane Valley, the Kalispel Indian Reservation, Spokane Indian Reservation, Turnbull National Wildlife Refuge, Mt. Spokane State Park, Riverside State Park, Lake Roosevelt National Recreation Area, and portions of the Colville National Forest.

The district's primary workstation is located in Deer Park, north of Spokane. The DNR utilizes a "home guard" approach in that the seasonal engine drivers park their assigned engines at their residence within their assigned geographic portion of the district. The Arcadia District staffs ten to eleven 3-person brush engines within the district each season, with one engine in south Stevens County, one engine in South Pend Oreille County, and the remainder spread through out Spokane County. Engine staffing is on a varied schedule that provides seven day per week coverage June through September.

The Arcadia District is also is home to a PBY air tanker on contract by the state. The 1500 gallon scooper fixed wing aircraft is based at the Deer Park Airport, and is available from mid June until the fire season is declared over in the fall, usually late September.

The DNR maintains "call when needed" contracts for Dozers and operators trained and equipped for fire suppression throughout the district.

The Arcadia District is also the home to the Airway Heights Camp Program, which staffs five 10 person inmate hand crews trained in wildland fire suppression.

DNR crews are neither trained nor equipped for structure suppression. Primary protection responsibilities are on private and state forest land throughout northeast Washington and the DNR also responds to fires off of DNR jurisdiction which threaten DNR protection.

The DNR does not provide formal EMT services. The crews are trained in first-aid, and some staff members have EMT and first-responder training, but this is not a service the DNR provides as part of their organization.

Personnel: The Arcadia District fire program staff totals 38-40 individuals, including 4 permanent employees, 5 career-seasonal employees who work up to nine months each year, and 30 seasonal employees on staff from roughly June to September. These are all paid staff members trained in wildland fire, but not in structure protection. Within the District an additional 5-8 permanent employees work in other programs, but assist in the fire program during the summer as needed.

Mutual Aid Agreements: The DNR has individual mutual aid agreements with local fire protection districts. Through the “Master Agreement” and “Northwest Compact”, the DNR has mutual aid agreements with Federal Agencies, neighboring states and Canada.

Make/Model	Capacity (gal)	Pump Capacity	Type
Ford	240	120	Wildland T6
Ford	240	120	Wildland T6
Ford	240	120	Wildland T6
Ford	240	120	Wildland T6
Ford	240	120	Wildland T6
Ford	240	120	Wildland T6
Ford	240	120	Wildland T6
Ford	240	120	Wildland T6
Ford	240	120	Wildland T6
Ford	240	120	Wildland T6
Ford	240	120	Wildland TB
International	600	120	Wildland T5

The Arcadia District Contracts Dozers as needed. The Arcadia District is home to the 5— 10 person Airway Heights crews. The Arcadia District is base to the PBY, Tanker 85. The Arcadia District staff includes: Type 3 Incident Commanders and Division Supervisors, and other various NWCG rated overhead staff. The Arcadia District maintains a supply cache and two mop-up support trailers with portable pumps, hose, and fittings.

Additional suppression resources include:

Helicopter: The DNR has six type 2 helicopters based out of Ellensburg, and they are staged throughout the state as needed. In times of high fire danger there is often a helicopter staged at Colville and occasionally at Deer Park.

Fixed-Wing: The DNR Northeast Region often partakes in contracting a fixed-wing platform for Air-Attack during peak fire periods.

Air Tankers: In addition to Tanker 85, the Arcadia district has access to Federal Tankers, Coure d’ Alene Air Tanker Base is nearby and often has a tanker on base during high fire

danger periods, although with reduced aircraft available the availability has been decreased. In addition, the DNR is able to utilize Canadian Air-Tankers through agreements.

4.9.2 USDA Forest Service

The USDA Forest Service in Stevens County is responsible for managing the Colville National Forest, which covers a large land base in Stevens, Ferry, and Pend Oreille Counties.

Three Rivers Ranger District

Call #	Year/Make	Model	Tank Capacity	Pump Capacity
E11	2004/-550	Type 6, Model-33U	300	BB4/ 110 GPM
E12	2002/International	Type 3, Model 123	1000	Hale PTO CP3 400 PSI

Republic Ranger District

Call #	Year/Make	Model	Tank Capacity	Pump Capacity
E21	2005/F-550	Type 6, Model-33U	300	BB4/ 110 GPM
E22	1999/F-450	Type 6, Model-52	300	BB4/ 110 GPM

Sullivan Lake/Newport Ranger District

Call #	Year/Make	Model	Tank Capacity	Pump Capacity
E31	2005/F-550	Type 6, Model-33U	300	BB4/ 110 GPM
E32	2007/International	Type 3, Model 123	500	Hale CBP250 /250 GPM
E33	2005/F-550	Type 6, Model-33U	300	BB4/ 110 GPM
E34	2001/F-450	Type 6	300	

4.9.3 Bureau of Indian Affairs, Spokane Agency

PO BOX 389
WELLPINIT, WA 99180
509 258-4566

Agency Summary: The Spokane Agency BIA Fire Management is responsible for wildland fire protection, for the entire Spokane Reservation which is located in the southern part of Stevens County. There is only one duty station located in the town of Wellpinit WA. We currently have 10 ten full time employees and 4 career-seasonal, we hire 3-6 seasonal every year, and three personnel for the lookout towers. Our primary concern/responsibility is to protect life, trust lands/all land within or threaten the reservation and tribal resources. We are capable of handling most Type *3* wildland incidents. We have mutual aid with Stevens County Fire District 2, Spokane Tribal Volunteer Fire Department, and Washington State DNR.

Priority Areas:

Residential Growth: There is one new housing development on the reservation just within the last five years located near Ford, WA. We can expect a lot more homes to go up in the next ten years. The area of concern is the wildland-urban interface a majority of the entire homes on the reservation fall under this category.

Communications: Communication on the reservation are good with a few black holes which are easily mitigated with human repeater or using the Lookout Towers as a relay to dispatch.

Firefighting Vehicles: The agency has four Type-6 engines, two Type-4 engines, and two truck/trailer with a D-6 & *D-5* cat and numerous crew vehicles.

*Burn Permit Regulations***:** Burning permits may be issued upon request, by the persons authorized by the Fire Management Officer (FMO). Currently, the authorized individuals are the Dispatcher, Fire Prevention Officer, and the Cache Manager. At the discretion of the Fire Management Officer, the site of the burn permit may be inspected prior to approval. During periods of high fire danger restrictions and/or shutdowns may be placed on burning by the Fire Management Officer.

Effective Mitigation Strategies: The Spokane agency has a fuels program and they do project work in the WUI (Wildland Urban Interface), HFR (Hazard Fuels Reduction) along side roadways on the reservation, and prescribe fire to help keep the forest health. The fuels program is just one of many ways that the agency is able to mitigate our large fire potential and fuel loading. Another way we preposition equipment during periods of high fire danger and taking advantage of being able to have a severity helicopter when ERC and 100 Fuels it the 97 percentile . We use "hoot owl" to shut down the woods after 13:00 P.M. during period of very high fire danger. "WETIP" is another avenue used to help stop arson caused fires. The "WETIP" program is a national program for the BIA agencies which offer up to $10,000 in reward money to any conviction of arson crime on Indian land.

Education and Training: The Fire Prevention program at the Spokane agency was established 2004 and had approved prevention plan in 2005-2009. We use Smokey the Bear at school, community events, and some special events. The agency offers educational programs to school on the Spokane & Kalispel reservation and surrounding communities. We us the local paper "Rawhide press" to go out appropriate Fire Prevention message for every month. The agency has offered numerous training ranging from Fire Investigation to Guard school.

Cooperative Agreements: There is 3 mutual aid agreements, one with the Spokane Tribal volunteer Fire Department, Stevens county fire district 1 & 2, and the Washington State Department of Natural Resources. These agencies are able to help us out instrumental when it comes to structure protection during wildland fires because our program is gear to fight wildland fires and we don't have the proper training to do structure protection.

Current Resources:

Year/Make	Model	Tank Capacity
1999 Ford F-450, 4 x 4	Type 6 Wildland	300
2002 Ford F-550, 4 x 4	Type 6 Wildland	300
2004 Ford F-550, 4 x 4	Type 6 Wildland	300
2005 Ford F-550, 4 x 4	Type 6 Wildland	300
2002 Dodge 3/4 ton		150
2001 John Deer Gator 6 x 2		75
1999 International 4900 Dt 466E	Type 4 Wildland	750
1984 GMC Diesel 7000	Type 4 Wildland	750
1968 Army surplus	Tender	1000
2001 Freightliner *W/* Trailmax Trailer	Haul Truck	
1994 Peterbilt *WI* Trailmax Trailer	Haul Truck	
1997 Cat Dozer D-6	Type 2 Dozer	
2000 Cat Dozer D-5	Type 2 Dozer	

Future Considerations: The Bureau of Indian Affairs fire programs budgets have been declining for the last few years and it is not going to let up any time soon. There is a demand on training because of the of the 2009 deadline set forth by the government for incumbents to become qualified in rolseries in the 13 key positions. The agency has four positions right now that fall under the key position. With all the budget cuts we have had to rely on the Tribal Forestry & Tribal DNR and our local cooperators to help out and support Fire Management on a lot of suppression activities. Another possibility is getting a contract helicopter to help us and our local cooperators with wildfire suppression.

4.9.4 U.S. Fish and Wildlife Service, Little Pend Oreille Wildlife Refuge

Fire Management Officer: Steve Pietroburgo
Telephone: 509-684-8384
e-mail: steve_pietroburgo@fws.gov
Address: 1310 Bear Creek Road
Colville, WA 99114

District Summary: 42,000 acre National Wildlife Refuge 13 miles SE of Colville, WA. Elevation Range of 1,800' on the west and 5,600' on the eastern part of the Refuge.

Residential Growth: Houses being built on the west and north boundaries of Refuge.

Communications: FWS radio frequencies. Go through Colville National Forest for Dispatch, but also work closely with WA DNR. Hand held and mobile radios.

Burn Permit Regulations: Go through Washington State DNR for smoke permits.

Effective Mitigation Strategies: Thinning along Refuge boundary as highest priority followed by prescribed burning. USFWS WUI grant money utilized to thin on private property adjacent to Refuge.

Education and Training: Professional series of fire managers require a bachelor's degree or similar education. NWCG courses and on-the-job training to meet fire line qualifications.

Cooperative agreements: National agreements with Dept. of Interior, Dept. of Agriculture, and Washington State DNR. Working on agreements with local fire districts. Rural Fire Assistance grants for local fire district.

Current Resources:

Year	Make	Model	Tank Capacity	Pump Capacity
1986	International	Type 3	1,000	100+
2001	Freightliner	Type 5	500	100
2002	Ford	F-450	300	75
2000	Polaris	6 x 6 ATV	70	25

4.9.5 Bureau of Land Management, Spokane District

Scott Boyd - Fire Management Officer
1103 N Fancher
Spokane, WA 99212
sboyd@or.blm.gov
509 536-1237

District Summary:

The Spokane District BLM has 2 engines. One is located in Spokane and the other in Wenatchee. With the District's scattered ownership pattern, the engines are usually on scene after initial attack forces have arrived. The engines are available off district and out of state.

Cooperative Agreements

The Spokane District BLM has Coop agreements with the Colville National Forest and the DNR.

4.10 Issues Facing Stevens County Fire Protection

4.10.1 Lack of Fire Protection in Populated Rural Areas

Several of the Strategic Planning Areas have regions along the outskirts of existing fire protection districts that have become populated, but have yet to become incorporated into the fire district or form a new one. In some cases, residents in this area are not even aware that they do not have structural or wildland fire protection. Due to the combination of timber and rangelands, a wildfire could potentially spread to residential areas before suppression resources arrived. A local effort to begin the process of researching potential options for gaining some kind of fire protection in these “no man’s land” areas should be considered. Recent fires across the northwest, have residents and firefighters alike concerned that the lack of response could lead to even small fires growing into a large, destructive wildfire before any organized suppression effort arrives to help. Furthermore, there are safety, communication, and liability issues when residents are left to fend for themselves or when neighboring fire districts or agencies leave their own jurisdiction to aid the effort.

Although the need for an organized fire suppression tactic in currently unprotected areas is obvious, the solution is not easy. Forming a new district or annexing into an existing district will require support (both monetary and social) from citizens as well as additional stations, volunteers, training, equipment, etc. Other options may include contracting with an agency or private organization to provide some level of structural and/or wildland fire protection. Equally important will be the formation of mutual aid agreements with other fire departments and agencies.

At this point, it is the responsibility of the landowners in the unprotected regions of Stevens County to lead the effort of researching potential options, garnering local support, and presenting the most desirable option to the County Commissioners.

4.10.2 Hedlund Bridge Closure

The closure of the Hedlund Bridge accessing the Kelly Hill area across the Kettle River Arm near Kamloops Island significantly slows emergency response to this area. Both residents and emergency responders alike must travel approximately five miles farther north to the bridge at Boyds to enter or leave this somewhat isolated region of Stevens County. In the event of a wildland fire or other emergency, this may create evacuation issues as this is the only reasonably short access route. The Northport-Flat Creek Road does provide an additional escape route north along Lake Roosevelt; however, this is a much longer and slower corridor.

4.10.3 Local Fire Department Transition to Paid Staff

Most of the local city and rural fire departments and districts operate solely on volunteer time. As communities grow, the amount of time needed to fully operate an effective and successful fire response organization becomes too much of a burden to place on volunteers resulting in high turnover and low recruitment rates. Several Stevens County Fire Districts and city departments are nearing this breaking point. It is the responsibility of communities that rely on

these districts to begin researching options to hire partial or full time paid staff to maintain the high quality of emergency response they depend on. In turn, fire districts must make the public aware of the need for paid staff and organize a campaign to gain local support.

4.10.4 Accessibility

Fire chiefs throughout the County have identified home accessibility issues as a primary concern in some parts of Stevens County. Many homes and driveways have been constructed without regard to access requirements of large emergency vehicles. Lack of accessibility restricts engagement by fire suppression resources. Enforcement of the International Fire Code, regarding road and driveway construction standards for fire apparatus would prevent accessibility issues in new developments.

4.11 Current Wildfire Mitigation Activities in Stevens County.

4.11.1 Northeast Washington Forestry Coalition

The Northeast Washington Forestry Coalition (NEWFC) is a community based non-profit organization involving industry, conservation groups, natural resource agencies, and residents cooperating to encourage and facilitate the use of natural resource principles that promote ecosystem health and diversity. Through community involvement and education, the coalition supports management of all land within the watersheds in a manner that sustains natural resources and that will, in turn, contribute to economic and community well-being and resilience.

NEWFC has been a participant in identifying, encouraging, and collaborating with the U.S. Forest Service to promote stewardship projects in the wildland urban interface that will accomplish fuels reduction, improve forest health, and improve defensible space for adjacent landowners. NEWFC has been a member of the County National Fire Plan (NFP) Grants ranking committee and a proponent for several specific grant proposals.

Table 4.9. NEWFC Involvement in Stevens County Wildfire Mitigation Projects.

Name	Funding Type	Lead Entity	Project Type	Timeline
Burnt Valley	Stewardship	USFS	Fuels Reduction	Completed 2006
Lakes	Stewardship	USFS	Fuels Reduction	Planning
Sand Creek / Pierre Lake	Stewardship	USFS	Fuels Reduction	Planning
Flowery Trail Homes Assoc.	National Fire Plan	DNR	Defensible Space	Grant Request
Waitts Lake	National Fire Plan	Stevens County Conservation District	Fuels Reduction	Grant 2008

4.11.2 Wildland Fire Mitigation Projects

Several organizations in Stevens County have been successful in developing, funding, and implementing wildland fire mitigation projects. These projects have been well-supported by the community and are helping to lessen the impact of wildfires on Stevens County residents, structures, ecosystems, and economy.

Suncrest Home Defensible Space Project - The Department of Natural Resources (DNR) partnered with Firesafe Spokane and Stevens County Fire District #1 to conduct defensible space treatments around homes in the community of Suncrest. The treatments were conducted on private property and community bridle trails. The fuel reduction project involved the removal

of pre-commercial regeneration, brush and ladder fuels. The project was funded by a National Fire Plan grant.

Spokane Reservation Fuels Reduction Project - The Department of Natural Resources partnered with the Spokane Bureau of Indian Affairs (BIA) and Stevens County Fire District #1 to develop strategic fire breaks in the Ford and Springdale Communities. The treatments were conducted on private property adjacent to Spokane Reservation lands. The project involved the removal of ladder fuels, pre-commercial regeneration, and brush along strategic corridors. The project was funded in 2004 by a National Fire Plan grant from the BIA.

Flowery Trail Fuels Reduction Project - The Department of Natural Resources partnered with Firesafe Spokane, 49 Degrees North, and the U.S. Forest Service to create defensible space around structures in the Flowery Trail area. The treatments were conducted on state-leased property. The project was funded by a 2003 National Fire Plan grant from the USFS. The fuel reduction project involved the removal of pre-commercial regeneration, brush and ladder fuels.

Burnt Valley Defensible Space Project - The Department of Natural Resources partnered with the US Forest Service, Stevens County Fire District #4, and the Colville Coalition to conduct defensible space treatments around homes and to develop strategic fuel treatments. The treatments were conducted on private properties. The fuel reduction project involved the removal of pre-commercial regeneration, brush and ladder fuels. The project was funded by a 2005 National Fire Plan grant from the USFS.

