

WILDFIRE PROTECTION AND TRIBAL NEEDS ASSESSMENT
*A study of the resources and needs related to wildland and structural fire protection for
Pacific Northwest Tribes*

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- Burns Paiute Tribe
- Confederated Tribes of the Chehalis
- Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians
- Confederated Tribes of the Grande Ronde
- Confederated Tribes of the Siletz
- Confederated Tribes of the Umatilla
- Confederated Tribes of the Warm Springs
- Coquille Indian Tribe
- Couer d'Alene Tribe
- Cow Creek Band of Umpqua Indians
- Cowlitz Tribe
- Jamestown S'Klallam Tribe
- Klamath Indian Tribe
- Lower Elwha Klallam Tribe
- Lummi Tribe
- Makah Indian Tribe
- Muckleshoot Tribe
- Nez Perce Tribe
- Nisqually Tribe
- Port Gamble Indian Community
- Quinalt Tribe
- Samish Tribe
- Sauk-Suiattle Indian Tribe
- Shoshone-Bannock Tribes
- Skokomish Tribe
- Squaxin Island Tribe
- Stillaguamish Tribe
- Swinomish Tribe
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EXECUTIVE SUMMARY

Overview

The Program for Watershed and Community Health at the University of Oregon undertook this study to examine the needs and issues of Tribes in Oregon, Washington and Idaho in relationship to wildfire protection and prevention. The purpose of the study is to communicate findings to Tribes, agencies and organizations that allocate funding and provide technical assistance for fire protection. This study also identifies strategies to increase assistance to Tribes in developing community fire plans, mapping risk and developing appropriate local programs related to wildfire.

This report documents the methodology and findings from interviews with Tribal foresters, emergency managers, natural resources staff and other Tribal leaders. The report includes recommendations to increase the capacity of Tribes to reduce potential losses to life, property and natural resources from wildfire. The report also provides an overview of policies and programs related to wildfire risk, traditional use of fire, economic impacts of fire occurrence, and the opportunities for strengthening capacity of Tribes to address wildfire protection. The policies addressed in this report include the Healthy Forests Restoration Act, the Tribal Forest Protection Act, the National Fire Plan and Ten-Year Comprehensive Strategy and the Federal Emergency Management Agency (FEMA) Disaster Mitigation Act.

Methodology

The study is based on information gathered during interviews with a variety of Tribal employees, including Tribal foresters, natural resource managers, planners and emergency managers. We requested interviews from the 42 federally recognized Tribes in the Pacific Northwest (Oregon, Washington and Idaho). We successfully interviewed representatives from 74 percent of the Tribes in this region.

The study addressed several broad areas related to fire management, fire planning, economic development and resources available for fire management and prevention. In developing questions for the study, we spoke with the Regional Bureau of Indian Affairs Fire Manager and regional Tribal liaisons with the Forest Service, Federal Emergency Management Agency and the Environmental Protection Agency. Representatives from these agencies provided us with suggestions and feedback for the survey design as well as with contacts within some of the Tribes. The survey was conducted between February and July 2004. We initiated the process by sending formal letters introducing the study to the Tribal Chairpersons and requesting Tribal participation in the survey.

Different Tribal governance structures and varying service delivery programs for fire protection resulted in interviews with different Tribal representatives. In some instances, Tribes had fire, forestry, or natural resource staff directly responsible for structural and/or wildland fire protection. In other cases, with Tribes that contract fire protection out to public agencies or neighboring jurisdictions, planning, emergency management or natural resource staff became our contacts for the survey. We also had the opportunity speak with a number of cultural resource staff of Tribes that have a particular interest in traditional use of fire or culturally significant sites at risk to wildfire.

Policy

This report addresses a number of federal policies that affect Tribal fire management. Current issues and needs that Tribes have related to fire management are complex due to the number of federal policies and agreements that apply to sovereignty, self-determination, forest management, and wildfire protection and prevention. A brief summary of the policies discussed in this report is provided below.

The landmark 2000 fire season ushered in several federal policies dealing with community fire planning, hazardous fuels reduction, wildfire risk assessment, and biomass utilization. Major legislation including the 2001 National Fire Plan (NFP), 2003 Healthy Forests Restoration Act (HFRA), and 2004 Tribal Forest Protection Act (TFPA) provide increased opportunities for Tribal and non-Tribal communities to access federal funding to reduce wildfire risk, protect natural, cultural, human, and financial resources, and potentially increase contracting opportunities.

The complexity of fire management plans and programs varies from Tribe to Tribe. Both federal fire management planning and community fire planning play a role in Tribal fire management. Funding for federal fire management planning has increased nearly five-fold from 1991 to 2001. Federal fire management funds are directed through the BIA toward fuels management, fire preparedness, and emergency stabilization activities on Indian forestland. Although an increase in fire management funding is a boon for many Tribes, the restrictions on the use of such funds may limit the Tribes' ability to develop comprehensive programs that address significant issues such as wildland fire hazard and risk and fire prevention education.¹

Community Wildfire Protection Plans (CWPPs), authorized by the HFRA, may fill a niche in Tribal fire management that federal fire management plans do not by reducing wildfire risk more comprehensively to community resources (natural, cultural, human, and financial). The community fire planning process emphasizes a collaborative approach to identify wildfire risk, prioritize hazardous areas, and address issues related to structural vulnerability. Community Fire Plans can include strategies for emergency management, education and prevention, biomass utilization, and other related issues.

Tribal control of fire management activities varies from Tribe to Tribe, based on the level to which Tribes have (or have not) compacted to control programs or services formerly delivered through the Bureau of Indian Affairs (BIA) as trustee. Under the 1975 Indian Self-Determination and Education Assistance Act (ISDEA) and subsequent "self-governance" policies, Tribes reserved the right to take control over their own affairs and make decisions that affect both Tribal members and assets. Therefore, in terms of fire management, Tribes may be more successful in implementing Tribal goals if they have greater control of relevant resources, programs, and services. The Indian Forest Management Assessment Team for the Intertribal Timber Council reinforces this point in terms of Tribal forestry, "*tribes with a greater degree of control over their resources have forests and forestry that align better with Tribal goals and vision than those with less autonomy.*"²

¹ Indian Forest Management Assessment Team (IFMAT), *An Assessment of Indian Forests and Forest Management in the United States* (Portland, OR: Intertribal Timber Council, 2001), 8.

² IFMAT-II, p. 86

Findings

The findings presented in this report address community fire protection, access to funding, economic development opportunities, and interagency coordination. While over half of respondents have participated in fire prevention activities such as hazardous fuels reduction or education, some respondents were less informed about community fire protection issues. Many respondents that did not have experience with these activities expressed an interest in pursuing a community fire plan or related activities.

The analysis and review process revealed that the majority of Tribes east of the Cascade Mountains (in more fire-prone country) were actively involved in community fire protection activities. While Tribes west of the Cascade Mountains are less likely to have participated in such activities, many expressed an interest in pursuing community fire protection. A number of respondents emphasized the importance of proactive fire planning west of the Cascades due to the potential for fires that may be less frequent, but of great magnitude. Respondents clearly stated that funding and planning is essential for communities on both sides of the Cascades.

A major barrier to community fire protection, fuels reduction, and fire prevention is access to appropriate funding sources. A number of Tribes mentioned the difficulty fluctuating funding poses to initiate and maintain fire-related programs. Also, respondents indicated although federal funding was available for community fire planning activities, many Tribes did not have the organizational capacity or meet eligibility requirements needed to pursue such opportunities. Virtually all respondents expressed an interest in economic development opportunities, specifically in contractor training. However, many respondents cited lack of adequate funding (and access to funding), high liability insurance, and lack of appropriate skills as barriers to taking advantage of contracting opportunities. Respondents suggested additional training and education may help to secure funding and resources to pursue these opportunities. Nearly all Tribes located east of the Cascade Mountains indicated economic development opportunities exist through biomass utilization or reuse/recycling of raw materials.

A number of participants suggested greater interagency coordination at the local, state, and federal level may increase access to fire protection resources and reduce communities' risk to wildfire. Such interagency coordination may increase opportunities for partnerships to more effectively address issues such as funding, education and outreach, and the traditional use of fire in land management.

Recommendations

Findings from this assessment indicate Tribes want increased access to training, funding, resources and technical assistance for fire protection, fuels reduction, contracting and emergency management. Following are recommendations based on the findings from the survey. The recommendations are described in greater detail in *Chapter 5: Recommendations*.

Action	Implementation Strategies	Potential Partners/Resources
1. Develop a clearinghouse of information for Tribal fire protection, mitigation and emergency management.	Alternatives: Internet site, a telephone call-in number, and a printed resource guide	<ul style="list-style-type: none"> • Tribal organizations with broad membership • BIA, ODF, DNR, FS, BLM
2. Provide contractor training for fire protection and fuels reduction	Identify training programs to provide skills and expertise to Tribes interested in contractor training.	<ul style="list-style-type: none"> • BIA, BLM, FS, F&W • Tribal organizations (e.g., ITC) • Community-based organizations
3. Provide training and resources on small business development and grant opportunities.	Identify small business development training programs and resources.	<ul style="list-style-type: none"> • Affiliated Tribes of NW Indians • ONABEN—Oregon Native American Business Network • Small Business Association • Tribal Business Info Centers • BIA
4. Examine opportunities to utilize stewardship contracting authorities for land management, fire protection and economic development.	Review Tribal stewardship contracting authorities and projects and fire protection programs to identify examples.	<ul style="list-style-type: none"> • Forest Service, BLM, BIA • Community-based organizations involved in stewardship projects
5. Develop and deliver resources and materials to assist Tribes in community fire planning, fuels reduction implementation and monitoring.	Create (and modify) resources on community fire planning for Tribes	<ul style="list-style-type: none"> • “CWPP: A Handbook for Wildland–Urban Interface Communities” • Framework for Community Fire Plans (PWCH) • BIA, BLM, FS)
6. Ensure Tribes have access to structural and wildland fire protection. Develop and deliver materials for training and education on fire protection and fire prevention. Assist Tribes in securing grants.	Provide information on grant writing, consultation on fire protection alternatives, access to the information and resources	<ul style="list-style-type: none"> • FEMA • USFA • NFPA • DHS • BIA • ITC • Grant Programs
7. Illustrate the role of traditional use of fire. Communicate this information to public agencies, adjacent jurisdictions, community-based organizations, youth and other stakeholders.	Build understanding of traditional use of fire and increase opportunities to integrate into implementation and monitoring programs.	<ul style="list-style-type: none"> • Literature and references on traditional use of fire • Traditional Ecological Knowledge
8. Organize a workshop for Tribes on community fire planning and prevention	Organize and hold a workshop for Tribes to provide a forum for the dissemination of materials and exchange of knowledge related to community fire planning and prevention.	<ul style="list-style-type: none"> • BIA • ITC • BLM, FS • Non-profit and community-based organizations

Action	Implementation Strategies	Potential Partners/Resources
		based organizations

Next Steps

This assessment has identified strategies to bring together partners and resources to meet the needs and concerns of Pacific Northwest Tribes concerning wildland and structural fire protection. In November 2004, PWCH had the opportunity to present findings and recommendations to a group of Tribal and public agency representatives in a meeting at the Coquille Tribal Offices in North Bend, Oregon. The meeting provided a venue for the exchange of information and ideas to strengthen the recommendations in the Assessment and promote interagency coordination (between Tribes, local fire districts, cities, counties, and public agencies) to enhance structural and wildland fire protection and prevention.

In the beginning of 2005, PWCH will conduct meetings (similar to the Coquille meeting) with Tribal and relevant public agency representatives in eastern Oregon or Washington to present findings and recommendations, identify additional needs and issues related to wildfire and structural fire protection and prevention, and identify next steps. These meetings will result in a strategic framework and resource guide to illustrate fire planning activities and processes and the extent to which Tribal needs can be met through fire management.

CHAPTER 1: INTRODUCTION

The Program for Watershed and Community Health at the University of Oregon undertook this study to examine the needs and issues of Tribes in Oregon, Washington and Idaho in relationship to wildfire protection and prevention. The purpose of the study is to communicate findings to Tribes, agencies and organizations that allocate funding and provide technical assistance for fire protection. This study also identifies strategies to increase assistance to Tribes in developing community fire plans, mapping risk and developing appropriate local programs related to wildfire.

Report Organization

This report includes five chapters and six appendices as described as follows:

Chapter 1: Introduction discusses background on issues related to wildfire risk, federal policies, traditional role of fire, economic impacts of fire occurrence, and the opportunities for strengthening capacity of Tribes to address wildfire protection through economic development.

Chapter 2: Policy describes the federal policies that impact Tribes in relationship to community or wildland fire protection or emergency management issues.

Chapter 3: Methodology describes the study design, duration and sample selected in conducting a series of telephone interviews with thirty-one federally recognized Tribes in Oregon, Washington and Idaho.

Chapter 4: Findings discusses survey results from interviews with thirty-one federally recognized Tribes in Oregon, Washington and Idaho on wildfire-related issues.

Chapter 5: Recommendations describes actions, alternatives and potential partners for building capacity within Tribes for wildfire protection and prevention.

Appendix A: Acronyms and Definitions lists select acronyms and definitions of terms used throughout this report.

Appendix B: Bibliography and Resources lists the articles, books, journals, web sites and other resources referenced in this study.

Appendix C: Tribal Profiles provides information on the population, land ownership and economic base of each of the federally recognized Tribes in Idaho, Oregon and Washington.

Appendix D: Survey Question Responses includes the percentage of responses for each question asked in the survey.

Appendix E: Open-Ended Survey Responses provides a full listing of open-ended responses given during individual interviews.

Appendix F: Draft Review Comments provides a summary of the comments gathered during the review period.

Background

The financial and social costs of wildfires are rising annually. Between 2000 and 2003, wildfires destroyed over 4,000 structures nationwide and cost the federal government over \$4.7 billion in fire suppression.³ In 2004 wildfire consumed over eight million acres across the United States — well above the ten-year average (1993 to 2003) of over 5.5 million acres.⁴ Grants through the National Fire Plan, the Federal Emergency Management Agency (FEMA) Assistance to Firefighters Grant Program, and other local, state, and federal fire-related programs have been established to bolster the ability of communities to prepare for and reduce the risk of wildfires. Most recently, the Healthy Forests Restoration Act has directed authorities for Community Wildfire Protection Plans. While these programs provide guidance to communities to reduce the risk of wildfire and other disasters, without technical assistance and financial support, many rural, isolated and poor communities may be unable to take advantage of the resources.

Many resource-poor Tribes also look to federal, state or local fire protection agencies to provide wildland and structural fire protection. This coordination is one way to provide resources. However, it does not necessarily address Tribal interests in fire management. Many Tribes have used fire historically as a way to manage forestlands and grasslands to protect habitat, cultivate food and materials used for basketry. Current regulations on burning and perceptions of fire limit the extent to which fire can be used in these traditional ways. Culturally significant sites may also be at risk to wildfire. Consultation with Tribes is important to protect sites not on Tribal land. These issues underscore the need for landscape-level resource and fire planning for Tribes. The National Fire Plan has made funds available nationwide for community fire planning, risk assessment, hazardous fuels reduction and small diameter marketing and utilization. It is critical Tribes have access to these funds, assistance in grant writing, and technical assistance for implementation of these programs.

Purpose

The purpose of this assessment is to build an understanding of the needs Tribes have in relationship to wildfire protection. Findings from this assessment may help Tribes gain greater access to federal fire programs and resources, increase understanding of the connections between wildfire and poverty, and secure the resources needed to protect themselves from wildfire. Based on the findings from interviews with Tribal representatives, this report includes recommendations on increasing assistance to Tribes for community fire plans, mapping of wildfire risk and formation of community networks and coalitions.

Definitions⁵

- **Sovereignty** is an internationally recognized concept. A basic tenet of sovereignty is the power of a people to govern themselves.⁶

³ National Interagency Fire Center (June 2004), <http://www.nifc.gov>

⁴ National Climatic Data Center (December 2004), <http://www.ncdc.noaa.gov>

⁵ Appendix A includes additional definitions.

⁶ American Indian Policy Center (June 2004), <http://www.airpi.org/pubs/indinsov.html>

- **Trust Responsibility** is the government's obligation to honor the trust inherent to treaties and agreements and to represent the best interests of the Tribes and their members.⁷
- **Self-Determination** is the ability of a people to pursue their own goals.⁸

Wildfire and Poverty

Wildfires can intensify rural poverty as they hit hardest those communities least able to protect themselves. A 2001 report by the University of Oregon's Program for Watershed and Community Health (PWCH) found that approximately three to five million of the ten to 15 million residents in the wildland-urban interface (WUI) throughout the West lack incomes sufficient to meet basic economic needs; making adequate wildfire protection cost-prohibitive.⁹ To ensure rural, poor and isolated communities have equal access to fire protection programs, public agencies, decision makers, and communities must begin to understand the challenges these communities face and take steps to secure funds and resources to be effective in developing community fire plans and reducing wildfire risk.

Along with the high risk of wildfire that communities throughout the nation face, there are additional challenges Tribes face in reducing wildfire risk such as location and community capacity. The 2001 PWCH report cites, *"depending on where they live, Native Americans have two to six times the risk of [structural] fire death as non-natives."*¹⁰ While there are federal programs, funds and resources made available to Tribes, states, counties and communities, many Tribes do not have the financial or human resources to pursue available programs and resources.

Historical losses from wildfire

Catastrophic wildfires have increased in frequency over the last twenty years. According to the National Interagency Fire Center, 11 fires of more than 100,000 acres occurred in the United States (excluding Alaska) from 1825 to 1985. But from 1987 to 2003—a period of 16 years—15 of such catastrophic fires have occurred. Over the last 20 years, catastrophic fires have increased 13-fold.¹¹ Such catastrophic fires (as well as smaller fires) have cost a number of Tribes important natural and cultural resources, infrastructure, and community members. In the summer of 2003, 18 Indian reservations were devastated by wildfire that came from adjacent federal lands. The fires of recent history discussed in this section—the Cedar Fire of 2003, Rodeo-Chediski Fire of 2002, the Pony and Bircher Fires of 2000, and several recent fires on the Warm Springs Reservation—caused many Tribal members to suffer sometimes devastating losses. These fires illustrate the range of potential losses Tribes may experience to cultural, economic and environmental resources.

⁷ American Indian Policy Center (June 2004), <http://www.airpi.org/pubs/indinsov.html>

⁸ IFMAT-II, 128.

⁹ Center for Watershed and Community Health, "Wildfire and Poverty: An Overview of the Interactions Among Wildfires, Fire-related Programs, and Poverty in the Western States," December 2001.

¹⁰ Ibid, (Wolf, 1997).

¹¹ National Interagency Fire Center, <http://www.nifc.gov>

Approximately 51,136 acres of reservation land burned in 2003.¹² In the summer of 2003 wildfire from adjacent federal lands invaded 18 reservations across the United States.¹³ In California alone, 11 wildfires burned over 30,000 acres of reservation land, killing ten people, and destroying over 130 homes.¹⁴ The Cedar Fire of October 2003—the largest wildfire in California’s history— consumed over 270,000 acres and forced the evacuation of 11 reservations, four of which suffered 75 to 100 percent damage to land and structures, including homes.¹⁵ The Barona and the Viejas Bands of eastern San Diego County lost the entire 16,000 acres of their original reservation, Capitan Grande. Alan L. Barnett, Councilmember of the Viejas Band of Kumeyaay Indians, states, “*This is a great loss to both Tribes and the county, as this land was a prime and undeveloped wildlife and species habitat. . .it’s the home of and burial ground of our ancestors.*”¹⁶

In the summer of 2002 the Fort Apache Reservation of Arizona suffered extraordinary losses due to the Rodeo-Chediski Fire—the largest fire in the history of the Southwest. The fire burned a total of 467,066 acres, 60 percent (280,992 acres) of which was reservation land.¹⁷ Although the Tribe has a total of 1.6 million acres of reservation land, the wildfire consumed 60 percent of standing timber—a valuable resource of the Tribe.¹⁸ While the Tribe did salvage some of the damaged timber, the Tribe estimated that logging decreased (from pre-fire annual harvests) by six million board feet in 2003.¹⁹

The 2002 Rodeo-Chediski Fire had devastating effects for the Fort Apache Reservation. The Tribe lost a large amount of commercially producible timber and the fire threatened the natural ecology and cultural resources of the area. Unfortunately, in July 2003, the Fort Apache Reservation was hit again by wildfire—the Kinishba Fire—which threatened stressed timber stands (which had been affected by the 2002 Rodeo-Chediski Fire), burned 24,700 acres, and forced 5,500 people to evacuate.²⁰

In the summer of 2000 two wildfires impacted Mesa Verde National Park and the Ute Mountain Reservation. The Bircher and Pony Fires burned over 4,000 acres of reservation land. While, the fires had an enormous impact on Mesa Verde National Park, burning over 23,000 acres, the Ute Mountain Reservation suffered significant losses in cultural resources. Most of the burn area had not been surveyed for archaeological sites and a number of historic structures, such as Chief Jack House’s log cabin, were lost.²¹ A Burned Area Emergency Rehabilitation (BAER) Team organized

¹² Leslie Ann Duncan, as reprinted from 6/21-22/04 Greensheets, Forest Policy Center. <http://www.americanforests.org>

¹³ Congress, House, *Tribal Forest Protection Act*, 108th Congress, 2nd sess., 2004, H.R. 3486.

¹⁴ Congress, House, *Tribal Forest Protection Act*, 108th Congress, 2nd sess., 2004, H.R. 3486.

¹⁵ Congress, House, U.S. Subcommittee on Forests and Forest Health, 21 April 2004.

¹⁶ Congress, House, U.S. Subcommittee on Forests and Forest Health, 21 April 2004.

¹⁷ White Mountain Apache Tribal web site, Rodeo-Chediski Fire Total Acreage, www.wmat.us/fireacreage.html

¹⁸ Congress, House, U.S. Subcommittee on Forest and Forest Health, *Hearing on the Cooperation among Various Governmental Agencies in Fighting Wildland Fires*, 28 September 2002.

¹⁹ Angela Cara Pancrazio, “Timber-eating ‘beast’ another blow to the Apaches,” *The Arizona Republic*, 15 July 2003, www.azcentral.com

²⁰ 1 August 2003, *Arizona Daily Star*, www.azstarnet.com

²¹ Pony Fire, Mesa Verde National Park Fire Management Office, www.nps.gov/meve/fire/ponyfire.htm

by the Department of the Interior worked with the Park and the Ute Mountain Ute to mitigate soil erosion, rehabilitate threatened resources, and protect archaeological sites.²²

Numerous wildfires in the Pacific Northwest have impacted the environmental, cultural and social resources of Tribes in this region. Wildland-urban interface fires have threatened the Confederated Tribes of Warm Springs in Oregon regularly over the past decade. In 1996 two fires, the Jefferson and Simnasho fires, burned over 120,000 acres of reservation land. The Simnasho Fire burned 120,000 acres—one-sixth of the Tribes' land—and destroyed ten homes.²³ The Jefferson Fire burned a total of 3,648 acres— 1,680 of which included reservation land.²⁴ Fueled by dense forest and ladder fuels, the Tribes lost a total of 21 million board feet of high-value timber.²⁵ In August and September of 2003, the Booth and Bear Complex Fire (B&B) burned a total of 90,769 acres, 3,800 of which included Warm Springs reservation land.²⁶ The 2004 Log Springs Fire (human-caused) burned over 13,000 acres of reservation land and threatened the community of Simnasho. Heavy fuel loads of standing timber and dead and downed material fed the fire.²⁷

As wildfires increase in frequency across the United States, Tribes could continue to suffer losses akin to the Viejas, Barona, Fort Apache, Warm Springs, and Ute Mountain Reservations. The destruction of homes, natural and cultural resources, and other infrastructure caused by wildfire can threaten the social and economic stability of many Tribes.

Traditional use of fire and cultural perspectives

Native Americans have often been referred to as the original stewards of the environment—caring, protecting, and managing agricultural and forestlands in a sustainable manner. Vine Deloria, Jr., Lakota author and lawyer, emphasizes the sustainable, ecological, conservatory nature of the Indian as he states, *“The Indian lived with is land.”*²⁸ As Euro-Americans settled Indian lands, the lifestyle and traditions of the Indian slowly altered in response to changing habitats, regulations, and acceptance. Through a long period of transformation, many traditions, such as the use of fire in cultivation, warfare, and communication, diminished in response to a hundred years of regulations, external influences and changing technology. Although the traditional use of fire by Tribes has decreased substantially over the last century, many Tribes still employ fire on Tribal lands to cultivate non-timber products such as basketry materials and to achieve other traditional land management objectives. *See Appendix B for more detailed accounts of traditional fire use in the Pacific Northwest.*

Many North American Indian Tribes traditionally used fire for myriad purposes, ranging from crop cultivation to communication. The nature and extent of the use of fire varied from Tribe to Tribe. Some Tribes such as the Kalapuya of the Willamette Valley used fire frequently to maintain

²² Pony Fire, Mesa Verde National Park Fire Management Office, www.nps.gov/meve/fire/ponyfire.htm

²³ High Country News, “A Summer of Smoke and Ashes,” www.hcn.org/servelets/hcn.Article?article_id=3356

²⁴ The Nugget, “Stubborn Jefferson Fire finally controlled,” www.nuggetnews.com/archives/960807/front2.shtml

²⁵ The Oregonian, “Listening to the Fire,” 18 August 1996, www.oregonlive.com

²⁶ Forest Service, www.fs.fed.us

²⁷ “Log Springs Fire finally contained,” www.bend.com

²⁸ As quoted by Shephard Krech III (italics in original), *The Ecological Indian* (New York: W.W. Norton and Company, 1999), 22.

grasslands and cultivate crops such as tarweed and berries, while Tribes such as the coastal Makah of the Olympic Peninsula used fire for canoe-making and smoking salmon.

Over the years, many interested in fire management have looked to traditional uses of fire for insight into the development of management alternatives. Clinton B. Phillips suggests, “*Knowing how the Indians used fire in the past might help managers achieve current fire management objectives for some wilderness areas.*”²⁹ Stephen F. Arno further recommends, “*Managers of wilderness, national parks, and other natural areas might benefit from knowing the past role of Indian fires in each vegetation type.*”³⁰ In their discussion of the role of indigenous burning in land management, Kimmerer and Lake reiterate that aboriginal use of fire stimulated a rich mosaic of vegetation types that was essential to crop yield and diversity of subsistence foods.³¹ They further acknowledge how the pendulum in forest management has swung to promote the enhancement of ecosystem health, productivity, and biodiversity, thereby providing an opportunity for the incorporation of indigenous knowledge of fire into current forest management.³² They conclude, “*Indigenous practice and philosophy offer us an alternative view of the ‘natural’ fire regime, in which humans regain their role as ‘keepers of the fire’ and the symbiotic relationship between humans, forest, and fire is reestablished for mutual benefit.*”³³

Fire suppression policy in the United States over the last century has resulted in dense forest conditions that expose communities in the WUI to potentially catastrophic losses. While fire may be perceived as a threat that places communities around the world at risk to catastrophic losses, disturbances are an intrinsic part of ecosystem development (Cooper 1913, Raup 1957, Oliver 1981, Pickett and White 1985) and fire has been an important natural process in the maintenance of ecosystem health and diversity in the forests of the western United States.³⁴

Recognizing the value and uses of fire by Tribes in the Pacific Northwest is an important element of this assessment and recommendations highlight cultural and resource preservation, as well as economic development opportunities.

