USDA FOREST SERVICE
Region 6 – Fremont-Winema National Forests
Silver Lake Ranger District
Toolbox Fire Recovery Project Environmental Impact Statement
Civil Rights Impact Analysis

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Executive Summary

This description of the affected environment and the subsequent analysis has been initiated to better understand how the local public would be affected by the proposed alternatives. The analysis is also intended to serve as technical compliance with applicable Civil Rights legislation and policies, Executive Order 12898 (Environmental Justice), and other legislation, policies, and regulations, as summarized below.

This analysis addresses both external stakeholders (public) and internal stakeholders (employees).

For external stakeholders, the assessment examined demographic data, current uses of National Forest System lands, and values related to natural resources. Subsistence resource use, an issue identified in Executive Order 12898, is also addressed as it relates to local populations.

Internal stakeholders include minority employees and employees with disabilities on the Silver Lake and Paisley Ranger Districts. The objective of including this information is to evaluate the impacts of the alternatives on the role of the Forest Service as an employer of minorities.

The analysis concludes that disparate or disproportionate impacts associated with the alternatives are not anticipated. Some positive effects that could accrue from Alternatives C through H include availability of timber supply to small businesses, more timely salvage resulting in less decay and defect, road closures in areas of importance to American Indian cultural resource sites or for protection of subsistence resources, access in portions of former Klamath Indian Reservation lands that are used for traditional hunting and gathering purposes by Klamath Tribes, and maintenance of open roads for general public recreation, firewood cutting, and subsistence uses. All of the action alternatives would contribute to the local economy in varying degrees.

Toolbox Fire Recovery Project Civil Rights Impact Analysis

Introduction

Civil Rights Impacts are the human dimension effects of major policy actions on the rights and opportunities of **ALL** people. Analyses are required to determine these potential effects prior to and during the implementation of major policy actions. The focus in this process is external as well as internal in nature. Specific attention is directed to groups who have historically had a less dominant presence as recipients, beneficiaries, participants, partners, or employees of the Fremont-Winema National Forests programs and services, such as racial or cultural minorities, older and handicapped citizens, and women, and groups such as commodity users (timber, personal use firewood, and special forest products).

All Forest Service actions have some form of impact, both positive and negative. The purpose of this impact analysis is to determine the scope, intensity, duration, and direction of impacts resulting from the proposed action.

The intention of conducting this impact analysis is to consider such actions in the light of the following:

1. Evaluative findings about the Toolbox Fire Recovery Project, including the alternatives that were identified,
2. Mitigation measures to reduce negative impacts,
3. Necessary documentation to support the analysis, and
4. Procedures to monitor the implementation of the action.

Legislation, Regulations, and Authorities

A summary of applicable legislation, regulations, and authorities is attached as Appendix One of this document.

Proposed Action

On July 12, 2002, a lightning storm ignited 67 fires on the Fremont-Winema National Forests. On the Silver Lake Ranger District, two of these fires, the Toolbox Fire, which started near Toolbox Springs, and the Silver Fire, which started near Silver Creek Marsh campground, became the primary fires within the Toolbox Fire Complex. Suppression activities on a portion of the adjacent Winter Fire also became a component of the Toolbox Complex. In total, the Toolbox Complex included approximately 85,000 acres, including approximately 49,500 acres of National Forests lands, 8,000 acres of Bureau of Land Management administered lands, and 27,500 acres of private land.

The Silver Lake Ranger District is proposing to accelerate recovery of the Toolbox Fire Complex area through salvage, fuel reduction, reforestation, and riparian improvement and protection projects. The purpose and need for this action is to create conditions that would facilitate efforts to:

- Recover habitat lost as a result of intense fire and reduce the likelihood of future habitat loss or soil damage from subsequent high intensity wildfire
- Restore riparian areas damaged by the Toolbox Fire Complex
- Protect remaining live stands from insect infestations associated with fire-killed trees
- Develop a long term sustainable forest through reforestation and fuels reduction
- Salvage burned timber while it retains some merchantable value

The Toolbox Fire Recovery Project totals approximately 48,000 acres of Fremont National Forest lands within T29 S, R 13-16 E, T 30 S, R 13-16 E, and T31 S, R 13-15 E, Willamette Meridian. The project area is bounded on the east by the north-south trending fault block feature known as Winter Rim. An unburned strip varying between 3 and 7 miles wide runs between the Silver Fire portion of the project area and the Toolbox Fire portion of the project area. Within this unburned area are locally familiar landmarks such as Thompson Reservoir and Hager Mountain.