Fruitland Defensible Space & Fuel Break Project - The Department of Natural Resources has partnered with the Spokane Bureau of Indian Affairs (BIA), National Park Service, and Stevens County Fire District #2 to develop strategic fuel breaks and create defensible space for structures in the Enterprise and Fruitland communities. The treatments are currently (2007) being conducted on private properties adjacent to Reservation and National Park Lands. The project involves the removal of ladder fuels, pre-commercial regeneration, and brush along strategic corridors and around structures. The project is funded by 2004 National Fire Plan grant funds from the BIA. Approximately 200 acres will be treated when the project is completed.

Little Pend Oreille Fuels Reduction Project – The Little Pend Oreille Fuels Reduction Project was funded by a 2005 National Fire Plan grant from the U.S. Fish and Wildlife Service. The project included the creation of strategic fire breaks along Slide Creek and Moran Creek Roads.

Fruitland Fuels Reduction Project (Enterprise & Camp Na Bor Lee) – The Department of Natural Resources is partnering with the Spokane Bureau of Indian Affairs (BIA), USDI National Park Service, and Stevens County Fire District #2 to develop strategic fire breaks in order to protect lives, infrastructure, and structures in the Fruitland and Enterprise communities. The treatments are being conducted on private property adjacent to Reservation and National Park Service lands. The project involves the removal of ladder fuels, pre-commercial thinning of regeneration, and brush removal along strategic corridors. The project is funded by 2004 and 2006 National Fire Plan grants from the BIA and is currently underway.

Waitts Lake – Red Marble Fuels Reduction Project – The Waitts Lake, Red Marble, and Mountain View areas have over 100 long-time residences and many new homes situated in mixed agricultural and forestland fuels. The fuels reduction project being implemented in 2008-10 will address access issues, establish fuel breaks, and help create defensible space around homes. Funding for this project is being provided by the Bureau of Land Management while the Stevens County Conservation District and Stevens County Fire District #4 will be implementing the project plans.

4.11.3 Multi-Jurisdictional Mutual Aid Agreements

Currently the cities, towns, fire protection districts, and wildland fire agencies within Stevens County have extensive mutual aid agreements that serve to increase the protection and effectiveness of all Stevens County fire response jurisdictions. Municipal and county fire departments provide mutual aid for each other to the fullest extent possible. The Stevens County Fire Districts have the opportunity for a suppression agreement with the Washington Department of Natural Resources. The agreement with the DNR allows for a Stevens County fire district to provide fire protection services to an area within the jurisdiction of the DNR located within the district and for the district to contract with the DNR to assist in fire protection services (on a limited basis) on forest land within the district's jurisdiction. These agreements significantly improve the capabilities and effectiveness of any and all individual fire departments as well as provide assistance to the DNR, F&WS, and USFS wildland fire departments. Not only does this improve the safety of Stevens County residents, structures, infrastructure, and lands, but it also facilitates good interdepartmental working relationships.

Chapter 5

5 Administration & Action Items

Critical to the implementation of this Community Wildfire Protection Plan will be the identification of, and implementation of, an integrated schedule of treatments targeted at achieving a reduction in the number of human caused fires and overall impact of wildland fires on Stevens County. As there are many land management agencies and thousands of private landowners in Stevens County, it is reasonable to expect that differing schedules of adoption will be made and varying degrees of compliance will be observed across all ownerships.

Stevens County encourages the philosophy of instilling disaster resistance in normal day-to-day operations. By implementing plan activities through existing programs and resources, the cost of mitigation is often a small portion of the overall cost of a project's design or program.

The land management agencies in Stevens County, specifically the USDA Forest Service, the SNR, and the Spokane Indian Reservation, are participants in this planning process and have contributed to its development. Where available, their schedule of land treatments have been considered in this planning process to better facilitate a correlation between their identified planning efforts and the efforts of Stevens County.

All risk assessments were made based on the conditions existing during 2007, thus, the recommendations in this section have been made in light of those conditions. However, the components of risk and the preparedness of the County's resources are not static. It will be necessary to fine-tune this plan's recommendations annually to adjust for changes in the components of risk, population density changes, infrastructure modifications, and other factors.

5.1 Monitoring and Maintenance

As part of the policy of Stevens County in relation to this planning document, this entire Community Wildfire Protection Plan should be reviewed annually (from date of adoption) at a special meeting of the planning committee, open to the public and involving all municipalities/jurisdictions, where action items, priorities, budgets, and modifications can be made or confirmed. The Stevens County Land Services Director (or an official designee of the Stevens County Commissioners) is responsible for the scheduling, publicizing, and leadership of the annual review meeting. During this meeting, participating jurisdictions will report on their respective projects and identify needed changes and updates to the existing plan. Maintenance to the plan should be detailed at this meeting, documented, and attached to the formal plan as an amendment. Re-evaluation of this plan should be made on the 5th anniversary of its acceptance, and every 5-year period following.

5.1.1 Annual Review

The focus of the planning committee at the annual review meeting should include the following topics:

- Update wildfire ignition and extent profile based on any events in the past year.
- Review strategic planning area assessments and note any major changes, development trends, or mitigation projects that have altered the vulnerability of each area.
- Update the Resources and Capabilities information as necessary for each fire department.
- Add a section to note accomplishments or current mitigation projects.

- All action items in Chapter 5 will need updated as projects are completed and as new needs come up. Action items will also need updated in the Prioritization Worksheet (Excel file).
- Address Emergency Operations Plan – how can we dovetail the two plans to make them work for each other? Specifically, how do we incorporate the EOP into the action items for the MHMP?
- Address Updated County Comprehensive Land Use Plan – how can we dovetail the two plans to make them work for each other? Specifically, how do we incorporate the Comprehensive Plan into the action items for the MHMP?

All meeting minutes, press releases, and other documentation of revisions should be kept on record by the Stevens County Land Services Director.

5.1.2 Five Year Review

The focus of the planning committee at the five year review should include all of the topics suggested for the annual review in addition to the following items:

- Update County demographic and socioeconomic data.
- Address any new planning documents, ordinances, codes, etc. that have been developed by the County or cities.
- Review listed communication sites.
- Review municipal water sources
- Redo all risk analysis models incorporating new information such as an updated County parcel master database, new construction projects, development trends, population vulnerabilities, changing risk potential, advanced technology, etc.
- Update county risk profiles and individual community assessments based on new information reflected in the updated models.

All meeting minutes, press releases, and other documentation of revisions should be kept on record by the Stevens County Land Services Director.

5.2 Prioritization of Mitigation Activities

The prioritization process will include a special emphasis on benefit-cost analysis review. The process will reflect that a key component in any funding decision is a determination that the project will provide an equivalent or more in benefits over the life of the project when compared with the costs. Projects will be administered by county and local jurisdictions with overall coordination provided by the County Land Services Director.

County Commissioners and the elected officials of all jurisdictions will evaluate opportunities and establish their own unique priorities to accomplish mitigation activities where existing funds, staffing, and resources are available and there is community interest in implementing mitigation measures. If no federal funding is used in these situations, the prioritization process may be less formal. Often the types of projects that the County can afford to do on their own are in relation to improved codes and standards, department planning and preparedness, and education. These types of projects may not meet the traditional project model, selection criteria, and benefit-cost model. The County will consider all pre-disaster mitigation proposals brought before the County Commissioners by department heads, city officials, fire districts and local civic groups.

When federal or state funding is available for hazard mitigation, there are usually requirements that establish a rigorous benefit-cost analysis as a guiding criterion in establishing project priorities. The County will understand the basic federal grant program criteria which will drive the identification, selection, and funding of the most competitive and worthy mitigation projects. FEMA's two grant programs (the Post-Disaster Hazard Mitigation Grant Program and Pre-Disaster Mitigation grant programs) that offer federal mitigation funding to state and local governments all include the benefit-cost and repetitive loss selection criteria.

The prioritization of new projects and deletion of completed projects will occur annually and be facilitated by the County Land Services Director to include the County Commissioner's Office, city mayors and councils, fire district chiefs and commissioners, agency representatives (USFS, WA DNR, etc.), and other community organizations. All mitigation activities, recommendations, and action items mentioned in this document are dependent on available funding and staffing. The prioritization of projects will be based on the selection of projects which create a balanced approach to mitigation which recognizes the hierarchy of treating in order (highest first):

- People
- Infrastructure
- Local and Regional Economy
- Traditional Way of Life
- Ecosystems

5.2.1 Prioritization Scheme

A numerical scoring system is used to prioritize projects. This prioritization serves as a guide for the County when developing mitigation activities. This project prioritization scheme has been designed to rank projects on a case by case basis. In many cases, a very good project in a lower priority category could outrank a mediocre project in a higher priority. The County mitigation program does not want to restrict funding to only those projects that meet the high priorities because what may be a high priority for a specific community may not be a high priority at the county level. Regardless, the project may be just what the community needs to mitigate disaster. The flexibility to fund a variety of diverse projects based on varying reasons and criteria is a necessity for a functional mitigation program at the County and community level.

To implement this case by case concept, a more detailed process for evaluating and prioritizing projects has been developed. Any type of project, whether county or site specific, will be prioritized in this more formal manner.

Since planning projects are somewhat different than non-planning projects when it comes to reviewing them, different criteria will be considered, depending on the type of project.

The factors for the non-planning projects include:

- Benefit / Cost
- Population Benefit
- Property Benefit
- Economic Benefit
- Project Feasibility (environmentally, politically, socially)
- Hazard Magnitude/Frequency
- Potential for repetitive loss reduction
- Potential to mitigate hazards to future development
- Potential project effectiveness and sustainability

The factors for the planning projects include:

- Benefit / Cost
- Vulnerability of the community or communities
- Potential for repetitive loss reduction
- Potential to mitigate hazards to future development

Since some factors are considered more critical than others, two ranking scales have been developed. A scale of 1-10, 10 being the best, has been used for cost, population benefit, property benefit, economic benefit, and vulnerability of the community. Project feasibility, hazard magnitude/frequency, potential for repetitive loss reduction, potential to mitigate hazards to future development, and potential project effectiveness and sustainability are all rated on a 1-5 scale, with 5 being the best. The highest possible score for a non-planning project is 65 and for a planning project is 30.

The guidelines for each category are as follows:

5.2.1.1 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 projects BC analysis results divided by 30. Therefore a project with a BC ratio of 150:1 would receive 5 points, a project with a BC ratio of 300:1 (or higher) would receive the maximum points of 10.

FEMA Requirement §201.4(c)(4)(iii) details criteria for prioritizing communities and local jurisdictions that would receive planning and project grants under available funding programs, which should include consideration for communities with the highest risks, repetitive loss properties, and most intense development pressures. Further, the requirement states that for non-planning grants, a principal criterion for prioritizing grants shall be the extent to which benefits are maximized according to a BC review of proposed projects and their associated costs. For many of the initiatives identified in this plan, the County may seek financial assistance under FEMA's HMGP or PDM programs. Both of these programs require detailed BC analysis as part of the FEMA award process. Stevens County is committed to implementing mitigation strategies with benefits which exceed costs. For projects which do not require financial assistance from grant programs that require this type of analysis, the County reserves the right to define "benefits" according to parameters that would otherwise be considered subjective, while still meeting the needs and goals of the plan.

5.2.1.2 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 the entire population. A ranking of 5 has the potential to impact 50% of the population, and a ranking of 1 will impact approximately 10% of the population. 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 effects the population, but should not be considered to have no population benefit.

5.2.1.3 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 $200,000,000 or more in losses. Property benefit of less

than $200,000,000 will receive a score of the benefit divided by $100,000,000, times 10. Therefore, a property benefit of $40,000,000 would receive a score of 2 ([40,000,000÷200,000,000] x 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 effects property, but should not be considered to have no property benefit.

5.2.1.4 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 could 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.

5.2.1.5 Vulnerability of the Community

For planning projects, the vulnerability of the community is considered. A community that has a high vulnerability with respect to other jurisdictions to the hazard or hazards being studied or planned for will receive a higher score. To promote planning participation by the smaller or less vulnerable communities in the state, the score will be based on the other communities being considered for planning grants. A community that is the most vulnerable will receive a score of 10, and one that is the least, a score of 1.

5.2.1.6 Project Feasibility (Environmentally, Politically & 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.

5.2.1.7 Hazard Magnitude/Frequency

The hazard magnitude/frequency rating is a combination of the recurrence period and magnitude of a hazaRoad 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.

5.2.1.8 Potential for repetitive loss reduction

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 will 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.

5.2.1.9 Potential to mitigate hazards to 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 on the onset of the development, the County will be less vulnerable in the future. Projects that will 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.

5.2.1.10 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 will receive a ranking of 5. A project with effectiveness that is highly questionable and not easily sustained should receive a ranking of 1.

5.2.1.11 Final ranking

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

Project Ranking Priority Score Non-Planning Projects

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

Project Ranking Priority Score Planning Projects

- High 18-30
- Medium 12-17
- Low 1-11

The ranking of each project is included in the following tables. Additionally, the individual scores and final ranking of each action item are included in the Appendices.

5.3 Possible Wildfire Mitigation Activities

As part of the implementation of wildfire mitigation activities in Stevens County, a variety of management tools may be used. Management tools include but are not limited to the following:

- Homeowner and landowner education
- Policy changes for structures and infrastructure in the Wildland Urban Interface
- Home site defensible zone through fuels modification
- Community defensible zone through fuels alteration
- Access improvements
- Emergency response enhancements (training, equipment, locating new fire stations, new fire districts)
- Regional land management recommendations for private, state, and federal landowners

Maintaining private property rights will continue to be one of the guiding principles of this plan's implementation. Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity. Net gains to the public benefit will be an important component of decisions.

5.4 Safety & Policy

Wildfire mitigation efforts must be supported by a set of policies and regulations at the County level that maintain a solid foundation for safety and consistency. The recommendations enumerated here serve that purpose. Because these items are regulatory in nature, they will not necessarily be accompanied by cost estimates. These recommendations are policy related in nature and therefore are recommendations to the appropriate elected officials; debate and formulation of alternatives will serve to make these recommendations suitable and appropriate.

Table 5.1. Action Items in Safety and Policy.

Action Item	Goals and Objectives	Responsible Organization	Timeline and Implementation Plan
5.1.a: Consider developing County policy concerning building materials used in high-risk WUI areas on existing structures and new construction.	**Protection of people and structures** by improving the ability of emergency response personnel to respond to threatened homes in high-risk areas. Priority: High	**Lead:** County Commissioner's Office **Support:** Stevens County Fire Districts #1-12, and city fire departments.	Year 1 (2008): Consider and develop policy to address construction materials for homes and businesses located in high wildfire risk areas. Specifically, a County policy concerning wooden roofing materials and flammable siding, especially where juxtaposed near heavy wildland fuels.
5.1.b: Begin distributing "Code of the New West" pamphlets with building permit requests.	**Protection of people and structures** by improving public awareness of the wildland fire risk in Stevens County. Priority: Medium	**Lead:** County Building Department **Support:** County Commissioners and incorporated cities of Colville, Chewelah, Kettle Falls, Marcus, Springdale, and Northport.	Year 1 (2008): Begin distribution of existing pamphlets with building permit applications.
5.1.c: Rural signage (road signs & house numbers) improvements across the County.	**Protection of people, structures, and infrastructure** by improving the ability of emergency services personnel, residents, and visitors to navigate roads. Priority: High	**Lead:** County Building Department **Support:** County Planning Department and County Commissioners.	Can be completed during year 1 (2008) pending funding to implement the project. Estimate $20,000 for signs and posting.
5.1.d: Consider developing county policy to encourage new home and business construction to install underground power lines.	**Protection of people and structures by** reducing the risk of wildfire ignitions. Priority: High	**Lead:** County Planning Department **Support:** County Commissioner's Office, Stevens County Public Utilities District, and utilities companies.	Year 1 (2008): Implement a policy to require new utility lines to be buried underground. Year 1 (2008): Collaborate with Stevens County Public Utilities District and local utility companies to implement this policy.

Table 5.1. Action Items in Safety and Policy.