Economic Development

Many Native American communities face obstacles in economic development including lack of financial and human capital; limited control over natural resources; limited access to markets and transportation; lack of interested investors; less-developed governance structure; and confusing

²⁹ Clinton B. Phillips, “The Relevance of Past Indian Fires to Current Fire Management Programs,” *Proceedings—Symposium and Workshop on Wilderness Fire*, Missoula, Montana, 15-18 November 1983, 90.

³⁰ Stephen F. Arno, “Ecological Effects and Management Implications of Indian Fires,” *Proceedings—Symposium and Workshop on Wilderness Fire*, Missoula, Montana, 15-18 November 1983, 83.

³¹ Robin W. Kimmerer and Frank K. Lake, “The Role of Indigenous Land Burning in Land Management,” *Journal of Forestry* 99, no. 11 (November 2001): 40.

³² *Ibid.*, 40.

³³ *Ibid.*, 40.

³⁴ Southwestern Oregon Fire Management Plan (draft), BLM and FS, August 2004.

federal/state policies.³⁵ The challenges addressed in this section deal with poverty, federal policy and funding, and Tribal governance.

Poverty and unemployment have long plagued Native American communities. According to the 2000 U.S. Census, the average unemployment rate on reservations is 13.6 percent, more than twice the national average. Likewise, 31.2 percent of reservation inhabitants live in poverty and the national poverty rate for Native Americans is 24.5 percent, more than double the national average.³⁶ Although the high unemployment and poverty rates of many Tribes may hinder economic stability, it makes these communities clear candidates for economic development.

Although federal efforts strive to improve the economic and social stability of Tribes, a recent study, conducted by the U.S. Commission on Civil Rights in July 2003, finds the federal government is not living up to the terms of the “trust” relationship.³⁷ The study asserts the failure of the federal government to adequately fund programs has resulted in a backlog of unmet needs that are not satisfied by incremental increases in funding.

In terms of economic development, the study highlights the Operation of Indian Programs (OIP), which is the highest funded program of the BIA. The OIP’s largest program activity is Tribal Priority Allocations (TPA). TPA funding has decreased gradually over the years, causing an estimated \$2.8 billion shortfall of funding to Tribes in 2000.³⁸ Insufficient TPA funds have stifled opportunities for economic development in many Tribes due to the reduction in program services such as benefits and insurance. The study emphasizes, “*perhaps the greatest impediment to self-determination has been the decision by several Tribes to refuse contracting activities because TPA funds simply are not sufficient to cover the cost of running programs.*”³⁹ The fluctuation of funding for other programs, such as the Rural Community Advancement Program, administered by the U.S. Department of Agriculture (USDA), has also impeded economic development in Tribes due to ever-changing funding—as funding fluctuates, activities are suspended and goals are left unfulfilled. Many Tribes are hesitant to start economic development projects or programs that depend on insecure or fluctuating funding.⁴⁰

A series of federal acts that emphasized “self-sufficiency,” “self-determination,” and “self-governance” in the 1970s set the parameters for the current legal status of Tribes. Although the shift toward a federal “self-determination” policy is tenuous and constantly challenged, it gives Tribes the opportunity to rebuild their governments and envision economic strategies that will work for their communities.⁴¹

Stephen Cornell and Joseph P. Kalt of the Harvard Project on American Indian Economic Development emphasize the need for Tribes to effectively exercise their sovereignty to be

³⁵ Stephen Cornell and Joseph P. Kalt, eds., “Reloading the Dice: Improving the Chances for Economic Development on American Indian Reservations,” In *What Can Tribes Do? Strategies and Institutions in American Indian Economic Development* (Los Angeles, CA: American Indian Studies Center, University of California 1992), 6.

³⁶ U.S. Commission on Civil Rights, “Quiet Crisis: Unmet Needs in Indian Country,” July 2003, 104.

³⁷ *Ibid.*, ix.

³⁸ *Ibid.*, 25.

³⁹ *Ibid.*, 28.

⁴⁰ See narrative assessment for perspectives of surveyed Tribes on contracting opportunities.

⁴¹ Stephen Cornell and Joseph P. Kalt, “Sovereignty and Nation-Building: The Development Challenge in Indian Country Today,” John F. Kennedy School of Government, Harvard University, 1998, 3.

economically successful. Cornell and Kalt note the key to successful economic development is nation-building—a proactive approach that requires a strong institutional foundation and aims to create an “*environment that encourages investors to invest, that helps businesses last, and allows investments to flourish and pay off.*”⁴² Tribes must assert their sovereignty promised by federal policy, case law, and treaties and govern effectively using institutions that are relevant to their culture. To optimize success, such governing institutions must provide the following: 1) stable institutions and policies; 2) fair and effective dispute resolution; 3) separation of politics from business management; 4) a competent bureaucracy; and 5) a cultural ‘match.’⁴³

The Harvard Project’s research stresses the importance of the support and exercise of Tribal sovereignty as means to economic stability and success. Cornell and Kalt note, “*It is increasingly evident that the best way to perpetuate reservation poverty is to undermine Tribal sovereignty. The best way to overcome reservation poverty is to support Tribal sovereignty.*” They also attest that, “*as long as the BIA or some other organization carries primary responsibility for economic conditions on Indian reservations, development decisions will reflect the goals of those organizations, not the goals of the Tribe.*”⁴⁴

Tribes face a number of challenges in pursuing economic development. As briefly discussed, one of the major obstacles in successful economic development is the assertion of Tribal sovereignty in the form of a legitimate, effective and stable governance system. Fluctuating federal funding and high poverty and unemployment rates also threaten the delivery and efficacy of economic development projects and programs on reservations, leaving many needs such as workforce training unfulfilled.

Proactive fire management provides a number of economic development opportunities for Tribes. Mitigating wildfire risk encompasses an array of activities such as hazardous fuels reduction and prescribed burning that may provide employment opportunities for Tribal members through Tribal and non-Tribal organizations. Also, the utilization and harvesting of forest products such as small diameter woods, biomass, and non-timber forest products may provide additional opportunities for employment and small business development.

⁴² Ibid., 8.

⁴³ Ibid., 12.

⁴⁴ Ibid., 29 - 32.

Healthy Forests Restoration Act

Title I of the Healthy Forests Restoration Act (HFRA) of 2003 aims to improve forest ecosystem health by reducing dense undergrowth that fuels catastrophic fires by expediting thinning and prescribed burning of hazardous fuels on federal land. HFRA also provides assistance to rural communities, states, and private landowners in restoring healthy forest conditions on state and private lands. Half of all fuel reduction projects under the current HFRA authorities are intended to occur in the WUI protection zone. HFRA also encourages biomass energy production through grants and assistance to local communities to create market incentives for removal of otherwise low value forest material.

Community Wildfire Protection Plans

The Healthy Forests Restoration Act encourages the development of Community Wildfire Protection Plans (CWPPs) through which communities designate their Wildland-Urban Interface (WUI), where HFRA projects are planned. CWPPs include designation of at-risk communities and require comprehensive wildfire risk assessments, identification and prioritization of hazardous fuels treatment projects and strategies for reducing structural vulnerability. Fire plans may also include strategies for emergency management, education and prevention, biomass utilization, and other related issues.

These plans must be developed through a collaborative process with local government, fire districts, and state department of forestry representatives, engage public agencies, address structural vulnerability, and identify and prioritize high hazard areas.

When a community is developing a fire plan, meeting the minimum requirements to become eligible for funding is only one potential outcome of the effort. There is an opportunity to reduce wildfire risk by strengthening collaborative relationships and building capacity for implementation of fire protection project.

Tribal Forest Protection Act

President George W. Bush signed H.R. 3846, the Tribal Forest Protection Act of 2004, into law in the summer of 2004. The law establishes a process for Tribes to work with federal agencies to reduce the threat of catastrophic wildfire on federal lands adjacent to Tribal lands. The bill is intended to improve the ability of Tribes and federal agencies to protect Tribal lands by addressing fire, insect infestation and other threats on federal lands. To do so, the Forest Service and the Bureau of Land Management would be permitted to contract with Tribes to undertake those projects. The bill complements the objectives of the Healthy Forest Restoration Act of 2003 for reducing wildfire risk across lands of multiple ownership and jurisdiction and includes a preference for Tribal participation on federal lands neighboring reservation trust lands. Rules for implementation of the Tribal Forest Protection Act have not yet been established.

National Fire Plan and Ten-Year Comprehensive Strategy

The National Fire Plan (NFP) was established after the landmark 2000 fire season with the intent of addressing severe wildland fires and their impacts communities while assuring sufficient firefighting capacity for the future. The NFP is a long-term commitment intended to help protect human lives, communities and natural resources, based on cooperation and communication among federal agencies, states, local governments, Tribes and interested publics. These entities completed a Ten-Year Comprehensive Strategy in August 2001 (NFP 2001) and an Implementation Plan in May 2002 (NFP 2002). The NFP focuses on 1) fire suppression, 2) rehabilitation, 3) hazardous fuels reduction, 4) community assistance, and 5) accountability. The Pacific Northwest (Oregon and Washington) NFP Strategy Team sees reduction of unnatural hazardous fuel levels that threaten communities and wildland ecosystems as the foundation principle for dealing with fire risks (NFP Strategy Team 2002). Most NFP funding in Oregon goes to wildfire preparedness and hazardous fuels treatment (USDI and USDA 2003).

Federal Emergency Management Agency--Disaster Mitigation Act

The Disaster Mitigation Act of 2000 (Public Law 106-390) amended the Robert T. Stafford Disaster Relief Act of 1988. The act is administered by the Federal Emergency Management Agency (FEMA) and reinforces the importance of pre-disaster infrastructure mitigation planning. In February 2002 FEMA published Interim Final Rule 44 CFR Part 201 of the Disaster Mitigation Act, which specifies criteria for state and local hazard mitigation planning and requires all states, local communities and Indian Tribal governments to develop natural hazard mitigation plans by November 2004. These may include countywide or multi-jurisdictional plans as long as all jurisdictions adopt the plan. Community and Tribal governments must have approved plans in order to be eligible for Pre-Disaster Mitigation (PDM) funds. Tribal governments may coordinate with local counties to produce Disaster Mitigation Plans, however this negates the option of “government-to-government” relations because the Tribe will not have a state-level mitigation plan and has become part of a team at the county level. Activities eligible for funding include management costs, information dissemination, planning, technical assistance and mitigation projects. The states must have plans in place in order to be eligible for certain categories of disaster assistance.

FEMA encourages local and multi-jurisdictional WUI communities to consider incorporating HFRA requirements for a CWPP into the FEMA multi-hazard mitigation planning process to allow for consolidated community planning rather than a series of separate efforts (FEMA 2004).

National Indian Forest Resources Management Act (NIFRMA)⁴⁵

The National Indian Forest Resources Management Act (NIFRMA) of 1990 was established out of concerns for the state of Indian forestlands and the U.S. trust responsibility for managing Indian forests. The NIFRMA called for the development of ten-year management plans that integrated Tribal values, the principles of sustained yield and multiple use, and included Tribal participation. The NIFRMA also required the development of education and technical training and mandated an independent assessment of the status of Indian forest resources and their management every ten years. The Intertribal Timber Council (ITC) was contracted to select an Indian Forest Management

⁴⁵ Institute of Public Law, <http://ipl.unm.edu/cwl/fedbook/natinfor.html>; IFMAT-II

Assessment Team (IFMAT) composed of select nationally recognized forestry experts. The IFMAT has conducted and published two assessments, 1993 and 2003; findings from these assessments will be discussed in greater detail below.

Federal Wildland Policy

The Federal Wildland Fire Policy and Program Review was chartered in 1995 by the Departments of the Interior and Agriculture following the 1994 fire season and with the increasing recognition of the dangerous fuels accumulation on public and private forestland across the nation. The Federal Wildland Policy recognizes the ecological threat of excessive fuel loads and calls for a proactive approach to protecting natural systems from uncharacteristic wildland fire. Most federal firefighting agencies have incorporated the federal policy into their guiding documents for fire management.⁴⁶

In January 2001 the 1995 Federal Wildland Fire Management policy was reviewed and updated requiring “all burnable acres of public lands must be covered under a federal policy-compliant Fire Management Plan by September 20, 2004.”⁴⁷ Therefore, all federal agencies are required to have an approved Fire Management Plan to receive federal funding after 2004. This mandate applies to Tribes through their BIA trustee. According to the Indian Affairs Manual, the purpose of a Fire Management Plan (FMP) is to address Tribal goals and objectives, the ecological role of wildland fire, values to be protected, preparedness, prevention, interagency mobilization, strategies for appropriate management responses to wildland fire, hazardous fuels management and prescribed fire use, and emergency rehabilitation of burned areas.⁴⁸ FMPs are required to specify the extent to which fires in particular areas should be suppressed, controlled, or permitted to burn naturally; each option has associated cost, safety, and natural resources implications. If a FMP does not address these issues or other required policies, local units (jurisdictions) are required to fully suppress all wildland fires.⁴⁹

As discussed above, the IFMAT has conducted two assessments with significant findings related to funding disparities, perceptions of forest management and resource planning, and government relations. The reports notes the substantial increase in federal funding for Indian Fire Management over the last ten years—from \$28.5 million in 1991 to \$109.1 million in 2001.⁵⁰ The 2001 fire program allocation is approximately 57 percent of the entire Indian fire and forestry budget.⁵¹ The funding increase is in recognition of the hazardous accumulation of fuels in Indian forests caused by past management practices and subsequent poor forest health. Federal Fire Management funds are directed through the BIA toward fuels management, fire preparedness, and emergency stabilization activities on Indian forestland. Although an increase in fire management funding is a boon for many Tribes, the restrictions on the use of such funds limits the tribes’ ability to develop comprehensive programs that address significant issues such as wildland fire hazard and risk and fire prevention

⁴⁶ Federal Forest Service, <http://www.fs.fed.us/land/wdfire.htm>; National Fire and Aviation Executive Board, http://www.nifc.gov/fire_policy/

⁴⁷ BLM notice IB OF&A-2003-059.

⁴⁸ Indian Affairs Manual, Wildfire Management: Operations and Procedures, Part 90, Ch. 2, p.1.

⁴⁹ Government Accounting Office, “Wildfire Management: Improved Planning Will Help Agencies Better Identify Fire-fighting Preparedness Needs,” March 2004, 1.

⁵⁰ Represented in real terms, IFMAT-II, p.46

⁵¹ IFMAT-II, p. 48

education.⁵² To address these limitations, the IFMAT-II offers two specific recommendations: 1) to make fire funding a permanent part of the base, and 2) to remove barriers that reduce the ability to integrate fire funding into the total forest management program.⁵³

Indian Self-Determination and Education Assistance Act (ISDEA)

The Indian Self-Determination and Education Assistance Act (ISDEA) of 1975 provides Tribes with the opportunity to become self-determining through Indian involvement, participation, and direction of services and programs the federal government provides for Indians. The ISDEA provides a procedure by which any approved Tribal organization may contract with the Secretary of the Interior to carry out any federally administered program, service, function, or activity. In essence, ISDEA expanded Tribal control over some policy areas, and most importantly, over reservation funds for educational and economic purposes. In the realm of forestry and natural resources, Tribes have made progress toward self-determination through compacting as reported by the BIA.⁵⁴ The IFMAT-II assessment reports the number of Tribes that have compacted or contracted to provide forestry services and functions has nearly doubled since 1991 (64 to 121).⁵⁵

As discussed in the economic development section of this report, Tribes that effectively exercise their sovereignty may have more economic resources than Tribes that do not. Likewise, Tribes that have a greater degree of control over their resources have programs, such as forestry, that are more consistent with Tribal goals and visions.⁵⁶

The Trust Relationship

Tribes are sovereign nations. Tribal sovereignty is affirmed through the U.S. Constitution, hundreds of treaties and agreements, and federal legislation and case law. In essence, the federal government has a fiduciary responsibility and financial obligation, through a number of agreements and treaties, to provide services and other protections to Tribes in exchange for relinquished lands. The federal government holds a significant portion of Tribal lands in trust for the benefit of future generations. A Tribe must have land in trust to exercise jurisdiction over Tribal members; this is a critical component of building self-determining communities and practicing self-governance.⁵⁷

The Bureau of Indian Affairs (BIA), within the Department of the Interior (DOI), primarily carries out the federal government's trust responsibility to Tribes. The DOI is charged with "fulfilling" the trust relationship and working with Tribal groups and governments *"to improve and protect their land and natural resource assets, manage Indian trust accounts, fulfill treaties and the mandates of Federal law, and help create educational opportunities and improve the quality of life."*⁵⁸ The DOI currently assists 562 federally

⁵² IFMAT-II, p. 8

⁵³ IFMAT-II, p. 8

⁵⁴ IFMAT-II, p. 86.

⁵⁵ IFMAT-II, p.10.

⁵⁶ IFMAT-II, p.86.

⁵⁷ National Congress of American Indians web site, <http://www.ncai.org>

⁵⁸ Department of the Interior, *Strategic Plan 2003-2008*, http://www.doi.gov/ppp/stratplanfy2003_2008

recognized Tribes, manages 56 million acres of Indian trust land and \$3.2 billion of financial trust assets, and provides education to 48,000 Indian students.⁵⁹

The efficacy of the trust responsibility has been critiqued from a number of standpoints. The recent publication of “A Quiet Crisis: Federal Funding and Unmet Needs in Indian Country” in July 2003, authored by the U.S. Commission on Civil Rights, emphasizes a burgeoning crisis in Indian Country caused by the federal government’s failure to honor financial commitments, pay attention to building basic infrastructure in Indian Country, and promote self-determination.⁶⁰ Also, the IFMAT-I and II underscore the need for an independent assessment of the federal government’s effectiveness in fulfilling its trust obligation based on expressed Tribal goals.⁶¹ The IFMAT-II recognizes the vital force the BIA plays in the management of Indian forests. However, budget limitations, vague and shifting policies, and limited staff have hindered delivery and efficacy of needed services. The IFMAT-II elaborates, *“in some respects the BIA is less fit for this role than a decade ago, in that it has fewer technical specialists in fewer critical fields delivering technical support to Indian forests.”*⁶²

As discussed above, the IFMAT-II findings indicate Tribes have made progress toward self-determination. To address the issue of sovereignty, the IFMAT-I and II draw from the growing body of evidence that *“tribes with a greater degree of control of their resources have forests and forestry that align better with Tribal goals and vision than those that have less autonomy.”*⁶³ A specific recommendation to strengthen institutions of self-governance states: *“federal support for activities that enhance true Tribal autonomy. . .should be maintained and intensified.”*⁶⁴

⁵⁹ Department of the Interior, *Strategic Plan 2003-2008*, http://www.doi.gov/ppp/stratplanfy2003_2008

⁶⁰ U.S. Commission on Civil Rights, “Quiet Crisis: Federal Funding and Unmet Needs in Indian Country,” July 2003

⁶¹ IFMAT-II, p.4

⁶² IFMAT-II, p.6

⁶³ IFMAT-II, p.86

⁶⁴ IFMAT-II, p.87

CHAPTER 3: METHODOLOGY

The study is based on information gathered during interviews with Tribal foresters, natural resource managers, planners and emergency managers. We requested interviews from the 42 federally recognized Tribes in Oregon, Washington and Idaho. We successfully interviewed representatives from 74 percent of the Tribes in this region. Based on this sample population, Tribes east of the Cascade Mountains account for 52 percent of the total population and 93 percent of total land base of our survey population. *See Appendix C for profiles of all of the Tribes in Oregon, Washington and Idaho.*

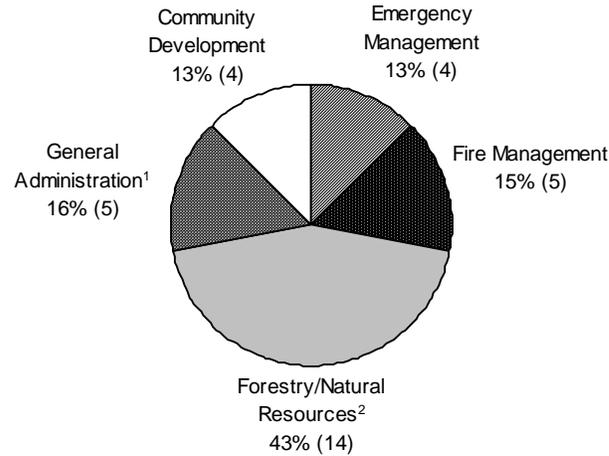
The study addresses several broad areas related to fire management, fire planning, economic development and resources available for fire management and prevention. In developing questions for the study, we spoke with the Regional Bureau of Indian Affairs Fire Manager and regional Tribal liaisons with the Forest Service, Federal Emergency Management Agency and the Environmental Protection Agency. Representatives from these agencies provided us with suggestions and feedback for the survey design as well as with contacts within some of the Tribes. The survey was conducted between February and June 2004. We initiated the process by sending formal letters introducing the study to the Tribal Chairpersons and requesting Tribal participation in the survey.

Due to the varying governance structures of the participant Tribes and differences in fire-related service delivery, the selection of individuals we surveyed varied. In some instances, Tribes had fire, forestry, or natural resource staffs that are directly responsible for structural and/or wildland fire protection. In other cases, with Tribes that contract fire protection out to public agencies or neighboring jurisdictions, planning, emergency management or natural resource staff became our contacts for the survey. We also had the opportunity to talk with a number of cultural resource staff of Tribes that have a particular interest and history with traditional use of fire or culturally significant sites at risk to wildfire.

Data Limitations

One of the obvious limitations of our data set is the number of Tribes interviewed; only thirty-one of the 42 federally recognized Tribes in the Pacific Northwest participated in our survey. Although our sample population was diverse in terms of location, land base, and population, not all Tribes in fire-prone areas participated in the survey. Also, the professional position of the interviewee varied from Tribe to Tribe. It would have been more consistent to interview only Fire Management Officers (FMOs) or Natural Resource Directors. However, some Tribes do not have such positions. Therefore, lack of consistency in interviewees such as knowledge, experience, or professional position affected the extent and depth of survey responses. Figure 3-1 shows the distribution of survey participants by professional field.

Figure 3-1. Survey participants by professional field



Note: In some cases, more than one individual per Tribe contributed information.

¹ Includes positions such as Special Projects Coordinator, Grants Administrator, and Chief Financial Officer.

² Includes Environmental Coordinator positions.

Some respondents were more informed than others regarding community fire planning, federal fire management plans and wildfire protection issues. As the policy section of this report discusses, there are a number of federal funding sources for Forest Management Plans, Fire Management Plans and Community Fire Plans. The knowledge of participants we interviewed varied in terms of their familiarity with community fire plans, federal fire management issues and related topics.

Survey Respondents

Tribes in the Pacific Northwest have distinct demographic differences in size, location and population. In addition, the differences in their Tribal governance structures affect how fire-related services are delivered. There are two major governance models that define the Tribe's relationship to the federal government: a form of governance adopted through the Indian Reorganization Act (IRA) and a Tribal Council. These differences result in unique personnel structures in some Tribes and thus, differences in the professional position responsible for fire-related services with the knowledge to respond to the survey. These differences directly affected the choice of survey respondents and resulted in interviews with people in distinctly different positions within the Tribal structure. In one case, a Bureau of Indian Affairs (BIA) employee, who was recommended by a Tribal councilman, was interviewed using the survey instrument.

Under the Indian Self-Determination and Education Assistance Act (ISDEA), Tribes gained the right to contract for services formerly provided by the Bureau of Indian Affairs (BIA). Tribes using the provisions of ISDEA may receive funding for a Fire Management Officer if they have sufficient population and land base. In many cases, the BIA retains the wildfire fighting function, since the potential costs to Tribes would far exceed their budgets in a major wildfire. A few larger Tribes have a Tribal Fire Management Officer, a BIA-managed fire fighting operation, and/or a forest manager who perform different functions for the total fire management operation. Although BIA fire-

fighting crews are present on many reservations, they respond to fires on public lands all over the United States, so they may not be available for local fire-fighting duty or activities when needed.

Many of the smaller Tribes have moved to compacting under the Indian Self-Governance Act to define their funding and operational relations to the federal government. These Tribes may also have shortfalls in federal funding that make full service fire management operations difficult or impossible. Many of these smaller Tribes do not have their own fire-related services, but contract with the state or county for service. In those cases, the professional Tribal position working on fire services might be a Tribal planner, police officer, or other Tribal employee with responsibilities for maintaining intergovernmental relationships for fire services in addition to an array of other responsibilities. In some cases, several individuals have responsibility for different components of fire management.

In general, one informant was selected for the interview from each Tribe based on the considerations stated above. Preferred contacts, who could best respond to the wide range of questions on the survey, were identified through a number sources including previous professional contacts of the researchers, partner agencies, Tribal officials including Tribal Chairpersons, Tribal personnel lists and Tribal general information offices. Planners, natural resource personnel and Fire Management Officers were the most frequently interviewed professionals in this study. However, in some cases, an attorney, a housing director, and a variety of other personnel were identified as the best respondents to provide information for some Tribes.

Non-Responses

A number of Tribes contacted to take part in the survey either did not respond or declined to participate for a variety of reasons. Some Tribes have specific research protocols or legal requirements that limited their ability to participate in our study within the given timeframe. Others did not feel that it was priority for the Tribe or did not have the staff to dedicate to the survey.

Survey Instrument and Administration

The survey was administered over the telephone. Interviews lasted anywhere between 30 minutes to one hour. The interviewers allowed respondents to contribute particular concerns or additional information to the open-ended questions at the end of the survey. The survey instrument consisted of 24 questions (with a number of sub-questions) including 14 yes or no responses, 8 multiple-choice responses and 17 narrative responses. *See Appendix D for the original survey questionnaire and responses.*

Survey Analysis

The survey data was categorized into quantitative and qualitative data types. Frequencies and cross tabulations were used to describe common themes and findings from the survey. Charts are used in the findings section of this report to present some of the data that illustrates comparative trends and varying responses based on income, location, and land base. Qualitative techniques were used to examine the narrative question responses to identify major themes around the areas of wildfire risk and preparedness, protection capabilities, access to federal resources, economic development and traditional uses of fire.

CHAPTER 4: FINDINGS

This section presents the findings from interviews with Tribal foresters, emergency managers, natural resources staff and other Tribal leaders, and highlight strategies for increasing the capacity of Tribes to reduce potential losses to life, property and natural resources from wildfire.