Data Gathering Process

Data used in this analysis was gathered from U.S. Census Bureau data, Toolbox Project public scoping, Forest recreational use reports, Interior Columbia Basin Ecosystem Assessment, and personal communication with specialists. The census information provided demographics and population characteristics for Lake and Klamath counties and is broken down by gender, median age, and race/ethnicity. Toolbox proposed action scoping comments were reviewed for any comments pertinent to impacts to civil rights, as displayed later in this analysis. Forest visitor use statistics derived from the 2002 Forest Visitor Use report are broken down by percentages for gender, age, race/ethnicity, and primary activities participation. Forest Service specialists provided statistics regarding use of lands within the Toolbox Project Area for firewood gathering and mushroom harvest activities.

Demographics and Population Characteristics

The following demographics and population characteristics for Lake and Klamath Counties are based on the 2000 U.S. Census Bureau information.

Lake County

Total Population:	7,422	
Males	3,721	50.1%
Females	3,701	49.9%
Race / Ethnicity*:		
White		91.0%
Black/African American		0.1%
American Indian		2.4%
Asian		0.7%
Pacific Islander		0.1%
Hispanic		5.4%
Other		3.2%

* Note – These figures are as shown on the official U. S. Census Bureau website. They do not total 100%.

Median Age:		
All	42.7	
Number over 62 years of age:	1,580	21.3%

Klamath County

Total Population:	63,775	
Males	31,907	50.0%
Females	31,868	50.0%
Race / Ethnicity:**		
White		87.3%
Black/African American		0.6%
American Indian		4.2%
Asian		0.8%
Pacific Islander		0.1%
Hispanic		7.8%
Other		3.5%

** Note – These figures are as shown on the official U. S. Census Bureau website. They do not total 100%.

Median Age:		
All	38.2	
Number over 62 years of age:	11,290	17.7%

Public Comments on the Toolbox Fire Recovery Project Proposed Action

The initial scoping packet and request for public comment on the Toolbox Fire Recovery Project was mailed to 173 individuals, and local, county, state, and federal officials. An additional outreach scoping letter was sent to 31 individuals or organizations representing underserved populations in Klamath and Lake Counties and northern California (see Appendix Two of this report). In response to the initial request for public comment, Silver Lake Ranger District received sixteen letters, emails, or telephone calls. Of those responses, three were requests for further information and did not contain comments. Of the remaining 13 responses, most of the comments were either outside the scope of the Toolbox project or pertained to natural resource issues. The following table displays issues that may be considered as having civil rights implications for users of the Toolbox Project Area on the Fremont-Winema national Forests.

Table 1: Public Scoping Issues Pertaining to Civil Rights

Issue	Number of Comments Received on this Issue
Public Access – No road closures	1
Environmental Justice – Fair treatment of everyone using the Forest	1
Non-motorized recreation opportunities – Opportunities for recreation in non-motorized areas	1
Economics – Impacts to local communities due to harvest or no harvest of burned timber	1

These civil rights implications will be analyzed to determine impacts, if any, in the comparison of alternatives in this civil rights impact statement.

Economic Effect on Low Income Communities or Counties

Alternatives C, D, E, G, and H may have a beneficial economic effect for protected groups and the county populations in general. However, this beneficial effect would be in the form of direct, indirect, and induced employment as a result of the Toolbox Fire Recovery Project timber sale, rather than as a direct payment resulting from timber sale receipts. In the past, the Twenty Five Percent Fund Act of 1908 (P.L. 60-136, ch. 192, 35 Stat. 260 as amended) required that 25 percent of all receipts, including timber sale receipts, be paid annually to the states in which a national forest is located for the support of schools and roads. A second, more recent, funding act, the Secure Rural Schools and Community Self-Determination Act of 2000 (PL 106-393) allows counties to elect to receive either the 25 percent payment described above or the average of the three highest payments for fiscal years 1986-1999. Lake, Klamath, and Deschutes Counties have elected to receive the fixed payment. Some portions of the funding (Title II dollars) are used for forest restoration work (road and trail maintenance, etc.). Local Resource Advisory Councils (RACs) recommend projects for funding and the Forest Supervisor provides direction. The Lake-Klamath County RAC places a high priority on projects that use the local contracting workforce (W. Aney, personal communication). Because the above-mentioned counties have elected to receive the fixed payment, the Toolbox Fire Recovery Project timber sale would have no direct effect on the amount of the fixed payment received by the state.