Action Item	Goals and Objectives	Responsible Organization	Timeline and Implementation Plan
5.1.e: Incorporate the Stevens County Community Wildfire Protection Plan into the Stevens County Comprehensive Plan, where applicable.	**Protection of people and structures** by dovetailing this planning process with other County planning documents. Priority: High	**Lead:** Stevens County Commissioners **Support:** Stevens County Planning Department.	Ongoing: Incorporate the goals and projects outlined in this plan into the updated Comprehensive Plan.
5.1.f: Consider adopting stringent regulations to insure fire-safe development of rural subdivisions (see FIREWISE or similar programs for specific recommendations).	**Protection of people and structures** by improving the ability of emergency services personnel to safely and effectively respond to home fires and decrease the overall fire risk in wildland urban interface areas. Priority: High	**Lead:** County Planning Department **Support:** County Commissioner's Office, County Building Department, Stevens County Fire Districts #1-12, city fire departments, developers, and interested residents.	Year 1 (2008): Research fire-safety related programs such as FIREWISE to determine specific recommendations for policy changes regarding development of rural subdivisions. Year 2 – 3 (2009 – 2010): Begin gathering public support of new regulations. Produce and submit necessary documentation to facilitate County adoption of recommended regulations.
5.1.g: Encourage enforcement of International Building Codes and International Fire Codes countywide to address substandard construction practices and access issues outside the incorporated city limits.	**Protection of people and structures** by improving access for emergency responders and reducing potential ignition risks due to substandard construction. Priority: High	**Lead:** County Commissioners **Support:** Stevens County Land Services, Public Works, and Stevens County Fire Districts #1-12.	Year 1 (2008): Develop a strategic plan for insuring that all International Building and Fire Code regulations are enforced countywide.
5.1.h: Consider developing a county policy to encourage land management agencies to implement a fuels reduction program at recreational or high use areas and trailheads.	**Protection of people and structures by** reducing the risk of wildfire ignitions. Priority: High	**Lead:** County Commissioners **Support:** County Land Services, incorporated cities of Colville, Chewelah, Kettle Falls, Marcus, Springdale, and Northport, USFS, DNR, BLM, FWS, Spokane Indian Reservation, and Stevens County Fire Districts #1-12, and city fire departments.	Year 1 (2008): Develop a policy to encourage land management agencies to actively manage fuels in high use areas to reduce the risk of accidental ignitions. Year 1 (2008): Collaborate with local fire departments and various land management agencies to develop a mutually agreed upon policy.
5.1.i: Preplan for evacuation/emergency access to the Kelly Hill area during the Hedlund Bridge closure period.	**Protection of people and structures** by improving response to emergencies in the Kelly Hill area. Priority: High	**Lead:** County Emergency Manager **Support:** Stevens County Public Works, and Stevens County Joint Fire District #8.	Year 1 (2008): Develop an emergency response plan to deal with access issues caused by the closure of Hedlund Bridge.

5.5 People and Structures

The protection of people and structures will be tied together closely as the loss of life in the event of a wildland fire is generally linked to a person who could not, or did not, flee a structure threatened by a wildfire. The other incident is a firefighter who suffers the loss of life during the combating of a fire. Many of the recommendations in this section will define a set of criteria for implementation while others will be rather specific in extent and application.

Many of the recommendations in this section involve education and increasing awareness of the residents of Stevens County. These recommendations stem from a variety of factors including

items that became obvious during the analysis of the public surveys, discussions during public meetings, and observations about choices made by residents living in the wildland-urban interface. Over and over, the common theme was present that pointed to a situation of landowners not recognizing risk factors:

- Fire district personnel pointed to numerous examples of inadequate access to homes of people who believe they have adequate ingress.
- Discussions with the general public indicated an awareness of wildland fire risk, but they could not generally identify risk factors.
- A large number of the respondents to the public mail survey (49%) indicated that they want to participate in educational opportunities focused on the WUI and what they can do to increase their home's chances of surviving a wildfire.

Residents and policy makers of Stevens County should recognize certain factors that exist today, that in their absence would lead to an increase in the risk factors associated with wildland fires in the WUI of Stevens County. The items listed below should be encouraged, acknowledged, and recognized for their contributions to the reduction of wildland fire risks:

Livestock grazing in and around the communities of Stevens County has led to a reduction of many of the fine fuels that would have been found in and around the communities and in the wildlands of Stevens County. Domestic livestock not only eat these grasses, forbs, and shrubs, but they also trample certain fuels to the ground where decomposition rates may increase. Livestock ranchers tend their stock, placing additional sets of eyes into the forests and rangelands of the County where they may observe ignitions or potentially risky activities. Livestock grazing in this region should be encouraged in the future as a low cost, positive tool of wildfire mitigation in the wildland-urban interface and beyond.

Forest management in Stevens County has not been greatly affected by the reduction of operating sawmills in the region. The forest management programs of the U.S. Forest Service, Spokane Reservation, and the Washington Department of Natural Resources has led to some reduction of wildland fuels where they are closest to homes and infrastructure; however, there is significant room for growth in these agency's fuels reduction programs. In addition, many private and industrial forest landowners have implemented very active forest management programs that are leading to a significant decrease in high risk fuels. Furthermore, forests are dynamic systems that will never be completely free from risk. Treated stands will need repeated treatments to reduce the risk to acceptable levels in the long term. Stevens County, as well as several other organizations and agencies, is currently considering using prescribed fire as a management tool to reduce hazardous fuels on their lands.

Agriculture is a significant component of Stevens County's economy. Much of the rangeland interface is made up of a mosaic of agricultural crops. The original conversion of these lands to agriculture from rangeland and forestland was targeted at the most productive soils and juxtaposition to water. Many of these productive rangeland ecosystems were consequently also at some of the highest risk to wildland fires because biomass accumulations increased in these productive landscapes. The result today, is much of the landscape historically prone to frequent fires, has been converted to agriculture, which is at a much lower risk than prior to its conversion. The preservation of a viable agricultural economy in Stevens County is integral to the continued management of wildfire risk in this region.

Salvage logging after a wildfire event can help capture some of the burned timber's economic value if implemented immediately after the wildfire event. Additionally, the removal of dead or dying trees can help lessen the forest's subsequent attack by insects. Salvage logging, if done

responsibly, can be effective in accomplishing both the economic goals of the administrating party as well as help reduce fuel loads in high risk areas.

Prescribed fire can be used as a tool in forest and rangeland management programs to accomplish several goals. Prescribed fire, when done correctly and in appropriate areas, can help reduce hazardous fuel loads. Prescribed fire has also been used to prepare sites for seeding or planting, improve wildlife habitat, manage competing vegetation, control insects and disease, improve forage for grazing, enhance appearance, and improve access.

Table 5.2. Action Items for People and Structures.

Action Item	Goals and Objectives	Responsible Organization	Timeline and Implementation Plan
5.2.a: Implementation of youth and adult wildfire educational programs.	**Protect people and structures** by increasing awareness of WUI risks, how to recognize risk factors, and how to modify those factors to reduce risk. Priority: High	Cooperative effort including: • Washington Department of Natural Resources • State and Private Forestry Offices • Bureau of Land Management • USDA Forest Service • Local School Districts • Spokane Indian Reservation • Stevens County Conservation District • Local Non-governmental Community Organizations • Local Fire District and Departments in Stevens County • Incorporated cities communities of Stevens County	Start immediately using existing educational program materials and staffing (e.g. Forest Stewardship class offered by Washington State University). Formal needs assessment should be the responsibility of WSU Extension and include the development of an integrated WUI educational series by year 2 (2008). Costs initially to be funded through existing budgets for these activities to be followed with grant monies to continue the programs as identified in the formal needs assessment.
5.2.b: Wildfire risk assessments of homes in identified strategic planning areas.	**Protect people and structures** by increasing awareness of specific risk factors of individual home sites in the at-risk landscapes. Only after these are completed can home site treatments follow. Priority: High	**Lead:** Washington DNR and Northeast Washington Forestry Coalition **Support:** County Commissioner's, USFS, local community organizations, Stevens County Fire Districts #1-12, and city fire departments. Actual work may be completed by Wildfire Mitigation Consultants.	Cost: Approximately $100 per home site for inspection, written report, and discussions with the homeowners. There are approximately 20,889 assessed buildings in Stevens County, roughly 8,356 (40%) of these structures would benefit from a home site inspection and budget determination for a total estimate of $835,600. Action Item: Secure funding and contract to complete the inspections during years 1 & 2 (2008-09) Home site inspection reports and estimated budget for each home site's treatments will be a requirement to receive funding for treatments through grants.
5.2.c: Home site defensible space treatments in proposed project areas.	**Protect people, structures, and increase firefighter safety** by reducing the risk factors surrounding homes in the WUI of Stevens County. Priority: Medium	**Lead:** Washington DNR and Northeast Washington Forestry Coalition **Support:** County Commissioner's, USFS, local community organizations, Stevens County Fire Districts #1-12, and city fire departments.	Actual cost level will be based on the outcomes of the home site assessments. See Table 5.5. for list of proposed projects and cost estimates. Home site treatments can begin with the securing of funding for the treatments and immediate implementation in 2008 and will continue from year 1 through 5 (2012).

Table 5.2. Action Items for People and Structures.

Action Item	Goals and Objectives	Responsible Organization	Timeline and Implementation Plan
5.2.d: Community defensible zone treatments in proposed project areas.	**Protect people, structures, and increase firefighter safety** by reducing the risk factors surrounding high risk communities in the WUI of Stevens County. Priority: Medium	**Lead:** Washington DNR and Northeast Washington Forestry Coalition **Support:** County Commissioner's, USFS, local community organizations, Stevens County Fire Districts #1-12, and city fire departments.	Actual funding level will be based on the outcomes of the home site assessments and cost estimates. Years 2-5 (2009-13): Treat high risk wildland fuels from home site defensible space treatments to an area extending 400 feet to 750 feet beyond home defensible spaces, where steep slopes and high accumulations of risky fuels exist near homes and infrastructure. Should link together home treatment areas. Treatments target high risk concentrations of fuels and not 100% of the area identified. To be completed only after or during the creation of home defensible spaces have been implemented. See Table 5.6. for list of proposed projects and cost estimates.
5.2.e: Maintenance of home site defensible space treatments.	**Protect people, structures, and increase firefighter safety** by reducing the risk factors surrounding homes in the WUI of Stevens County. Priority: Medium	**Lead:** Washington DNR and Northeast Washington Forestry Coalition **Support:** County Commissioner's, USFS, local community organizations, Stevens County Fire Districts #1-12, and city fire departments.	Home site defensibility treatments must be maintained periodically to sustain benefits of the initial treatments. Each site should be assessed 5 years following initial treatment Estimated re-inspection cost will be $500 per home site on all sites initially treated or recommended for future inspections.

5.6 Infrastructure

Significant infrastructure refers to the communications, transportation (road and rail networks), energy transport supply systems (gas and power lines), and water supply that service a region or a surrounding area. All of these components are important to northeastern Washington, and to Stevens County specifically. These networks are by definition a part of the wildland-urban interface in the protection of people, structures, **infrastructure**, and unique ecosystems. Without supporting infrastructure a community's structures may be protected, but the economy and way of life lost. As such, a variety of components will be considered here in terms of management philosophy, potential policy recommendations, and mitigation recommendations.

Communication Infrastructure: This component of the WUI seems to be diversified across the county with multiple source and destination points and a spread-out support network.

Transportation Infrastructure (road and rail networks): This component of the WUI has some significant potential limitations in Stevens County. U.S. Highway 395 is the primary maintained route linking Stevens County to other major population centers including Spokane. Thus, a significant amount of interstate and international traffic travels through the County. Also, State Routes 20, 25, 231, 291, and 292 connect the more remote communities of Northport, Wellpinit, and Hunters. In the event any of these roadways are disabled, access or evacuation to some areas may become limited to seasonally maintained secondary roads or forest routes.

Other roads in the County have limiting characteristics, such as narrow travel surfaces, sharp turning radii, low load limit bridges and cattle guards, and heavy accumulations of fuels adjacent to and overtopping the corridor. Some of these roads access remote forestland and rangeland areas. While their improvements will facilitate access in the case of a wildfire, they are not the priority for treatments in the county. Roads that have these inferior characteristics and access homes and businesses are the priority for improvements in the county.

Energy Transport Supply Systems (gas and power lines): A number of power lines crisscross Stevens County. Unfortunately, many of these power lines cross over forestland ecosystems. When fires ignite in these vegetation types, the fires tend to spread rapidly and burn at variable intensities depending on the weather conditions. There is a potential for high temperatures and low humidity with high winds to produce enough heat and smoke to threaten power line stability. Most power line corridors have been cleared of vegetation both near the wires and from the ground below. Observations across the County of the primary transmission lines lead to the conclusion that many of the lines should be evaluated for potential widening of the corridor and further removal of brush and other vegetation from the ground below the wires.

Water Supply: In many of Washington's communities, water is derived from surface flow that is treated and piped to homes and businesses. When wildfires burn a region, they threaten these watersheds by the removal of vegetation and creation of ash and sediment. As such, watersheds should be afforded the highest level of protection from catastrophic wildfire impacts. In Stevens County, water is supplied to many homes by single home or multiple home wells or pumped from the Colville River.

Table 5.3. Action Items for Infrastructure Enhancements.

Action Item	Goals and Objectives	Responsible Organization	Timeline and Implementation Plan
5.3.a: Post "Emergency Evacuation Route" signs along the identified primary and secondary access routes.	**Protection of people and structures by** informing residents and visitors of significant infrastructure in the County that will be maintained in the case of an emergency. Priority: Medium	**Lead:** County Emergency Manager **Support:** County Public Works, County Commissioner's, Stevens County Fire Districts #1-12, and city fire departments.	Year 1 (2008): Purchase of signs. Post roads and make information available to residents of the importance of Emergency Routes.
5.3.b: Create and maintain defensible space around critical infrastructure including, but not limited to communication sites, community shelters, government buildings (city, County, State, and federal), petroleum storage sites, hospitals, water storage sites, and PUD Service Stations.	**Protect people, structures, and increase firefighter safety** by decreasing the risk of loss of critical communications infrastructure to wildland fire. Priority: High	**Lead:** County Emergency Manager **Support:** County Commissioners, , incorporated cities of Colville, Chewelah, Kettle Falls, Marcus, Springdale, and Northport, Spokane Indian Reservation, Stevens County Public Utilities District, and various facility/utility owners.	Year 1 (2008): Meet with facility and utility owners operating communications infrastructure in Stevens County and set up a criteria for maintaining a defensible space in these areas. Year 2 (2009): Develop defensible space plans and begin implementing hazardous fuel reduction projects.
5.3.c: Access improvements of bridges, cattle guards, culverts, and limiting road surfaces.	**Protection of people, structures, infrastructure, and economy** by improving access for residents and firefighting personnel in the event of a wildfire. Reduce the risk of a road failure that leads to the isolation of people or the limitation of emergency vehicle and personnel access during an emergency. Priority: High	**Lead:** County Public Works **Support:** County Commissioners, State of Washington (Lands and Transportation), USFS, DNR, Spokane Indian Reservation, and private landowners.	Year 1 (2008): Update existing assessment of travel surfaces, bridges, and cattle guards in Stevens County as to location. Secure funding for implementation of this project (grants). Year 2 (2009): Conduct engineering assessment of limiting weight restrictions for all surfaces (e.g., bridge weight load maximums). Estimate cost of $XXX which might be shared between County, BLM, USFS, State, and private based on landownership associated with road locations. Year 2 (2009): Post weight restriction signs on all limiting crossings, copy information to rural fire districts and wildland fire protection agencies in affected areas. Estimate cost at roughly $10-$15,000 for signs and posting. Year 3 (2010): Identify limiting road surfaces in need of improvements to support wildland firefighting vehicles and other emergency equipment. Develop plan for improving limiting surfaces including budgets, timing, and resources to be protected for prioritization of projects (benefit/cost ratio analysis). Create budget based on full assessment.

Table 5.3. Action Items for Infrastructure Enhancements.

Action Item	Goals and Objectives	Responsible Organization	Timeline and Implementation Plan
5.3.d: Access improvements through roadside fuels management.	**Protection of people, structures, infrastructure, and economy** by improving access for residents and firefighting personnel in the event of a wildfire. Allows for a road based defensible area that can be linked to a terrain based defensible areas. Priority: Medium	**Lead:** County Emergency Manager **Support:** County Public Works, State of Washington (Lands and Transportation), USFS, DNR, Spokane Indian Reservation, and private landowners.	Year 1 (2008): Update existing assessment of roads in Stevens County as to location. Secure funding for implementation of this project (grants). Year 2 (2009): Specifically address access issues on roads identified in Table 5.7. See Table 5.7 for list of proposed projects and cost estimates. Year 3 (2010): Secure funding and implement projects to treat roadside fuels.
5.3.e: Improve communications capability in the Enterprise and Camp Nayborly area.	**Protect people, structures, and increase firefighter safety** by improving communication. Priority: Medium	**Lead:** County Emergency Manager **Support:** National Park Service, Bureau of Indian Affairs, and Washington DNR.	Year 1 (2008): Conduct a study to decide the best course of action to improve communication capabilities in this area. Work with area landowners to research options. Year 2 (2009): Develop project plan, obtain funding, and install needed equipment.

5.7 Resource and Capability Enhancements

There are a number of resource and capability enhancements identified by the rural and wildland firefighting districts in Stevens County. All of the needs identified by the districts are in line with increasing the ability to respond to emergencies and are fully supported by the Community Wildfire Protection Plan committee.

Specific repeated themes of needed resources and capabilities include:

- Retention and recruitment of volunteers
- Update firefighting equipment countywide
- Improved road and house number signage
- Improve communication capability
- Develop water resources in rural areas
- Training and development of rural firefighters in structure and wildland fire

Although additional, and specific, needs were enumerated by the districts in Stevens County, these items were identified by multiple districts and in the public meetings. The implementation of each issue will rely on either the isolated efforts of the fire districts or a concerted effort by the County to achieve equitable enhancements across all of the districts. Given historic trends, individual departments competing against neighboring departments for grant monies and equipment will not necessarily achieve countywide equity.

Table 5.4. Action Items for Firefighting Resource and Capability Enhancements.