Questions range in scope from wildfire risk and preparedness and access to funding and technical assistance to fire protection, traditional use of fire and education and outreach for wildfire protection. This narrative summary examines the quantitative and qualitative data gathered from 31 interviews and presents findings in the following areas:

- Wildfire risk and loss
- Access to funding and technical assistance
- Fire protection
- Traditional use of fire
- Culturally significant sites
- Open burning
- Economic development opportunities
- Education and outreach

To further explore the quantitative results, we assessed some survey questions with three different variables in mind:

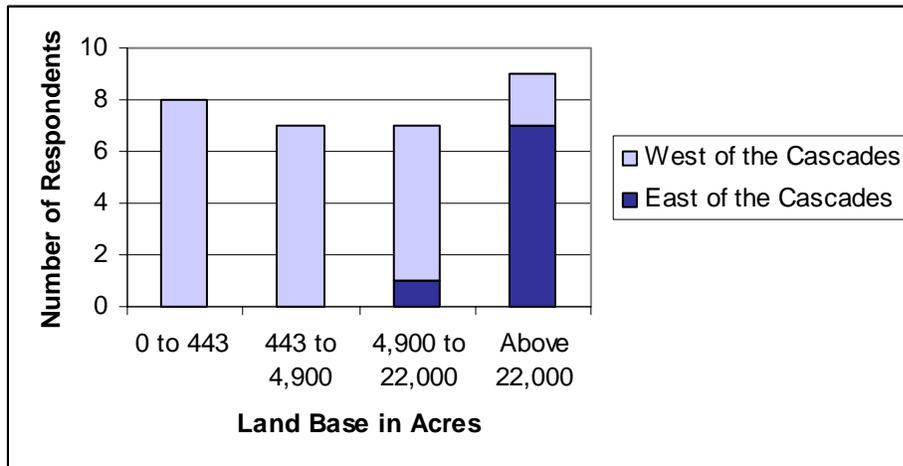
- The location of the reservation (east versus west of the Cascade mountains);
- The size of land base (from zero to over 1.4 million acres);
- Tribal member enrollment (from 237 to over 8,000 members)

Using the additional variables offered a more in-depth profile of participant Tribes and identified significant relationships between certain variables. Some of the overall sample statistics include:

- 75 percent of Tribes are located west of the Cascade Mountains;
- The median land base is 5,000 acres; and
- The median Tribal enrollment is 1,439

Figure 4-1 illustrates survey respondents by land base and location. Although there were only eight Tribes located east of the Cascade Mountains, these Tribes have significantly larger land holdings than Tribes west of the mountains. Tribal reservation land east of the Cascades accounts for 93 percent of the total land base of all participant Tribes. These variables provide insight into the needs and issues of Tribes in relationship to geography, population and land base.

Figure 4-1. Location of Tribes and land base



Wildfire Risk and Loss

Understanding the causes and impacts of wildfire can help identify strategies to reduce risk from wildfire. In the survey of 31 Tribes, 74 percent of respondents indicated that human-caused fires are a major cause of wildfire. Twenty-two percent of respondents also indicated wildfires occur because of natural causes. Human-caused wildfires include structural, recreational, farming accidents, arson and open burning. Sources of human-caused fires identified by respondents included fireworks, cigarettes and other man-made accidents. For example, one Tribe noted children playing with matches contributed to the incidence of wildfire within their community. Other responses indicated some fires are caused by internal sources in homes such as electrical wiring and stoves. A few sources also mentioned open burning (slash piles) as a cause of wildfire. Tribes with a larger land base (4,900 acres or more) indicated open burning (31 percent) and human activity (81 percent) as primary causes of wildfire.

Sixty-two percent of all respondents indicated their Tribe has experienced loss of property or infrastructure from past wildfires. Forty-two percent of respondents also mentioned loss of access to natural resources such as grazing land and timber caused by wildfire. A “loss of access to natural resources” can be associated with the loss of cultivating ability on lands such as grazing and forest lands for some duration. A few Tribes noted a loss of natural resource value and income due to damages caused by wildfire. No respondents indicated there has been loss of life because of wildfire in recent years.

Eighty-three percent of the Tribes east of the Cascade Mountains noted loss of property or infrastructure as a major impact of wildfire, compared to 55 percent of Tribes west of the mountains. Seventy-five percent of Tribes with a smaller land base (4,900 acres or less) also indicated property or infrastructure loss as an impact of wildfire. Seventy-two percent of Tribes with large land bases (22,000 acres or more) have experienced natural resource losses because of wildfire.

Community Fire Planning and Risk Assessment

Community fire planning provides community members and relevant agencies an opportunity to engage in a collaborative process that focuses on reducing the wildfire risk to life, property, and natural resources. The Healthy Forest Restoration Act (HFRA), passed in 2003, promotes community fire planning, biomass energy production, and hazardous fuels reduction on federal lands. Community Wildfire Protection Plans (CWPPs) require communities to conduct a wildfire risk assessment, designate Communities-at-Risk and Wildland-urban Interface (WUI) areas, address strategies for reducing structural vulnerability and emergency management, and conduct education and outreach activities. In sum, CWPPs stress the protection of community assets from the risk of wildfire and strengthening partnerships through the collaborative process.

Federal Wildland Policy requires that all public lands must be covered under Fire Management Plans (FMPs), which focus on preparedness, prevention, mobilization, emergency rehabilitation, and fuels management. FMPs differ from CWPPs in that they focus more on land management, whereas CWPPs focus more on community protection from wildfire. As discussed in greater detail in the policy section of this report, federal funds for fire management have increased dramatically over the past ten years. However, these funds are generally restrictive and inhibit a comprehensive management program.

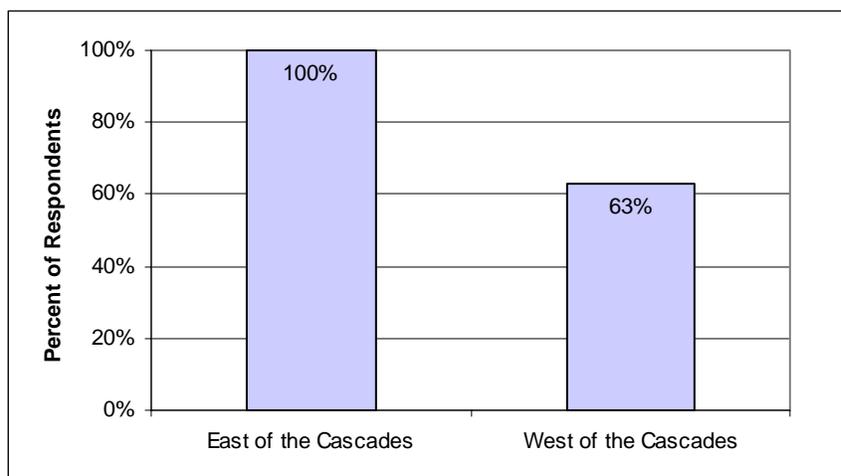
Identifying wildfire risk and potential impacts is essential to protecting a community from the deleterious effects of wildfire. Communities that have a community fire plan or have conducted a wildfire risk assessment or related activities are often more prepared for wildfire and can reduce the risk of wildfire to the community and the environment.⁶⁵ Fifty percent (15) of respondents indicated that their Tribe has developed a community fire plan or participated in related activities such as fire prevention, fuels reduction, or education.

Although nearly half of the Tribes surveyed have not participated in such activities, about 70 percent (13) of all Tribes that have not participated in such activities expressed an interest in pursuing a community fire plan or related activities. Some of the qualitative responses indicated though many Tribes have an interest in fire planning and preparedness, several lack resources, staffing, and fire department capabilities, among others to pursue these endeavors. Other Tribes stated community fire protection was not a priority; rather, forest management takes precedence or the occurrence of wildfire is so infrequent, a fire plan may not be a priority.

Figure 4-2 illustrates the percentage of Tribes east and west of the Cascade Mountains that have not developed a community fire plan but are interested in pursuing such activities. Responses indicate Tribes east of the mountains are more interested in community fire planning activities than Tribes west of the mountains.

⁶⁵ Departments of Agriculture and the Interior, *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: Ten-year Comprehensive Strategy*, August 2001, 2.

Figure 4-2. Location of Tribes interested in pursuing community fire planning activities



A few Tribes located west of the Cascade Mountains indicated community fire protection activities were low a priority due to the low frequency of fire. However, a number of respondents emphasized the importance of proactive fire planning west of the Cascades due to the potential for fires of greater magnitude caused by thick forests and large amounts of downed fuels. Therefore, funding and planning is still essential for communities on both sides of the Cascades.

Of those respondents who indicated the Tribe has a fire plan, the stage of plan development and complexity varied. Some Tribes have fire plans that cover both wildfire and structural fire, while others have plans that are more oriented toward natural resource management. Also, depending on location, a few Tribes indicated they are active in implementing fire-related programs in their communities, enhancing community awareness and preparedness for wildfires. Approximately thirty percent of respondents identified agencies and organizations that assisted in the development of the community fire plan. Responses varied, but included entities such as local staff (fire, forestry, planning), county, Department of Natural Resources (DNR), Bureau of Land Management (BLM), and other local and state agencies.

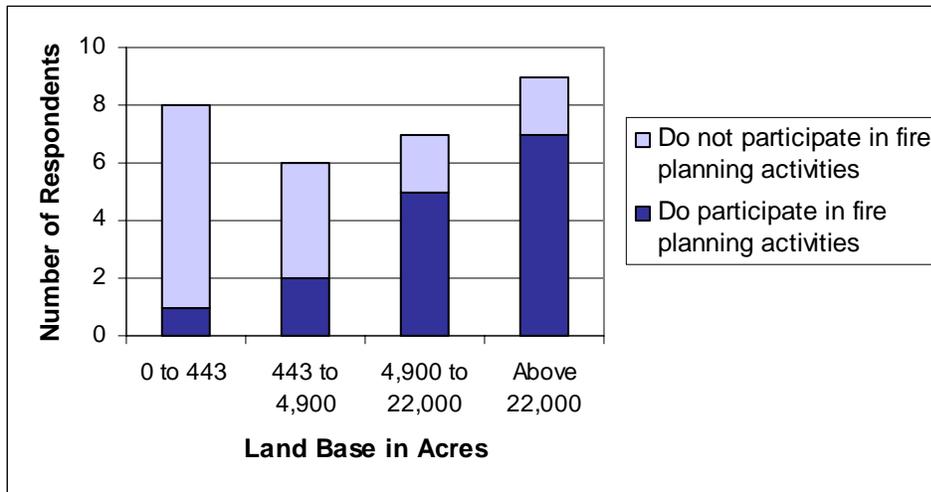
Survey responses indicated approximately one-third of Tribes have conducted a wildfire risk assessment. Some Tribes may have conducted a wildfire risk assessment as part of the federally mandated Forest Management Plan or Fire Management Plan. For Tribes that have conducted a wildfire risk assessment, the resources, tools, and work with cooperating agencies varied. Some Tribes have mapped fuels and vegetation data using Geographic Information Systems (GIS); other Tribes have looked at fire history to determine what has occurred and could occur. For Tribes that have not conducted a wildfire risk assessment, 84 percent indicated they have GIS or mapping ability or coordinate with an agency or organization that has the ability. Some Tribes are more advanced than others with GIS capability; other Tribes are seeking grants to enhance capability.

About sixty percent of Tribes cited funding, staffing, equipment, technical assistance, and expertise as the major resources needed to develop a community fire plan or conduct a risk assessment. Many Tribes are short-staffed and/or under-funded to take on work such as risk assessment that may not be the highest priority for the Tribe. A number of Tribes have some elements needed to develop a fire plan, but are unable (due to lack of finances, personnel, or experience) to bring the components together to form a coherent plan. Some Tribes mentioned the need for information on community fire planning such as how to get the community involved, who needs to be involved, and other

important elements. Also, some Tribes voiced concern of the growing number of homes in the wildland-urban interface and the urgency for a community fire plan.

Responses indicate the larger the land base, the more likely the Tribe has participated in wildfire activities such as risk assessment, hazardous fuels reduction, and wildfire education. Figure 4-3 illustrates the relationship between land base and community fire in planning activities. Seventy-eight percent of Tribes with a land base less than 4,900 acres have not developed a fire plan or participated in related activities. In contrast, 75 percent of Tribes more than 4,900 acres have developed fire plans.

Figure 4-3. Land base and community fire planning activities



Similarly, seventy-nine percent of Tribes with land bases smaller than 4,900 acres have not conducted a wildfire risk assessment. Fifty-six percent of Tribes with land bases larger than 22,000 acres have conducted an assessment. These statistics show Tribes with larger land bases have been more active in wildfire protection activities such as wildfire risk assessment, fire prevention, fuels reduction, or community fire planning. Nearly 70 percent of Tribes that have not developed a community fire plan or participated in related activities, expressed an interest in pursuing such projects. About 13 percent of respondents, located west of the Cascades, also noted wildfire planning is not a high priority because wildfire is simply not a great risk. Half of the respondents indicated ongoing defensible space/fuels reduction projects occur on Tribal forest land or around homes. Of these respondents, the majority noted projects have been funded through the BIA with National Fire Plan dollars. Tribal government or the Forest Service has funded other projects.

Access to Funding and Technical Assistance

The BIA is the primary agency charged with fulfilling the “trust responsibility” the federal government has to Tribes. As with many federal agencies, shifting and vague policies, budget limitations, and limited staff have hindered the ability of the BIA to deliver needed services to many Tribes. To this end, Tribes have sought to depend less on federal services through compacting. Compacting, authorized under P.L. 100-472, allows a Tribe to take over management of any or all of federal Indian programs and associated budgets, and gives them discretionary power for budget

allocation.⁶⁶ Nevertheless, compacting is not an immediate option for all Tribes. Access to federal funding and technical assistance is essential for many Tribes to work toward self-governance.

For many Tribes, federal funding supports programs for fire protection, training, education, equipment and/or technical assistance. Survey findings show the majority of Tribes (70 percent) indicated they do not feel they are adequately served by federal programs for fire protection. A number of respondents stated frustration with the inadequate funding some Tribes receive, the lack of responsibility and control Tribes have in wildfire protection, and the complexity of some of the programs offered by the federal agencies.

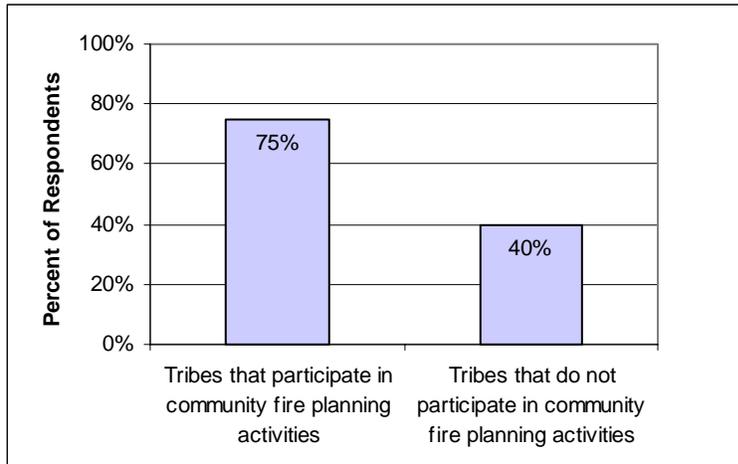
To supplement federal funding and to bolster wildfire protection, some respondents indicated they apply for federal grants for fuels reduction, fire training, and a number of other fire-related activities. Approximately 39 percent of the Tribes surveyed have applied for such federal grants. The most common federal programs they have applied to are administered by the Bureau of Indian Affairs (BIA) (33 percent) or through the National Fire Plan (20 percent). Of those Tribes that have applied for grants through these programs, 57 percent have been successful in receiving and coordinating such grants.

For Tribes that did not apply for federal grants for fire protection or fuels reduction, approximately sixty percent indicated it is not a high priority or that lack of resources (e.g., grant writing skills, staffing, funding, technical assistance, monitoring and reporting) precludes application. Other respondents indicated their communities cannot easily match the criteria for the grants or do not have the time to search for applicable grants. One Tribe stated: *"It is[just as] difficult to run a long-term program off of short-term grants as it is a challenge to operate a stable program based on unstable funds."*

Also, figure 4-4 shows 75 percent of Tribes that participate in fire planning activities have been successful in coordinating and receiving grants; whereas, only 40 percent of Tribes that do not participate have had success in coordinating and receiving grants. These statistics indicate Tribes with a fire plan are more likely to apply and receive federal grants for wildfire protection and fuels reduction.

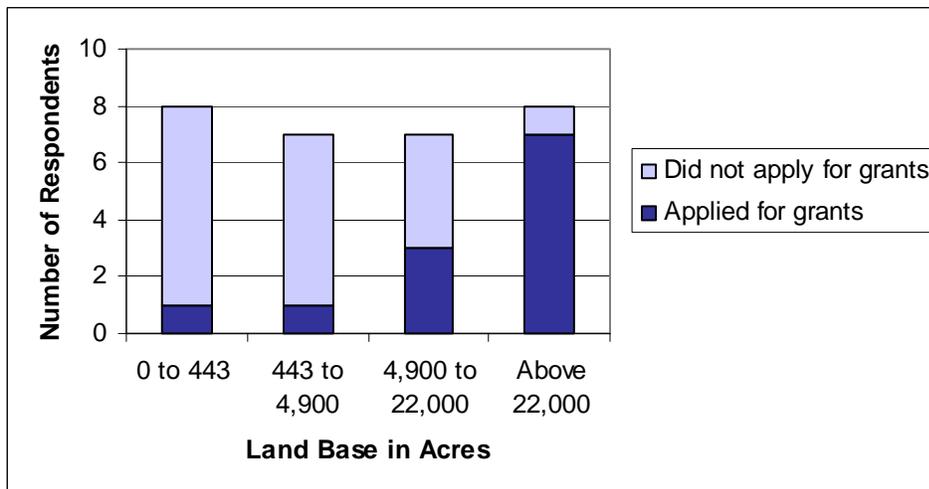
⁶⁶ IFMAT-II, p. 124.

Figure 4-4. Success in grant coordination and community fire planning activities



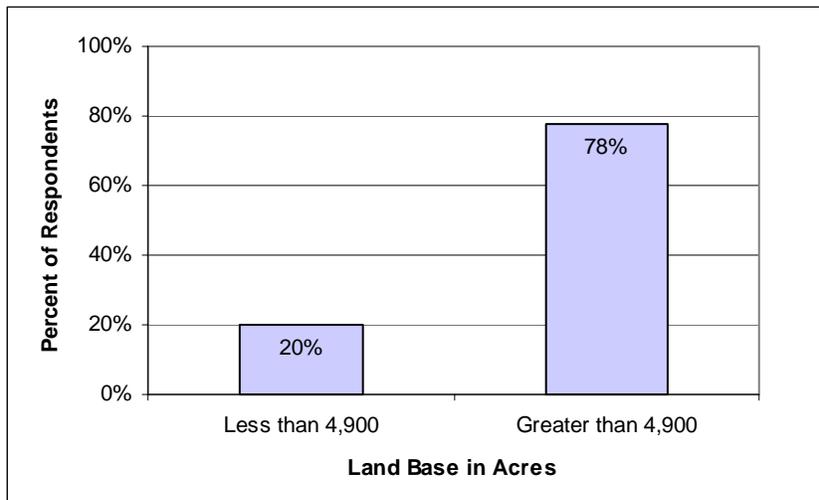
The relationship of land base and access to grants is also significant. The larger the land base, the more likely it is respondents succeeded in applying, receiving, and coordinating federal grants for wildfire protection and fuels reduction. Figure 4-5 shows the number of respondents that have applied for grants in relation to land base. Seventy-eight percent of Tribes with land bases between 22,000 and 1.4 million acres have applied for grants; whereas, only 13 percent of Tribes with land bases smaller than 4,900 acres have applied for grants. This statistic can also be related to the location of Tribes; Tribes east of the Cascade Mountains in more fire-prone country have a larger land base than Tribes east of the Cascades and, therefore, are more likely to apply for grants for fire protection and prevention.

Figure 4-5. Land base and grant application



For Tribes that have applied for federal grants, 78 percent of those with a land base of 4,900 or greater have been successful in coordinating and receiving such grants; whereas, only 20 percent of Tribes with a land base of 4,900 or less have been successful. Figure 4-6 represents this relationship.

Figure 4-6. Land base and success in grant coordination



These statistics demonstrate a relationship between land base, grant application, and ultimate success in receiving grants. As shown in figure 4-3 above, there is also a significant relationship between land base and fire planning activities. In our survey population, Tribes with larger land bases (4,900 acres and above) were generally more likely to participate in community fire planning activities, apply for federal grants, and have success in coordinating and receiving grants. Nonetheless, survey respondents of a range of land bases still indicated they are inadequately served by federal programs. A number of respondents mentioned access to federal funding and programs is an issue. Also, inflexible criteria and lack of awareness of opportunities were cited as obstacles to federal programs. One Tribe stated: *“Criteria needs to be changed to make [federal funding sources] more equally available. The federal government should provide Tribes with sufficient notice about programs that are available. Time is needed to go through the Tribal governmental process; program review, policy review, grants office, and Tribal council are all part of the review process.”*

Fire Protection

Wildland fire protection is inherent to trust responsibility. The BIA is responsible for this service at no cost to Tribes; this service can be delivered using BIA, Tribal, or other local fire suppression efforts. This section is intended to delineate what type of agreements or arrangements Tribes have related to fire protection and to share significant findings that emerged through cross-analysis.

The roles of Tribes and other agencies and jurisdictions in administering fire protection, particularly structural fire protection, varied widely among respondents. Structural fire protection is most often handled by the BIA or other county, state, or agency fire protection services (38.7 percent of respondents), cooperating agreements or mutual aid (29 percent), or a mix of volunteer and paid staff. Only 13 percent of respondents have a structural fire department funded by the BIA, while only ten percent of Tribes have a structural fire department funded by the Tribe. The majority of Tribes receive wildland fire protection either directly or indirectly through the BIA, as the trust responsibility dictates. Thirty-nine percent of Tribes receive wildland fire protection through the BIA (or contracted out by the BIA to state agency fire protection services), 36 percent use cooperating agreements or mutual aid, and 23 percent have a Tribal fire department funded by the BIA. Table 4-1 shows the dominant responses for structural and wildland fire protection.

Table 4-1. Structural and wildland fire protection

Fire Protection Agency	Structural	Wildland
Tribal Fire Department (Funded by Tribe)	9.7%	-
Tribal Fire Department (Funded by BIA)	12.9%	22.6%
BIA ¹	38.7%	38.7%
Mutual Aid ²	29.0%	35.5%
Volunteer Tribal Staff	6.5%	-
Paid Tribal Staff	-	6.5%
Mix (some volunteer, some paid) staff	16.1%	6.5%

¹ Includes other county, state or agency fire protection services

² Includes cooperating agreements

None of the responding Tribes have paid Tribal staff for structural fire protection. Similarly, none of the respondents have a Tribal fire department funded by the Tribe or a volunteer Tribal staff for wildland fire protection.

Comparing fire protection to land base, responses show Tribes with a larger land base are more likely to have a Tribal fire department (both structural and wildland) than Tribes with a small land base. Responses indicate Tribes with a small (or no) land base are more likely to lack local protection and rely on adjacent districts and state or federal fire protection services. In terms of structural fire protection, 27 percent of Tribes with a land base greater than 4,900 acres have a Tribal fire department funded by the BIA. In contrast, none of the Tribes less than 4,900 acres have such a Tribal fire department. Participant Tribes with fewer than 4,900 acres are more likely to have cooperating agreements or mutual aid for structural fire protection.

For wildland fire protection, figure 4-7 shows the percentage of respondents that have a Tribal fire department funded by the BIA in relationship to land base. Sixty-three percent of Tribes with greater than 22,000 acres have a Tribal fire department funded by the BIA, while only seven percent of Tribes less than 4,900 acres have a BIA-funded Tribal fire department. Sixty-three percent of Tribes with land holdings greater than 22,000 acres and a BIA-funded Tribal fire department are located east of the Cascades. Overall, responses show Tribes rely more on BIA or other county, state, or agency fire protection services and/or cooperating agreements and mutual aid for wildland fire protection.

Figure 4-7. Land base and BIA-funded Tribal fire department (wildland fire protection)

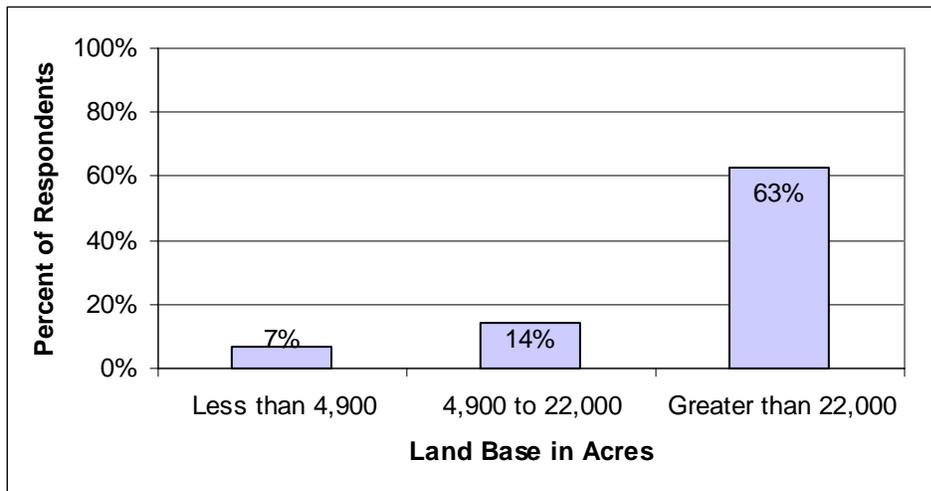
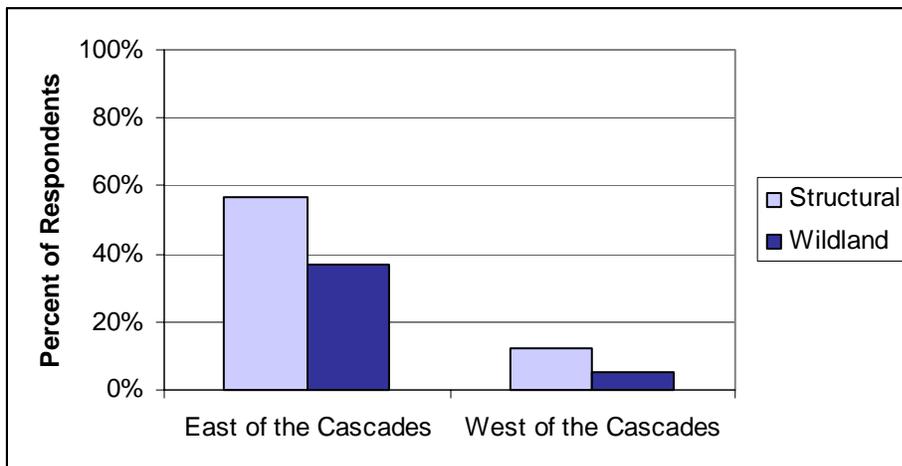


Figure 4-8 illustrates the percentage of Tribes east and west of the Cascades that have a wildland and structural Tribal fire department funded by the BIA. Tribes east of the Cascades are more likely than Tribes west of the Cascades to have a BIA-funded Tribal fire department for both wildland and structural fire protection. These findings demonstrate Tribes with a larger land base are more likely to have a BIA or Tribally funded fire department.

Figure 4-8. Location and BIA-funded Tribal fire department (wildland and structural fire protection)



The findings from this survey also indicate greater resident population and Tribal enrollment results in an increased likelihood for structural fire protection serviced by the Tribe. Approximately 75 percent of Tribes with more than 3,300 members have a structural fire department. In contrast, none of the Tribes with fewer than 1,400 enrolled members have a structural fire department funded by the Tribe or the BIA. For wildland fire protection, 43 percent of Tribes with 1,940 enrolled members or greater have a fire department, while only seven percent of Tribes with 1,940 members or less have a fire department.

Traditional Use of Fire

Tribes have used fire for cultural, environmental and agricultural reasons since time immemorial. Of Tribes participating in this survey, approximately 60 percent indicated traditional use of fire has played a role in mitigating the impacts of wildfire, restoring habitat, or cultivating non-timber products. All of the Tribes located east of the Cascade Mountains noted fire was used traditionally for restoration, mitigation, and cultivation purposes. Only 45 percent of Tribes west of the mountains indicated fire was used traditionally.