The Civil Rights Impact Analysis that was prepared for the proposed Interim Directive for Categorical Exclusions for Limited Timber Harvest (February, 2002) discusses impacts to communities regarding mill closures and the resulting loss of employment. Younger workers tend to leave the communities in search of alternative employment. Community

economic instability leads to a lessening of support for community institutions and public services, which increases erosion of services to the elderly, dependent mothers, and children. Implementation of timber sale harvest under Alternative C, D, E, G, or H would increase timber industry jobs and indirectly, service-related jobs.

All of the action alternatives would contribute to the local economy, with the total number of combined salvage jobs, related activity jobs, and indirect jobs ranging from 379 to 825. However, more of the impact is likely to be associated with reforestation and activities other than the 1 to 2 year impact of timber harvest. According to information provided by Steve Williams, Regional Economist for the Workforce and Economic Research office of the Oregon Employment Department, there are currently eight classified logging firms in Lake County with an average employment of 28 in 2001 and 21 in the first half of 2002. This is well below the estimate of workers needed. A review of 15 different logging occupations shows that only seven fallers and five logging tractor operators are registered with the Oregon Employment Department and are actively seeking employment in Lake County and the southern portion of Deschutes County (J.Haugen/S.Williams, personal communication). It is expected that upon implementation of the Toolbox timber sale harvest, out-of-area crews would be brought into the area to accomplish the work. Some of them may bring their families. This should have a positive effect on Silver Lake and Paisely services for the duration and should increase the number of service-related jobs (J.Haugen/S.Williams, personal communication). The degree of impact varies by alternative, as shown in Table 6 on page 11 of this analysis. No negative impacts on dependency of community stability are predicted.

Due to the nature of the economy and the source of the workers, there is likely to be more people working, but not a very significant drop in the unemployment rate. Many of the workers will take the bulk of their income out of the county, but, while they are working in Lake County, they will be spending money for goods and lodging, to the benefit of local businesses that can supply their needs. (Haugen, 2003)

The following table displays the total numbers of jobs that would result from implementation of the Toolbox project. Direct jobs are those that are associated with logging and milling. Indirect jobs are jobs that are closely related to the item that generates the direct impact, but do not deal with the initial processing, such as lumber hauling, once the logs have been processed at a mill. Induced jobs are those that are one step farther removed, including services (grocery stores, gas stations, utilities, etc.) and retail and wholesale trade. The economic effect of these additional jobs would be dispersed throughout Lake and Klamath counties and throughout the State of Oregon (J. Haugen, 2003).

Table 2: Estimated Numbers of Direct, Indirect, and Induced Jobs, by Alternative

Alternative	Direct Jobs	Indirect/Induced Jobs	Total Jobs
A – No Action	0	0	0
C	550	275	825
D	253	126	379
E	495	249	744
G	549	275	824
H	479	239	718

Potential beneficial impacts are speculative, and because so many factors other than proximity to a national forest and supply of wood products may influence county revenues, there is not sufficient information to project positive benefit from a potential increase in timber sales resulting from implementation of Alternative C, D, E, G, or H. However, a disparate effect is not anticipated.

Subsistence Uses

Subsistence lifestyles include not only the use of materials for survival, but also subsistence activities, rituals, or ceremonies that contribute to the maintenance of community structure or social cohesion. Subsistence activities may be included in the recreation activity category and some differences may exist in the way ethnic groups use the Forest for recreation purposes. The Toolbox Fire Recovery Project Area is viewed by subsistence users for resources including recreation, firewood, herbs, grasses, roots, tubers, berries, and large and small game. Recreation, firewood cutting, and other uses are discussed later in this document. Although any natural disaster or poorly managed activity has the potential to degrade forest resources, and thus, subsistence values, no adverse impacts are anticipated from salvage harvest, reforestation, and fuel treatment activities within the Toolbox Fire Recovery Project Area.