Action Item	Goals and Objectives	Responsible Organization	Timeline and Implementation Plan
5.4.a: Enhance radio availability in each district, link in to existing dispatch, improve range within the region, and conversion to consistent standard of radio types.	**Protection of people and structures** by direct firefighting capability enhancements. Priority: High	**Lead:** County Emergency Manager **Support:** County Commissioner's, USFS, DNR, Spokane Indian Reservation, local community organizations, Stevens County Fire Districts #1-12, and city fire departments.	Year 1 (2008): Summarize existing two-way radio capabilities and limitations. Identify costs to upgrade existing equipment and locate funding opportunities. Year 2 (2009): Acquire and install upgrades as needed.
5.4.b: Retention of volunteer firefighters.	**Protection of people and structures** by direct firefighting capability enhancements. Priority: High	**Lead:** County Commissioner's, Stevens County Fire Districts #1-12, and city fire departments. **Support:** Wildland fire agencies working with a broad base of County citizenry.	Target an increased recruitment (+10%) and retention (+20% longevity) of volunteers. Year 1 (2008): Develop incentives program and implement it.
5.4.c: Establish and map onsite water sources such as hydrants or underground storage tanks and drafting or dipping sites.	**Protection of people and structures** by direct firefighting capability enhancements. Priority: Medium	**Lead:** County Emergency Manager **Support:** County Commissioner's Office, County GIS Department, USFS, DNR, Stevens County Fire Districts #1-12, and city fire departments.	Year 1 (2008): Identify populated areas lacking sufficient water supplies and develop project plans to develop a permanent water source or drafting/dipping sites. Implement project plans and begin mapping (GPS) known water sources and drafting/dipping sites to be provided to fire response agencies and County offices.

Table 5.4. Action Items for Firefighting Resource and Capability Enhancements.

Action Item	Goals and Objectives	Responsible Organization	Timeline and Implementation Plan
5.4.d: Increase training and capabilities of firefighters.	**Protection of people and structures** by direct fire fighting capability enhancements. Priority: High	**Lead:** County Commissioner's, local community organizations, Stevens County Fire Districts #1-12, and city fire departments. **Support:** County Emergency Manager, DNR, BLM, and USFS for wildland training opportunities and with the State Fire Marshall's Office for structural firefighting training.	Year 1 (2008): Develop a multi-County training schedule that extends 2 or 3 years in advance (continuously). Identify funding and resources needed to carry out training opportunities and sources of each to acquire. Year 1 (2008): Begin implementing training opportunities for volunteers.
5.4.e: Improve safety equipment and personal protective equipment for all fire districts in Stevens County.	**Protection of people and structures** by direct firefighting capability enhancements. Priority: High	**Lead:** County Emergency Manager **Support:** County Commissioner's, USFS, local community organizations, Stevens County Fire Districts #1-12, and city fire departments.	Year 1 (2008): Complete an inventory of all supplies held by the Fire Districts (boots, turnouts, Nomex, gloves, modern lighting, straps, and hardware), and complete a needs assessment matching expected replacement schedule. Develop Countywide re-supply process for needed equipment.
5.4.f: Support the maintenance and/or enhancement of state and federal firefighting programs and resources in Stevens County.	**Protection of people and structures** by direct wildland firefighting capability enhancements. Priority: High	**Lead:** County Emergency Manager **Support:** County Commissioners, Stevens County Fire Districts #1-12, and city fire departments.	Ongoing: Provide community and County support for the State and Federal fire and firefighting programs within the County. Assist State and Federal fire programs raise awareness of wildland fire issues in local communities.
5.4.g: Support the acquisition of new and updated rolling stock and other equipment for each fire district or department in Stevens County.	**Protection of people and structures** by direct firefighting capability enhancements. Priority: High	**Lead:** Stevens County Fire Districts #1-12 and city fire departments.	Year 1 (2008): Verify stated need still exists, develop budget, and locate funding and equipment (surplus) sources. Year 1 or 2 (2008-09): Acquire and deliver needed materials and equipment.
5.4.h: Facility, land, and basic equipment for an additional station near the center of Fire District #12's response area.	**Protection of people and structures** by direct firefighting capability enhancements. Priority: Medium	**Lead:** Stevens County Fire District #12	Year 1 (2008): Verify stated need still exists, develop budget, and locate funding and equipment (surplus) sources. Year 1 or 2 (2008-09): Acquire and deliver needed materials and equipment.
5.4.i: Facility, land, and basic equipment for three additional satellite stations in Fire District #11's response area.	**Protection of people and structures** by direct firefighting capability enhancements. Priority: High	**Lead:** Stevens County Fire District #11	Year 1 (2008): Verify stated need still exists, develop budget, and locate funding and equipment (surplus) sources. Year 1 or 2 (2008-09): Acquire and deliver needed materials and equipment.

Table 5.4. Action Items for Firefighting Resource and Capability Enhancements.

Action Item	Goals and Objectives	Responsible Organization	Timeline and Implementation Plan
5.4.j: Obtain funding to replace or remodel Stevens County Fire District #7's Station 71.	**Protection of people and structures** by direct firefighting capability enhancements. Priority: High	**Lead:** Stevens County Fire District #7	Year 1 (2008): Verify stated need still exists, develop budget, project plan, and locate funding sources. Year 1 or 2 (2008-09): Begin implementation of proposed project plan.
5.4.k: Obtain funding to build a firefighter training tower in Stevens County Fire District #7.	**Protection of people and structures** by direct firefighting capability enhancements. Priority: Medium	**Lead:** Stevens County Fire District #7	Year 1 (2008): Verify stated need still exists, develop budget, and locate funding and equipment (surplus) sources. Year 1 or 2 (2008-09): Acquire and deliver needed materials and equipment.

5.8 Proposed Project Areas

Each of the following projects was ranked using the same criteria described in Section 5.1.1. The final ranking of each project is included in the following tables. Additionally, the individual scores of each project are included in the Appendices.

5.8.1 Proposed Home Defensible Space Projects

The following home defensible space project areas were identified by the CWPP planning committee as having multiple factors contributing to the potential wildfire risk to residents, homes, infrastructure, and the ecosystem. Treatments within the project areas will be site specific, but will likely include homeowner education, creation of a wildfire defensible space around structures, and access corridor improvements. Specific site conditions may call for other types of fuels reduction and fire mitigation techniques as well.

The estimated project cost was calculated by assuming an average treatment cost of $700 per parcel ($400 per parcel for non-or sparsely forested areas and $1000 per parcel in forested areas). Cost estimates assume that no revenue was generated by the removal of timber or other product and that only 80% of the property owners participate in the project. Community defensible zone projects may include, but are not limited to commercial or precommercial thinning, prescribed burning, installation of greenbelts or shaded fuel breaks, and general forest health improvements.

The Washington Department of Natural Resources, U.S. Forest Service, Bureau of Land Management, and/or the Northeast Washington Forestry Coalition may take the lead on implementation of many of these projects; however, project boundaries were purposely drawn without regard to land ownership in order to capture the full breadth of the potential wildland fire risk. Coordination and participation by numerous landowners will be required for the successful implementation of the identified projects. Additional planning information on these projects is included in the Appendices.

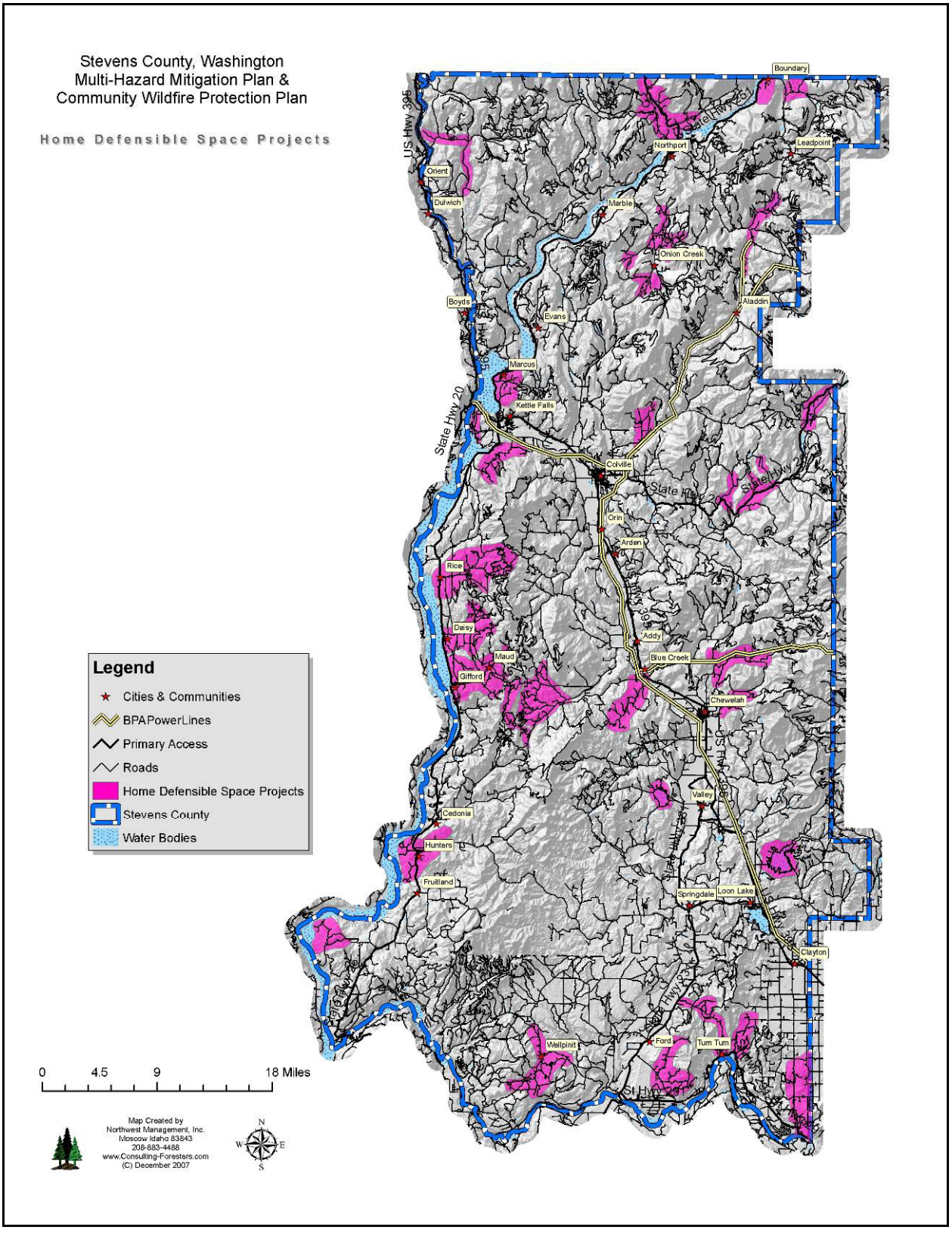
Table 5.5. Proposed Home Defensible Space Project Areas.

Project Areas	Total Parcels	Estimated Project Cost	Priority Ranking
Black Lake Home Defensible Space	54	$30,240	Medium

Table 5.5. Proposed Home Defensible Space Project Areas.

Project Areas	Total Parcels	Estimated Project Cost	Priority Ranking
Burnt Valley Home Defensible Space	178	$99,680	High
Camp Nayborly Home Defensible Space	115	$64,400	High
Cedar Creek Home Defensible Space	117	$65,520	Medium
Corkscrew Canyon Home Defensible Space	234	$131,040	High
Daisy Home Defensible Space	219	$122,640	High
Deep Lake Home Defensible Space	222	$124,320	High
Deer Lake Home Defensible Space	1,188	$665,280	High
Dry Creek Home Defensible Space	237	$132,720	High
Flowery Trail Home Defensible Space	136	$76,160	High
Gifford Home Defensible Space	248	$138,880	Medium
Gold Heights-Pingston Creek Defensible Space	328	$183,680	High
Gulches Home Defensible Space	183	$102,480	High
Hawks Home Defensible Space	33	$18,480	Medium
Homestead Canyon Home Defensible Space	419	$234,640	High
Hunters Home Defensible Space	552	$309,120	High
LPO Lakes Home Defensible Space	389	$217,840	High
Mingo Mountain Home Defensible Space	166	$92,960	High
North Stone Mountain Way Defensible Space	27	$15,120	Medium
Onion Creek South Defensible Space	96	$53,760	High
Park Rapids Home Defensible Space	148	$82,880	High
Pierre Lake Home Defensible Space	33	$18,480	Medium
Quinns Meadow Home Defensible Space	179	$100,240	High
Rail Canyon Home Defensible Space	263	$147,280	Medium
Rice Home Defensible Space	336	$188,160	High
Sand Creek Home Defensible Space	80	$44,800	Medium
Scott Valley Home Defensible Space	265	$148,400	Medium
Sheep Creek Home Defensible Space	280	$156,800	High
South Deep Home Defensible Space	45	$25,200	Medium
Squaw Creek Home Defensible Space	56	$31,360	Medium
Stranger Creek Home Defensible Space	73	$40,880	Medium
Summit Valley Home Defensible Space	270	$151,200	Medium
Waitts Lake Home Defensible Space	601	$336,560	High
Wellpinit Home Defensible Space	62	$34,720	Medium
West Kettle Falls Home Defensible Space	398	$222,880	High

Figure 5.1. Map of Proposed Home Defensible Space Projects



5.8.2 Proposed Community Defensible Zone Projects

The following community defensible zone projects were identified by the planning committee as high wildfire risk areas beyond the immediate vicinity of the home defensible space projects. The community defensible zone projects include common spaces or additional public or private property surrounding more densely populated areas.

The proposed community defensible zone projects are intended to treat high risk wildland fuels to an area extending beyond home defensible spaces, where steep slopes and high accumulations of risky fuels exist near homes and infrastructure. These projects should link home site treatments areas together. Community defensible zone treatments should target high risk concentrations of fuels and not necessarily 100% of the area identified. These projects should be completed only after or during home defensible space project implementation.

The estimated project costs were calculated based on treating an additional two acres per parcel* at approximately $700 per acre. Cost estimates assume that no revenue was generated by the removal of timber or other product and that only 80% of the property owners participate in the project. Community defensible zone projects may include, but are not limited to commercial or precommercial thinning, prescribed burning, installation of greenbelts or shaded fuel breaks, and general forest health improvements.

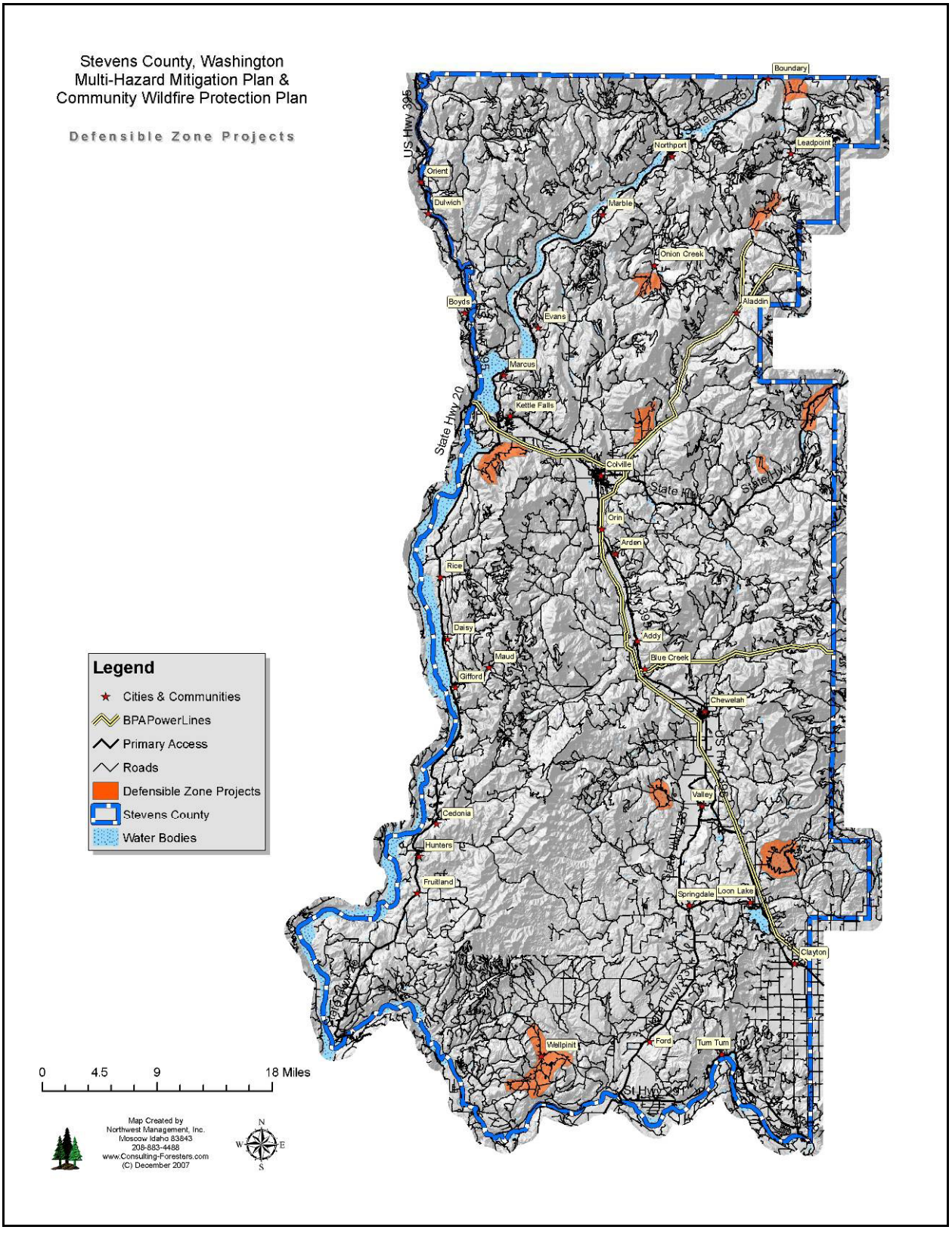
The Washington Department of Natural Resources, U.S. Forest Service, Bureau of Land Management, and/or the Northeast Washington Forestry Coalition may take the lead on implementation of many of these projects; however, project boundaries were purposely drawn without regard to land ownership in order to capture the full breadth of the potential wildland fire risk. Coordination and participation by numerous landowners will be required for the successful implementation of the identified projects. Additional planning information on these projects is included in the Appendices.