A number of Tribes indicated fire was used domestically for warmth, cooking, and light, as well as for habitat enhancement. Many Tribes emphasized fire was also used for underburning or burning the underbrush of forests and meadows to cultivate natural plants, enhance wildlife habitat, manage species, and to keep hazardous fuels to a minimum. For some Tribes, fire was also used to enhance berry production and to stimulate growth of hazel and bear grass for basketry.

Over 40 percent of Tribes indicated prescribed burning was a common practice in the Tribes' past. As settlement and acquisition of native lands increased, however, prescribed burning decreased due to imposed regulations and a patchwork of land patterns. Today, of those Tribes that still conduct prescribed burning, the major financial support comes from the BIA, Tribal members and departments such as forestry and natural resources. Of those Tribes that do not participate in prescribed burning, most indicated the landscape has changed drastically since the cessation of burning practices, and a century of fire suppression has resulted in dangerous fuels build-up in many forests.

Tribal responses varied as to how to increase public and agency understanding of the traditional uses of fire. A few Tribes mentioned, anecdotally, there is skepticism among agencies and/or the public about the beneficial uses of fire. A few respondents suggested public education and outreach events, such as holding public meetings or handing out pamphlets and brochures, would be a possible strategy to reduce skepticism and increase public understanding. One Tribe suggested allying with scientists and using scientific fact to help garner support and increase understanding of the traditional use of fire. A few Tribes also indicated the Forest Service, state Department of Natural Resources, State Departments of Forestry, Bureau of Land Management, and the BIA are key agencies to coordinate with for fire protection and fuels management.

Culturally Significant Sites

Federal, state, and local agency awareness of traditional sites is essential for site protection and preservation. Lack of communication or awareness can cause the degradation or destruction of traditional sites because of poor response time (or no response) or poorly implemented mitigation procedures. Only 50 percent of participant Tribes indicated rural fire protection districts, local government, and state and federal agencies are aware of traditional sites and the need for site protection in mitigating or responding to fire. The majority of Tribes indicated there is a lack of communication and/or coordination between the Tribes and such agencies. One Tribe stressed the need to establish and formalize a relationship with the agencies to improve coordination and communication, and most importantly, build trust. However, some respondents also voiced concern that making the location of culturally significant sites known to the public could make the sites more vulnerable to vandalism or degradation.

To help protect culturally significant sites and ensure coordination between first responders and Tribal/state/federal archaeologists or natural resource managers, respondents suggested the following strategies:

- Fire training for those with cultural knowledge;
- A system that identifies “cultural zones” and is made available to applicable agencies;
- An awareness program that highlights education and training and increases understanding, expectation, and knowledge;
- Guidelines for fire suppression tactics minimize (or avoid) impact on sites; and
- Meeting with local agencies/jurisdictions to establish a tactical plan

Although a few Tribes expressed satisfaction with the level of coordination with local agencies/fire districts and with the Federal agencies, approximately 60 percent of respondents emphasized more should and could be done to improve the existing system.

Open Burning

Open burning has been a common method of disposing of solid and green waste on a number of reservations. Some Tribes have developed solid waste pick-up systems or alternative uses for biomass, but participant Tribes noted population, location and lack of market, limit the development of such programs. Open burning of solid and green waste, if improperly managed, can produce sparks that may result in wildfire. Forty-six percent of respondents acknowledged there is a relationship between burning waste in Tribes and the incidence of fire and fire-related losses among Tribes.

The responses concerning fires related to open burning and consequent losses varied, as expected. Most Tribes mentioned if there were fires attributed to open burning, the losses were minimal. A few Tribes indicated burning slash piles and other green waste is a problem—mostly due to sheer quantity of waste, burn bans, and other regulations related to air quality. Some Tribes noted sparks from open burn piles cause small fires. One Tribe emphasized open burning caused some of the largest fires in the Tribe’s recent history.

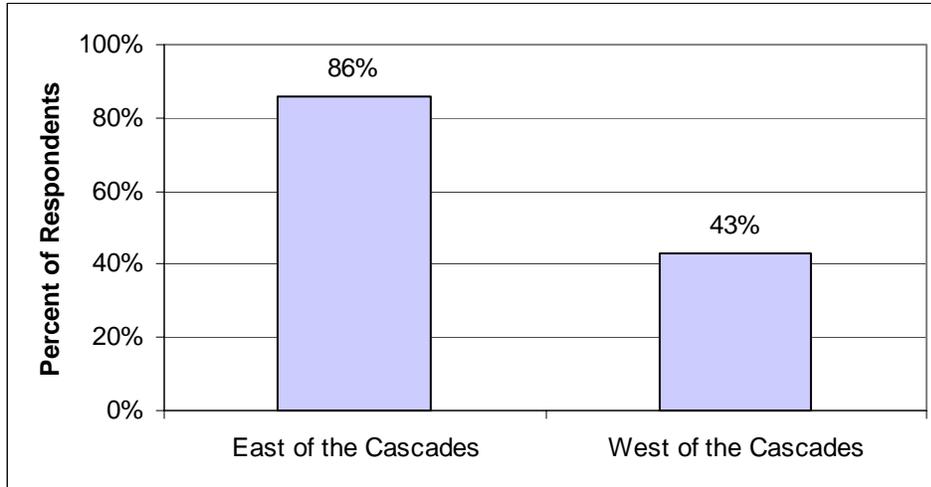
A number of Tribes indicated solid waste pick-up systems are generally too expensive and operate at a high cost to the individual. Other Tribes have more advanced systems with the Tribe paying for 100 percent of the service and/or a solid waste manager. One Tribe suggested business opportunities in solid waste pick-up may be enhanced through education programs or economic incentives.

Economic Development Opportunities

Nearly all respondents, despite land base, income level, location, or population, expressed an interest in economic development opportunities. Nonetheless, for some Tribes, location or size of land base may preclude opportunities for certain types of economic development. For instance, as shown in figure 4-9, 86 percent of Tribes east of the Cascade Mountains indicated economic development opportunities exist through the reuse or recycling of waste products or the utilization of biomass from fuels reduction projects. In contrast, only 43 percent of Tribes west of the Cascades indicated that such opportunities are available. One Tribe emphasized much of the money for fuels reduction

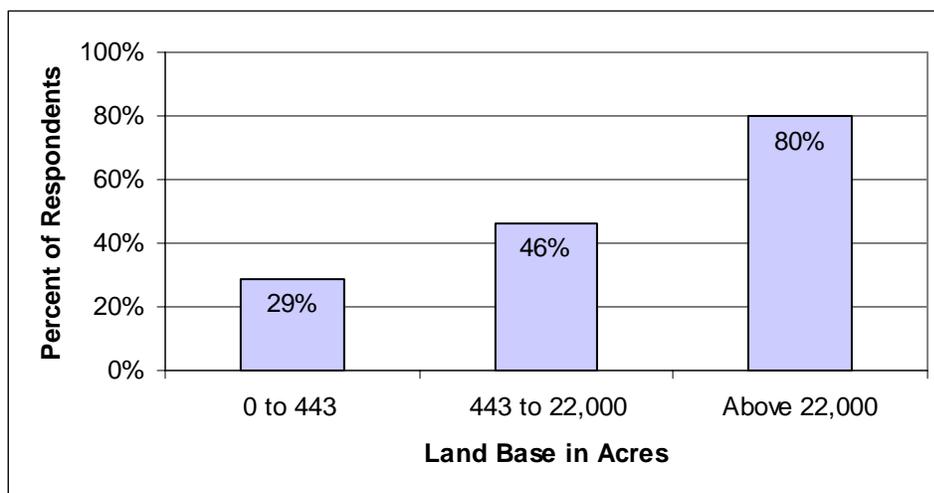
projects goes east of the mountains to more fire-prone country; this makes it difficult to secure contracts west of mountains because there is not enough funding to be competitive.

Figure 4-9. Location and economic development opportunities through reuse/recycle



Similarly, as figure 4-10 shows, Tribes with larger land bases are more likely to have economic development opportunities through the reuse or recycling of waste products or the utilization of biomass from fuels reduction projects. Approximately 80 percent of Tribes with land bases larger than 22,000 acres indicated such economic development opportunities existed. In contrast, 46 percent of Tribes with land bases between 443 to 22,000 acres and 29 percent of Tribes with land bases of 443 acres or less noted such economic development opportunities existed. This relationship between land base and economic development opportunities in fuels reduction is not surprising; larger reservations (in acres) simply have more land of varied terrain to manage than smaller reservations.

Figure 4-10. Land base and economic development opportunities through reuse/recycle



Although nearly all Tribes expressed an interest in economic development, only 54 percent of respondents (as individuals or as part of a Tribal business) are able to take advantage of general contracting opportunities. However, 96 percent of Tribes indicated Tribal members are interested in or working to expand their experience, skill and knowledge to be contractors and take advantage of contracting opportunities. Sixty-four percent of those interested noted they *do not* have access to the programs needed to develop or expand contracting skills.

The nature and extent of contracting opportunities varies from Tribe to Tribe. In some cases, the Tribe is the sole contractor, hiring Tribal members and operating a number of businesses. In other scenarios, there are few, if any, Tribal contractors, due to a number of barriers. One Tribe noted Tribal contractors might not compete well with larger, non-Tribal companies that have more resources including equipment, trained employees and access to capital.

For many Tribes, expense is the greatest obstacle in taking advantage of contracting opportunities. One respondent voiced the ironic situation of many interested in contracting: “*needing money to make money.*” A number of Tribes noted inadequate funding (as well as a lack of *access to* funding) makes it difficult to start a business. Two Tribes specifically noted liability insurance is too high to making contracting a profitable venture. Another Tribe indicated an economic development officer within the Tribal government would be a good resource for the Tribe and Tribal members interested in contract opportunities.

Respondents also stressed the need for training and education on a variety of levels including small business development, vocational training for young adults disinterested in college, and training specifically for contractors and managers. One Tribe expressed the need for a small business development center, where training seminars could be conducted, small businesses could be housed, and business guidance/counseling could take place. Another Tribe voiced concern that long-term security (most likely through adequate financial resources) is needed to assure both employees and investors that the (business/economic development) program is not finite.

Education and Outreach

A few respondents suggested Tribal members and members of the greater community need to be educated on traditional uses of fire and fire prevention strategies. In terms of educating members of

the Tribal community, the majority of respondents indicated the Tribal Council or General Council would be the best organization or person to present such information. Other responses noted a combination of people or organizations such as a local government leader and a fire prevention expert or a Tribal staff member and the Tribal Council would be effective. Also, two Tribes indicated the local fire department would be a good resource to present information.

Respondents indicated newspapers are the most common (and effective) medium used to disseminate information on fire prevention and related safety issues to Tribal members and/or reservation residents. At least five respondents specifically stated the Tribal newsletter was a common source to send information to community members. Other responses highlighted the Department of Housing and Urban Development (HUD) web site and word-of-mouth as effective.

Conclusion

The analysis of qualitative and quantitative survey data and the application of additional variables such as land base and enrollment figures revealed some significant findings that include the following:

- The majority of Tribes indicated wildfires are often human-caused;
- Tribes with larger land bases have experienced greater losses to natural resources than Tribes with smaller land bases;
- Half of survey respondents have participated in fire prevention/protection activities;
- Seventy percent (13) of all Tribes that have not participated in community fire planning activities in the past expressed an interest in pursuing a community fire plan or related activities;
- A number of respondents indicated although federal funding is available, many Tribes do not have the organizational capacity (e.g. grant writing skills, staffing, technical assistance) to pursue grants for fire protection or fuels reduction;
- Tribes with larger land bases are more likely to apply for grants for fire protection and be more successful in coordinating and receiving those grants;
- The majority of respondents indicated greater coordination and communication between Tribes and relevant local, state, and federal agencies is needed to protect and preserve culturally significant sites;
- Eighty percent of Tribes located east of the Cascade Mountains indicated economic development opportunities exist through the utilization of biomass from fuels reduction projects or the reuse/recycling of waste products;
- All respondents expressed an interest in economic development opportunities; 93% specifically mentioned they would be interested in receiving training on contracting opportunities.

The final open-ended questions of the survey provided respondents with the opportunity to share additional information on other barriers that affect Tribal access to fire protection resources. Many survey respondents indicated limited staff, lack of financial resources, and lack of expertise preclude Tribes from taking advantage of existing resources to strengthen fire protection capabilities thereby reducing wildfire risk. Tribes stressed that limited funding is a major barrier to attaining adequate structural and wildland fire protection. Many Tribes simply lack the funding to initiate programs, spark community interest, conduct training, and/or maintain existing or new programs. A few

Tribes specifically noted BIA funds and support decrease year after year, making it difficult for Tribes to reduce their risk to wildfire.

Respondents emphasized interagency coordination as means to increase access to fire protection resources and reducing risk to wildfire. Coordination between states, counties, Tribes and federal programs such as the National Fire Plan, Healthy Forests Restoration Act, and Northwest Fire Plan, would help strengthen Tribal fire protection capabilities. Many Tribes mentioned a number of barriers to fire protection resources related to federal, state, and local agencies. Specific barriers included the lack of awareness of some federal programs; the restrictions associated with some programs, such as a certain amount of land to qualify for a Fire Management Officer (FMO); or the inability to be eligible for some federal grants due to the lack of a fire district or department. Another Tribe mentioned state and county agencies do not extend services (for free) to Tribal or trust lands because the lands are not part of the tax base.

Respondents suggested a variety of ways in which barriers to fire protection resources may be reduced. A few suggestions included sharing educational material on community fire planning and basic fire education, expanding the use of traditional ecological knowledge to benefit Tribes and local communities, and conducting workshops on fire training. One respondent mentioned that for smaller Tribes with fewer resources, it would be beneficial to partner with local jurisdictions and other agencies engaged in community fire planning and wildfire risk assessment. Another Tribe stressed it is essential to be proactive in planning for wildfire—to recognize and anticipate the risks associated with wildfire and initiate positive change. The recommendations in the following section build upon the ideas expressed by survey participants.

CHAPTER 5: RECOMMENDATIONS

Overall, findings from this assessment indicate Tribes want increased access to training, funding and technical assistance for fire planning and protection, fuels reduction, contracting and emergency management. Following are recommendations based on the findings from the survey. For each recommendation, we provide alternatives for implementation and a list of potential partners.

1. Develop a clearinghouse of information focused on Tribal wildfire protection, mitigation and emergency management.

This task requires knowledge of the programs, grants and other resources associated with fire planning, mitigation, and emergency management issues. Accessibility to the clearinghouse is also equally as important as the information provided. Alternatives for the clearinghouse include an Internet site (hosted on a server that Tribes from multiple states can access), a telephone call-in number, and a resource book that could be ordered via mail.

It may also be possible to provide such a clearinghouse of information on an existing web site. There are a number of web sites (e.g. the Intertribal Timber Council, Affiliated Tribes of Northwest Indians, etc.) that provide information regarding relevant policies, programs, grants, and web links. Coordination with such providers to expand the information available and offer additional services such as providing monthly updates may be a possibility.

Alternative	Benefits	Challenges	Costs
Internet	39% of respondents indicated half of the Tribal population has access to the Internet. Respondents indicated that opportunities for web access are increasing on reservations. Information can be updated and users can check back frequently or be notified by a list serve.	Tribal offices or citizens that do not have Internet access (or computers) may not have adequate access to the resources provided in the clearinghouse. People without computer training may not know how to use the site.	Costs are limited to web site development, maintenance and server costs. Coordination with an existing organization to use their server may reduce costs.
Telephone	A 1-800 number can provide free and easy access to a large population. People may think highly of personal contacts.	Staffing, training and maintenance could result in large costs. There may be limits to when people can access information because of business hours, time changes, etc.	Telephone line(s), staffing, training and business office associated with the clearinghouse.
Resource Manual	Can be mailed to anyone interested in these issues. Monthly, quarterly or some kind of regular newsletter helps build and maintain relationships about program opportunities.	Information cannot be updated as frequently (or will result in higher costs to have multiple mailings per year). Logistically difficult to administer, staff, produce document, etc.	Information design and development; Staffing and mailing costs.

Potential Partners:

- Bureau of Indian Affairs (BIA), US Department of Interior – The BIA has the primary responsibility of fulfilling the trust relationship between the federal government and Tribes. To this end, the BIA serves as a purveyor of services, conduit of information, and coordinator of funds. The BIA may play a greater role in the dissemination of information and technical assistance to help Tribes have greater access to information regarding structural and wildland fire protection, grant opportunities, and community fire planning activities.
- Tribal organizations that have broad membership and can provide members with access to clearinghouse information. (e.g., Affiliated Tribes of Northwest Indians, Columbia Inter-Tribal Fish Council, National Conference of American Indians, etc.)
- The Intertribal Timber Council (ITC) – The ITC is a non-profit, nationwide consortium of Indian Tribes, Alaska Native Cooperations (ANCs), and individuals dedicated to improving the management of natural resources of importance to Native American communities. The ITC works with BIA, private industry, and academia to explore issues and identify strategies to promote social, economic, and ecological values while protecting forests, soil, water, and wildlife. (<http://www.itcnet.org>)
- State and federal agencies with fire-related program can provide information to the resource clearinghouse. (e.g., BIA, BLM, Forest Service, Fish & Wildfire)

2. Provide contractor training for fire protection and fuels reduction.

Identify training programs to provide skills and expertise to Tribes interested in contractor training. There are training programs (through the Forest Service and other community-based organizations in the Northwest) that could provide skills and expertise to Tribes interested in contractor training as well as stewardship contracting authorities.

Potential Partners and Resources:

- Bureau of Indian Affairs
- Forest Service (Training and Stewardship Contracting Authorities)
- Intertribal Timber Council (ITC)
- Other Federal Agencies (BIA, BLM, F&W)
- Community-based organizations that can assist with training and project development

3. Provide training and resources on small business development and grant opportunities.

Small business development can help in creating and maintaining economic development opportunities. With the potential for jobs in fire prevention and fuels reduction and utilization of small diameter wood products, small business development training can provide Tribes with tools to manage these efforts in a profitable and sustainable manner.

Potential Partners and Resources:

- Bureau of Indian Affairs

- *Affiliated Tribes of Northwest Indians – Economic Development*. <http://www.atni-edc.org>
- *Minority Business Opportunity Committee* (a committee of the Oregon Federal Executive Board), Portland, Oregon. Phone: 503-823-3315. <http://www.oregon.feb.gov/mboc.htm>
- *ONABEN—Oregon Native American Business Network*, Tigard, Oregon. Phone: 503-968-1500. <http://www.onaben.org/>
- Small Business Association. <http://www.sba.gov>
- *Tribal Business Information Centers (SBA Program)* - The Office of Native American Affairs is dedicated to ensuring that American Indians, Native Alaskans and Native Hawaiians seeking to create, develop and expand small businesses have full access to the necessary business development and expansion tools available through the Agency's entrepreneurial development, lending and procurement programs. <http://www.sba.gov/naa/Tribes/>
- Small Business Development Centers (local organizations)

4. Examine opportunities to utilize stewardship contracting authorities for land management, fire protection and economic development.

Stewardship contracting is creating opportunities for communities to derive economic, environmental and social benefit from forest management on federal lands. There are existing Tribal stewardship projects and fire protection programs that may serve as good examples for other Tribes interested in pursuing stewardship contracts. For example, the Maidu Stewardship project is a National Pilot Collaborative Stewardship project that provides an example of proactive land management in areas that contain significant cultural resources. The project focuses on collaborative communication protocols, traditional ecological knowledge and community cultural revitalization. Objectives of the project include improving forest, meadow and riparian health.⁶⁷

Stewardship contracting authorities provide appropriations from the Forest Service for the purpose of entering into cooperative agreements with Federal, Tribal, State and local governments, private and nonprofit entities, and landowners. These cooperative agreements provide for the protection, restoration, and enhancement of fish and wildlife habitat and other resources to reduce risk from natural disasters on public or private land within a watershed.⁶⁸ These authorities provide an opportunity to coordinate with the Forest Service and identify potential funding that could be used for fuels reduction and other restoration activities.

Potential Partners and Resources:

- Bureau of Indian Affairs
- Forest Service and Bureau of Land Management (Training and Stewardship Contracting Authorities)
- Intertribal Timber Council (ITC)

⁶⁷ Cunningham, Farrell and Katie Bagby, *The Maidu Stewardship Project: Blending of two knowledge systems in forest management*, Pacific West Community Forestry Center, March 2004.

⁶⁸ Forest Service, *Stewardship Contracting Handbook*, January 2004, <http://www.fs.fed.us/forestmanagement/projects/stewardship/handbook/index.shtml>.

- Community-based organizations that can assist with training and project development

5. Develop and deliver resources and materials to assist Tribes in community fire planning, fuels reduction, implementation and monitoring.

With the recent policies and programs focused on community fire planning and fuels reduction, there is a need to provide guidance on the planning, implementation and monitoring of these programs. There are resources on community fire planning that can be adapted, modified, or simply used as a baseline for developing resources that would be appropriate and useful for Tribes in Oregon, Washington and Idaho.

Potential Partners and Resources:

- Bureau of Indian Affairs
- Pacific Northwest Wildfire Coordinating Group, National Fire Plan Strategy Team
- “Preparing a Community Wildfire Protection Plan: A Handbook for Wildland–Urban Interface Communities,” Sponsored By the Communities Committee, National Association of Counties, National Association of State Foresters, Society of American Foresters, and the Western Governors’ Association. <http://www.safnet.org/policyandpress/cwpphandbook.pdf>.
- *Framework for Community Fire Plans: A Collaborative and Integrated Approach to Developing Community Fire Plans*, Program for Watershed and Community Health, University of Oregon, 2004. <http://cwch.uoregon.edu>
- Adjacent jurisdictions engaged in community fire planning or mitigation programs.
- State and Federal agencies responsible for land and forest management and fire protection.

6. Ensure that Tribes have significant access to structural and wildland fire protection. Develop and deliver training and education on fire protection and fire prevention for Tribes. Assist Tribes in securing grant resources for fire protection and fire prevention.

There are numerous programs aimed at enhancing fire department capabilities for protection and suppression. The Federal Emergency Management Agency, National Fire Protection Association, and Department of Homeland Security are the primary agencies providing grants and resources for fire protection. These grants are highly competitive and require a cost-share for eligibility. FEMA cost-shares are generally reduced for “small and impoverished” communities. Communities that fall within this category have a population under 3,000, a significant population under the national per capita income, and an unemployment rate above six percent. Many small Tribes in the Northwest may fall into this category. *See Appendix C: Tribal Profiles for more information.*

Technical assistance to Tribes may include providing information on grant writing for these programs and consultation on fire protection alternatives. Many Tribes rely on federal agencies for wildland fire protection and adjacent jurisdictions for structural fire protection.

Potential Partners and Resources:

- Bureau of Indian Affairs
- Federal Emergency Management Agency, US Fire Administration
- State and Federal agencies responsible for fire protection.

7. Illustrate the role of traditional use of fire in mitigating losses from wildfire and creating opportunities for restoration, cultural resources and economic development.

Communicate this information to public agencies, adjacent jurisdictions, community-based organizations, youth and other stakeholders.

Recognizing historical, cultural and natural resources can assist Tribes in identifying strategies for mitigation and action, while also engaging broad community participation. In developing a community fire plan (or any other strategic plan for a Tribe), there is an opportunity to document the traditional knowledge and experiences of the Tribe. Communicating this information to the public and agencies, will help build understanding of how and why these practices have been used and increase opportunities to integrate these practices into implementation and monitoring programs.

Potential Partners and Resources:

- Appendix B of this document includes a listing of resources on traditional use of fire.
- Frank Lake, Oregon State University
- Gerald Williams bibliography (see Appendix B)
- The Confederated Salish-Kootenai Tribes have developed an education project to educate children and the community about the history and tradition of fire in the natural environment in the Northern Rockies. The project consists of four phases, the first of which is near completion. Germaine White is the Education Coordinator for this project.

8. Organize a workshop for Tribes on community fire planning and prevention.

Many communities do not have sufficient resources or skills to successfully engage in a comprehensive community fire planning process. Findings from this needs assessment show that Tribes have an interest in community fire planning activities, but would like to learn more about the planning process, basic plan elements, and types of funding that are more readily accessible with a community fire plan. A workshop on community fire planning and prevention would provide Tribes with the opportunity to both receive and share information related to community fire planning activities. One of the primary goals of the workshop should be to bring Tribes, agency, and other organizational representatives together to discuss the potential impacts of wildfire on their communities and the significance of community fire planning activities. The workshops should also convey the positive effect of the community fire planning process related to community capacity development and natural resource management.

Potential Partners:

- BIA
- Intertribal Timber Council (ITC)
- Other state and federal agencies responsible for forest and land management
- Program for Watershed and Community Health
- Other non-profit organization with expertise in community fire planning and hazardous fuels reduction (e.g. Watershed Training and Research Center)

APPENDIX A: ACRONYMS AND DEFINITIONS

Acronym List

BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CWPP	Community Wildfire Protection Plan (Healthy Forests Restoration Act)
DOI	Department of the Interior
FEMA	Federal Emergency Management Agency
FMO	Fire Management Officer
F&W	Department of Fish and Wildlife
GIS	Geographic Information System
HFRA	Healthy Forests Restoration Act
HUD	Housing and Urban Development (Federal)
ITC	Intertribal Timber Council
ISDEA	Indian Self-Determination and Education Assistance Act
NIFRMA	National Indian Forest Resources Management Act
NFP	National Fire Plan
NFPA	National Fire Plan Association
NHMP	Natural Hazards Mitigation Plan
ODF	Oregon Department of Forestry
OIP	Operation of Indian Programs
PDM	Pre-Disaster Mitigation Program (FEMA)
PWCH	Program for Watershed and Community Health
SBA	Small Business Association
TEK	Traditional Ecological Knowledge
TFPA	Tribal Forest Protection Act
TPA	Tribal Priority Allocations
USDA	United State Department of Agriculture
USFA	United States Fire Administration
WUI	Wildland-Urban Interface

Definitions

This section provides a summary of selected policies and/or definitions that appear periodically in the report.

Communities-at-Risk

Policy/Source	Definition
Healthy Forests Restoration Act	Title I – Hazardous Fuel Reduction on Federal Land, SEC. 101. Definitions: (1) AT-RISK COMMUNITY.—The term “at-risk community” means an area— (A) that is comprised of— (i) an interface community as defined in the notice entitled “Wildland Urban Interface Communities Within the Vicinity of Federal Lands That Are at High Risk From Wildfire” issued by the Secretary of Agriculture and the Secretary of the Interior in accordance with title IV of the Department of the Interior and Related Agencies Appropriations Act, 2001 (114 Stat. 1009) (66 Fed. Reg. 753, January 4, 2001); or (ii) a group of homes and other structures with basic infrastructure and services within or adjacent to Federal land; (B) in which conditions are conducive to a large-scale wildland fire disturbance event; (C) for which a significant threat to human life or property exists as a result of a wildland fire disturbance event.

Compacting

Policy/Source	Definition
Indian Forest Management Assessment Team	A mechanism (authorized by P.L. 100-472) by which a tribe can take over management of any or all federal Indian programs with their associated budgets and exercise discretionary power over how the budget are distributed among the “compacted” programs.

Cooperating Agreements

Policy/Source	Definition
National Wildfire Coordinating Group	Cooperator: Local agency or person who has agreed in advance to perform specified fire control services and has been promptly instructed to give such service. Cooperating Agency: An agency supplying assistance including, but not limited to direct tactical or support functions or resources to incident control.