Fremont National Forest Recreation Use

The Fremont National Forest Visitor Use Monitoring Results (August 2002) provide estimates for visitor recreation use on the Fremont National Forest for the period of October 2000 through September 2001. Data was not collected at the District level, so it is not possible to estimate the number of Forest visitors to areas within and adjacent to the Toolbox project area. Estimates of use are based on measurements for the following:

National forest visit – the entry of one person upon the national forest to participate in recreation activities for an unspecified period of time. A national forest visit can be composed of multiple site visits.

Site visit – the entry of one person upon the national forest to participate in recreation activities for an unspecified period of time.

Wilderness visits – the entry of one person onto the national forest wilderness to participate in recreation activities for an unspecified period of time.

Random sampling representative of the population of all visitors provided the estimates of total use, as follows:

- **National Forest Visits – 529,594**
- **Site Visits – 574,563**
- **Wilderness Visits – 2,219**

National Forest Visitors

Basic descriptors of the forest visitors were developed based upon those visitors interviewed, then expanded to the national forest visitor population. The following tables display gender and age descriptors.

Table 3: Gender Distribution of Fremont National Forest Visitors

Gender	Distribution
Male	95.8%
Female	4.2%

Table 4: Age Distribution of Fremont National Forest Recreation Visitors

Age Group	Percent in Group
Under 16	6.9
16-20	0.5
21-30	1.8
31-40	17.2
41-50	39.6
51-60	4.6
61-70	29.0
Over 70	0.4

Visitors categorized themselves into one of seven race/ethnicity categories. Table 3 provides a detailed breakout by category.

Table 5: Race/Ethnicity of Fremont National Forest Recreation Visitors

Category	Total Percent National Forest Visits
Black/African American	0.3
Asian	0.0
White	99.1
American Indian/Alaska Native	0.5
Native Hawaiian or Other Pacific Islander	0.0
Spanish, Hispanic, or Latino	0.1
Other	0.0

Zip Codes

According to the Fremont NF visitor use monitoring results, no forest visitors were from another country. The percent of local visitors to the Fremont NF can be determined by comparing the zip codes of those surveyed with the local forest zip codes. Lake County zip codes accounted for slightly over 26 percent of the zip codes listed in the survey. Klamath County zip codes accounted for slightly over 23 percent of the zip codes listed. There was an average of 2.1 people per vehicle. This information, in conjunction with traffic counts, was used to expand observations from individual interviews to the full forest population of recreation visitors.

Wilderness Visitors

The estimates of visitor use for designated Wilderness areas are shown in the following tables.

Table 6. Age Distribution of Fremont NF Wilderness Visitors

Age Group	Percent in Group
Under 16	29.1
16-20	1.9
21-30	2.9
31-40	0.0
41-50	47.8
51-60	12.9
61-70	5,4
Over 70	0.0

Table 7: Race/Ethnicity of Fremont NF Wilderness Visitors

Category	Total Percent National Forest Visits
Black/African American	0.0
Asian	0.0
White	100
American Indian/Alaska Native	0.0
Native Hawaiian or Other Pacific Islander	0.0
Spanish, Hispanic, or Latino	0.0
Other	0.0

Zip Codes

The Wilderness visitors were from a wide variety of zips codes. Visitors from Klamath County accounted for 26.9 percent of the total Wilderness visitors. No Lake County zip codes were reported for Wilderness visitors.

Description of Purpose of the Visit

According to the Fremont Visitor Use Survey, the average recreation visitor went to 1.1 sites during the national forest visit. Most visitors (86.3 percent) went to only one site. During their visits to the forest, the top five recreation activities of the visitors were fishing, developed camping, viewing natural features, viewing wildlife, and hiking/walking. Visitors surveyed listed their top primary activities for their current recreation visits to the forest as gathering forest products, hunting, fishing, developed camping, and general relaxation. The following table from the Fremont Visitor Use Survey displays visitor activity and primary activity.