Table 5.6. Proposed Community Defensible Zone Project Areas.

Project Areas	Total Parcels	Estimated Project Cost	Priority Ranking
Black Lake Defensible Zone	54	$60,480	Medium
Cedar Creek Defensible Zone	117	$131,040	Medium
Deep Lake Defensible Zone	222	$248,640	Medium
Deer Lake Defensible Zone	1,188	$665,280	High
Onion Creek South Defensible Zone	96	$107,520	Medium
Gulches Defensible Zone	183	$204,960	High
LPO Lakes Defensible Zone	389	$435,680	Medium
Mingo Mountain Defensible Zone	166	$185,920	Medium
Waitts Lake Defensible Zone	601	$336,560	High
Wellpinit Defensible Zone	62	$69,440	Medium

*The estimated project costs for the Waitts Lake and Deer Lake projects were calculated based on treating one acre per parcel at approximately $700 per acre due to the high density housing on smaller lots in these areas.

Figure 5.2. Map of Proposed Community Defensible Zone Projects



5.8.3 Proposed Fuels Reduction Projects

The following proposed fuels reduction projects were identified by the planning committee to be specific areas at high risk to wildfire due not only to the forest fuels, but also due to increased likelihood of an ignition. High use recreational areas or industrial operations in or near forestland fuels have an increased likelihood of an ignition from human or mechanical sources. The proposed fuel reduction projects will likely include more general fuels treatments such as forest health improvements or weed management in the surrounding area in conjunction with enhanced fire safety precautions. Installation of escape proof fire pits, barbeque stands, designated trails, and restricted use of fireworks can help reduce the ignition risk in recreational areas, while having numerous fire extinguishers on site and creating a maintained fuel break between mechanical operations and forestlands can decrease the ignition risk in industrialized areas.

The estimated project cost was based on $250 per acre of treatment. Cost estimates assume that no revenue was generated by the removal of timber or other product. The Washington Department of Natural Resources, U.S. Forest Service, Bureau of Land Management, and/or the Northeast Washington Forestry Coalition may take the lead on implementation of many of these projects; however, project boundaries were purposely drawn without regard to land ownership in order to capture the full breadth of the potential wildland fire risk. Coordination and participation by numerous landowners may be required for the successful implementation of the identified projects.

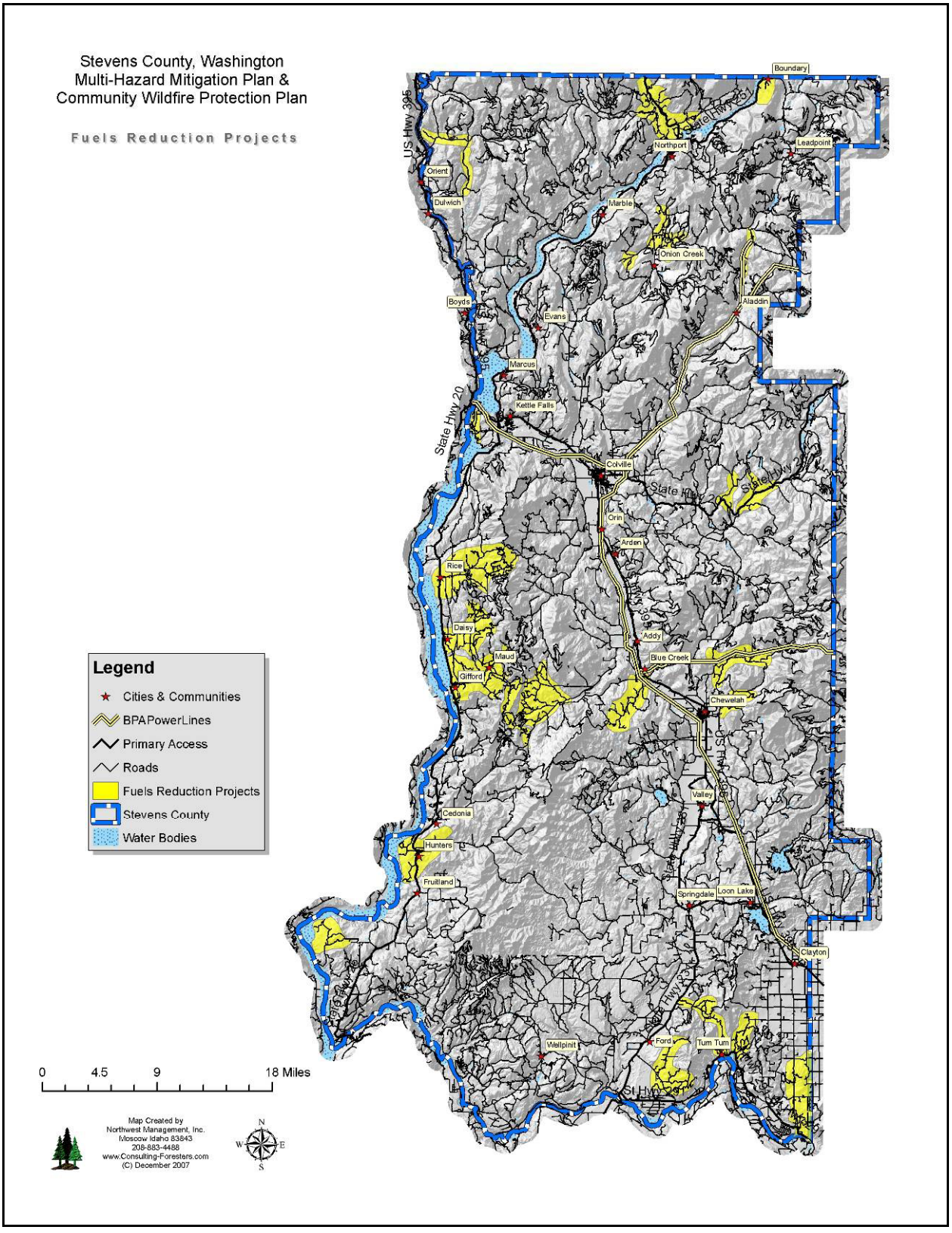
Table 5.7. Proposed Fuels Reduction Project Areas.

Projects Areas	Total Acres	Estimated Project Cost	Priority Ranking
Burnt Valley Fuels Reduction	5,314	$1,328,426	Medium
Camp Nayborly Fuels Reduction	3,730	$932,519	Medium
Corkscrew Canyon Fuels Reduction	6,212	$1,553,091	Medium
Daisy Fuels Reduction	6,511	$1,627,791	Medium
Dry Creek Fuels Reduction	5,699	$1,424,633	High
Flowery Trail Fuels Reduction	2,281	$570,223	Medium
Gifford Fuels Reduction	9,054	$2,263,421	Medium
Hawks Fuels Reduction	887	$221,748	Medium
Homestead Canyon Fuels Reduction	7,309	$1,827,269	High
Hunters Fuels Reduction	6,348	$1,586,939	High
North Stone Mountain Way Fuels Reduction	1,699	$424,675	Medium
Park Rapids Fuels Reduction	3,218	$804,465	Medium
Pierre Lake Fuels Reduction	1,665	$416,350	Medium
Quinns Meadow Fuels Reduction	3,815	$953,848	Medium
Rail Canyon Fuels Reduction	4,241	$1,060,319	High
Rice Fuels Reduction	11,680	$2,919,881	Medium
Sand Creek Fuels Reduction	2,204	$551,068	Medium
Scotts Valley Fuels Reduction	3,239	$809,796	High
Sheep Creek Fuels Reduction	8,413	$2,103,210	High
South Deep Fuels Reduction	1,544	$386,060	Medium
Squaw Creek Fuels Reduction	1,907	$476,661	Medium
Stranger Creek Fuels Reduction	3,081	$770,212	Medium
Summit Valley Fuels Reduction	7,715	$1,928,694	High

Table 5.7. Proposed Fuels Reduction Project Areas.

Projects Areas	Total Acres	Estimated Project Cost	Priority Ranking
West Kettle Falls Fuels Reduction	1,068	$267,041	High

Figure 5.3. Map of Proposed Fuels Reduction Projects



5.8.4 Proposed Roadside Fuels Treatment Projects

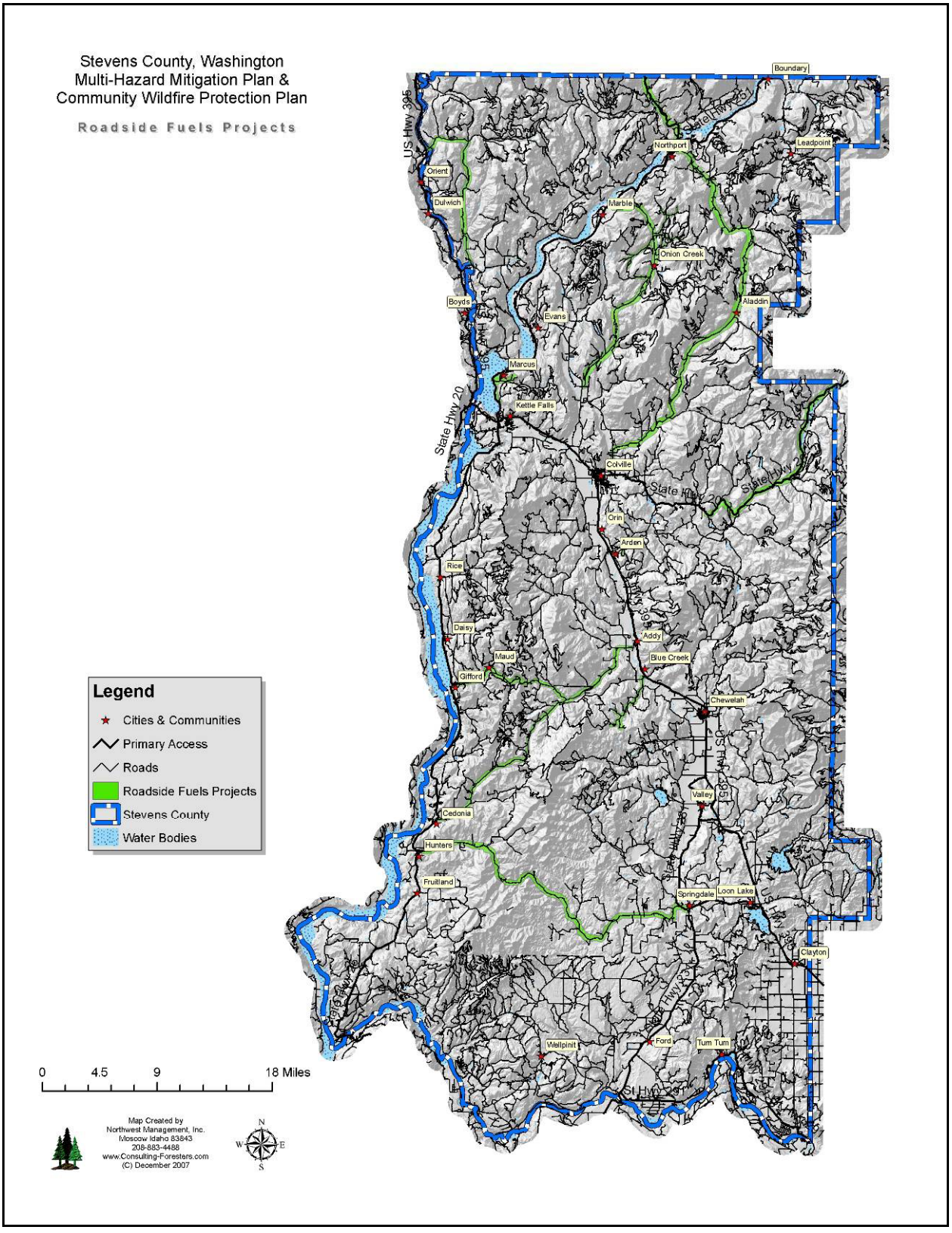
The proposed roadside fuels treatment projects are access corridors identified by the planning committee as being potentially unsafe for both ingress by emergency responders and egress in the event of an emergency evacuation due to wildfire. Treatments within the project areas will be site specific, but will likely include precommercial or commercial thinning within 200 feet from each side of the road, herbicide applications, and brush removal with the intent to create a fuel break along the road corridor. Prescriptions may include more intense removal of trees and other vegetation within 5 to 100 feet of the road and reduced intensity removal farther out. This technique will help lessen the intensity of a wildfire and may bring a crown fire to the ground before it reaches the road. Specific site conditions may call for other types of fuels reduction and fire mitigation techniques as well. The estimated project cost was calculated by assuming an average treatment cost of $700 per acre of treatment.

The Washington Department of Natural Resources, U.S. Forest Service, Bureau of Land Management, and/or the Northeast Washington Forestry Coalition may take the lead on implementation of many of these projects; however, project boundaries were purposely drawn without regard to land ownership in order to capture the full breadth of the potential wildland fire risk. Coordination and participation by numerous landowners will be required for the successful implementation of the identified projects. Additional planning information on these projects is included in the Appendices.

Table 5.8. Proposed Roadside Fuels Treatment Projects.

Roadside Fuels Treatments	Approximate Miles	Approximate Acres	Estimated Project Cost	Priority Ranking
Addy-Gifford Roadside Fuels	24.2	1,175	$822,773	High
Aladdin Roadside Fuels	58.7	2,847	$1,992,654	High
Arden Butte Roadside Fuels	2.3	112	$78,421	High
Bodie Mountain Roadside Fuels	9.7	468	$327,824	Medium
Cedonia-Addy Roadside Fuels	51.1	2,479	$1,735,537	High
Dry Creek Roadside Fuels	18.4	891	$623,508	Medium
Flora Roadside Fuels	1.7	82	$57,208	Medium
Gold Heights Roadside Fuels	12.3	597	$417,815	High
Hawks Roadside Fuels	6.3	303	$212,121	Medium
Highway 20 East Roadside Fuels	36.0	1,745	$1,221,304	High
Highway 25 North Roadside Fuels	13.3	643	$449,954	High
Miller Roadside Fuels	2.7	129	$89,991	Medium
Moran Creek Roadside Fuels	1.6	77	$53,994	Medium
Onion Creek Roadside Fuels	32.2	1,561	$1,092,746	High
Pierre Lake Roadside Fuels	12.1	588	$411,387	Medium
Quinns Meadow Roadside Fuels	2.3	110	$77,135	Medium
Sand Creek Roadside Fuels	6.3	303	$212,121	Medium
Slide Creek Roadside Fuels	1.1	53	$37,282	Medium
Springdale-Hunters Roadside Fuels	62.5	3,030	$2,121,212	High

Figure 5.4. Map of Proposed Roadside Fuels Treatment Projects



5.9 Regional Land Management Recommendations

Reference has been given to the role that forestry, grazing and agriculture have in promoting wildfire mitigation services through active management. Stevens County is a rural county by any measure. It is dominated by wide expanses of forest and rangelands intermixed with communities and rural houses.

Wildfires will continue to ignite and burn depending on the weather conditions and other factors enumerated earlier. However, active land management that modifies fuels, promotes healthy range and forestland conditions, and promotes the use of these natural resources (consumptive and non-consumptive) will insure that these lands have value to society and the local region. We encourage the US Forest Service, the Bureau of Land Management, State Parks, the Washington Department of Natural Resources, the Fish and Wildlife Service, industrial forestland owners, private forestland owners, and all agricultural landowners in the region to actively manage their wildland-urban interface lands in a manner consistent with reducing fuels and risks.

The following sections help identify were some of the land management agencies in Stevens County have planned, current, or proposed fuel reduction projects. Where possible, these projects have also been mapped and are presented in Appendix I. Knowing where agency projects are located can help this committee as well as other agencies prioritize their own fuels reduction projects. Simultaneous fuels reduction projects occurring on adjacent properties is not only encouraged, but this can also help cut down on costs.