Mutual Aid

Policy/Source	Definition
National Wildfire Coordinating Group	A system where two or more fire departments, by prior agreement, operate essentially as a single agency to respond routinely across jurisdictional boundaries to render mutual assistance in combating fire emergencies

Prescribed Fire

Policy/Source	Definition
National Wildfire Coordinating Group	Any fire ignited by management actions under certain, predetermined conditions to meet specific objectives related to hazardous fuels or habitat improvement. A written, approved prescribed fire plan must exist, and NEPA requirements must be met, prior to ignition.

Structural Fire Protection

Policy/Source	Definition
National Wildfire Coordinating Group	<p>Structure fire: Fire originating in and burning any part of any building, shelter, or other structure</p> <p>Structural fire protection: The protection of homes or other structure from wildfire.</p>

Traditional Ecological Knowledge

Policy/Source	Definition
Berkes, Fikret (1998)	"[a] cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationships of living beings (including humans) with one another and with their environment."

Wildland Fire Protection

Policy/Source	Definition
National Wildfire Coordinating Group	<p>Wildland: An area in which development is essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Some structures, if any, are widely scattered.</p> <p>Wildland Fire: Any fire occurring on the wildlands, regardless of ignition source, damages or benefits.</p> <p>Protection: The actions taken to limit the adverse environmental, social, political, and economical effects of fire.</p>

Wildfire Risk Assessment

Policy/Source	Definition
Josephine County Integrated Fire Plan	<p>A risk assessment evaluates the following measure to determine wildfire risk:</p> <p>Risk: the potential and frequency for wildfire ignitions (based on past occurrences).</p> <p>Hazard: the conditions that may contribute to wildfire (fuels, slope, aspect, elevation and weather).</p> <p>Values: the people, property, natural resources and other resources that could suffer losses in a wildfire event.</p> <p>Protection Capability: the ability to mitigate losses, prepare for, respond to and suppress wildland and structural fires.</p> <p>Structural Vulnerability: the elements that affect the level of exposure of the hazard to the structure (roof type and building materials, access to the structure, and whether or not there is defensible space or fuels reduction around the structure).</p>

Wildland-Urban Interface (WUI)

Policy/Source	Definition
Federal Register /Vol.66, No.160 /Friday, August 17,2001 /Notices	The Federal Register states, "the urban-wildland interface community exists where humans and their development meet or intermix with wildland fuel." This definition is found in the Federal Register Vol.66, Thursday, January 4, 2001, Notices; and in "Fire in the West, the Wildland/Urban Interface Fire Problem," A Report for the Western States Fire Managers, September 18, 2000.
10-Year Comprehensive Strategy	A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy (August 2001) "The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels" (Glossary of Wildland Fire Terminology, 1996). http://www.fireplan.gov/content/reports/?LanguageID=1
NFPA 1144	NFPA 1144: Standard for Protection of Life and Property from Wildfire 2002 Edition Wildland/Urban Interface is an area where improved property and wildland fuels meet at a well-defined boundary. Wildland/urban intermix is an area where improved property and wildland fuels meet with no clearly defined boundary. http://www.nfpa.org/catalog/home/OnlineAccess/1144/1144.asp

APPENDIX B: BIBLIOGRAPHY AND RESOURCES

- Arno, Stephen F. "Ecological Effects and Management Implications of Fires." In *Proceedings—Symposium and Workshop on Wilderness Fire: Missoula, Montana, November 15-18, 1983*, edited by James E. Lotan, et al. Ogden, UT: USDA Forest Service, Intermountain Forest and Range Experiment Station.
- Boyd, Robert T., ed. *Indians, Fire, and the Land in the Pacific Northwest*. Corvallis, OR: Oregon State University Press, 1999.
- _____. "Strategies of Indian Burning in the Willamette Valley." *Canadian Journal of Anthropology*, Vol. 5, No. 1 (Fall): 65-86.
- Center for Watershed and Community Health. "Wildfire and Poverty: An Overview of the Interactions Among Wildfires, Fire-related Programs, and Poverty in the Western States." December 2001.
- Cornell, Stephen and Joseph Kalt, eds. "Reloading the Dice: Improving the Chances for Economic Development on American Indian Reservations." In *What Can Tribes Do? Strategies and Institutions in American Indian Economic Development*. Los Angeles, CA: American Indian Studies Center, University of California, 1992.
- _____. "Sovereignty and Nation-Building: The Development Challenge in Indian Country Today." John F. Kennedy School of Government, Harvard University (Harvard Project on American Indian Economic Development), 1998.
- Gottesfeld, Leslie M. Johnsen. "Aboriginal Burning for Vegetation Management in Northwest British Columbia." *Human Ecology*, Vol. 22, No. 2, 1994: 171-188.
- Helfrich, Prince. "Coming of the Indians." *Eugene Register Guard*, 1961 July 14.
- Indian Forest Management Assessment Team. *An Assessment of Forests and Forest Management in the Unities States*. Portland, OR: Intertribal Timber Council, 2000.
- Kimmerer, Robin W. and Frank K. Lake. "The Role of Indigenous Land Burning in Land Management." *Journal of Forestry*, Vol. 99, No. 11, November 2001: 36-41.
- Krech III, Shepard. *The Ecological Indian*. New York: W.W. Norton and Company, 1999.
- Phillips, Clinton B. "The Relevance of Past Indian Fires to Current Management Programs." In *Proceedings—Symposium and Workshop on Wilderness Fire: Missoula, Montana, November 15-18, 1983*, edited by James E. Lotan, et al. Ogden, UT: USDA Forest Service, Intermountain Forest and Range Experiment Station.
- Tiller, Veronica E. *Tiller's Guide to Indian Country: Economic Profiles of Indian Reservations*. Albuquerque, NM: BowArrow Publishing Company, 1996.
- U.S. Commission on Civil Rights. "Quiet Crisis: Unmet Needs in Indian Country Today." July 2003.

- U.S. Congress. House. Committee on Resources. Subcommittee on Forests and Forest Health. *Hearing on the Cooperation among Various Governmental Agencies in Fighting Wildland Fires*. Washington: Government Printing Office, 21 April 2004.
- U.S. Congress. House. *Tribal Forest Protection Act 2004, Part I*. 108th Congress, 2d session, H.R. 3846. Congressional Record. Vol. 108, no. 509. Washington: Government Printing Office, 20 May 2004.
- U.S. Departments of Agriculture and the Interior. "A Collaborative Approach for Reducing Wildland Risks to Communities and the Environment: Ten-year Comprehensive Strategy." Washington: Government Printing Office, August 2001.
- U.S. Department of the Interior. *Indian Affairs Manual*. Washington: Government Printing Office, August 1998.
- _____. *Strategic Plan 2003-2008*. Washington: Government Printing Office, September 2003.
- U.S. Government Accounting Office. "Wildfire Management: Improved Planning Will Help Agencies Better Identify Fire-fighting Preparedness Needs." Washington: Government Printing Office, March 2004.
- White, Richard. "Indian Land Use and Environmental Change, Island County, Washington: A Case Study." *Arizona and the West*, Vol. 17, No. 4 (Winter): 328-338.
- Williams, Gerald W., Ph.D.. *References on the American Indian Use of Fire in Ecosystems*. Washington, D.C.: USDA Forest Service, 2001.

Web Sources

- American Indian Policy Center, <http://www.airpi.org>
- Arizona Republic, <http://www.azcentral.com>
- City of Bonner's Ferry, <http://www.bonnerrsferry.com>
- The Columbian, <http://www.columbian.com>
- Confederated Tribes of the Chehalis Reservation, <http://www.chehalisribes.org>
- Confederated Tribes of the Colville Reservation, <http://www.colvilletribes.com>
- Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians, <http://www.ctclusi.org>
- Confederated Tribes of the Umatilla, <http://www.umatilla.nsn.us>
- Confederated Tribes of the Warm Springs, <http://www.warmsprings.com>
- Coquille Indian Tribes, <http://www.coquilletribe.org>
- Couer d'Alene Tribe, <http://www.cdatribe.org>
- Cow Creek Band of the Umpqua Indians, <http://www.cowcreek.com>

Cowlitz Tribe, <http://www.cowlitz.org>
Forest Policy Center: American Forests, <http://www.americanforests.org>
Forest Service, <http://www.fs.fed.us>
Institute of Public Law, <http://ipl.unm.edu>
Jamestown S'Klallam Tribe, <http://www.jamestowntribe.org>
Kalispel Indian Community, <http://www.kalispeltribe.com>
Klamath Tribe, <http://www.klamathtribes.org>
National Congress of American Indians, <http://www.ncai.org>
National Fire Plan, <http://www.fireplan.gov>
National Interagency Fire Center, <http://www.nifc.gov>
National Park Service, <http://www.nps.gov>
Nooksack Indian Tribe, <http://www.nooksack-tribe.org>
Northwest Portland Area Indian Health Board, <http://www.npaihb.org>
Parade Magazine, <http://www.parade.com>
Samish Indian Tribe, <http://www.stillaguamish.nsn.us>
The Seattle Times, <http://seattletimes.nwsourc.com>
Skokomish Indian Tribe, <http://www.skokomish.org>
Snoqualmie Indian Tribe, <http://www.snoqualmiecasinoproject.com>
Suquamish Indian Tribe, <http://www.suquamish.nsn.us/>
Squaxin Island Tribe, <http://www.squaxinland.org>
Stillaguamish Indian Tribe, <http://www.stillaguamish.nsn.us>
Oregon Legislative Commission on Indian Services, <http://www.leg.state.or.us/cis/cisin>
Port Gamble Indian Community, <http://www.pgst.nsn.us>
South Puget Sound Intertribal Planning Agency, <http://www.spipa.org>
Washington Governor's Office of Indian Affairs, <http://www.goia.wa.gov>

Annotated Bibliography

Krech III, Shephard. *The Ecological Indian: Myth and History*. New York: W.W. Norton and Company, 1999. (p. 101-122).

Krech directly addresses the mythical and actual role of fire in North American Indian culture. Drawing from a variety of sources, both anecdotal and ecological, Krech introduces the myriad uses Indians employed fire. He notes, "In fact, North American Indians burned often and for myriad ends, many of which were practical, like keeping mosquitoes and flies at bay. The most important related to subsistence, aggression, communication, and travel" (103). Use of fire varied from Tribe to Tribe, with different ecological intentions and effects. Fire was used at various times of the year for different reasons—often without the care of effects or control (110). Unfortunately, much of the history of fire by natives has been forgotten due to changes in habitat, lifestyle, regulation, and acceptance. Krech calls this "cultural amnesia" (111).

Krech makes the point that Indians used fire for subsistence more than for any other purpose. Fire was used to gain access to animals, improve or eliminate forage, and to drive and encircle animals (103). The Krech cites a number of instances where Indians employed fire including the burning of grasses/understory that would create favorable forage for animals and the encircling or driving deer/buffalo with fire (103-5). He notes, "almost everywhere, Indians burned the land to surround, drive, frighten, or scorch the animals and reptiles they sought to eat, and to create proper foraging conditions, either in the same or in the following year, for small and large mammals and the predators (including themselves) that sought them" (106).

Indians also used fire to increase the production of berries, seeds, nuts, and other gathered foods. Specifically, fire was used to improve the growth, harvest, and production of wheat or grass used for basketry, and nuts, berries, and plants such as huckleberry, acorns, camas, and nettles, which were important food sources.

Fire was also used as a weapon (defense and offense), form of communication, and for ease of travel (107). Krech notes, "American Indians burned the land pragmatically to confuse, hinder, maim, or kill their enemies, Indian or white, to drive them from or into cover, or to mask their own actions" (108). In the realm of communication, fire was used to alert other Tribes of danger, celebrate the return of war parties, and organize hunting parties. As far as ease of travel, fire was used to clear the understory of forests, which allowed for better travel through the woods.

Boyd, Robert T. "Strategies of Indian Burning in the Willamette Valley." *Canadian Journal of Anthropology*, Vol. 5, #1 (Fall). (p.65-86)

Boyd first describes the environmental setting of the Willamette Valley as early as the 1850s. He asserts at the time of settlement by pioneers, the valley was characterized by an "oak savannah"—open grasslands with hilly areas scattered with oak—with a number of microenvironments, each with special plants (camas, hazel, wild onion, salal, etc.) utilized by nearby Indians. Taking into account palynological, anthropological, ecological and anecdotal evidence, it can be hypothesized "regular aboriginal fires were the main cause of the perpetuation of the oak savannah" (67). The cessation of aboriginal fire has aided the domination of forest cover (Douglas fir and Garry oak) in areas that are not used for cultivation or grazing.

Boyd next discusses the native inhabitants of the Willamette Valley: the Kalapuya. The subsistence base of the Kalapuya was first wild foods such as camas lily, hazelnuts, tarweed, wapato, and berries

and then game, the most prominent being the white-tailed deer. Boyd uses a variety of journal excerpts to illustrate the patterned and regular use of fire by the Kalapuya.

The Kalapuya used fire for two major reasons: to encircle and hunt deer and to gather tarweed. The Kalapuya also burned native grasses to collect grasshoppers and a number of other insects. Fire further eased the production and collection of hazelnuts and acorns, promoted the growth of basket-making materials, and created environments favorable to the growth of wild berries and root crops. Also, fire was used for crop cultivation (tobacco); the Kalapuya were aware that ash was an effective fertilizer for planted seeds (78).

Boyd concludes,

Clearly, fire was an important component in both the cultural and ecological systems of the prehistoric Willamette Valley. The Kalapuya Indians used fire in a wide range of subsistence activities, and fire was essential for maintaining a fire climax biotype. The link between the two systems was the natives' use of fire as a tool, a tool which simultaneously improved the subsistence quest while maintaining ecological diversity (82).

White, Richard. "Indian Land Use and Environmental Change, Island County, Washington: A Case Study." *Arizona and the West*, Vol. 17, #4 (Winter). (p. 327-338).

White explores the use of fire by Salish Tribes in Island County in western Washington. The Salish Tribes occupied two major islands in Island County, Whidbey and Camano. White asserts, "through the use of fire and a simple technology, the Indians over many generations had encouraged the growth of three dominant plants on the islands—bracken, camas, and nettles—to supplement their regular diet of fish and small game, and also had created the conditions that fostered immense forests of Douglas fir" (327).

The Salish food cycle was dominated by fishing, hunting, and gathering. The nettle was an important source of food, medicine, and material for the Salish. According to Salish testimony, the nettle was cultivated as a crop—using fire to replenish the soil and promoted growth in the next season. Camas and bracken were also staples of the Salish diet; fire was used to promote their growth and abundance. The Salish also burned the forests to discourage the encroachment of the Douglas fir and to encourage the production of berries, fireweed, and game.

White presents a thorough argument concerning the role of native burning in the evolution of the ecology of Island County. He concludes, "The stability of the environment the Salish had created in Island County depended on their continued burning, cultivation, and gathering. If they ceased these activities, the ecology of the area would have been altered" (338). Unfortunately, like many areas in the Northwest, native burning practices curtailed as white farmers settled on Indian lands; Indians were unable to continue their native traditions thus altering the environment significantly.

Gottesfeld, Leslie M. Johnsen. "Aboriginal Burning for Vegetation Management in Northwest British Columbia." *Human Ecology*, Vol. 22, No. 2, 1994. (p. 171-188)

Gottesfeld explores the burning practices of the Gitskan and Wet'suwet'en peoples of northwest British Columbia, who occupy the upper drainage of the Skeena River and the western headwaters of the Fraser River. The Gitskan and Wet'suwet'en peoples of B.C. traditionally used fire to stimulate the growth of berry patches (black huckleberry, soapberry, and lowbush blueberry) and

prevent the invasion of other shrub species and conifers. The berry patches were lightly burned in late August and September to stimulate vigorous sprouting and berry production.

Today, the Gitskan and Wet'suwet'en people engage in prescribed burning on reserve lands; vegetation burned usually includes grass or scrub dominated by aspen, hazel, red osier, rose, willow, or young lodgepole pine (181). The primary reason for burning is to stimulate grass growth and to kill or damage some shrub species or young conifers (181). This process precludes the growth of a dense understory, which reduces fire hazard. Most burning occurs on steep south-facing slopes or in the floodplain.

Helfrich, Prince. "Coming of the Indians." *Eugene Register Guard*, 1961 July 14.

Helfrich shares anecdotal evidence of Indian burning in western Oregon. He discusses the annual burning of the old Indian trails in the central Cascades by the Warm Springs Reservation Indians. The trails were burned to provide easier access through the country to forage for horses and big game animals (they were easier to hunt). He notes, "these seasonal treks were duplicated both north and south of the Three Sisters area. The Willamette and Santiam Rivers were widely used for hunting and fishing and the old trails led back through the Cascades to the Indians' wintering grounds."

APPENDIX C: TRIBAL PROFILES

The Tribes of the Pacific Northwest have unique geographic, economic and social characteristics. The profiles in this section are intended to illustrate the distinct features of Tribes in Oregon, Washington and Idaho that may be at risk to wildfire. Significant features such as land base, location and history of each Tribe are discussed on a Tribe-by-Tribe basis. Population, Tribal enrollment, per capita income, and poverty rate are presented in comparative tables.

Reservation populations fluctuate depending on the size of the reservation and the density of the cities that are within reservation boundaries. Some Tribal communities, such as the Burns-Paiute Tribe in eastern Oregon are located in extremely rural, low-density regions, while other Tribes such as the Muckleshoot or Puyallup in Washington are located in more urban settings and have a greater number of residents within reservation boundaries. Tribal enrollment figures indicate the current number of officially enrolled Tribal members, ages 18 and over. Enrollment figures naturally vary depending on the size of the Tribal community. In many cases, such as with the Klamath Indian Tribe of Oregon, a significant portion of Tribal members do not live within reservation boundaries and are not included in reservation population estimates.

Per capita income and poverty rates alone do not provide an accurate picture of the economic climate of a Tribal community. For example, many Tribal members are employed in seasonal positions, such as fishing or firefighting. The Census figures do not capture these seasonal employment rates. However, the comparison of figures at the Tribal, state, and national levels offers a perspective of the economic disparities between Tribes and state and national averages.

IDAHO

The four Tribes within Idaho's boundaries include the Couer d'Alene, Nez Perce, Shoshone-Bannock, and Kootenai Tribes. The Duck Valley Reservation, a Shoshone-Paiute land base, is located on the Idaho/Nevada border and is not included in the Tribal needs assessment.

Population and Enrollment

The Nez Perce have the largest land base of Idaho Tribes with approximately 750,000 acres, while the Kootenai maintain the smallest land base with 250 acres of trust land. As table C-1 shows, the Nez Perce have nearly 18,000 residents on the reservation, while the Kootenai have approximately 75. This disparity in reservation population is a reflection of the size of each reservation. In terms of Tribal enrollment, the Nez Perce and Shoshone-Bannock Tribes have the largest enrollment figures of 3,326 and 3,951, respectively.

Table C-1. Tribal population and enrollment

Federally Recognized Tribes	Population on Reservation	Tribal Enrollment ¹
<i>Coeur d'Alene Tribe</i>	6,551	1,907*
<i>Nez Perce Tribe</i>	17,959	3,326*
<i>Shoshone-Bannock Tribes</i>	5,762	3,951
<i>Kootenai Tribe</i>	75	165

Source: U.S. Census 2000, unless otherwise noted

¹ Tribal enrollment data from Northwest Portland Area Indian Health Board, www.npaihb.org

* Figure from Tribal web site, web addresses vary

Poverty Indicators

As represented in table C-2, Tribes in Idaho have a lower per capita income and a higher poverty rate than the state and national averages. The Kootenai have the highest per capita income of \$16,291 and the lowest Tribal poverty rate of 11.9 percent. The Shoshone-Bannock have the lowest per capita income of \$11,309 and the highest poverty rate of 23.6 percent. It is important to note, these figures are also a reflection of reservation size and population sampled.

Table C-2. Per capita income and individual poverty rate, 2000.

	Per Capita Income	Individual Poverty Rate
United States	\$21,587	12.4%
State of Idaho	\$17,841	11.8%
Federally Recognized Tribes		
<i>Coeur d'Alene Tribe</i>	\$16,241	15.6%
<i>Nez Perce Tribe</i>	\$14,768	14.2%
<i>Shoshone-Bannock Tribes</i>	\$11,309	23.6%
<i>Kootenai Tribe</i>	\$16,291	11.9%

Source: U.S. Census 2000

Profiles

Coeur d'Alene Tribe

The Coeur d'Alene Reservation is located south of Coeur d'Alene near Plummer and St. Maries, Idaho. The reservation covers 345,000 acres of rich farmland and forest, stretching from the Palouse to the Northern Rocky Mountains.⁶⁹ The reservation includes Lake Coeur d'Alene and the St. Joe and Coeur d'Alene Rivers. The Coeur d'Alene currently maintain a 6,000-acre farm and the reservation countryside includes 180,000 acres of forest and 150,000 acres of farmland.⁷⁰

Nez Perce Tribe⁷¹

The Nez Perce Reservation is located in north central Idaho, east of Lewiston. The reservation consists of 750,000 acres and includes prairies, rivers, and canyons. The Clearwater River runs along its northern and eastern borders. The Nez Perce are involved in various aspects of north central Idaho's business community, from logging and fishing to commerce and education. The Nez Perce are actively involved in agriculture, of which wheat is the major crop, and forestry. The Nez Perce Forest Resource Management Program manages, harvests, and markets thousands of acres of timberlands.

⁶⁹ Veronica E. Tiller, *Tiller's Guide to Indian Country: Economic Profiles of American Indian Reservations* (Albuquerque, NM: BowArrow Publishing Company, 1996), 332.

⁷⁰ Coeur d'Alene Tribal web site, www.cdaTribe.org

⁷¹ Tiller, 338.

Shoshone-Bannock Tribes (Fort Hall Reservation)⁷²

The Fort Hall Reservation totals 544,000 acres and is home to the Shoshone and Bannock Tribes. The reservation is located along the upper reaches of the Snake River in southeastern Idaho. The reservation land varies from rich farmland to rugged foothills and mountains. Agriculture is a major source of revenue for the Tribes, producing crops such as small grain, alfalfa, potatoes, and cattle. The Shoshone and Bannock Tribes are also involved in enterprises including gaming and tourism.

Kootenai Tribe

The Kootenai Reservation is located in northeastern Idaho, near the city of Bonner's Ferry. The reservation consists of 250 acres held in federal trust along the Kootenai River.⁷³ The majority of the reservation land is forested, set amid three mountain ranges: the Selkirk, Purcell, and Cabinet. The Kootenai are also involved in agriculture, primarily cultivating wheat and barley. The Tribe is a driving force in Boundary County's economy and spearheaded the construction of the Kootenai River Inn in 1986 and the Kootenai Tribal Sturgeon Hatchery in 1991.⁷⁴

OREGON

The nine federally recognized Tribes in Oregon are located throughout the state of Oregon, from the coastal area of Coos Bay to the high desert plateau of Harney County. *Note that the Fort McDermitt Reservation, located on the Oregon/Nevada border is not included in the Needs Assessment because the majority of the reservation lies in Nevada.*

Population and Enrollment

The Confederated Tribes of the Warm Springs have the largest land base of Oregon Tribes with reservation and trust lands totaling 644,000 acres; whereas, the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians have the smallest land base of approximately 130 acres. According to the U.S. Census, the Klamath, the Cow Creek Band of Umpqua Indians, and the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians had the smallest reservation population in 2000. The Confederated Tribes of the Warm Springs, with the largest land base, had a total population of 3,314 in 2000. The enrollment figures for the Tribes vary, but Confederated Tribes of the Warm Springs and the Grande Ronde Community had the largest enrollment figures of 4,164 and 4,740, respectively as of 2002. Table C-3 shows the population and enrollment figures of Oregon Tribes.

⁷² Ibid., 335.

⁷³ Ibid., 336.

⁷⁴ <http://www.bonnerrsferrychamber.com/pages/Tribe.html>

Table C-3. Tribal population and enrollment

Federally Recognized Tribes	Population on Reservation	Tribal Enrollment ¹
<i>Burns Paiute Tribe</i>	171	326
<i>Confederated Tribes of the Siletz Reservation</i>	308	3,808
<i>Coquille Tribe</i>	258	817*
<i>Confederated Tribes of the Warm Springs Reservation</i>	3,314	4,164
<i>Confederated Tribes of the Umatilla Reservation</i>	2,927	2,446*
<i>Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians</i>	25	754*
<i>Confederated Tribes of the Grande Ronde Community</i>	55	4,740
<i>Klamath Indian Tribes</i>	9	3,466
<i>Cow Creek Band of the Umpqua Indians</i>	22	1,217

Source: U.S. Census 2000, unless otherwise noted

¹ Tribal enrollment data from the Oregon Commission on Indian Services, www.leg.state.or.us/cis/cisinfo.htm

* Figure from Tribal web site, web addresses vary

Poverty Indicators

As table C-4 shows, the per capita income of Tribes in Oregon was lower than the state and national level in 2000. Also, the individual poverty rate was greater at the Tribal level than the state and national level. The Confederated Tribes of the Umatilla Reservation had the highest per capita income of \$15,158 and the lowest poverty rate of 15.8 percent. The Burns Paiute Tribe had the highest poverty rate of 36.3 percent, while the Confederated Tribes of the Coos, Lower Umpqua and Siuslaw had the lowest per capita income of \$3,627.

Table C-4. Per capita income and individual poverty rate, 2000.

	Per Capita Income	Individual Poverty Rate
United States	\$21,587	12.4%
State of Oregon	\$20,940	11.6%
Federally Recognized Tribes		
<i>Burns Paiute Tribe</i>	\$7,312	36.3%
<i>Confederated Tribes of the Siletz Reservation</i>	\$10,877	22.6%
<i>Coquille Tribe</i>	\$13,863	34.7%
<i>Confederated Tribes of the Warm Springs Reservation</i>	\$9,136	28.4%
<i>Confederated Tribes of the Umatilla Reservation</i>	\$15,158	15.8%
<i>Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians</i>	\$3,627	0.0%
<i>Confederated Tribes of the Grande Ronde Community</i>	\$9,274	0.0%
<i>Klamath Indian Tribes</i>	\$9,600	0.0%
<i>Cow Creek Band of the Umpqua Indians</i>	N/A	N/A

Source: U.S. Census 2000

Profiles

Burns Paiute Tribe

The Burns Paiute Reservation and trust lands total 13,736 acres and are located in the high desert of Harney County in south central/eastern Oregon.⁷⁵ The Blue and Steen Mountains and the high desert climate provide a rich environment for ponderosa pine, alfalfa, wild meadow hay, and the cattle ranching industry. Agriculture is the primary sector of the Tribal economy, while the lumber industry is considered a secondary sector. The Tribe owns a 110-acre farm on which alfalfa is grown.⁷⁶

Confederated Tribes of Siletz

The Siletz Reservation and trust lands total 4,204 acres and are located in Lincoln County on the Oregon Coast. The majority of reservation and trust lands contain thousands of acres of prime Oregon Coast Range timberland. The Tribal forestry program harvests several commercial tree species, including Douglas fir, western red cedar, and western hemlock.⁷⁷ The Confederated Tribes of Siletz take an active role in wildlife, fisheries, forestry, and environmental management in Lincoln County.

⁷⁵ Oregon Legislative Commission on Indian Services, www.leg.state.or.us/cis/cisin

⁷⁶ Tiller, 540.

⁷⁷ Ibid., 545.