Table 8: Fremont National Forest Activity Participation and Primary Activity

Activity	Percent participation	Percent who said it was their primary activity
Camping in developed sites (family or group)	60.6	7.8
Primitive camping	15.6	2.5
Backpacking, camping in unroaded areas	1.8	0.4
Resorts, cabins and other accommodations on Forest Service managed lands (private or Forest Service run)	1.4	1.3
Picnicking and family day gatherings in developed sites (family or group)	27.1	0.5
Viewing wildlife, birds, fish, etc on national forest system lands	33.8	2.2
Viewing natural features such as scenery, flowers, etc on national forest system lands	35.9	0.3
Activity	**Percent participation**	**Percent who said it was their primary activity**
Visiting historic and prehistoric sites/area	1.8	0.1
Visiting a nature center, nature trail or visitor information services	0.7	0.1
Nature Study	1.0	0.0
General/other- relaxing, hanging out, escaping noise and heat, etc,	11.3	3.4
Fishing- all types	63.3	8.2
Hunting- all types	16.8	12.6
Off-highway vehicle travel (4-wheelers, dirt bikes, etc)	1.5	0.4
Driving for pleasure on roads	10.0	1.3
Snowmobile travel	0.0	0.0
Motorized water travel (boats, ski sleds, etc)	0.2	0.0
Other motorized land/air activities (plane, other)	0.2	0.0
Hiking or walking	33.3	0.7
Horseback riding	0.0	0.0
Bicycling, including mountain bikes	25.6	0.2
Non-motorized water travel (canoe, raft, etc.)	0.7	0.0
Downhill skiing or snowboarding	0.0	0.0
Cross-country skiing, snow shoeing	0.0	0.0
Other non-motorized activities (swimming, games and sports)	0.8	0.3
Gathering mushrooms, berries, firewood, or other natural products	18.6	13.9

The fires of 2002 may have some impact on recreational use within the project area due to fire damage to some of the recreation sites and portions of the National Recreation Trail. However, the activities associated with implementation of the Toolbox Fire Recovery Project would have no adverse impacts to recreation opportunities.

Access

The issue of access on Forest Service roads was raised during public scoping. Fremont National Forest Land and Resource Management Plan Standards and Guidelines state, "Road density will be the most economical system necessary to meet the land management objectives. Overall density for the roaded area of the Forest will not exceed 2.5 miles per square mile" (LRMP, page 116). All alternatives were developed following an interdisciplinary Roads Analysis process that evaluated opportunities, determined priorities, and made recommendations for road management actions, including closure or decommissioning, for the purpose of promoting watershed recovery, reducing impacts on wildlife habitat, or protecting cultural resource sites. In response to input from Klamath Tribe representatives, the alternatives respond, to varying

degrees, to retention of access on former Klamath Indian Reservation lands. Alternative C would retain all access. In Alternatives E, G, and H, only those roads recommended for decommissioning during the roads analysis process would be decommissioned. Other roads that have a less pressing need for treatment and were recommended for simple closure would remain open. For Alternative D, which responds to watershed restoration, wildlife habitat, and cultural resource objectives, the criteria used in developing road management proposals did not include retention of access within former reservation lands. With the exception of Alternative D, road management activities would have no adverse impacts to access on the project area for recreational or personal use purposes.

Firewood Cutting and Other Uses of the Toolbox Project Area

Firewood

According to the Toolbox Firewood Resource Report (Pierce 2003), in the past 20 years an average of approximately 300 personal use firewood permits were sold per year on the Silver Lake Ranger District. An average of 1,200 cords were removed per year. Approximately 10 percent of the firewood removed in the past came from the project area. Local residents from Silver Lake, Christmas Valley, Fort Rock, and Summer Lake have been the primary gatherers of firewood due to the proximity of these communities to the project area.

The trend is for an increase in firewood cutting District-wide. In 2002, 435 permits for 1,570 cords were sold on the District. In the near future firewood cutting in the moderate to very high burn intensity stands is expected to decrease slightly until the charred bark is loose enough to fall off the dead stems. During that time some of the local woodcutters may be displaced from the Toolbox project area, however; this number should be relatively minor and woodcutters will not have to travel far from the project area to find adequate sources of firewood on the District. The long-term opportunities for firewood cutting in the project area by the public and members of the Klamath Tribes will primarily depend on the access management strategy designed for each alternative, as described in the Access section of this analysis. Firewood cutting by Tribal members rarely occurs in the project area because of the distance from their homes. Former Tribal lands west of the project area on the Chiloquin Ranger District are considerably closer to most members' residences.