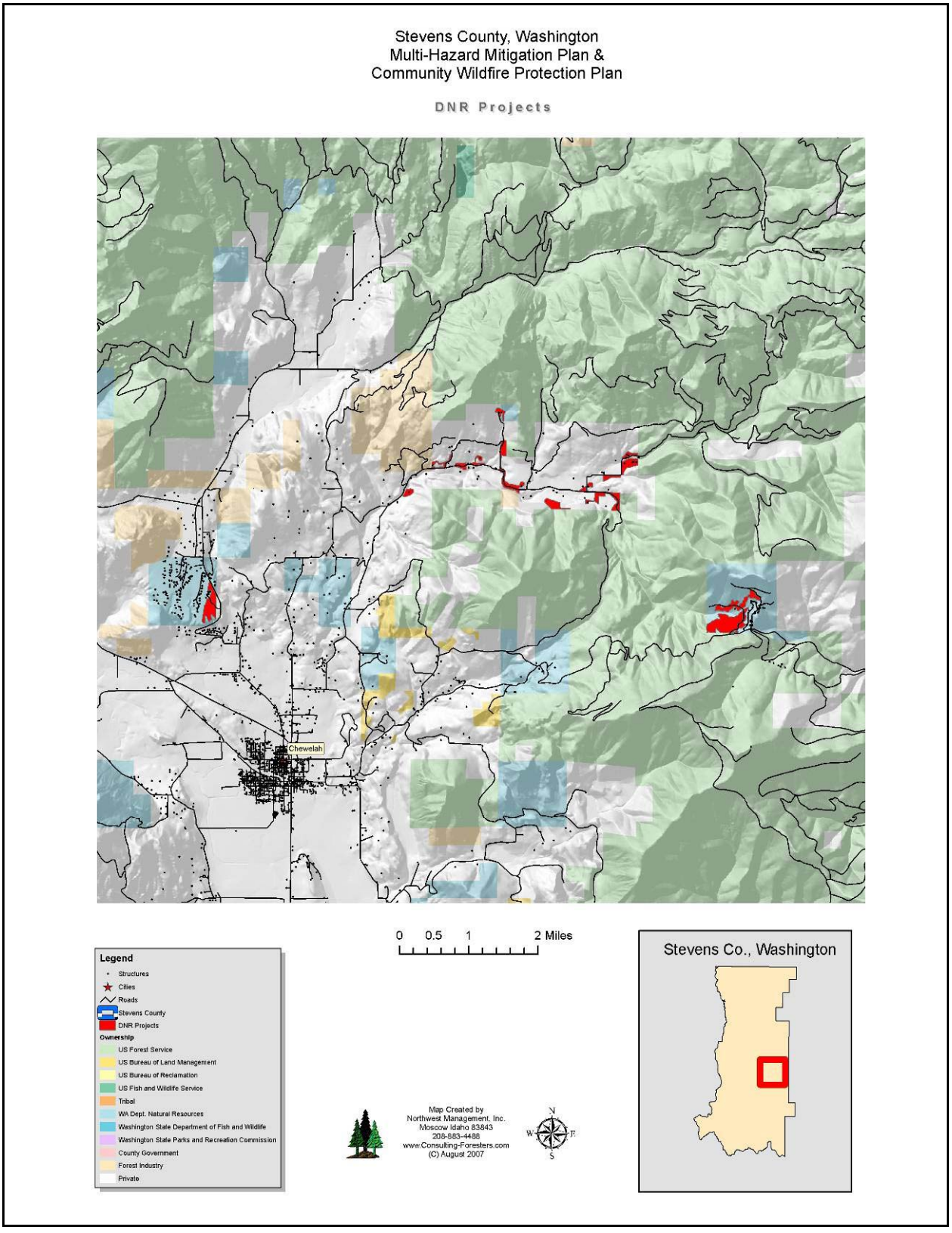
5.9.1 Washington Department of Natural Resources

The projects depicted on the following map were recently completed or are in progress on DNR trust lands. The management goal on these lands was primarily forest health and hazardous fuels reduction. They included commercial and pre-commercial thinning of overstocked stands to improve forest health and reduce fire danger.

Flowery Trail Fuels Reduction Project - The Department of Natural Resources conducted a commercial forest improvement sale on state trust lands in the Flowery Trail area. The project involved the removal of small wood material in area of the Flowery Trail community for the purpose of forest health improvement and fire hazard reduction.

Burnt Valley Defensible Space Project - The Department of Natural Resources partnered with the US Forest Service, Stevens County Fire District #4, and the Colville Coalition to conduct defensible space treatments around homes and to develop strategic fuel treatments. The treatments were conducted on private properties. The fuel reduction project involved the removal of pre-commercial regeneration, brush and ladder fuels. The project was funded by a 2005 National Fire Plan grant from the USFS.

Figure 5.5. DNR Fuels Reduction Projects.

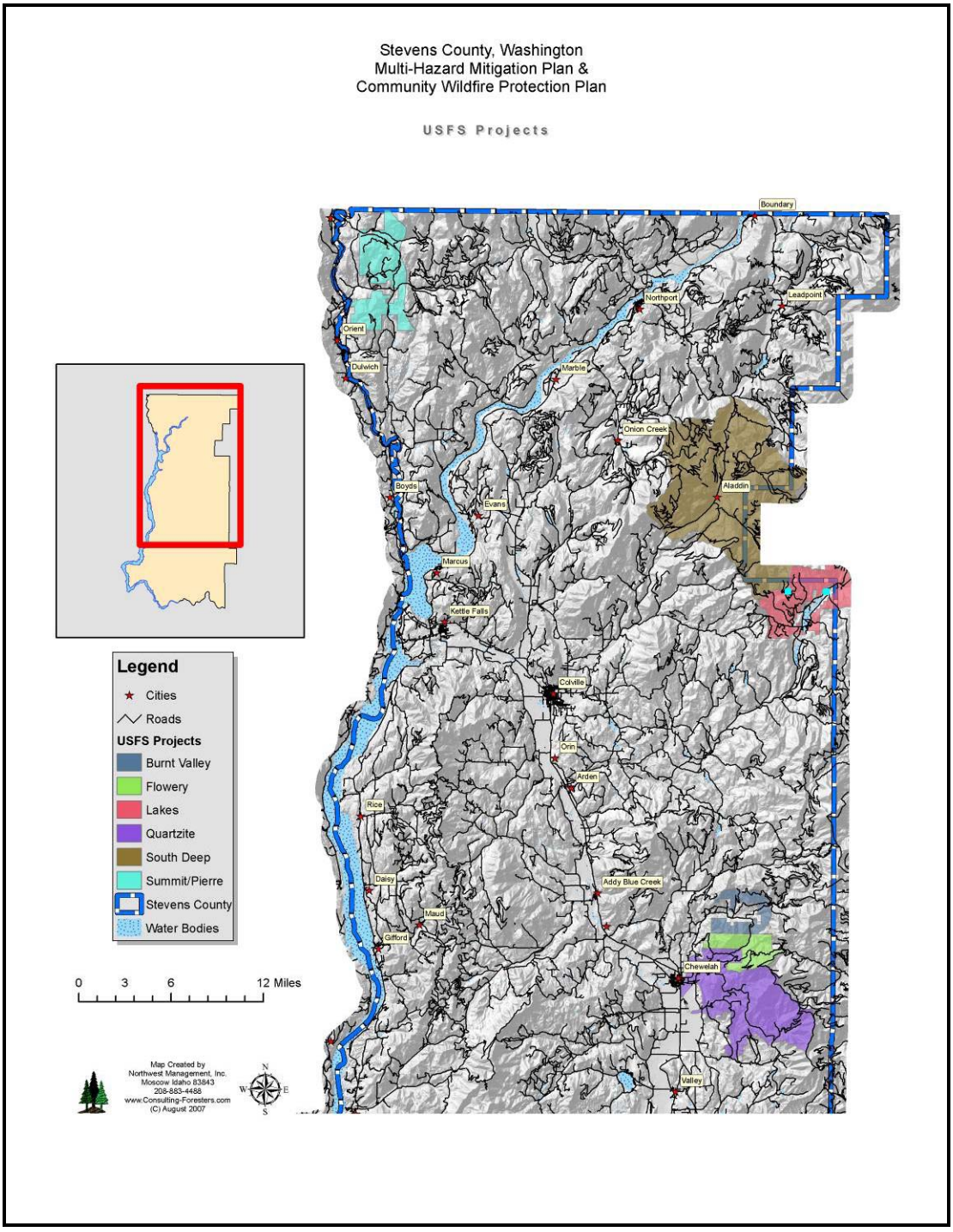


5.9.2 USDA Forest Service Projects

The U.S. Forest Service is working on several fuels reduction projects on the Colville National Forest in Stevens County.

The Burnt Valley, South Deep, Summitt/Pierre, and Lakes projects are wildland urban interface fuels reduction projects consisting of commercial harvest and post-harvest fuels treatments. The Quartzite project is a restoration project designed to introduce fire back onto the landscape.

Figure 5.6. U.S. Forest Service Project Map.



5.9.3 U.S. Fish and Wildlife Service

The following is a comprehensive list of all the proposed, planned, or ongoing projects managed by the U.S. Fish and Wildlife Service. Many units are receiving more than one type of treatment; thus, they are listed more than once, often with the same acreage.

Table 5.9. U.S. Fish and Wildlife Service Proposed Projects.

Treatment Name	Treatment Category	Treatment Type	Acres	WUI	Fire Regime	Planned Initiation Date	Planned Completion Date
Addy Mtn.	Mechanical	Thinning	200	No	I	5/1/2005	9/30/2005
Prescribed Fire	Fire	Broadcast Burn	200	No	I	10/1/2007	9/30/2008
	Mechanical	Thinning	80	Yes	I	8/1/2003	9/30/2003
Alderson Piles	Fire	Hand Pile Burn	80	Yes	I	10/1/2003	9/30/2004
Alderson	Fire	Broadcast Burn	80	No	I	4/1/2010	4/30/2010
Aspen	Fire	Broadcast Burn	5	No	I	4/1/2004	4/30/2004
Prescribed Fire	Fire	Broadcast Burn	20	No	III	10/1/2006	10/31/2006
Thinning and piling	Mechanical	Thinning	52	Yes	II	10/1/2010	9/30/2011
Berg Lane Machine Pile	Mechanical	Machine Pile	5,137	No	III	10/1/2007	9/30/2008
Berg Lane Timber Sale	Mechanical	Biomass Removal	5,137	No	III	10/1/2007	9/30/2008
Berg lane Pile Burn	Fire	Machine Pile Burn	5,137	No	III	10/1/2008	9/30/2009
Prescribed burn	Fire	Broadcast Burn	20	No	I	9/1/2005	9/30/2005
Pile Burning	Fire	Hand Pile Burn	200	No	I	10/1/2004	9/30/2005
Prescribed Fire	Fire	Broadcast Burn	340	No	I	10/1/2005	9/30/2006
Rookery Road Piles	Fire	Machine Pile Burn	5,137	No	III	10/1/2005	9/30/2006
Bermuda Triangle Broadcast Burn	Fire	Broadcast Burn	5,137	No	III	10/1/2006	9/30/2007
Prescribed Burn	Fire	Broadcast Burn	500	No	I	10/1/2003	5/1/2004
Prescribed Burn	Fire	Broadcast Burn	500	No	I	4/1/2004	4/30/2004
Biarly Unit 5	Fire	Broadcast Burn	5,137	No	III	10/1/2006	9/30/2007
Biarly Unit 4	Fire	Broadcast Burn	5,137	No	III	10/1/2006	9/30/2007
Biarly Unit 6	Fire	Broadcast Burn	5,137	No	III	10/1/2006	9/30/2007
	Mechanical	Thinning	500	No	I	10/1/2002	1/30/2003
Cedar Creek Road	Mechanical	Thinning	5,567	Yes	II	10/1/2006	9/30/2007
Cedar Creek Thin	Mechanical	Thinning		Yes	I	10/1/2006	9/30/2007
Blacktail Mtn Loop Rd	Mechanical	Thinning	5,567	Yes	II	10/1/2006	9/30/2007
Blacktail Mtn Loop Rd.	Mechanical	Chipping	5,567	Yes	II	10/1/2006	9/30/2007
Blacktail Mtn Rd.	Mechanical	Chipping	5,567	Yes	II	10/1/2006	9/30/2007
Cedar Creek Hand Piles	Mechanical	Hand Pile	200	Yes	II	10/1/2006	9/30/2007
Thinning	Mechanical	Thinning	5,567	Yes	II	10/1/2006	9/30/2007
Piles	Mechanical	Hand Pile	5,567	Yes	II	10/1/2006	9/30/2007
Piles	Mechanical	Hand Pile	5,567	Yes	II	10/1/2006	9/30/2007
Cedar Creek Thin	Fire	Hand Pile Burn	5,567	Yes	II	10/1/2007	9/30/2008
Cedar Creek Road	Fire	Hand Pile Burn	5,567	Yes	II	10/1/2007	9/30/2008
Chapman	Fire	Broadcast Burn	100	No	I	10/1/2007	9/30/2008
	Fire	Broadcast Burn	250	No	I	10/1/2002	1/30/2003
Chimney V	Fire	Broadcast Burn	828	Yes	II	10/1/2005	9/30/2006
Thinning and piling	Mechanical	Thinning	100	Yes	I	6/1/2003	9/30/2003
Daily	Fire	Broadcast Burn	80	No	I	4/1/2010	4/30/2010
Aspen Burns	Fire	Broadcast Burn	828	Yes	II	10/1/2006	9/30/2007
Narcisse Creek II	Fire	Broadcast Burn	828	Yes	II	10/1/2007	9/30/2008
Prescribed Fire	Fire	Broadcast Burn	828	Yes	II	10/1/2007	9/30/2008
East Christianson Meadow	Fire	Broadcast Burn	5,137	No	III	10/1/2005	9/30/2006
South LPO River II	Fire	Broadcast Burn	3,866	Yes	I	10/1/2005	9/30/2006
East Wier Meadow	Fire	Broadcast Burn	5,137	No	III	10/1/2007	9/30/2008
Log Barn meadow	Fire	Broadcast Burn	2,852	Yes	II	10/1/2007	9/30/2008
North Berg Meadow	Fire	Broadcast Burn	5,137	No	III	10/1/2007	9/30/2008
West Christianson Meadow	Fire	Broadcast Burn	5,137	No	III	10/1/2007	9/30/2008
West Wier Meadow	Fire	Broadcast Burn	5,137	No	III	10/1/2007	9/30/2008
Wier Barn Meadow	Fire	Broadcast Burn	5,137	No	III	10/1/2007	9/30/2008
Prescribed Fire	Fire	Broadcast Burn	80	Yes	I	10/1/2007	9/30/2008
Brown House Meadow	Fire	Broadcast Burn	5,137	No	III	10/1/2005	9/30/2006

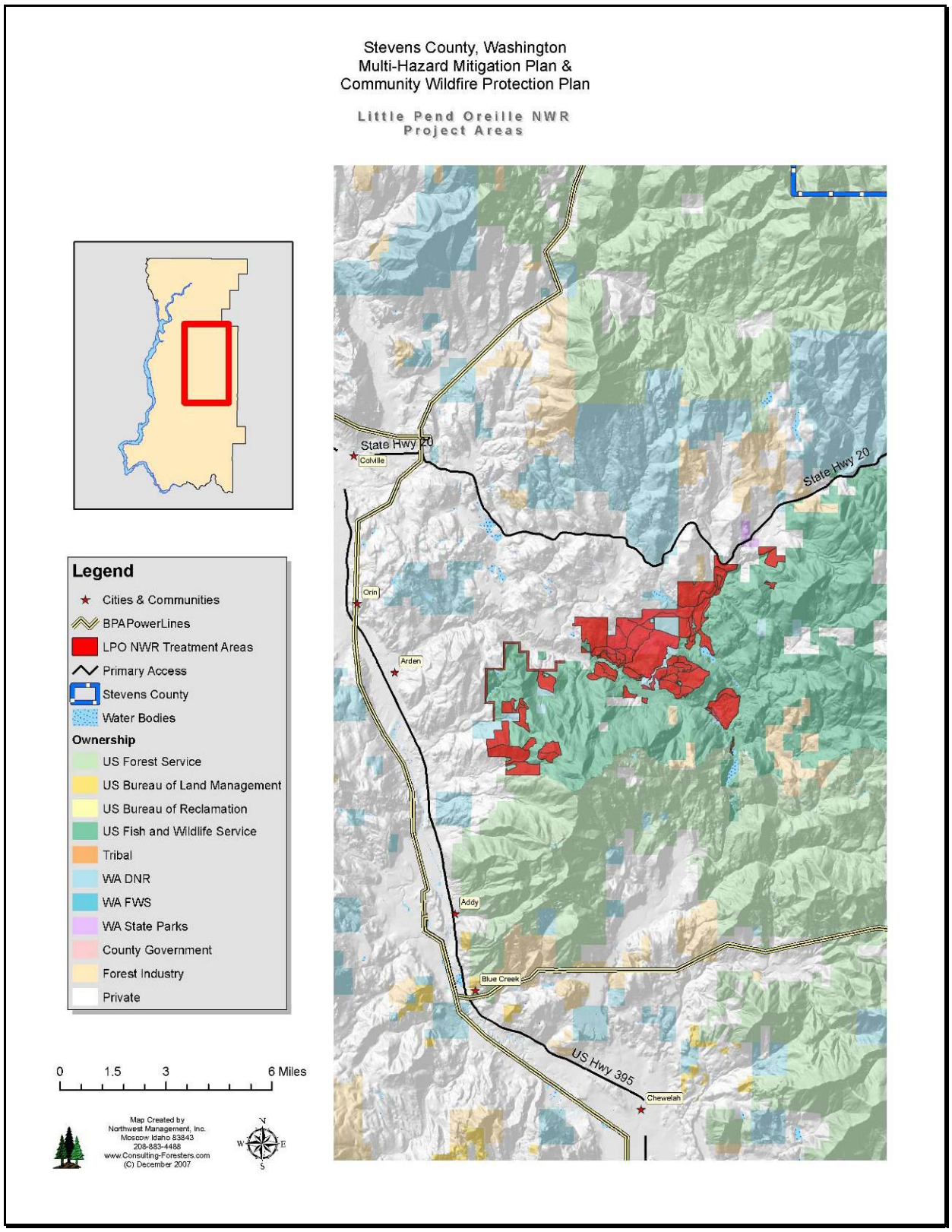
Table 5.9. U.S. Fish and Wildlife Service Proposed Projects.