Coquille Tribe

The Coquille Tribe is located on the southwest Oregon Coast, near Coos Bay. The reservation and trust land acreage total 6,512 acres.⁷⁸ The principal industries in the Coos Bay region are fishing, lumber, agriculture, shipping, and recreation. The Coquille Tribe operates an organic cranberry bog at the mouth of the Coos River, about one and one-half miles from the Pacific Ocean.⁷⁹

Confederated Tribes of the Warm Springs Reservation

The Warm Springs Reservation is located in central Oregon in Jefferson and Wasco Counties. The majority of Tribal members live in or near the town of Warm Springs. The reservation and trust lands consist of desert canyons and mountain forests that total 644,000 acres and span five counties.⁸⁰ The Tribal economy is based on natural resources, including hydropower, forest products and ranching. Tourism and recreation also make important contributions.⁸¹

Confederated Tribes of the Umatilla Reservation

The Confederated Tribes of the Umatilla include the Cayuse, Walla Walla, and Umatilla peoples. The reservation and trust land acreage consist of plains, river valleys, and timbered mountain areas and total 172,882 acres near Pendleton in northeast Oregon.⁸² The Umatilla River runs through reservation lands and the Blue and Wallowa Mountains lie to the south and southeast, respectively. Today, the economy of the Confederated Tribes consists of agriculture, livestock, timber, recreation, hunting, fishing, and gaming.⁸³

Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians

The reservation of the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians is located in Coos Bay on the southern Oregon Coast. The reservation is 6.1 acres and trust lands total 120 acres.⁸⁴ The headwaters of the Coos, Siuslaw, and Umpqua Rivers and the forested valleys provide rich riparian, estuarine, and timber resources for the Confederated Tribes. In April 2002 the Confederated Tribes submitted a Forest Land Restoration Proposal that would restore approximately 60,000 acres to the Tribes.⁸⁵

⁷⁸ Oregon Legislative Commission on Indian Services , www.leg.state.or.us/cis/cisin

⁷⁹ Coquille Tribal web site, www.coquilleTribe.org

⁸⁰ Oregon Legislative Commission on Indian Services , www.leg.state.or.us/cis/cisin

⁸¹ Warm Springs Tribal web site, www.warmsprings.com

⁸² Oregon Legislative Commission on Indian Services, www.leg.state.or.us/cis/cisin

⁸³ Confederated Tribes of the Umatilla web site, www.umatilla.nsn.us

⁸⁴ Oregon Legislative Commission on Indian Services, www.leg.state.or.us/cis/cisin

⁸⁵ Confederated Tribes of the Coos, et al., www.ctclusi.org

Confederated Tribes of the Grande Ronde Community

The reservation of the Confederated Tribes of the Grande Ronde Community is located east of Lincoln City on the northern Oregon Coast. Reservation and trust lands total 11,040 acres, most of which are timberlands. Timber revenue is an integral source of Tribal income and contributes to a wide range of social services and economic development projects.⁸⁶ The principal industries in the Grand Ronde Community are tourism, gaming, and timber.

Klamath Indian Tribes

The Klamath Indian Tribes are made up of the Klamath, Modoc and Yahooskin Band of the Snake Indians. The Tribes are located in the high plateau region of south central Oregon, near Upper Klamath Lake. Historically, Tribal reservation lands were comprised of large stands of ponderosa pine. In the 1950s the Klamath Tribes were completely self-sufficient and one of the wealthiest Tribes in the United States.⁸⁷ Today, the Klamath Tribes own small parcels of land in southern Oregon (360 acres) and have initiated a land acquisition plan with the federal government. As part of their post-termination economic self-sufficiency plan, the Tribes recently opened a casino north of Klamath Falls along the Williamson River.⁸⁸

Cow Creek Band of Umpqua Indians

The reservation and trust lands of the Cow Creek Band of Umpqua Indians total 3,236 acres and are located in Douglas County in southwestern Oregon.⁸⁹ The Cow Creek Band of the Umpqua Indians traditionally inhabited the forested canyons and valleys of Oregon's southern Pacific Coast Range, near the North and South Umpqua Rivers. Today, the Tribe has a successful economic development corporation, the Umpqua Indian Development Corporation (UIDC), which operates several businesses for the benefit of Tribal members, local residents, and the surrounding community. The Seven Feathers Hotel and Casino in Canyonville, Oregon is a successful venture of the UIDC.⁹⁰

WASHINGTON

The 29 federally recognized Tribes in Washington are scattered throughout the state with a number of reservations located on the Olympic Peninsula. The Confederated Tribes of the Colville Reservation and Yakama Indian Nation have the greatest land bases of Tribes in the northwest, totaling nearly 1.4 million acres each. Washington also has three Tribes that were recently federally re-recognized—the Samish Tribe in 1996, the Snoqualmie Indian Tribe in 1999, and the Cowlitz Indian Tribe in 2000.

⁸⁶ Tiller, 338.

⁸⁷ Klamath Tribal web site, www.klamathTribes.org

⁸⁸ Klamath Tribal web site, www.klamathTribes.org

⁸⁹ Oregon Legislative Commission on Indian Services, www.leg.state.or.us/cis/cisin

⁹⁰ Cow Creek Tribal web site, www.cowcreek.com

Population and Enrollment

Reservation populations vary greatly in Washington because of the size of some reservations and the proximity of Tribal lands to urban areas. For example, the Samish Indian Nation and the Puyallup Tribe are located in urban areas, Anacortes and Tacoma, and have populations of 33,265 and 41,341, respectively. The proximity of these Tribes to such urban cores has an effect on the number of residents on reservation lands. The enrollment figures of these Tribes are considerably lower than the population figures, as shown in table C-5. The Confederated Tribes of the Yakama Indian Nation and Colville Reservation have the greatest enrollment figures of 8,870 and 8,882, respectively.

Table C-5. Tribal population and enrollment

Federally Recognized Tribes	Population on Reservation	Tribal Enrollment ¹
<i>Confederated Tribes of the Chehalis Reservation</i>		
<i>Hoh Indian Tribe</i>	691	650
<i>Kalispel Indian Community</i>	102	212
<i>Lower Elwha Tribal Community</i>	206	280
<i>Makah Indian Tribe</i>	315	638
<i>Nisqually Indian Tribe</i>	1,356	2,356
<i>Nooksack Indian Tribe</i>	525	500
<i>Port Gamble Indian Community</i>	547	1,341
<i>Quileute Tribe</i>	932*	1043*
<i>Quinault Tribe</i>	371	706
<i>Sauk-Suiattle Indian Tribe</i>	1,370	2,453
<i>Shoalwater Bay Tribe</i>	45	237
<i>Skokomish Indian Tribe</i>	90*	N/A
<i>Spokane Tribe</i>	730	796
<i>Squaxin Island Tribe</i>	2,004	2,153
<i>Upper Skagit Indian Tribe</i>	405	650
<i>Confederated Tribes & Bands of the Yakama Indian Nation</i>	238	504
<i>Confederated Tribes of the Colville Reservation</i>	31,799	8,870
<i>Lummi Tribe</i>	7,587	8,882
<i>Muckleshoot Indian Tribe</i>	4,193	4,000*
<i>Puyallup Tribe</i>	3,606	1,660
<i>Suquamish Indian Tribe (Port Madison Reservation)</i>	41,341	2,600
<i>Tulalip Tribes</i>	6,536	890
<i>Jamestown S'Klallam Tribe</i>	9,246	3,200*
<i>Swinomish Indians</i>	16	526*
<i>Stillaguamish Tribe</i>	2,664	778
<i>Samish Indian Tribe</i>	102	237
<i>Snoqualmie Indian Tribe (New 1999)</i>	33,265	525
<i>Cowlitz Tribe (New 2000)</i>	N/A	N/A
<i>Cowlitz Tribe (New 2000)</i>	N/A	N/A

Source: U.S. Census 2000, unless otherwise noted

¹ Tribal enrollment data from Northwest Portland Area Indian Health Board, www.npaihb.org

* Figure from Tribal web site, web addresses vary

Poverty Indicators

The great variety and number of Tribes in Washington provide for less disparity between the state and national averages, in terms of per capita income and individual poverty rate. Tribes such as the Samish, Jamestown S'Klallam, Swinomish, Puyallup, and Tulalip are nearly at parity with state and national per capita income levels. Although, it is important to note that many of these Tribes are located near urban centers, where a large portion of reservation residents work off of the reservation. Tribes such as the Quinalt, Quileute, and the Upper Skagit are generally more isolated and have per capita income levels that are much lower than the state and national average. In terms of poverty rate, the Tribes with the highest poverty rate include the Hoh, Quileute, and Upper Skagit. The Suquamish, Sauk-Suiattle, Jamestown S'Klallam, and Samish Tribes have individual poverty rates that are lower than the state and national average. Table C-6 shows the 2000 per capita income and poverty rate for Washington Tribes.

Table C-6. Per capita income and individual poverty rate, 2000.

	Per Capita Income	Individual Poverty Rate
United States	\$21,587	12.4%
Washington State	\$22,973	10.6%
Federally Recognized Tribes		
<i>Confederated Tribes of the Chehalis Reservation</i>	\$9,097	24.4%
<i>Hoh Indian Tribe</i>	\$10,008	42.0%
<i>Kalispel Indian Community</i>	\$6,973	23.4%
<i>Lower Elwha Tribal Community</i>	\$8,769	26.6%
<i>Makah Indian Tribe</i>	\$10,986	31.3%
<i>Nisqually Indian Tribe</i>	\$14,094	18.2%
<i>Nooksack Indian Tribe</i>	\$10,515	28.5%
<i>Port Gamble Indian Community</i>	\$10,111	17.3%
<i>Quileute Tribe</i>	\$9,589	34.5%
<i>Quinault Tribe</i>	\$9,621	31.5%
<i>Sauk-Suiattle Indian Tribe</i>	\$10,029	3.6%
<i>Shoalwater Bay Tribe</i>	\$16,254	9.5%
<i>Skokomish Indian Tribe</i>	\$10,475	27.6%
<i>Spokane Tribe</i>	\$10,151	28.7%
<i>Squaxin Island Tribe</i>	\$13,401	31.4%
<i>Upper Skagit Indian Tribe</i>	\$6,490	54.8%
<i>Confederated Tribes & Bands of the Yakama Indian Nation</i>	\$10,618	28.0%
<i>Confederated Tribes of the Colville Reservation</i>	\$12,185	26.8%
<i>Lummi Tribe</i>	\$17,669	18.3%
<i>Muckleshoot Indian Tribe</i>	\$16,890	16.0%
<i>Puyallup Tribe</i>	\$22,263	12.2%
<i>Suquamish Indian Tribe (Port Madison Reservation)</i>	\$22,691	7.0%
<i>Tulalip Tribes</i>	\$19,858	10.1%
<i>Jamestown S'Klallam Tribe</i>	\$28,238	0.0%
<i>Swinomish Indians</i>	\$25,318	13.0%
<i>Stillaguamish Tribe</i>	\$8,076	12.9%
<i>Samish Indian Tribe</i>	\$27,054	8.1%
<i>Snoqualmie Indian Tribe (New 1999)</i>	N/A	N/A
<i>Cowlitz Tribe (New 2000)</i>	N/A	N/A

Source: U.S. Census 2000

Profiles

Confederated Tribes of the Chehalis Reservation

The Confederated Tribes of the Chehalis Reservation and trust lands total 4,215 acres and are located in southwestern Washington between the Black and Chehalis Rivers southeast of Olympia.⁹¹

⁹¹ Tiller, 577.

Traditionally, the Tribal economy was driven by the rivers, creeks, and tributaries that stretched from the mouth of Grays Harbor to the headwaters of the Chehalis River. Today, the Tribes are dedicated to preserving, conserving, and enhancing the physical and cultural qualities of the reservation's natural resources, including fish, plant, and wildlife.⁹² The Tribes operate a number of commercial fish farms that enhance the Chehalis River Basin and provide revenue for the reservation.⁹³

Hoh Indian Tribe⁹⁴

The Hoh Indian Tribal Reservation and trust lands total 443 acres and are located on the western coast of the Olympic Peninsula at the mouth of the Hoh River. The reservation lies within the boundaries of the Olympic National Park and consists of coastal forest and tidelands. As a somewhat isolated, coastal Tribe, the livelihood of the Hoh is based primarily on fishing and the sale of traditional wares, such as canoes, decorative baskets, and carvings. The Tribe also operates a fish hatchery program. The tidelands provide a rich array of clams, crab, and perch fishing.

Kalispel Indian Community

The Kalispel Indians, or "River or Lake Paddlers," traditionally inhabited the forested mountains and valleys of the Pend Oreille River. Today, the Kalispel Indian Community's reservation and trust lands total 4,629 acres and are surrounded by national forest in northeastern Washington with the Pend Oreille River serving as a western boundary.⁹⁵ The majority of Tribal land consists of floodplain and steep slopes, making it difficult to develop for economic purposes.⁹⁶ However, the Tribe has been successful in the operation of an aluminum box factory, a buffalo herd, and a fish hatchery.⁹⁷

Lower Elwha Klallam Tribe

The Lower Elwha Reservation is located west of Port Angeles on the north-central portion of the Olympic Peninsula. The reservation and trust lands consist of 875 acres of land in a checkerboard pattern near the mouth of the Elwha River on the Strait of Juan de Fuca.⁹⁸ A primary economic resource of the Tribe is commercial fishing, although much fishing is subsistence-oriented. Tribal members utilize the coastal location for the harvesting of a variety of sea life including, fish, crab, clams, oysters, and urchins.

⁹² Chehalis Tribal web site, www.chehalisTribes.org

⁹³ Tiller, 579.

⁹⁴ *Ibid.*, 581-2.

⁹⁵ *Ibid.*, 583.

⁹⁶ Kalispel Indian Community web site, www.kalispelTribe.com

⁹⁷ Washington Governor's Office of Indian Affairs, www.goia.wa.gov/Tribalinfo/kalispel.html

⁹⁸ Tiller, 584.

Makah Indian Tribe

The Makah Reservation is located on the northwestern tip of the Olympic Peninsula on Cape Flattery and Koitlah Point. The reservation and trust lands total 30,142 acres of coastal forest and mountains, sandy beaches, and craggy bluffs.⁹⁹ The majority of reservation and trust land is forested. Housing is scattered throughout the reservation, with one major housing development surrounded by forest land. Commercial fishing and tourism are the dominant industries in the Makah's economy. The Tribe promotes its abundant natural resources as a tourist attraction.

Nisqually Indian Tribe

The Nisqually Reservation and trust lands total 4,800 acres and are located on the lower Nisqually River in rural Thurston County, Washington.¹⁰⁰ The reservation lies east of Olympia and is adjacent to Fort Lewis Military Reservation. Traditionally, the Nisqually harvested fish from the River and utilized the prairie tracts for agricultural purposes.¹⁰¹ Today, the Tribe operates two major fish hatcheries on the Nisqually River.¹⁰² The principal industries in the area include the state government, wood products, food products, and agriculture.

Nooksack Indian Tribe

The Nooksack Reservation is located in western Washington directly east of Bellingham in the Upper Nooksack River Valley. The reservation and trust lands total 2,500 acres near the Nooksack and Sumas Rivers.¹⁰³ The Tribe aims to protect and restore Tribal natural resources for the benefits of its Tribal members and the greater community. The Tribal natural resource department is dedicated to assessing, preserving, and restoring salmon habitat and managing fish and shellfish resources in an ecological and sustainable manner.¹⁰⁴

Port Gamble Indian Community

The Port Gamble S'Klallam Reservation is located on the northern tip of the Kitsap Peninsula in western Washington. The reservation and trust lands total 1,301 acres and are situated near Port Gamble Bay.¹⁰⁵ Utilizing existing natural resources, the Port Gamble S'Klallam have developed an economy that takes advantage of abundant shellfish, fish, and wildlife. The major employers for Tribal members are the Tribal government, individual treaty fishing enterprises, gaming, and local area businesses.¹⁰⁶

⁹⁹ Makah Forest Management Plan, 1999-2009.

¹⁰⁰ Ibid., 591.

¹⁰¹ South Puget Sound Intertribal Planning Agency, www.spipa.org

¹⁰² Tiller, 591.

¹⁰³ Ibid., 591.

¹⁰⁴ Nooksack Tribal web site, www.nooksack-Tribe.org

¹⁰⁵ Tiller, 592.

¹⁰⁶ Port Gamble S'Klallam Tribal web site, www.pgst.nsn.us

Quileute Tribe

The Quileute Reservation and trust lands total 700 acres and are located near La Push on the western coast of the Olympic Peninsula.¹⁰⁷ The reservation is surrounded by the Olympic National Park on three sides and located on the south banks of the Quillayute River.¹⁰⁸ As a coastal community, natural resources such as shellfish, fish, and wildlife are the driving force in the Tribal economy. Outdoor recreation activities such as ocean and river fishing, hiking, and hunting attract tourists to the area.

Quinalt Tribe

The Quinalt Reservation is located north of Grays Harbor on the Olympic Peninsula. Reservation and trust lands total 208,150 acres and consist of 24 miles of coastal shorelands and thousands of acres of dense forests that contain Douglas fir, western red cedar, hemlock, and red alder.¹⁰⁹ The Quinalt Indian Nation is dedicated to restoring abundant fish runs of chinook, sockeye, coho, steelhead, and king salmon, and reforesting Tribal lands as means to secure future natural resources. The Quinalts take pride in the active, environmentally conscious management of Tribal fisheries and reforestation efforts.¹¹⁰

Sauk-Suiattle Indian Tribe

The Sauk-Suiattle Reservation totals 23 acres and is located in Skagit County, near the town of Darrington.¹¹¹ Traditionally, the Tribe's homelands, consisting of prairie, forest, and rolling hills, were the entire drainage area of the Sauk, Suiattle, and Cascade Rivers.¹¹² The Tribe's Environmental Department, established in 1999, aims to protect and enhance the health of the Sauk and Suiattle River Watersheds through a variety of projects dealing with air and water quality, mountain goats, and wetlands.¹¹³

Shoalwater Bay Tribe

The Shoalwater Bay Tribe is located at Willapa Bay on the southwest coast of Washington, just west of Aberdeen. The half-square mile reservation is located in Tokeland, Washington.¹¹⁴ Traditionally, many Tribal members worked in the commercial fishing, oystering, and logging industries.¹¹⁵

107 Tiller, 595.

108 Northwest Portland Area Indian Health Board, www.npaihb.org

109 Tiller, 597.

110 Ibid., 597.

111 Ibid., 598.

112 Sauk-Suiattle Tribal web site, www.sauk-suiattle.com

113 Sauk-Suiattle Tribal web site, www.sauk-suiattle.com

114 South Puget Sound Intertribal Planning Agency, www.spipa.org

115 Washington Governor's Office of Indian Affairs, www.goia.wa.gov

Skokomish Indian Tribe

The Skokomish Reservation totals approximately 5,000 acres and is located at the mouth of the Skokomish River in Mason County on the Olympic Peninsula.¹¹⁶ Reservation lands are primarily rural and bordered by the Skokomish River to the south and Hood Canal to the east. The fishing and logging industries are the main forces in the Tribal economy. The Tribe has an active Natural Resources Department that is responsible for projects concerning water quality, environmental health, hazardous waste, and habitat protection and enhancement.¹¹⁷

Spokane Tribe¹¹⁸

The Spokane Reservation and trust lands total 154,898 acres in eastern Washington, northwest of Spokane. The Spokane and Columbia Rivers make up the southern boundary of the reservation while the Grand Coulee Dam Recreation Area marks the western boundary. The land varies from rolling fields to heavily forested mountains. Although the Tribe maintains a range program and small wheat and alfalfa farms, the driving force in the Tribal economy is the logging industry. The forest, comprised of ponderosa pine, Douglas fir, and lodgepole pine, supports a number of Tribally-owned businesses, including the Spokane Indian Reservation Timber Products Enterprise (SIRTP), Spokane Wood Products, and a number of private logging companies.

Squaxin Island Tribe

The Squaxin Island Tribe, known as the “People of the Water,” is located in Mason County on the Olympic Peninsula, near the community of Kamilche. Squaxin Island, the designated federal reservation, is a small (2,000 acres) uninhabited island located east of Kamilche about ten miles north of Olympia.¹¹⁹ Although the Tribe no longer lives on the island, members still use the area for fishing, hunting, shellfish gathering, camping, and other activities.¹²⁰ The Tribe is a dedicated steward of natural resources in south Puget Sound and works to protect the water quality, fish, shellfish, wildlife, timber and plants in the region.¹²¹ Aquaculture projects such as fish pens and oyster harvesting are important components of the Tribal economy.

Upper Skagit Indian Tribe¹²²

The Upper Skagit Reservation and trust lands total 250 acres and are located in the Cascade foothills near Sedro-Woolley in Skagit County. The reservation is divided into two non-contiguous parcels—

¹¹⁶ Tiller, 598.

¹¹⁷ Skokomish Tribal web site, www.skokomish.org

¹¹⁸ Tiller, 600-1.

¹¹⁹ *Ibid.*, 602.

¹²⁰ Squaxin Island Tribal web site, www.squaxinland.org

¹²¹ Squaxin Island Tribal web site, www.squaxinland.org

¹²² Tiller, 606.

Hemlock Road and Bow Hill Road Reservation. Hemlock Road Reservation is the primary reservation. Fishing and forestry provide seasonal employment for the Upper Skagit. The Tribe owns and operates a fish hatchery at Hemlock and a Tribally-owned business, Timberline Services Enterprise, provides fire-prevention and fire-fighting services.

Confederated Tribes and Bands of the Yakama Indian Nation¹²³

The Yakama Reservation and trust lands total 1.4 million acres in the Yakima Valley in south-central Washington. The lands encompass fertile farmland, rangeland, and dense forests of ponderosa pine, pine-fir, mixed conifers, lodgepole pine, and true fir/mountain hemlock. The Yakama Indian Nation is a driving force in south-central Washington's economy with successful businesses in agriculture, manufacturing, tourism, construction, forestry, and industrial development. In the realm of forestry, the Yakama Indian Nation manages the largest stand of commercial saw log timber of any reservation. In the 1990s approximately 90 percent of Tribal income was generated by the timber industry.

Confederated Tribes of the Colville Reservation

The Colville Indian Reservation and trust lands are located in north central Washington and total over 1.4 million acres, primarily in Okanogan and Ferry counties.¹²⁴ The Columbia and Okanogan Rivers serve as reservation boundaries to the east, south, and west. Reservation lands are diverse and contain timber stands, minerals, varied terrain, rivers, lakes, and native plants and wildlife.¹²⁵ The Colville Tribes operate a number of enterprises in the realm of gaming, forest products, recreation, and agriculture. As a reservation rich in open- and forested rangelands and farmland, the Tribes raise cattle and horses and harvest wheat, alfalfa, barley, and apple crops. Also, nearly half of reservation lands is forested with commercially viable tree species, including pine, fir, lodgepole pine, cedar, and tamarack.¹²⁶ Tribal enterprises in wood products include Colville Indian Precision Pine, Inchelium Wood Treatment Plant, Colville Timber Resource Company, and Colville Tribal Logging.¹²⁷

Lummi Tribe¹²⁸

The Lummi Reservation is located west of Bellingham in northwestern Washington. The 21,000-acre reservation consists of 8,000 acres of tidelands and three peninsulas that form Lummi and Bellingham Bay and a small island (1,000 acres), named Portage Island. The fishing industry is the primary source of employment on the reservation. In addition to independent fishing operations, Tribally owned businesses include a seafood processing plant, the Lummi Processing Venture, and Fish Point Seafood. The Tribe is also dedicated to the repopulation of native fish and shellfish

¹²³ Ibid., 607-8.

¹²⁴ Ibid., 579.

¹²⁵ Colville Tribes web site, www.colvilleTribes.com

¹²⁶ Tiller, 580.

¹²⁷ Colville Tribes web site, www.colvilleTribes.com

¹²⁸ Tiller, 585-6.

populations through salmon and shellfish hatcheries. Forest lands on the reservation are scattered and consist of Douglas fir, cedar, alder, maple, and hemlock.

Muckleshoot Indian Tribe¹²⁹

The Muckleshoot Indian Reservation totals 3,840 acres and is located on the Muckleshoot Prairie between the Green and White Rivers, just south and east of the Seattle and Tacoma metropolitan areas. At the urban fringe, the reservation is comprised of two distinct areas: an urban/suburban area to the west and agricultural and open space to the east. The Muckleshoot have utilized their urban location and been successful in gaming and entertainment (amphitheater). The Tribe also operates two fish hatcheries, helping to repopulate local lakes, rivers, and streams.

Puyallup Tribe

The Puyallup Reservation is located within the Tacoma city limits in Pierce County and totals 103 acres.¹³⁰ The Puyallup Tribe is part of the Puget Sound Salish Indians, who hunted, gathered, and fished in Puget Sound waters in the shadow of Mount Rainier.¹³¹ Today, gaming enterprises such as the Emerald Queen Casino and Bingo Palace are the driving force in the Tribal economy and provide significant revenue for the Tribe.

Suquamish Indian Tribe (Port Madison Reservation)

The Suquamish Indian Tribe resides on the Port Madison Reservation on the Kitsap Peninsula on Puget Sound. The reservation totals 7,486 acres and is comprised of two separate sites: the northeastern portion at the rural waterfront village of Indianola and the southwestern portion by the historic waterfront village of Suquamish.¹³² Reservation lands are rural residential in character and consist of rolling hills of second- and third-growth timber in rural residential areas.¹³³ As a coastal Tribal community, the primary sources of income for Tribal members are the commercial fishing and shellfish industries. The Tribes operate a number of successful businesses including Grover's Creek Fish Hatchery, Clearwater Casino, and Suquamish Seafoods.¹³⁴

Tulalip Tribes¹³⁵

The Tulalip Reservation and trust lands total 11,500 acres and are located west of Marysville in the mid-Puget Sound region. The reservation's southern border is the Snohomish River, while the waters of Puget Sound make up the western border. Although Tribal members were once dependent

¹²⁹ Ibid., 589-90.

¹³⁰ Ibid., 595.

¹³¹ Northwest Portland Area Indian Health Board, www.npaihb.org

¹³² Tiller, 593.

¹³³ Suquamish Tribal web site, www.suquamish.nsn.us/

¹³⁴ Suquamish Tribal web site, www.suquamish.nsn.us/

¹³⁵ Tiller, 605.

on logging and migratory farm labor, the Tribal economy has diversified to include business opportunities in gaming, services, and construction. The Tulalip also operate a salmon fish hatchery and manage over 6,000 acres of forests that consist primarily of Douglas fir, western hemlock, western red cedar, and red alder.

Jamestown S’Klallam Tribe

The Jamestown S’Klallam Reservation and trust lands total 20 acres located near the town of Blyn on Sequim Bay on the Olympic Peninsula.¹³⁶ As a coastal Tribal community, the S’Klallam traditionally subsisted on the abundance of fish, shellfish, and herring of local waters. Today, the Jamestown S’Klallam have taken an active role in the resource enhancement and protection. The Natural Resources Department ensures the orderly harvesting of shellfish, fish, and wildlife resources as means to provide opportunities for subsistence and livelihood for Tribal members. The Tribe also operates a seafood farming and processing business, Jamestown Seafood, and a successful casino, Seven Cedars Casino.¹³⁷

Swinomish Indian Tribe¹³⁸

The Swinomish Reservation totals 7,169 acres and is located on Fidalgo Island in Skagit County in northwestern Washington. The island lies directly north of Whidbey Island on upper Puget Sound and varies in terrain, ranging from tidelands to steep rock outcroppings that provide spectacular views of Skagit Valley and nearby islands. Tribal members are primarily employed in the region’s fishing, farming, and timber industries. The Tribe is actively involved in aquaculture projects and maintains a seafood processing plant, Seafoods Enterprise. The uplands of the reservation are comprised of dense timber including western red cedar, western hemlock, Douglas fir, and red alder. Although the Swinomish harvest portions of timberlands, they are dedicated to sustainable practices and reforestation programs.