In the short term, the fires of 2002 increased the total amount of dead timber available for firewood cutting. Although charred stems may be less desirable than beetle killed timber, none of the alternatives would have a direct adverse impact on the ability of permit holders to harvest firewood.

Mushrooms

Silver Lake District has not been traditionally known as an area with large mushroom populations. In 2002, 1,122 permits for commercial harvest of Matsutake mushrooms were issued Forest-wide. Most of those permits (1,107) were for use on the Chemult District. In comparison, only five permits were issued on the Silver Lake District for that same period.

In 2002, The Fremont-Winema National Forests issued 30 commercial morel mushroom permits and 489 free use morel permits, none of which were for the Silver Lake District. Although the fires of 2002 may increase potential for mushroom growth in other areas of the Fremont-Winema National Forests, specialists do not foresee an increase on the Silver Lake District. Historically, mushroom populations have not increased in burned areas on the Silver Lake District in the past (J.Wilson, personal communication). However, with adequate moisture in late May 2003, it is possible that the area could experience an increase in mushroom populations, primarily morels. Implementation of the Toolbox project activities would not occur until 2004, at which time mushroom populations will most likely return to pre-fire conditions. None of the alternatives are expected to have an adverse impact on commercial or personal-use mushroom harvest.

Cultural/Heritage

Among the responsibilities of the Forest Service is compliance with the National Historic Preservation Act of 1966, (NHPA) (PL 89-665) and the laws and regulations collectively protecting the cultural resources and religious freedom of American Indians. American Indian groups may use lands within the Toolbox project area for religious or cultural ceremonies. Cultural or religious sites may include traditional sacred sites or contemporary religious sites guaranteed under the American Indian Religious Freedom Act. The Toolbox EIS alternatives are not anticipated to have an adverse impact on use of lands within the project area for religious or cultural ceremonies.

Klamath Tribes

The southern portion of the Silver Lake Ranger District includes portions of former Klamath Tribes reservation lands. Through a Memorandum of Agreement between the U.S. Forest Service and the Klamath Tribes, certain traditional uses of

the Fremont National Forest lands are guaranteed. Most of the Klamath Tribe cultural uses, such as camping, hunting, fishing, berry picking, plant gathering and firewood cutting follow use patterns similar to uses for the general public (An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins, Volume IV, page 1928). There are, however, differences in purpose, as related to the culture of the Klamath Tribes. These traditional uses are not expected to be adversely impacted by salvage and post-salvage activities, and, in fact, the proposed activities may have a beneficial impact with regards to enhanced wildlife populations for hunting, and economic opportunities associated with timber industry-related employment.

The Klamath Tribes have been consulted on a regular basis regarding the Toolbox Fire Recovery Project planning process, and have been involved in project planning. As a result of this consultation, Klamath Tribes concerns regarding access on former Klamath Indian Reservation lands have been addressed in Alternatives C, E, G, and H, as described in the Access section of this analysis.

Internal Stakeholders

One of the ways in which Forest Service proposed actions could affect minority communities is as an employer of minorities. For the purposes of this analysis, the primary job classifications that could be impacted are Engineers and Engineering Technicians, and Foresters and Forestry Technicians in timber sale related positions. Current Fremont-Winema National Forests employment statistics for some of the protected classes (women, ethnic minorities, persons with disabilities) in these job classifications are as follows:

Engineers and Engineering Technicians
- Women – 3
- Disabled – 1
- Minority – 1

Foresters and Forestry Technicians
- Women – 40
- Disabled – 10
- Minority – 20

The majority of these employees are employed in fire-related jobs. None of these jobs will be affected by implementation of the Toolbox Fire Recovery Project. Employees were afforded the opportunity to comment at employee meetings and during the scoping phase of the Toolbox Fire Recovery Project. No employee comments relating to employment were received with regard to this project. The Toolbox Fire Recovery project would not disproportionately affect any of the above groups.