Treatment Name	Treatment Category	Treatment Type	Acres	WUI	Fire Regime	Planned Initiation Date	Planned Completion Date
East Kidney Pond	Fire	Broadcast Burn	5,137	No	III	10/1/2005	9/30/2006
Kidney Pond	Fire	Broadcast Burn	5,137	No	III	10/1/2005	9/30/2006
Kidney Pond	Mechanical	Biomass Removal	100	No	I	10/1/2005	9/28/2006
Knutson Meadow	Fire	Broadcast Burn	4	No	I	10/1/2003	10/30/2003
Lenhart Forest	Fire	Broadcast Burn	40	No	I	4/1/2010	4/30/2010
Pile Burn	Fire	Machine Pile Burn	50	No	II	9/15/2004	9/15/2004
Prescribed Fire	Fire	Broadcast Burn	50	No	II	4/6/2005	4/30/2005
Inholdings Thinning	Mechanical	Thinning	100	Yes	II	10/1/2004	9/30/2005
Defensible space	Mechanical	Thinning	100	Yes	II	4/1/2005	9/30/2005
LPO River	Fire	Broadcast Burn	140	Yes	I	3/1/2004	4/15/2004
Winslow Camp	Mechanical	Biomass Removal	140	No	I	10/1/2005	9/30/2006
Winslow Camp	Fire	Machine Pile Burn	140	Yes	I	10/1/2006	11/30/2006
Winslow Camp	Fire	Machine Pile Burn	140	No	I	10/1/2006	9/30/2007
Winslow Camp	Mechanical	Machine Pile	140	Yes	I	10/1/2006	9/30/2007
	Fire	Broadcast Burn	400	No	I	10/1/2002	11/30/2002
Minnie Flats	Fire	Broadcast Burn	400	No	I	10/1/2003	9/30/2004
Minnie Flats	Fire	Broadcast Burn	400	No	I	10/1/2003	9/30/2004
South Minnie	Mechanical	Biomass Removal	400	No	I	10/1/2005	9/30/2006
Minnie South	Mechanical	Machine Pile	400	No	I	10/1/2006	10/30/2006
Minnie South	Fire	Machine Pile Burn	400	No	I	10/1/2006	9/30/2007
Cottonwood	Mechanical	Hand Pile	400	Yes	I	6/1/2007	9/30/2007
Cottonwood	Mechanical	Thinning	400	Yes	I	6/1/2007	9/30/2007
Minnie South	Fire	Broadcast Burn	5,137	No	III	10/1/2007	9/30/2008
Moran Creek CT	Mechanical	Thinning	2,467	Yes	I	10/1/2006	9/30/2007
Happy Valley Meadow	Fire	Broadcast Burn	2,467	Yes	I	10/1/2007	9/30/2008
Moran Creek I	Fire	Broadcast Burn	2,467	Yes	I	10/1/2007	9/30/2008
Moran Creek II	Fire	Broadcast Burn	2,467	Yes	I	10/1/2007	9/30/2008
Moran Creek III	Fire	Broadcast Burn	2,467	Yes	I	10/1/2007	9/30/2008
Moran Creek IV	Fire	Broadcast Burn	2,467	Yes	I	10/1/2007	9/30/2008
Slide Creek I	Fire	Broadcast Burn	2,467	Yes	I	10/1/2007	9/30/2008
Slide Creek II	Fire	Broadcast Burn	2,467	Yes	I	10/1/2007	9/30/2008
Slide Creek III	Fire	Broadcast Burn	2,467	Yes	I	10/1/2007	9/30/2008
Buffalo Wilson I	Fire	Broadcast Burn	3,866	Yes	I	10/1/2007	9/30/2008
Buffalo Wilson II	Fire	Broadcast Burn	3,866	Yes	I	10/1/2007	9/30/2008
Buffalo Wilson Meadow	Fire	Broadcast Burn	3,866	Yes	I	10/1/2007	9/30/2008
Buffalo Wilson Thin	Mechanical	Thinning	3,866	Yes	I	10/1/2007	9/30/2008
Happy Valley Burn	Fire	Broadcast Burn	3,866	Yes	I	10/1/2007	9/30/2008
Buffalo Wilson Hand Pile Burn	Fire	Hand Pile Burn	3,866	Yes	I	10/1/2008	9/30/2009
Paulke Piles	Fire	Hand Pile Burn	345	Yes	I	10/1/2003	12/30/2003
Paulke	Fire	Broadcast Burn	345	Yes	I	4/1/2004	9/30/2004
Prescribed Burn	Fire	Broadcast Burn	345	Yes	I	10/1/2006	9/30/2007
Slide Creek	Fire	Machine Pile Burn	1,100	Yes	I	11/1/2002	12/31/2002
Narcisse Creek	Fire	Broadcast Burn	1,100	Yes	I	11/1/2002	12/31/2002
Moran Creek	Fire	Machine Pile Burn	1,100	Yes	I	11/1/2002	5/28/2003
Durlan	Fire	Machine Pile Burn	1,100	Yes	I	11/1/2002	9/30/2003
Happy Valley	Fire	Machine Pile Burn	1,100	Yes	I	11/1/2002	5/28/2003
Paulke/Park Rapids	Fire	Machine Pile Burn	1,100	Yes	I	12/1/2002	5/28/2003
	Fire	Broadcast Burn	4	No	I	10/1/2002	10/20/2002
Potters Pond Road	Mechanical	Thinning	90	No	I	10/1/2005	9/30/2006
Hand Piling	Mechanical	Hand Pile	90	No	I	10/1/2006	10/31/2006
Potters Pond Road	Fire	Hand Pile Burn	90	No	I	10/1/2006	9/30/2007

Table 5.9. U.S. Fish and Wildlife Service Proposed Projects.

Treatment Name	Treatment Category	Treatment Type	Acres	WUI	Fire Regime	Planned Initiation Date	Planned Completion Date
Potters Pond Meadows 1	Fire	Broadcast Burn	90	No	I	10/1/2006	9/30/2007
Thinning	Mechanical	Biomass Removal	90	No	I	11/1/2006	9/30/2007
Potters Pond Broadcast Burn	Fire	Broadcast Burn	90	No	I	10/1/2007	9/30/2008
Prospect Creek	Mechanical	Thinning		Yes	I	10/1/2006	9/30/2007
Prospect Creek Road Thin	Mechanical	Thinning	5,567	Yes	II	10/1/2006	9/30/2007
	Mechanical	Hand Pile	200	Yes	II	10/1/2006	9/30/2007
Prospect Creek Piles	Fire	Hand Pile Burn	200	Yes	II	10/1/2006	9/30/2007
Prospect Creek Road Burn	Fire	Hand Pile Burn	5,567	Yes	II	10/1/2007	9/30/2008
Rhymer Ridge Harvest	Mechanical	Biomass Removal	2,467	Yes	I	10/3/2005	9/30/2006
Pile Burning	Fire	Machine Pile Burn	100	No	I	10/3/2005	9/30/2006
	Mechanical	Machine Pile	100	No	I	10/1/2006	10/31/2006
	Mechanical	Chipping	64	No	II	10/1/2003	12/15/2003
Sampson Orchard	Fire	Hand Pile Burn		No	I	6/1/2003	7/1/2003
Sampson	Mechanical	Thinning	200	No	I	6/1/2003	8/30/2003
Sampson Orchard	Fire	Hand Pile Burn	50	No	I	10/1/2003	12/1/2003
Sampson Orchard	Fire	Broadcast Burn	50	No	I	3/1/2004	4/15/2004
Schumaker Meadow	Fire	Broadcast Burn	20	No	I	9/1/2005	9/30/2005
South LPO River	Fire	Broadcast Burn	19	No	I	10/1/2004	10/30/2004
	Mechanical	Thinning	160	Yes	I	6/1/2003	9/30/2003
Pile Burning	Fire	Hand Pile Burn	160	Yes	I	11/1/2003	9/30/2004
Squaw Creek	Fire	Broadcast Burn	180	Yes	I	4/1/2010	4/30/2010
Pile Burning	Fire	Hand Pile Burn	160	Yes	I	11/1/2004	12/15/2004
Pile Burning	Fire	Hand Pile Burn	160	Yes	I	10/1/2006	9/30/2007
Starvation	Mechanical	Thinning	200	No	I	3/1/2004	5/30/2004
Prescribed Burn	Fire	Broadcast Burn	200	Yes	I	3/15/2005	9/30/2005
Starvation Flat Pile Burns	Fire	Hand Pile Burn	235	Yes	II	9/1/2004	9/30/2004
Starvation Depression RX Burn	Fire	Broadcast Burn	2,852	Yes	II	10/1/2005	9/30/2006
Starvation Flat I	Fire	Broadcast Burn	2,852	Yes	II	10/1/2006	9/30/2007
Starvation Flat II	Fire	Broadcast Burn	2,852	Yes	II	10/1/2006	9/30/2007
Starvation Flat III	Fire	Broadcast Burn	2,852	Yes	II	10/1/2006	9/30/2007
Winslow Lake	Fire	Broadcast Burn	2,852	Yes	II	10/1/2006	9/30/2007
Starvation East	Mechanical	Biomass Removal	2,852	Yes	II	10/1/2007	9/30/2008
Starvation East	Mechanical	Machine Pile	2,852	Yes	II	10/1/2007	9/30/2008
Starvation East	Fire	Broadcast Burn	2,852	Yes	II	10/1/2008	9/30/2009
Starvation East Pile Burn	Fire	Machine Pile Burn	2,852	No	II	10/1/2008	9/30/2009
	Fire	Broadcast Burn	51	No	I	10/1/2002	10/30/2002
Upper Manz Meadow	Fire	Broadcast Burn	22	Yes	I	10/1/2004	10/30/2004
West LPO River	Fire	Broadcast Burn	4	No	I	10/1/2003	10/30/2003
Winslow piles	Fire	Machine Pile Burn	50	Yes	I	3/1/2003	9/30/2003
Winslow Cabin	Fire	Broadcast Burn	50	Yes	I	10/1/2003	9/30/2004

Figure 5.7. U.S. Fish and Wildlife Service Project Map.



5.9.4 National Park Service

The National Park Service has numerous planned fuels reduction projects along the Lake Roosevelt National Recreation Area shoreline in Stevens County. These are typically small acreage projects in higher use areas.

A number of treatments will be used in different areas to achieve forest fuel reduction. These will include thinning, pruning, piling, chipping, and prescribed burning. A combination of methods may be used to restore historic tree densities and fuel loading. Each unit, once restored, will be monitored and routinely understory burned between 3 and 11 years to maintain fuel loads, mimicking historic fire cycles of ponderosa pine dominated forests.

Within 200 feet adjacent to interested landowners residences, thinning and chipping or piling will be used. Requests can be made for the following fiscal year. Landowners can contact Tod Johnson at 360-854-7350 for more information on defensible space or to obtain more information on other planned projects.

The following is a short description of currently planned units.

North Gorge

Thinning and understory burning to reduce stand density and fuel load.

Napoleon

Understory burning and thinning will be used.

Marcus

Thinning, chipping, piling and prescribed fire will be used adjacent to the town of Marcus. Some of this work has already been performed. On Marcus Island, crown thinning and prescribed fire treatments have been completed and maintenance burning will start in 3-5 years.

Evans

Thinning and burning treatments have been performed and contract crown thinning is scheduled in fiscal year 2008 further north of these areas. Prescribed burning will be performed following this to reduce fuel loads.

Thompson (China Bend)

Thinning by contract is scheduled for fiscal year 2008. Piling and burning will follow thinning.

Snag Cove

A combination of thinning, chipping, and pile burning adjacent to the campground will be used.

Kamloops

Thinning, chipping, piling and pile burning will be used. Thinning, chipping and piling for fiscal year 2008 and pile burning in 2009 are scheduled.

Mission Point

Understory thinning has been completed. Understory burning is in the planning phase. Future projects may include additional thinning.

Kettle Falls

Crown thinning by contract and understory burning are being planned. Additional thinning, piling, chipping and pile burning may be used.

Bradbury

Understory thinning, pruning and piling have been performed. Pile burning is scheduled for fiscal year 2008. Understory burning and future crown thinning may be performed.

Rickey Point

Understory thinning and piling have been performed. Pile burning, and understory burning is scheduled for fiscal year 2008. Understory thinning in previously untreated areas is scheduled spring 2008. Areas may receive future crown thinning and understory burning.

Hunters

Understory thinning and burning will be used to maintain forest fuel loads.

Cloverleaf

Multiple thinning entries and understory burns will be implemented.

Gifford

Understory, crown thinning, pruning and burning has been completed. Future maintenance burning to maintain fuel load will be performed in approximately 5-7 years and on cycles ranging from 3-11 years.

Gifford Ferry

Light understory thinning, pruning and understory burning will be performed

Clark Lake

Multiple entries of understory thinning, piling, pile burning, understory burning and crown thinning will be used to achieve historic tree densities and fuel loading.

Ne Bor Le

Understory thinning, pruning and some burning has been performed. Additional understory burning and thinning is being planned.

Enterprise

Pruning of Douglas fir mistletoe brooms in campground, understory thinning, piling and pile burning adjacent to the campground and understory burning of the area is planned. Pruning and understory thinning will be initiated in fiscal year 2009.

Due to the small acreage of many of the Lake Roosevelt National Recreation Area wildfire mitigation projects, the following maps have been zoomed in to specific areas and are shown in a series of three maps.

Figure 5.8. Lake Roosevelt National Recreation Area Project Map #1.

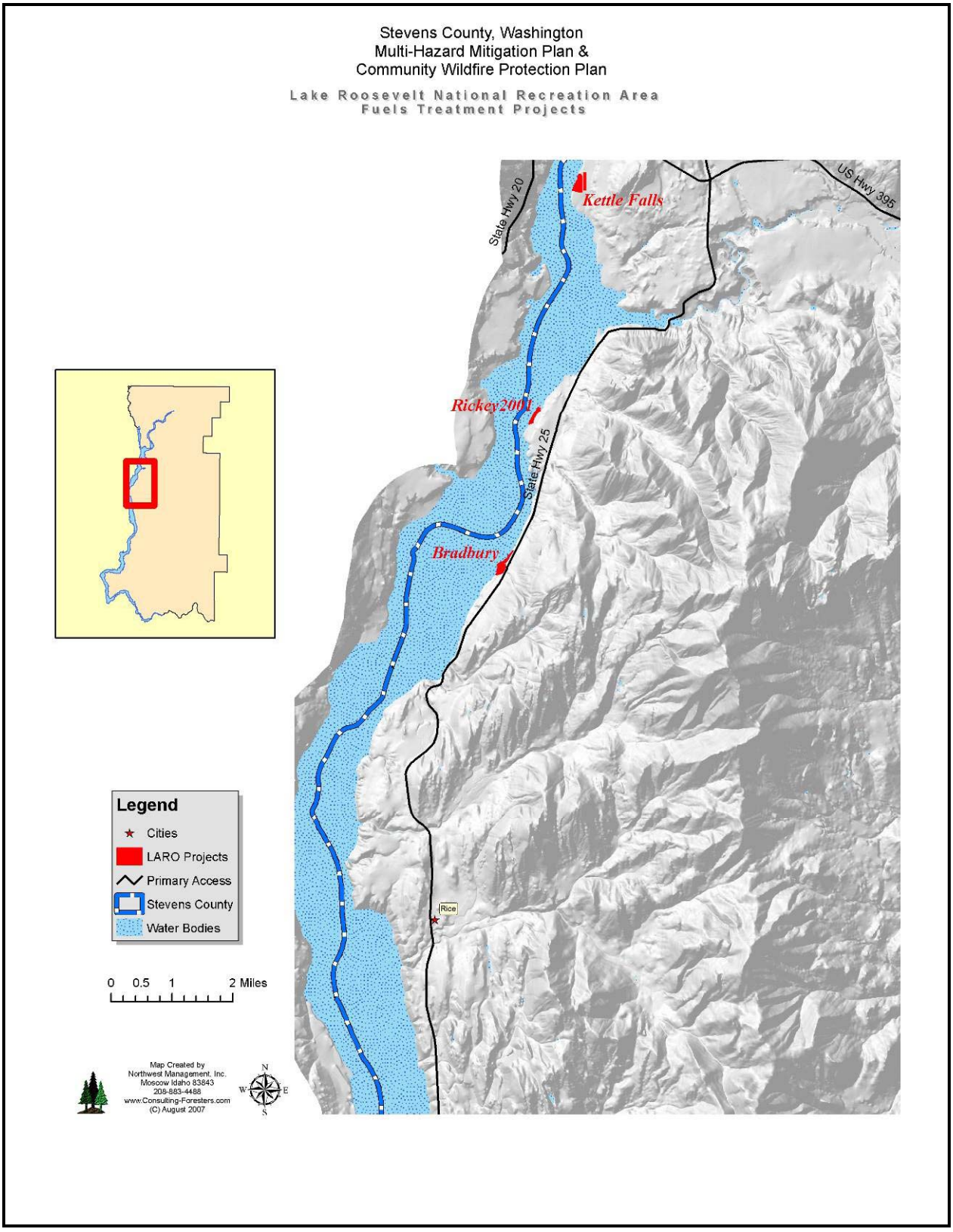


Figure 5.9. Lake Roosevelt National Recreation Area Project Map #2.