Stillaguamish Tribe

The Stillaguamish Reservation totals 40 acres and is located in northern Snohomish County, near Arlington.¹³⁹ The Cascade Mountains and Stillaguamish River Basin provide an environment rich in natural resources including fish, timber, and wildlife. The Stillaguamish Natural Resources Department is dedicated to the protection and enhancement of the Stillaguamish River Basin. The Tribe operates two fish hatcheries that aim to replenish wild Chinook and Coho salmon populations. The Tribe is also active in water quality monitoring of the North and South forks of the Stillaguamish as well as wetland and riparian restoration activities.¹⁴⁰

¹³⁶ Jamestown S’Klallam Tribal web site, www.jamestownTribe.org

¹³⁷ Jamestown S’Klallam Tribal web site, www.jamestownTribe.org

¹³⁸ Tiller, 603.

¹³⁹ Ibid., 603.

¹⁴⁰ Stillaguamish Natural Resources Tribal web site, www.stillaguamish.nsn.us

Samish Indian Tribe¹⁴¹

The Samish Indian Tribe was federally re-recognized in 1996. The Tribal headquarters are located in Anacortes on Fidalgo Island in northwestern Washington. The Tribe does not currently have reservation or trust land. Traditionally, the Samish were an ocean-going people whose territory stretched from the timbered hills of the Cascades west to the shores of the San Juan Islands. Today, the Tribe is committed to protecting the environment and preserving natural and cultural resources for Tribal members. The Tribe currently operates the Samish Research Center, which aims to provide scientific support for stewardship of treaty rights, prepare Tribal members for careers in science and engineering, and generate Tribal employment through research and conservation projects.

Snoqualmie Indian Tribe

The Snoqualmie Indian Tribe was federally re-recognized in 1999. The Tribal headquarters are currently located in the Cascade foothills in the town of Fall City in east King County.¹⁴² The Tribe has recently purchased 56 acres of land in the Snoqualmie Hills, near the town of North Bend, with the intent to establish a new reservation and build a great-lodge style casino. The Tribe is in the application process of turning the 56-acre parcel in trust land.¹⁴³

Cowlitz Tribe

The Cowlitz Tribe was federally re-recognized in 2000. The Tribe traditionally inhabited the Cowlitz River Basin in southwestern Washington, near the present-day cities of Kelso, Toledo, and Longview.¹⁴⁴ The Tribe has recently purchased 152 acres of land west of La Center in Clark County, with the intent to establish a reservation and casino. The Tribe is currently in negotiations with Clark County officials and has applied for trust status for the 152-acre parcel.¹⁴⁵

141 Samish Tribal web site, www.samishTribe.nsn.us/

142 Snoqualmie Tribal web site, www.snoqualmiecasinoproject.com

143 "Tribe, City sign deal to pave way for Snoqualmie off I-90," *The Seattle Times*, 5 May 2004, http://seattletimes.nwsourc.com/html/localnews/2001919976_snoqualmie05e.html

144 Cowlitz Tribal web site, www.cowlitz.org

145 "Cowlitz hold meeting, try to mollify casino critics," *The Columbian*, 14 May 2004, http://www.columbian.com/05142004/front_pa/144818.html

APPENDIX D: SURVEY QUESTIONS AND RESPONSES

Interview Results (valid percent used where indicated)

1. What are the primary causes of wildfire in the Tribe?

22.6% Natural causes	9.7% Structural Fire
6.5% Farming accidents	22.6% Recreation
22.6% Open burning	74.2% Human-Caused
9.7% Arson	35.5% Other

2. What kinds of impacts have there been in the past from these fires? [*percent/valid percent*]

6.5%/7.7% Loss of Life	35.5%/42.3% Loss of access to natural resources
51.6%/61.5% Loss of property/infrastructure	38.7%/46.2 Other

3. Has your Tribe developed a Community Fire Plan or participated in related activities? (Fire prevention, education etc.)

48.4% Yes	
48.4% No	

 - If yes, when was your fire plan developed, who assisted in the development and what have been successes and challenges in its implementation?
 - If no, is this something that your Tribe is interested in pursuing?
No – 31.6% Yes – 68.4% (*valid percent*)

4. Has your Tribe conducted a wildfire risk assessment?

29% Yes	
64.5% No	

 - If yes, what is done with cooperating agencies, and with what resources/tools?
 - If no, does your Tribe have GIS or mapping capability, or coordinate with an agency or organization that does?
No 15.8% Yes – 84.2% (*valid percent*)

5. What are the resources your Tribe would need to develop a community fire plan?

6. Are there ongoing defensible space/fuels reduction projects on Tribal Forest land or around homes?

45.2% Yes	38.7% No
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If yes, how were these projects funded?

Grants

7. Has your Tribe applied for federal grants for fire protection or fuels reduction?

38.7% - Yes

32.3% BIA

19.4% National Fire Plan

12.9% FEMA Assistance to Firefighters Grant program

6.5% FEMA Pre-Disaster Mitigation program

9.7% Other: [Forest Service]

58.1% - No

• If no, why not? (check all that apply)

26.1% Lack of grant writing skills

43.5% Not aware of available grants

69.6% Other: [not a priority or lack of resources]

• If yes, has you Tribe been successful in receiving and coordinating those grants?

57.1% Yes

42.9% No

Fire Protection Resources

8. How is fire control handled on the reservation? (check all that apply)

Structural

12.9% Tribal fire department funded by BIA

9.7% Tribal fire dept. funded by the Tribe

38.7% BIA or other county, state or agency fire protection services

6.5% Volunteer Tribal staff

3.2% Paid Tribal staff

16.1% Mix (some volunteer/some paid)

29% Cooperating agreements/mutual aid

6.5% Other:

Wildfire

22.6% Tribal fire department funded by BIA

0% Tribal fire department funded by the Tribe

38.7% BIA or other county, state or agency fire protection services

0% Volunteer Tribal staff

6.5% Paid Tribal staff

6.5% Mix (some volunteer, some paid) staff

35.5% Cooperating agreements/mutual aid

16.1% Other:

9. Is your Tribe is adequately served by federal government programs for fire protection, training, education, equipment and/or technical assistance?

25.8% Yes

58.1% No

□ Why or why not?

▪ Have you coordinated and received assistance from state government?

41.9% Yes 22.6% No

10. What Federal agency or non-profit programs are you aware of that are available to Tribes to assist them with fire protection and community fire planning activities?
11. Do you feel that federal funding sources for fire protection have been made available and accessible?
- 25.8% Yes
 - 48.4% No
- 100% If yes, have funds be used successfully? (valid percent)
- If no, how could they be more accessible?

Open burning/Solid Waste Issues

12. Due to a lack of solid waste management, is there a relationship between open burning and the incidence of fire and fire-related losses among Tribes?
- 41.9% Yes
 - 48.4% No
- If yes, do you know how many fires open burning has caused in recent years and what the losses have been?
13. Are there opportunities for economic development through the reuse or recycling of waste products/ utilization of biomass from fuels reduction projects?
- 48.4% Yes
 - 29% No
 - 12.9% N/a
- If yes, what are the resources needed to take advantage of economic development opportunities?
14. How can solid waste pickup systems be more affordable? Is there a way to provide an income stream from solid waste pickup?

Contracting

15. Are members of your Tribe (as individuals or as part of a Tribal business) able to take advantage of contracting opportunities? Why or Why not?
- 48.4% Yes
 - 41.9% No
16. Is there interest, and/or are members of your Tribe working to expand their experience, skill and knowledge to be contractors?
- 77.4% (96 valid percent) Yes
 - 3.2% No
- Do you have access to those types of programs?
 - 25.8% Yes
 - 45.2% No
- What training or resources are needed to take advantage of contracting opportunities?

Traditional Use of Fire

17. Has traditional use of fire played a role in mitigating the impacts of wildfire, restoring habitat, or cultivating non-timber forest products within in the Tribe?

58.1% Yes

38.7% No

If yes, what kind of support do you have for prescribed burning, and who offers that support?

18. In what other ways has your Tribe used fire traditionally?

19. Do you have suggestions for increasing agency & public understanding of traditional uses of fire (including the timing and methods of burning)?

Culturally Significant Sites

20. Are rural fire protection districts, local government, and state and federal agencies aware of traditional sites and the need for site protection in mitigating or responding to fire?

41.9% Yes

41.9% No

21. What kind of programs are needed to ensure that first responders are coordinating with Tribal, State or Federal archaeologists/resource managers to help protect culturally significant sites?

Are there alternative methods of firefighting used that help protect these sites?

Outreach and Education Issues

22. Can you estimate how widely used is the Internet by Tribal members, staff, leaders, and reservation residents?

16.1% A majority of the population

22.6% Less than half of population

22.6% Half of the population

25.8% Only by Tribal government

23. Who is the best person (or organization) to present information to the Tribe on fire prevention?

16.1% Tribal government leader

12.9% Outside expert /outside organization

19.4% Community leader

51.6% Other?

32.3% Local service provider (fire chief, clinic doctor, etc.)

24. How do Tribal members and/or reservation residents get information fire prevention and related safety issues?

16.1% Mass media

22.6% Websites

9.7% Radio announcements

35.5% Flyers

54.8% Newspapers

32.3% Other?

APPENDIX E: SURVEY RESPONSES TO OPEN-ENDED QUESTION

1. What are the primary causes of fire in your Tribe?

- Human caused-carelessness
- Car fires along I-5
- Fireworks-4th of July
- Man-made accidents, open fire not containing
- Human caused.
- 50 % are human caused
- Human caused, generally
- Human caused—house fires, few wildfires
- Human caused—reckless burning
- Primarily Residential, electrical
- Drought
- Logging, logging machinery
- Human caused—brushfires, fireworks
- Human—fireworks is the largest
- Human-caused
- 70% are human-caused.
- Children with matches, fireworks, etc. Children are the biggest cause of fire.
- There have not been major fires since the 1860s. Not much lightening, in summer it can get dry.
- Operations caused
- Human-caused (fireworks, smoking), also escaped slash burning
- Man, stupidity, fireworks, outdoor burning
- Fireworks
- Human caused, fireworks, open burning
- House, chimney fires
- Human caused—fireworks
- Cigarettes, human-caused, housefires from internal sources.

2. What kinds of impacts have there been in the past from these fires?

- Pertains to grazing lands--\$1,000 loss in two years
- Minor infrastructure, they allow trainees to practice burning on property
- Timber value is lost. Some home in the interface
- In the past, fire-disturbance was part of environment; manage forest, better habitat for species
- Fire resulted in prescribed burns.
- Wildlife and agricultural habitat—loss of grazing, forage land
- Major impacts, evacuated housing.
- Fire runs a long cycle; late 1800s and 1930s.
- Loss of natural resources
- Lots of little fires
- There have not been losses recently. The largest wildfire that occurred was in 1920.
- Not sure
- Not much loss; DNR does a good job
- Houses

5. What resources does your Tribe need to develop a community fire plan?

- We need to know the components of a fire plan. What does it take to put it together? Information on what it is and how to do it.
- They would coordinate efforts with the local fire chief and DFPA. They have talked about it in the past.
- The biggest thing needed is more about the planning with the community. More strategic level planning. More resources for community involvement.
- Funding, knowing plan development and implementation. BIA would take the lead. Need staff, training, equipment. If BIA transfers budget, need manpower.
- It's not a high priority to be prepared for fire, but if there were resources, we would do it.
- The Tribe is expanding a lot more with fire apparatus—sub stations for districts that are more fire prone.
- Coordination with the adjacent RFPD and the FS. It would be inclusive of ongoing expansion—they are adding a hotel expansion maybe with firefighting equipment at the casino.
- Adjacent communities are developing mitigation plans, so the Tribe is working with them.
- Emergency planner position
- Have a planner, specialists and money, fire station, firefighters, equipment (only 1 truck - it's old)
- Already have it
- Not sure
- Have the plan: need the funds to update it and provide education activities
- Expertise, funding, personnel
- Funding: FMO is in place, may need temporary funding for the FMO
- Don't know what it takes to develop one. After reading up on it—the Tribe would need the expertise that would be required. People who are well versed in fire mgmt. plans
- They need people and staff. Most of the fire staff do not have extra time.
- Not a priority for the tribe
- Something that they are assessing right now through the NW Forest Plan are the provisions for community fire plans. The tribe has a unique arrangement with the BLM and they don't want to duplicate with the BLM—they have such an elaborate plan. They are now working in coordination with the Federal Fire Mgmt. Plan for their region and they met a BLM fire ecologist. They are following the FMP template as the Tribal forest lands are included. Again, they are trying to be into neighboring approaches. On the Tribal forest lands—that's all dedicated to forests, it's not available for housing, commercial, industrial. Other than forest land, the tribe has about 1000 acres for community development. Tribal people are at risk and are in the WUI. Part of the lands that the tribe owns are rural forested areas. 800 acres is Douglas fir plantations. They are in a very active program of thinning to protect the community—in their 3rd year of carrying out hazardous fuel reduction projects.
- We have a fire plan in place
- Funding and technical assistance. They don't have the staff to do it by themselves. Consultant. The Tribe is comprised of forest land. Pretty much whole population is living in the rural interface, so this is a need.
- Someone to help, funding, they could put it together. They need funds and a dedicated person.
- Money
- Need to hire forest manager, need funding and resources
- Expertise
- A dedicated committee and financial support
- None: county and city serve these needs

6. Are there ongoing defensible space/fuels reduction projects on Tribal Forest land or around homes?

- Annually through Tribal administration. This is done on Tribal lands, inside the boundary. Farm and grange land controls outside fire, the areas that fire may come from.
- Indirectly through NFP, through BIA hazardous fuels reduction WUI funds. On the reservation the state has been slow to work. Intermix of Tribal and private lands.
- BIA used to have people to do fire protection. With BIA cutbacks, that is no longer happening. Landowners can't always afford to do work on their own.
- Tribal council approved to proceed with three WUI projects. Funding through BIA NFP, 2003 funding.
- BIA-1997
- Tribal/federal funding. Projects occurring on forest lands only.
- Federal fuels program
- The projects are funded and administered through the Forest Service and the Tribe provides the consultation. They are most likely National Fire Plan dollars.
- They are funded through the BIA
- National Fire Plan funding through the BIA
- BIA grants from national fire plan funds
- The tribe is diverting funds from other needs to get something done. But it's relatively little. Only what he can afford to do. Tribal budget, a little bit of other areas.
- They don't have property that has fuels issues. They have fairly good stands. It's more of the adjacent federal and state lands that are of greatest concern.

7. Has your Tribe applied for federal grants for fire protection or fuels reduction?

If no, why not?

- Not aware of all grants, someone outside writes grants on commission
- The Tribe relies on intergovernmental agreements for fire protection so they work with other agencies to ensure that they receive fire protection services, but they don't write their own grants
- Lack of grant writing skills and resources. Hard to run a long-term program on short-term grants
- Lack of resources, hard to compete with other agencies that have full-time staff.
- Emergency Management Plan is now obsolete and they're revisiting it.
- Minimal land holdings: No BIA resources available in boundaries: 6,000 acres, 1,000 trust, 2,000 held by Tribal members
- Needs not assessed or prioritized at this moment
- No land in trust
- Many available grants are not applicable to tribe. Also, tribe does not have full-time FMO with time and resources to search for and apply for grants
- No time: program is just developmental and lacks complexity. Lacks extra staff to manage—huge workload for managing, accounting, and reporting.
- The Tribe is not staffed and does not have the infrastructure. There is only one forester. There are two biologists and a GIS person—that's it for the natural resources staff.
- Not a priority—doesn't apply.
- No grant writer. One of the biggest things to help them out would be getting a student involved to help write grants, help along those lines.
- Not a high priority—channel migration issues are bigger
- Not considered a high grant writing priority

- Lack of grant writing skills in forestry
- Don't fit criteria
- Not a high priority at this time
- Lack of capacity to manage grants: high cost in resources to manage grants, reporting and monitoring, documenting, and researching possible applicable grants.

If yes, has your Tribe been successful in receiving and coordinating those grants?

- We received FEMA funding for a fire truck, no grants for fuel reduction; main concern is around homes.
- Wish neighbors would pay attention, be aware of risk of fire.
- BIA has funded 1500 acres of fuels reduction through the NFP. They report to NFPORS

8. How is fire control handled on the reservation?

Structural

- No agreements, hope for county help, still not land in trust
- County fire district
- Paid for service from nearest municipality
- Tribal volunteer FD MOA with fire mgmt.; 6,000 annual for BIA
- State as outlined in rural fire district
- Local rural fire district
- Volunteer non-Indian from the adjacent county only
- No structural FMO
- Protected by local fire district
- They use the BIA volunteer fire department, but it is now a mix of full-time staff and volunteers from the Tribal.
- First we pray, then look to nearby cities for assistance
- Adjacent Fire dept.
- Contract with adjacent County fire and rescue. Volunteer fire dept. was too expensive, so it is no longer. Tribe has to pay count because of tax base issue. BIA funding reimbursed.

Wildland

- BLM handles some grange fires
- DNR maybe
- County fire district
- Summer only, on call Tribal FD
- Depends on assessment and size of fire, etc.
- State as outlined in rural fire district
- Local rural fire district
- Interagency firefighting, FS, State, BLM
- He is the only Tribal employee with training; WA state dept. of natural resources—but they are 45 minutes/1 hour response time out of the nearest city. When something hits, they hope Tribal members show up with shovels.
- Forest Service and DNR
- DNR, state and federal BIA
- Washington DNR paid by BIA
- DNR

- The Tribe has cooperating agreements with both: 2% of casino profits are dedicated to fire protection agreements—around \$350,000 per year. Issue is response time: need a local fire station on reservation to shorten response.

9. Is your Tribe is adequately served by federal government programs for fire protection, training, education, equipment and/or technical assistance?

Why or why not?

- Covered through adjacent fire district. If the fire district comes on reservation, bill is forwarded to BIA. No formal contract. Response time is very slow. BLM crew assists with grange fire. The tribe would like its own fire dept from the FEMA grant. Looking for other resources.
- Relies on intergovernmental agreements; they have local protection from the RFPD and State wildland protection.
- The federal government has contracted with BIA for WUI protection. 8 years ago they got wildland fire protection equipment, the tribe would prefer more responsibility.
- There are some issues with local jurisdiction, but they're mostly covered.
- We do need more resources, drought has exacerbated fire
- Will follow up with natural resources
- The tribe receives adequate support for wildland fire fighting. They conduct their own training for that as well. However, they do not receive much support for structural firefighting and are in the process of increasing their structural capabilities.
- Newly recognized tribe, many programs not in place
- Do not have fire house or fire operation
- Lack funds
- Would like to explore possibility of federal funding for local fire depts.
- Do have a system in place: some problems exist. Lack FMO. Fire danger relatively low here, but potential for serious damage in specific areas. Difficulties in keeping firefighting skill level up and call ups that take federally qualified firefighters to other areas to fight fire
- Cooperative agreements with DNR, they are authorized to respond
- The Tribe hasn't needed these programs b/c of not having a land base. The tribe hasn't yet positioned themselves to take advantage to request that kind of training.
- They have a unique way of doing it. BIA usually coordinates funding assistance, but some of it comes through the State Conflagration Act, though BIA pays for it.
- They've received most of what they've gone after. They have had a small fire crew that they've made available. Go out to state forestry or forest service for training.
- Since the BIA is the trustee, they get reams of information, faxes, etc. on all of the different things. It is overwhelming. They need to know what's important. All of the training, NIFC, National Fire Program for BIA, this BIA region is in Portland, Northwest region, it's a tremendous flow of information. They have a small staff and are stretched very thin. It's a struggle to sift through and know what to pay attention to. They have a great working relationship with the BIA program, it's just the sheer volume of info that is hard to keep up with.
- The tribe has not really served at all with these types of programs.
- The issues are, like any community in a valley that is forested, just his perception. The tribe seems to be at the mercy of the federal agencies. They haven't had any discussion about what would really happen if a fire came up the valley. They don't know what they would do. It's possible they could have a large tribe, and he doesn't know what the tribe would do. If they had

been included, they would have a better idea. Recommendation—include tribes in federal fire mgmt. Planning.

- BIA funding is primarily for Tribes with Fire Departments. Little funding is available to assist other Tribes to coordinate with other government s.
- BIA agreement with state on Tribal land
- BIA said there was nothing on insurance

10. What federal agency or non-profit programs are you aware of that are available to the Tribes to assist in wild fire protection activities?

- DHS, FEMA, FS, DOI, BIA. Need to know more. A community fire plan would help assess their needs. Unfamiliar with non-profit programs that could assist.
- Interagency training programs, interagency agreements, lot of support, NIFC, etc.
- Fire chief has to write grants, not good enough. FEMA, BIA, BLM/FS, DOE, DOD (hazmat), NFP
- DOE
- CDBG-HUD
- BIA, USDA, and County
- Not aware, lack of capacity to do it; need to share with other tribes
- FEMA, DHS
- Do not know if funding programs are available
- BIA programs only. The Tribal fire history makes it difficult to qualify for other programs
- Cooperate with DNR and Ft. Simcoe Job Corps. Bureau of Reclamation crews—engines, camp crews, logistics, and support.
- Mutual aid agreements and memorandums of understanding with FS, BLM, ODF, Jefferson County, Juniper Flats RFPD, etc. Mutual aid back and forth.
- County payments (RAC money), WUI/NFP, most of the rest of the funding is towards habitat restoration, jobs in the woods, noxious weeds, BLM, under the RAC, riparian vegetation conversion programs. Variety of things. Some of that stuff can convert and be used for thinning.
- National Fire Plan, Firewise
- BIA
- Not sure of any that are accessible for tribes.
- Most likely FEMA and Homeland Security: just learning about their programs

11. Do you feel that federal funding sources for fire protection have been made available and accessible?

If yes, have funds be used successfully?

- Sometimes hear about funding programs, sometimes not.
- How much funding and how well they can participate
- For wildland firefighting, not structural
- Note: strict reporting requirements, keeps requests conservative
- In the eye of the holder. For smaller tribes, they don't have enough resources.

If no, how could they be more accessible?

- Have to hustle develop a CFP. Strong need for a facility to get them trained
- Disappointed in DHS, it is not government-to-government
- More info on grants

- Depends. Less red tape, better access to the internet
- Increased communication with fire department and grants department
- Would like firehouse, need funding source
- Need structural fire funds
- Change criteria to make them more equally available; this answer is part yes: BIA funds are used successfully, other programs have criteria problems
- The programs are accessible, but funds are not adequate.
- We have quite a bit of work to do. It's not that funds are not available, they have too much going on. They are just now putting more focus on hazardous fuels reduction. They haven't tried to access everything that's there. It's a capacity issue. Prioritizing the resource mgmt. Program. Fire incidence has not been a huge problem down in this area. Give recognition that they can have catastrophic fires. They haven't been able to move it to a high priority because they don't have the capacity.
- He keeps hearing that there is a possibility of getting funds, resources and equipment for Tribal fire protection, but he's never seen it come. Don't know where it is, would like to see it put into practice. Fire is important and they've pointed that out, but they've never acted.
- Raise awareness—put on-line
- Access—not clearly defined
- Programs specifically for tribes—grants don't fit Tribal situations
- Change criteria to make them more equally available. Federal government should provide tribes with sufficient advance notice about programs that are available to them: time is needed to go through Tribal governmental process: program review, policy review, grants office and Tribal council are part of the review process.

12. Due to a lack of solid waste management, is there a relationship between open burning and the incidence of fire and fire-related losses among Tribes?

If yes, do you know how many fires open burning has caused in recent years and what the losses have been?

- Two fires, caused by people burning in their back yards. There is a solid waste management system, local business does pick-up
- 20 year ago large fire started from open burning, but it's not a primary concern. Working on air quality issues with the EPA.
- Man-made is the 3rd largest. Largest fires in recent from open burning. Sparks get away and travel upstream fast. Rail fires and accidents on I-84 cause fire too.
- Lots of agricultural burning, causes small percentage of controlled burns, some take off with wind. Railroad doesn't maintain brush along tracks, causes problems.
- Managing green waste is a challenge. Waste burning caused a fire a few years ago.
- No
- Open land fill continues burning, not sure of numbers
- Have permit program for outside burning; use a company for garbage pick-up
- No, but open burning landfill exists. Tribe does keep open cat trail around the dump to reduce fire risk
- Very unusual, one.
- Losses of range land; solid waste costs are too high
- Yes. There have been losses to property and other, often caused by debris burning, burning barrels, trash fires.
- There are occasional small fires from neighboring landowners burning slash.

- They have had some timber sales where it is very difficult, site preparations, they had to abandon burn plans because of DEQ and fed requirements for smoke mgmt., ODF, get a window of opening for the weather. A lot of the landowners are having more problems trying to get their slash taken care of.
- 25% minimal losses
- It mainly brush that's being burning
- Open burning and forest practice burning can be a health problem, but it's never really presented itself as a problem to safety. The tribe is in a buffer area, there is a lot of clearing around the tribe. The grass is fairly short.
- Do not have staff
- Don't know
- Burning ban revise (?) system reduce problem
- So far, not a problem.

13. Are there opportunities for economic development through the reuse or recycling of waste products/ utilization of biomass from fuels reduction projects?

If yes, what are the resources needed to take advantage of economic development opportunities?

- Business development, need the know how to set up a business, know regulations, taxes, licenses, etc.
- Slash piles are chipped for potlatch; lots of small diameter left not hauled out, more information needed
- Adjacent NF, clearcutting, replanted, thinning—leftover product could be opportunity. Also, cut, bale wheatfields could work.
- Depends if tribe is restored 60,000 acres of 2nd stand timber, will need to be thinned for silviculture.
- The fuel in the WUI is sagebrush; try to get timber lands more stable; sage chips?; cost of recycling is too high.
- Real estate needed for recycling program, need to link jobs with waste reuse program; not getting support for recycling program
- Coordination of timber sales, local mill takes raw materials, possible chips.
- Need funding. Small home recycling no longer funded.
- Too small scale to make it work; they must pay to recycle
- Both recycling and biomass
- Knowing the resources, they could supply a biomass operation. A lot is wasted because there is no market. Capacity building to understand the economics and the opportunities. The Tribe needs people and funding.
- The tribe is looking at Co-Gen opportunities at the mill. Definitely something that is going to come to fruition. Funding is an issue.
- Not for forest resources—industrial property. There has been some consideration of siting a waste stream incinerator for household garbage
- 35-40-year old trees that they are thinning because there is a market. An environmental assessment was recently done for a larger plantation thinning for 5-10 years. Stand density mgmt., cultural enhancement. Thinning plantation stands that have just reached commercial marketability. 7-8" diameter DBH. They are thinning wherever they can find markets. They have been successful locally.
- Chipper

- He thinks that there are opportunities. He is a forester and used to own a small company, so he definitely sees the opportunities. But, because of the trust responsibility with the BIA—they tend to clear cut and run. He wants the BIA to understand that you don't have to pile and burn or clear cut and run. In his eyes, yes, there is a possibility. Need funding and technical assistance to get a successful utilization program off the ground. Work with universities, etc.
- (NO)—they've been fighting Co-Gen. Class 1 airshed. The proximity of Co-Gen, biomass fuels would produce enough nitrates to cause concerns related to pollution. Have to consider the cost-benefit. The Forest Service came down against the impacts to the Class 1 airshed.
- Some limited recycling done by the tribe
- May not be a priority for economic development. County doesn't do recycling, but provides for garbage pick paid for by the tribe
- Staff and financial support
- The tribe is looking at the possibility to developing a transfer station to reduce collection costs and make it accessible to Tribal members, help in keeping water resources clean for natural resources, salmon, etc.