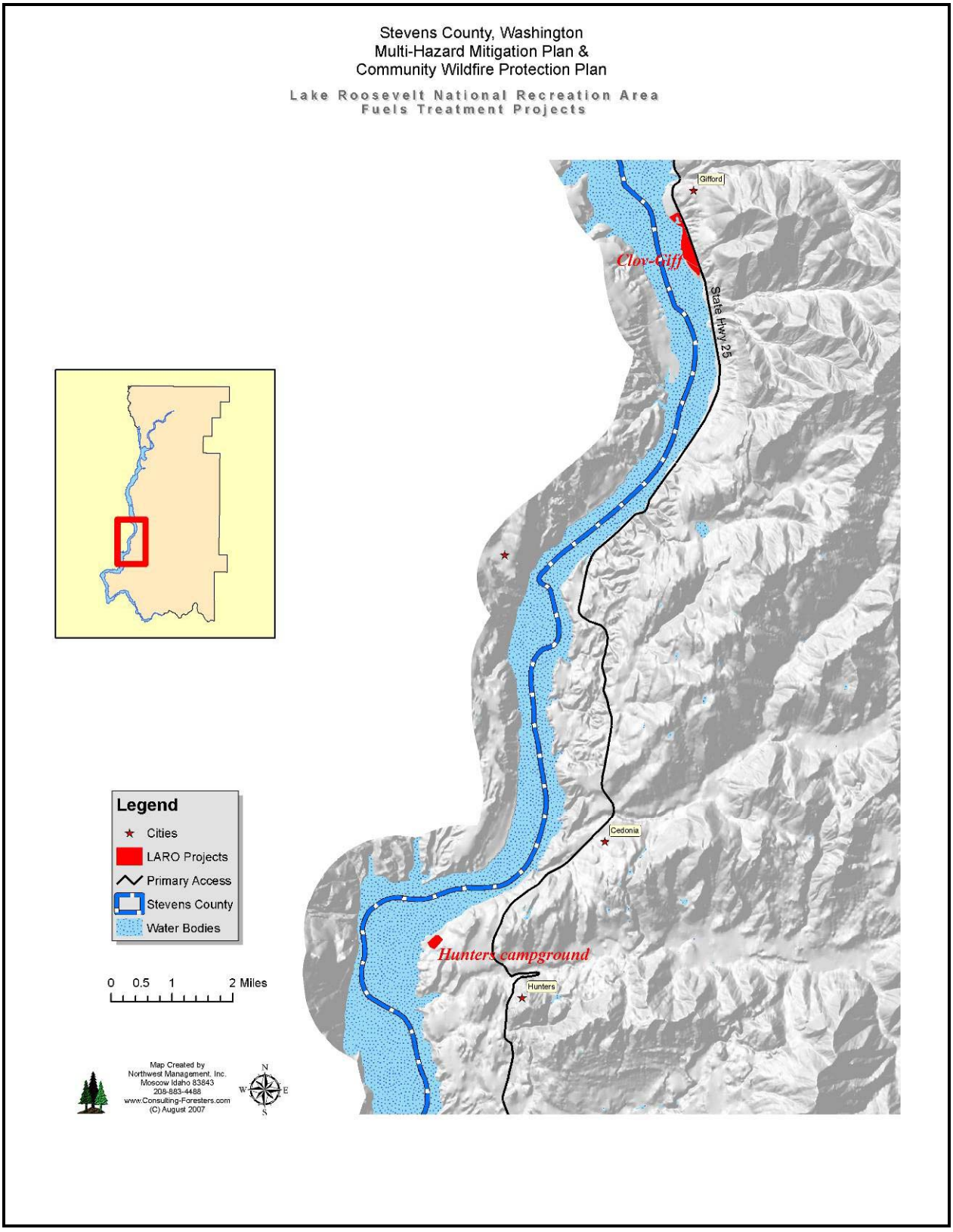
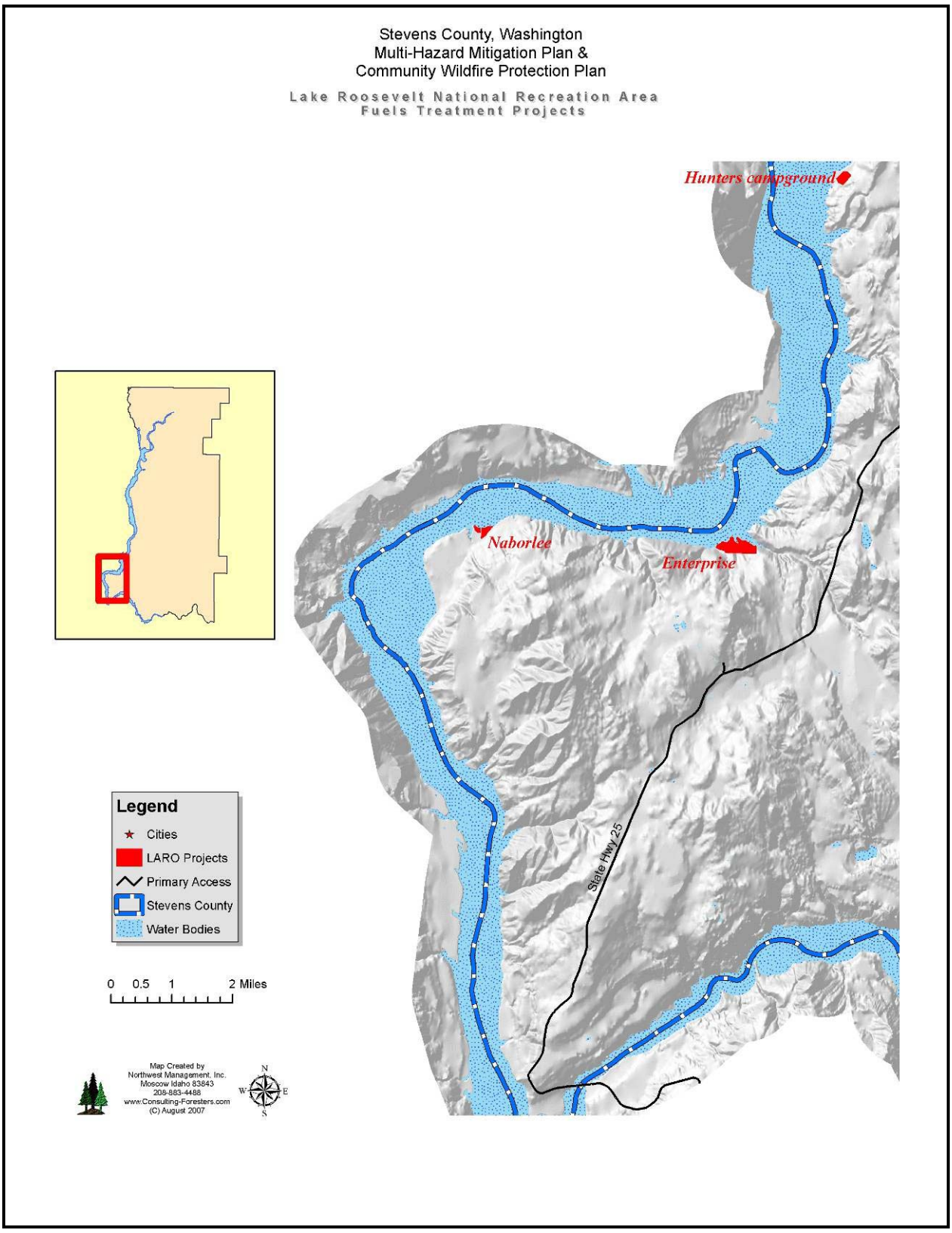


Figure 5.10. Lake Roosevelt National Recreation Area Project Map #3.



Chapter 6

6 Supporting Information

6.1 List of Tables

6.2 List of Figures

6.3 Potential Funding Sources

6.3.1 Wildfire Hazard Specific Funding Programs

10.677 - Forest Land Enhancement Program	***Abstract:*** 10.677 Forest Land Enhancement Program (FLEP) FEDERAL AGENCY: DEPARTMENT OF ARGICULTURE, FOREST SERVICE AUTHORIZATION: Farm Security and Rural Investment Act of 2002. Public Law 107-171.
15.228 - National Fire Plan - Wildland Urban Interface Community Fire Assistance	***Abstract:*** 15.228 National Fire Plan - Wildland Urban Interface Community Fire Assistance FEDERAL AGENCY: BUREAU OF LAND MANAGEMENT, DEPARTMENT OF THE INTERIOR AUTHORIZATION: Department of the Interior and Related Agencies Appropriations Act of 2001, Title IV, Public Law 106-291.
10.054 - Emergency Conservation Program	***Abstract:*** 10.054 Emergency Conservation Program (ECP) FEDERAL AGENCY: FARM SERVICE AGENCY, DEPARTMENT OF AGRICULTURE AUTHORIZATION: Agricultural Credit Act of 1978, Title IV, Public Law 95-334, 16 U.S.C. 2201-2205, as amended.
10.679 - Collaborative Forest Restoration	***Abstract:*** 10.679 Collaborative Forest Restoration (CFRP) FEDERAL AGENCY: FOREST SERVICE, DEPARTMENT OF ARGICULTURE AUTHORIZATION: Secure Rural Schools and Community Self-Determination Act of 2000, Title VI-Community Forest Restoration, Public Law 106-393, Section 605, Establishment of Program.
97.017 - Pre-Disaster Mitigation (PDM) Competitive Grants	***Abstract:*** 97.017 Pre-Disaster Mitigation (PDM) Competitive Grants FEDERAL AGENCY: DEPARTMENT OF HOMELAND SECURITY AUTHORIZATION: Sec. 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 USC 5133.
97.036 - Disaster Grants - Public Assistance (Presidentially Declared Disasters)	***Abstract:*** 97.036 Disaster Grants - Public Assistance (Presidentially Declared Disasters) FEDERAL AGENCY: DEPARTMENT OF HOMELAND SECURITY AUTHORIZATION: Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, 42 U.S.C. 5121 et seq.; Executive Order 12148; Reorganization Plan No. 3, 1978.
97.039 - Hazard Mitigation Grant	***Abstract:*** 97.039 Hazard Mitigation Grant (HMGP) FEDERAL AGENCY: DEPARTMENT OF HOMELAND SECURITY AUTHORIZATION: Robert T. Stafford Disaster Relief and Emergency Assistance Act, Section 404, 42 U.S.C. 5170c.
97.048 - Disaster Housing Assistance to Individuals and Households in Presidential Declared Disaster Zones	***Abstract:*** 97.048 Disaster Housing Assistance to Individuals and Households in Presidential Declared Disaster Zones FEDERAL AGENCY: DEPARTMENT OF HOMELAND SECURITY AUTHORIZATION: Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended by Public Law 106-390.
97.049 - Presidential Declared Disaster Assistance - Disaster Housing Operations for Individuals and Households	***Abstract:*** 97.049 Presidential Declared Disaster Assistance - Disaster Housing Operations for Individuals and Households FEDERAL AGENCY: DEPARTMENT OF HOMELAND SECURITY AUTHORIZATION: Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended by Public Law 106-390.
97.050 - Presidential Declared Disaster Assistance to Individuals and Households - Other Needs	***Abstract:*** 97.050 Presidential Declared Disaster Assistance to Individuals and Households - Other Needs FEDERAL AGENCY: DEPARTMENT OF HOMELAND SECURITY AUTHORIZATION: Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended by Public Law 106-390. This CFDA is for when State receives a grant from FEMA under Section 408(f) to administer the other needs provision. If a grant has not been requested by the State, the assistance is provided for under CFDA 97.048.

6.4 Signature Pages

This Stevens County Community Wildfire Protection Plan has been developed in cooperation and collaboration with the representatives of the following organizations, agencies, and individuals.

6.4.1 Resolution of Adoption by the Stevens County Commissioners

Resolution of the Commissioners of Stevens County, Washington

7-2008

A resolution of the Stevens County Board of Commissioners declaring county support and adoption of the Stevens County Community Wildfire Protection Plan.

Whereas, The Stevens County Board of Commissioners supports the Stevens County Community Wildfire Protection Plan and

Whereas, The Stevens County Community Wildfire Protection Plan will be utilized as a guide for planning as related to the National Fire Plan, the Healthy Forest Restoration Act, and other purposes as deemed appropriate.

Therefore be it resolved, that the Stevens County Board of Commissioners do hereby adopt, support, and will facilitate the Stevens County Community Wildfire Protection Plan's implementation as deemed appropriated.

Passed and approved this 14th Day of January 2008

Board of County Commissioners
Stevens County, Washington

By: Tony Delgado, Chairman
Board of County Commissioners

By: Malcolm Friedman
Board of County Commissioners

By: Merrill J. Ott
Board of County Commissioners

Attested by: Polly Coleman
Stevens County Clerk of the Board

6.4.2 Resolution of Adoption by the City of Colville

6.4.3 Resolution of Adoption by the City of Kettle Falls

6.4.4 Resolution of Adoption by the City of Chewelah

6.4.5 Resolution of Adoption by the Town of Northport

6.4.6 Resolution of Adoption by the Town of Marcus

6.4.7 Resolution of Adoption by the Town of Springdale

6.4.8 Signatures of Participation by Stevens County Fire District and Departments

This Community Wildfire Protection Plan and all of its components identified herein were developed in close cooperation with the participating entities listed.

By: Jeff Pitts, Chief
City of Colville Fire Department

Date

By: Doug Sassman, Chief
City of Chewelah Fire Department

Doug Sassman

1-14-08

Date

By: Robert McIntosh, Chief
City of Kettle Falls Fire Department

Mayor

1-14-08

Date

By: Doug Morrow, Chief
Town of Marcus Fire Department

Date

By: Eric Middlesworth, Chief
Town of Northport Fire Department

Mark Beck

1-14-08

Date

By: Mark Beck, Chief
Town of Springdale Fire Department

Mark Beck

1-14-08

Date

By: Mark Beck, Chief
Stevens County Fire District #1

1-14-08

Date

By: Rick Anderson, Chief
Stevens County Fire District #2

By: Jeff Pitts, Chief
Stevens County Fire District #3

Date

By: Tim Vandoren, Chief
Stevens County Fire District #4

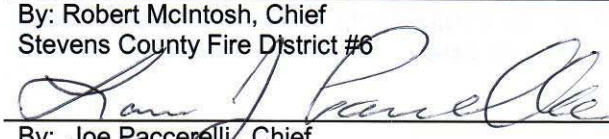
Les Schneiter

1/14/08

Date

By: Les Schneiter, Chief
Stevens County Fire District #5

By: Robert McIntosh, Chief
Stevens County Fire District #6 — Date



1/14/08

By: Joe Paccerelli, Chief
Stevens County Fire District #7 — Date

By: Herb Hippler, Chief
Stevens County Fire District #8 — Date

By: Glen Thompson, Commissioner
Stevens County Fire District #9 — Date

By: Fred Fredrickson, Chief
Stevens County Fire District #10 — Date

By: Mark Burnell, Chief
Stevens County Fire District #11 — Date

By: William Murphy, Chief
Stevens County Fire District #12 — Date

6.4.9 Signatures of Participation by other Stevens County Entities

This Community Wildfire Protection Plan and all of its components identified herein were developed in close cooperation with the participating entities listed.

Vicki Christiansen — 2/11/08

By: Vicki Christiansen, State Forester
Washington Department of Natural Resources — Date

for St Rakys — 1/14/08

By: Rick Brazell, Forest Supervisor
Colville National Forest — Date

By: Raymond D. Fry, Superintendant
USDI Bureau of Indian Affairs — Date

By: Steve Pietroburgo, Fire Management Officer
USDI Fish and Wildlife Service, Little Pend Oreille NWR — Date

Lloyd McGee — 1/14/08

By: Lloyd McGee, President
Northeast Washington Forestry Coalition — Date

By: Rick Sherwood, Tribal Chairman
Spokane Indian Reservation — Date

Charles L. Kesler for — 1/14/08

By: Christine Titus, District Administrator
Stevens County Conservation District — Date

1/14/08

By:Carl Eklund, Patrol Agent in Charge
U.S. Customs and Border Protection — Date

Margaret Hooker for — 1/14/08

By: Debbie Bird, Superintendent
USDI National Park Service, Lake Roosevelt NRA — Date

Tera R. King — 1/14/08

By: Tera R. King, Project Manager
Northwest Management, Inc. — Date

6.5 Literature Cited

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King, Tera R. and V. Bloch. *Lead Authors.* 2008. Stevens County, Washington, Community Wildfire Protection Plan – Volume II. Northwest Management, Inc., Moscow, Idaho. May 30, 2008. Pp 184.

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King, Tera R. and V. Bloch. *Lead Authors.* 2008. Stevens County, Washington, Terrorism and Civil Unrest Mitigation Plan – Volume IV. Northwest Management, Inc., Moscow, Idaho. May 30, 2008. Pp 42.

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