14. How can solid waste pickup systems be more affordable? Is there a way to provide an income stream from solid waste pickup?

- Pay \$18.75/month, like it to be less
- Purchase services for economic development or local businesses
- There is a solid waste manager. Pretty affordable and accessible.
- A lot of people don't use the existing system because of high cost. Need manpower for recycling plant. Need to coordinate to make EPA air quality requirements.
- Affordability not an issue, people don't want it in their backyard.
- No—all voluntary and other systems are set up to pick-up
- Not aware: need more specialized capacity, Tribal employees
- Being evaluated: tribe plans to close dump and look for a new system
- Not likely: distance of tribe's reservation from collection areas is too great to make cost-effective. Recycling programs are underutilized; education programs and economic incentives would help.
- Too small of a population for recycling
- Not likely. It was tried, lack of market, do work with county bins
- Garbage pick-up service doesn't cost Tribal members anything. The tribe pays for the service.

15. Are members of your Tribe (as individuals or as part of a Tribal business) able to take advantage of contracting opportunities?

Why or why not?

- Liability insurance is too expensive. Reluctant to go out and start a business because liability issues and expense.
- Either will contract crews or hire Tribal members; there are a number of regulations and rules associated with burning.
- Not given opportunities to compete. A large company has advantage with better equipment. Limited training resource; need vocational training.
- Not a lot of funds for the west side, seen like fuels reduction happens east of the mountains.
- Tribe is contractor, then hire Tribal members. Tribal fire crews are hired, but has gotten political, lot of manpower and high unemployment rate.

- Training and access to training is difficult; trying to set up a program internally, but is difficult
- One Tribal contractor, competitive, gets bids. Many are interested but cannot afford the liability insurance. Tribe requires performance bond that is expensive.
- No funds, training, etc.
- Not likely an area of interest
- No aware of business opportunities or knowledge to organize; Lack of resources and capital to start
- No programs, but lots of fires, lots of business
- May be interested. Need funding, recruit members, volunteers, etc.
- Lack of knowledge for setting up a business, need licenses, paperwork, and capital funding. Would need training; western Washington has lower fire risk
- Tribe would be interested
- Only if they have the initiative to do it themselves. The tribe does not have contracting crews. They do it for riparian restoration, but not for forestry.
- A few have worked on mowing projects and employed in thinning. Liability hasn't been an issue. The tribe has one Tribal enterprise that does fuels thinning. Private individuals have bought their own insurance. It's a factor, but they have some folks interested. The tribe has a good small business training program.
- There is a Tribal crew
- Tribe puts it all out for a bid—particularly the timber sales, most of that goes to non-Tribal contractor.
- Certification, bonding
- Highly encouraged by tribe
- Tribal members are working for another contractor
- Pretty scattered and remote. Mostly firewood.

16. What training and/or resources are needed?

- Small business resources center—need facility to house, open to community members if interested, need to designate space for resource center.
- Business development through Tribal employment—need interest and investment.
- Reduce the barriers to getting contracts
- Contractor training
- Get right people into jobs. Job placement and referral program.
- Contractor training to provide continuous work; vocational training for younger generation disinterested in college
- Funds, training
- Get passed resources and training; historical racism is the barrier to even getting resources: agencies, banks, etc. do not respond to requests
- Need capital for equipment and training
- Not sure
- Unknown
- Business training, capital funding, loans, training opportunities. Bonding, liability issues would have to be solved. Excellent personnel capacity exists in Tribal members who are retired from fire mgmt. And live on reservation.
- One economic development officer for training, access to capital is a barrier.
- Capital funding for equipment, knowledge of process to qualify, get names or listing documentation
- Equipment, training, people

- They need some training in what's available—Forest stewardship training, off-reservation, what's available. It's a gray area (off-reservation opportunities).
- Through the ODF.
- The tribe does its own training. Most people grew up in logging. They have a Tribal crew doing the WUI thinning on Tribal land. If there were opportunities for some of the Tribal members with entrepreneurial interest that would be great. Financial resources (better access), mechanized equipment, you need big dollars. Program that could provide business mgmt. And financial resources to get operation up and running. A lot of stewardship contracting—to make investments—lenders and operators want assurance that it is not a finite program. They can get left hanging. An assurance that the work and program is long-term. Financial resources are necessary to generate more resources.
- A few would be interested in starting a business, brushing, thinning, fuels reduction work. Goes back to needing money to make money. The Tribe itself is interested in starting that kind of business if there is an opportunity to do so.
- They have a very small tribe. Not sure who would be interested. Only 60 people live out there. It's too small. Don't want to limit opportunities.
- Need state/federal training; cooperate with federal and the state
- Liability, training, capital investments
- Not sure

17. Has traditional use of fire played a role in mitigating the impacts of wildfire, restoring habitat, or cultivating non-timber forest products within in the Tribe?

If yes, what kind o support do you have for prescribed burning and who offers that support?

- Restoring habitat to reduce fuels—grass, sage, juniper, plants, and trees—more wild game would come through to be hunted.
- Historically, but no longer
- Because of checkerboard pattern can't do prescribed burning. Fire suppression has been active a long time. Advocating burning on forest lands.
- Fired for sweat/warmth/cooking. Cultural traditions. 1880s/90s burned land to settle.
- Traditional burning for grasslands until about 1985. Lots of meadows and burning needed to reduce the hazardous fuels and threat to wildlife, restoration.
- Traditional fire used until 1960s. The forests have not reached catastrophic conditions, but will soon enough.
- Don't do it now.
- Little support—FortLewis does it on adjacent lands. Prescribed burning was used traditionally, but stopped—people didn't understand use, were arrested.
- Tribal forestry, BIA
- Not sure
- It is being discussed as a future possibility
- Huge support from tribe and it DNR. Prep work is expensive—mechanical means and logging
- The tribe can no longer use fire traditionally because of the conditions of the forest.
- Many years ago, fires were used for fire mitigation and habitat restoration. Now they do prescribes burning and they have support from Tribal members for the program because of the traditional use of fire.
- While it is generally too wet to do prescribed burning, the tribe burns the fuels after harvest for timber sales when appropriate—broadcast burn

- Habitat enhancement and enhancement of culturally significant species, prescribed burning this fall. Camas used to be burned regularly. Encroachment of trees off of the meadow.
- Currently, University of Washington/US Forest Service
- That's long past. The tribe has been impacted by individuals taking over prairies and open space. The use of the fire against the tribe was more common—people burning out tribes. Controlled burning use to be the case, but not since the 1800s. The forest service and settlers burned out the tribe. Tribal longhouses burned by settlers. Mixed history.
- Small base; forester uses logging

18. In what other ways has fire been used traditionally?

- Homefires, campfires, cooking, smoking to color buckskin, etc.
- Prescribed burning on agricultural property, in coordination with other agencies.
- Cultivate cultural plants in meadow and grassland, help keep trees from growing too densely, huckleberries.
- Cooking and staying warm, burn underbrush in forest stands.
- Open burning
- Cook outs for salmon
- Cooking, canoe-making, warmth
- Elders carried out burning of brush for fire protection; prescribed burning around houses to protect from wildfire, used for cultivation process, help wildlife. Need to spread traditional use of fire, work with scientists to show beneficial uses. Need to reduce racism
- Burn before harvest, burn slash piles
- Just cooking, smokehouse, etc.
- Ocean-going tribe; but used for smoking, cooking, etc.
- Burned cranberry bogs
- Ceremonial fires, smoke salmon, major use for wood heat
- Fire was used in berry patches and plum patches—they would light a fire to take out the dead and decaying material to produce more berries or plums in the future. The FS is now realizing that the loss of fire from the environment has had negative effects on forest health and has contributed to catastrophic fire occurrences. Fire has been an integral part of the environment. The FS is coming along, fire is important in the natural cycle.
- Traditional native American underburning, wildlife habitat, clearing undergrowth, etc.
- The tribe is exploring trying to cultivate areas to grow hazel for basketry. Best harvest occurs when hazel has been burned. They are in the process of identifying areas to do that and continue the two or three year cycle. Talking with the adjacent National Forests, trying to find the hazel. The Cultural resources director is trying to find sources for basket materials.
- They use fire as a tool to manage species. Some of the meadow area is being restored for cultural enhancement. The Tribal cultural resources director has been using mechanical removal of trees to thin the dense Douglas fir stands around the meadow. They left opening for species diversity. Follow up is burning the lower meadow. They need to find out the timing on the burning to promote bracken fern—important in the growth of the camas bulb.
- Bear grass rejuvenation, land clearing, wildlife habitat.
- Natural meadows on the reservation. In talking to elders, he learned that those areas were burnt on purpose for plant growth and cultivation of resources. Restoration for the chocolate tulip. Pretty much gone. Now the meadow is taken over by blackberry and scotch broom. There aren't any homes there though, and that is his priority (though he would like to get to that).
- Ceremonial
- Don't know

- Burning prairies for bulbs and tubers
- Some use of prescribed fire for camas.

19. What are your suggestions for increasing agency and public understanding of traditional uses of fire?

- Finding out—several meetings (watershed, forest service planning). They know that prescribed burns increase habitat and control fuel, becoming more aware as community.
- More public education and outreach on impacts of fire and ways that it can be used to community's benefit
- It's an issue to provide too much information as it may result in arson
- Indigenous processes coming out of natural world made sense; hard to communicate to mainstream society; lack of understanding re: wisdom of tribes—should work with scientists more closely, dispel preconceived notions; get out to academic disciplines
- Pamphlets, brochures, fire safety program
- Doesn't really apply, but the Tribal Museum is excellent center for explaining traditional uses to the public. Or use a canned video or DVD for educational purposes
- Work more with US FS and state DNR and Adjacent County
- The tribe is trying to address this issue by reducing fuels in the forest and creating an environment where fire can be used as it was traditionally.
- Yes, they've had agency support, though there is always someone who is against prescribed burning (even some Tribal members).
- This is an interesting subject—intergovernment agency for NWFP. Excellent cooperation with the BLM, using BLM burn bosses to run the operations. Good cooperation with BIA—on timber sale. It's a good cooperation, but burdensome process.
- We have some research going concerning these issues but we need more awareness.
- As a forester, yes. But it's like talking to deaf ears. It's a great tool to be utilized, but hard to convince people in downtown Portland or Seattle.
- Talk to cultural resources. Fire has been used to the disadvantage of the tribe.

21. What kind of programs are needed to ensure that first respondents are coordinating with Tribal/Federal archaeologists to protect sites?

- They rely on FS, BLM, County. Adequate understanding.
- Strong relationships with local fire district and state agency—aware of sites
- Building fire lines is the destructive part of the process; need guidelines for fire suppression tactics to help protect sites; (similar to CATS, riparian areas)
- Whole cultural resources dept. Educating people is the key—cultural awareness, education for agencies and communities to prevent fire altogether
- Closer coordination between fire district and tribe in terms of protection of cultural resources. Not aware of cultural sites, more contact with BLM, FS.
- Fire training for those with cultural knowledge; having training resource advisors helps get people out on the line. Lack of communication with BLM, FS.
- In place in tribe
- Tribe holds all cultural sites secure; state identifies if there is fire on Tribal lands; use MIST tactics—using small wheel trailer and tiller, little ground disturbance.
- Have active GIS: would need program staff, cultural resources, etc.
- Educational programs and government-to-government relations
- Cultural resources person goes with fire

- Need more coordination through government to government relations between tribe, state, and federal agencies. Need to develop system for “cultural zones” or other methods so sites do not become public knowledge and at risk to damage.
- No direct input with federal and state agencies. Need basic info on maps—needs to be on data level with NPS, but does it get to firefighters? No formal pre-fire discussions through government to government relations with agencies and tribe to develop Tribal concerns and develop solutions
- Yes, working on GIS layer for cultural area—can close it off and open for fire only
- The FS is good about consulting with the Tribe. When a fire broke out in the City—that was a major village site—they called the Tribe to find out what was going on. It’s mostly the state, county, and city that don’t always work with the tribes. It’s a slow process, but they are starting to do better. Make recommendations for consultations—you can avoid a lot of conflict if you don’t ignore the cultural resources department on or off the reservation. The cities, counties, or states need to meet with the Tribes. They make good recommendations to the adjacent government. It helps people know what to expect and respond with more confidence.
- The tribe is doing some of that in house—ongoing county governments, etc. Yes, there are alternative methods. If they know where the sites are, they’ll take step to remove mechanized equipment, etc. Not the MIST tactics. It’s a modified suppression. Real close ties to the Tribal Archaeologist. They can tell you where there are lot of the sites.
- It’s a matter of talking with them, education process.
- Federal fire management plan—they have included the Tribal land and have ongoing communication that will meet their needs. Good step.
- An awareness program would be good.
- It becomes a very political arena because of the past history of the Tribes—isn’t too keen on letting out the location of culturally significant sites. Vandalism. Hesitant. He would like to let it out. If they knew they could trust the state to protect those site. Built a hat on a chief.
- Hasn’t really been a factor. They are protected, but not anymore a priority.
- Education and training
- Work with cultural resources dept of tribe: the area doesn’t have a lot of “ruins” but some sites still exist.

23. Who is the best person (or organization) to present information to the Tribe on fire prevention?

- Tribal Council, representing and presenting information to the public
- Combination of things, community forum is active; difficult to get participation
- Tribal Council, natural resources staff and the Tribal newsletter
- Combination of things
- Activities are concentrated on kids
- Deliver educational services to multiple small tribes
- Contractors for professional training
- Housing Authority
- Volunteer fire dept.
- Team: external provider and community member works best
- 4 General Councils year. If you’re having a meeting, not many people there, no big controversy.
- Mediums used—NEPA process for projects, they have their own procedures for getting input—Tribal Council and two General Council—Salmon Bake at the end of the month. Annual

accomplishments. If they have specific EA's, they bring it to everyone's attention. Within the staff, Tribal members, have their own internal process

- General council meetings once a month.
- Meetings
- Local fire department provides visits to schools, houses; not sure of extent of service, may need to increase visits.

24. How do Tribal members and/or reservation residents get information fire prevention and related safety issues?

- Weed and seed, tutoring program
- Word of mouth
- Door to door is the most economical
- Community meetings—good place for agencies to share info with Tribal members
- Public meetings with signs and fire prevention information
- Tribal newsletter, HUD provides information on-site
- Tribal newsletter is most effective way
- A lot of personal contact.
- Monthly newspaper
- Word of mouth
- Classes and training with housing authority, newspapers
- Tribal newsletter, HUD web site

25. What are other barriers that affect Tribe access to fire protection resources?

- Interagency coordination; traditionally state and counties haven't worked well together; need to get through those barriers to ensure fire protection across multiple ownerships and jurisdiction.
- Funds available to do fire planning, prevention planning, pro-active fire prevention.
- Money, costs of labors, involvement in planning at state level.
- Using fire to reduce risk to fire. Other barriers include the administrative process for applying for grants when there is no full-time staff to work on it.
- Restrictions in programs: lack of adequate funding
- 1) Have fire training education, get experts, food; 2) have ability to repeat, cyclical knowledge; 3) need fire crew, program, education would show off traditional use; 4) Workshops: need knowledge; 5) federal government sets up competition between tribes; 6) Tribes impact all around by less and less BIA funds
- Funding, lack of personnel, lack of interest (by unpaid staff), requires a lot of time for meetings, with cooperators
- Funding and physical infrastructure; adequate water and infrastructure—no hydrants
- Lack of state cooperation, lack of BIA support, no FMO position, county fire dept. does not include Tribal members. No clear-cutting due to flood concerns: BIA wanted to cut, but Tribal Council blocked. Several hundreds of acres of brush near housing area—unable to get state, county, or federal cooperation for fuels reduction. Volunteer county fire dept. is 6 + miles away from Tribal residential areas. Slow response and little coordination. Tribes does not get funded for a FMO because of small land base (1,000 acres).
- Funds and qualified personnel are too limited.
- Not under current conditions. When the Tribe reacquires the land there will be a whole lot of headaches in managing such a large amount of acres in today's political world.

- Lack of understanding of what is available for planning. On the ground treatment is fine. They don't know what's out there. Stuff coming from the bureau is open. Natural forest around the Tribe—stewardship contracts, things that have opened—it is definitely creating opportunities for the tribe.
- Winter flooding is one of the main issues. Most of the Tribal lands are higher than the floodplain, but the biggest problems in the winter time is the power may go out for days. Earthquake and tsunami are risks too. They run up against issues related to the crew for off-reservation fires. The tribe gets reimbursed for the cost of sending them out, but the Tribal overhead was not reimbursed (indirect rate). Through their requirements, when they spend money on salary, they have to apply an indirect rate. They decided it was costing the tribe too much money so they no longer have a crew. They could set up a contractor. How would they get the crew out—they have bonds and licenses for other purposes. It would be a matter of putting something together. Natural Resources crew does treeplanting, thinning, brush slashing. They are available for firefighting as a seasonal crew and can get good folks. But fire season is when there is the most work, but there are pluses and minuses to that, because that's when natural resources needs them to focus on those issues. Right now, the Tribal crew is focused on work at home.
- Not a barrier—because of the limited staff and resources, if they had a way of focusing this a little better—not just faces and information. Fed agencies could take burden on—HFRA, NFP, and programs, if they could refine, be more specific when communication with Tribes about what the real opportunities are. What is really useful here? They brought that up to the Tribal Monitoring under the NWFP—BLM and FS, that's what they've requested. When agencies have programs, they shouldn't shotgun out—they need to follow government-to-government and Tribal consultations. His recommendation is that they should filter all the information down and make it more useful. Specific identification of projects. Tribes have 3 seats on the IAC and PACs—Intertribal Timber Council, NW Fish Commission, California, NWFP, Tribal Monitoring Advisory Group of the NWFP formed in the last year. Keeping current with ongoing stuff in the NWFP. More effective integration and coordination between all of the programs—NFP, HFRA, RAC, NWFP, Fisheries, Salmon Recovery. In a big picture, more coordination, how to make them complement each other. A real goal to strive for. Noxious weeds, WUI, stewardship contracting, oversight of how it all fits together. More efficiently with these programs.
- Willingness to be proactive and recognize risks
- Lack of BIA and federal funding for emergency mgmt. If the Tribe had equipment (like a 200-gallon fire truck, simple tools, basic firefighting equipment, etc.) it would be easier for the tribe to have a quick response and not have people's lives at risk. They aren't even eligible for many grants at this point because they don't have a fire district or a foundation to work from. What resources will help tribes get started when they don't have any resources? He would like to see training and Red Cards for Tribal members. It wouldn't hurt. Can't throw inexperienced people in front of a flame. Other suggestions are to build the program, and get funding and technical assistance. Defensible space around homes and government office are two biggest priorities. The Tribe would definitely be interested in pilot projects.
- Most of the land base of the tribe—150 acres—is surrounded by forest, rural development and farming agricultural. Most is mixed rural development. Good deal of forest practice, still in transition. It's the surrounding national and state forests that concern them. This conversation sparked a little interest. The tribe should probably plan for wildfire. It only happens every 60 years. It's bound to happen, but don't know when. Pretty inconvenient when it happens.

Depends on the year and the weather. They are quite different than Oregon, but they can get drought as well.

- Funding, expertise. County and state position is that because Tribal lands are trust lands and are not in the tax base, they get no services unless they pay.
- Funding problem

26. Other comments or questions?

- Requested more information on the framework for community fire plans
- Would like to see these questions again. The Tribe is in a period of transition and needs to start to recognize the importance of these issues and share this information with the community.
- Need background. Note: this tribe is newly recognized and is in the process of planning for Tribal government functions. They have not targeted fire management yet. The land is not yet trust land, so they are covered by WA DNR and county, since they still pay land and state tax
- Thinks this kind of report will be useful
- 1) tribe works with local rural fire districts; 2) Agreements now formalized and regularized donations; 3) substantial non-indian population on lease land within the reservation boundaries may have different contacts/concerns. Fire safety poster contest.
- This tribe does not have land in trust or a reservation. They own some wooded vacant land, but not homes or facilities. Tribal headquarters are in Anacortes and are served by the local fire districts—they recently signed an MOU with the other local district for homeland area
- Tribe is trying to help other agencies reintroduce the sage grouse in need to preserve habitat for grouse and manage fire program to achieve objectives.
- Only the Tribal Administrative Office is on Tribal land, and Tribal members live in adjacent communities. The tribe recently developed a Forest Management Plan, which is near completion.
- Hazardous fuels reduction, treatment of overstocked plantations, etc., along with watershed restoration projects are all factors in restoring and maintaining watershed health. They are now working on developing a Co Sub-basin Restoration Plan under a grant from NOAA-fisheries. Issues of wildfire protection, fuels treatment, risk assessment and wildfire impacts on watershed health are matters that need to be addressed in our overall approach to Resource Mgmt. Planning. There needs to be a framework to pull all this together. Community Wildfire Protection Plans are an important element of the “master plan.”
- BIA does not have adequate fire protection, so it contracts with state DNR to meet its responsibilities for fire protection trust land.

APPENDIX F: DRAFT REVIEW COMMENTS

<p>POLICY</p>	<ul style="list-style-type: none"> • TFPA just signed, how can this report address this act so early (without rules for implementation)? (p.3) • Approved fire mgmt. plans are a req. of all federal agencies to receive funding after 2004. This pertains to tribes through their BIA trustee (p.20) [can he recommend a resource?] • All tribes are subject to CFR when overseeing Tribal trust lands. Each tribe must have a Forest Mgmt. Plan that requires sound forest mgmt. of sustainable harvest of trust resources. They should all be sustainable harvests.[reference Code of Federal Regulations - 25 standards/53 Indian manual • How do the fire plans developed through the BIA mandate differ from the community fire planning focus of the assessment? • Include more information re: the BIA fire mgmt. Program and how it is serving or not serving the tribes. Look at IFMAT II Report. • Reword TFPA • Define the role of the BIA as trustee and under the ISDEA Act
<p>FUNDING</p>	<ul style="list-style-type: none"> • Tribes already have access to NFP funding; they can request funds for analysis and planning • Recent increases in BIA funding for fire mgmt. What is the disconnect b/t the BIA funding and the lack of access to resources that tribes are describing? • Planning dollars v. implementation dollars. A lot of tribes get funding for planning, but not the structure needed to actually implement. • Possibility of pooling of grant resources to pursue economic development ventures
<p>RECOMMEN- DATIONS</p>	<ul style="list-style-type: none"> • ITC provides webpage and links with fire info. ITC also disseminates information through channels and formats • ITC is scheduling contracting workshops with the FS and BLM • ITC and BIA provide community fire planning info. Tribes have access to funding and for completing CWPPs and to FIREWISE and resources • Tribes are provided wildfire protection through the BIA trustee through direct programs operations or MOUs with local/state agencies • (4) consider www.healthyforest.info as a resource • For smaller tribes: "To provide assistance for partnering and collaboration with other agencies and jurisdictions engaged in community fire planning and wildfire risk assessment." • Email and brochures are probably the best way to communicate information to tribes; it would be helpful to get an update email when clearinghouse information has been updated • More information on federal policies and opportunity to comment on them would be helpful • Information on grants, links, worksheets, etc. would be helpful • Add a recommendation to hold a workshop for Tribes on community fire planning and prevention. Stress that it should be a joint workshop involving the BIA and ITC. • All of the recommendations should reflect the government-to-government relationship and not just suggest a side route to attaining resources. • Recommendations should consider the need to consult with Tribes, protocol for working through Tribal Councils, etc. • Include the ITC website (and ITC's mandate in general) in the recommendations <p>Address the sovereignty issue in recommendations (as a way to build recognition for what this means and how it should be addressed in community fire planning and resources allocation).</p>
<p>ECONOMIC DEVELOPMENT</p>	<ul style="list-style-type: none"> • Many NW tribes have outstanding natural resources—Is this paradigm being inferred on all NW tribes?(p.11) • Several NW tribes have exercised their rights through self-determination and exert strong control over their resources and mgmt. decisions (p.11) • Poverty employment figures confusing (p.11)

<p>WILDFIRE (Protection, history, WUI concern)</p>	<ul style="list-style-type: none"> • Tribal fire crews are also dispatched to other incidents. It is the FMO's responsibility to manage his workforce and keep adequate initial capacity at his agency (p.14) • Indian crews are also dispatched through Interagency fire centers • Wildfire protection is inherent to trust responsibility. The BIA is responsible for this service at no cost to tribes. This could be by using BIA, Tribal or other local fire suppression force. What is the intent of this section (wildland /structural fire protection)? (p.23) <p>WUI Communities:</p> <ul style="list-style-type: none"> • What about threat that WUI communities pose to natural resource management? (p.10) • Why do they build in fire-prone environments? Sound land use planning could avoid this issue (p.11) <p>Wildfire History:</p> <ul style="list-style-type: none"> • "Already hurting"—What does this mean? (p.9) <p>Traditional fire:</p> <ul style="list-style-type: none"> • Don't talk as if practice is extinct; rework wording
<p>SURVEY METHODS</p>	<p>Interviewees:</p> <ul style="list-style-type: none"> • Individuals who participated may or may not have direct experience with wildfire activities; many agencies cover small reservations or the BIA contracts with other agencies. How is this variable addressed in the analysis? (p.3) • Just using # of tribes, regardless of land base and fire authority can distort findings (p.3) <p>Survey instrument:</p> <ul style="list-style-type: none"> • Number of questions do not match up (p.15) <p>Analysis:</p> <ul style="list-style-type: none"> • Your analysis seems to overlook the drastically different fire regimes faced by east-side tribes v. west-side tribes. • Historic fire data would demonstrate this well-known fact and could drastically alter your analysis (p.16) • How does the east v. west fire regimes alter affect your findings? (p.17) <p>Wildland/structural fire protection section confusing (p.23)</p>
<p>QUESTIONS/ COMMENTS</p>	<p>Additional Resources:</p> <ul style="list-style-type: none"> • Frank Lake, OSU, has extensive bibliography of native use of fire • BC offers great examples. Similar stand conditions, role of First Nations, etc. Consider integrating into background section. (p.37) • Potential partners and resources: the O and C counties organization have a good web site that deal with the Secure School Funding Bill and community-based fire planning. www.healthyforests.info <p>Questions:</p> <ul style="list-style-type: none"> • What is the effective % of tribes/agencies that have fire authority and responsibility that were interviewed? (p.3) • What percentage of the trust land base is located east of the Cascades? (p.16) • What percent of tribes have not conducted a wildfire risk assessment? (p.18) • Do tribes actually contract out for fire protection or does the BIA on their behalf? (p.14) <p>Comments:</p> <ul style="list-style-type: none"> • Seems your purpose duplicates the role of BIA as trustee (p.5) • Source? P2, S1 (p.6) • Verify figure (60 percent of standing timber) (p.9) • Make reference to seasonal employment issues (tourism, fishing, etc). 85% of tribes try to field crews. It's hard for tribes to dedicate vehicle to transport fire crews.(p.38) • Confederated Tribes (Coquille) are interested in getting involved in the process and staying on top of training and activities • Make clear distinction b/t resources and programs related to wildfire protection and community fire planning