Unfavorable Impacts

No adverse impacts to any individual's or group's civil rights are expected from the implementation of salvage and post-salvage activities planned in the Toolbox Fire Recovery Project, with the exception of road management objectives in Alternative D, which may impact access to some areas of the former Klamath Indian Reservation lands.

Favorable Impacts

Watershed restoration, road management, and fuel treatment projects are designed to protect or enhance wildlife populations. Salvage harvest, precommercial thinning, and reforestation activities would be designed to promote the long-term development of sustainable late and old structure forest conditions. These activities would also provide economic opportunities in the form of contract opportunities and employment, as well as an increase in indirect and service-related jobs.

Alternatives

Table 9: Activities Proposed by Alternative

			Alt. A	Alt. C	Alt. D	Alt. E	Alt. G Preferred	Alt. H
Commercial Salvage	Total Acres		0	14441	6367	11490	14419	13031
	Acres w/i Roadside Hazard Corridors		0	1300	1300	1300	1300	1300
	Total Volume (MMBF – million bd. ft)		0	73.3	33.7	66.1	73.2	63.8
Commercial Salvage in RHCAs - Acres (these are included in the above)	Category 1 - Acres		0	37	15*	19	15*	15*
	Category 3 - Acres		0	448	186*	390	448	186*
	Category 4 - Acres		0	147	15*	123	147	15*
			* all acres are within Roadside Hazard Corridors					
Logging Systems	Ground-Based - Acres		0	13971	6007	11183	13970	13031
	Helicopter	Acres	0	470	360	307	449	0
		Number of Units	0	15	8	3	14	0
		Volume (MMBF)	0	4.1	3.2	2.7	3.9	0
Snag Retention – Acres of "no-salvage" within 3,690 acres of identified suitable cavity-nester habitat			3690	3309	3665	3398	3312	3690
Precommercial Thinning - Acres			0	2214	2214	0	2214	2214
Fuels Treatments and Reductions - Acres	Whole Tree Yard or YTA only		0	4197	688	4768	3065	3961
	Addl. Treatment w/i Salv. Units		0	10244	5680	6723	11354	9070
	Addl. Treatment o/s Salvage Units, within ¼ Mi of PVT Boundary		0	0	0	0	5596	0
Reforestation - Acres	Site Prep		0	5301	4830	5330	3580	4695
	Fuels Treatment (in Refo. areas only. This is a subset of the Fuels Treatment above)		0	8642	4776	5759	11350	7535
	Planting (net)		0	20906	20743	20753	20728	20721
Prescribed Fire – Acres			0	3572	2450	0	3572	2450
Road Management	Decommission - Miles		0	69.0	71.6	14.6	71.6	71.6
	Close - Miles		0	72.9	75.5	67.4	10.4	72.9
	Leave Open - Miles		271.0	129.1	123.9	188.9	188.9	126.5
	Open Rd. Density (NF lands within Project Boundary) – Miles/Sq. Mi.		3.68	1.76	1.68	2.57	2.57	1.72
Temporary Road Development	Re-open Unclassified Rds - Miles		0	21.4	5.7	15.8	21.4	19.7
	New Development - Miles		0	16.0	0.0	13.3	16.0	14.9
Road Reconstruction – Miles			0	9.5	5.5	9.5	9.5	9.5
Soil and Riparian Protection/ Restoration Projects	LWD Placement – Stream Miles		0	9.6	9.6	9.6	9.6	9.6
	Aspen Enhancement - Acres		0	690	690	0	690	690
	Deciduous Plant in Riparian - Acres		0	7	7	0	7	7
	Rd. 2917413 Drainage Improvement		No	Yes	Yes	No	Yes	Yes

Mitigation and Resource Protection Measures

The analysis documented in the Toolbox Fire Recovery Project EIS discloses possible adverse impacts to resources that may occur from implementing actions proposed under each alternative. Measures have been formulated to mitigate or reduce these impacts. These measures were guided by direction from the Fremont National Forest Land and Resource Management Plan. These design features, as well as the following mitigation measures, are an integral part of each of the action alternatives. They are listed here separately to avoid repeating them in each alternative description.

Wildlife:

Provide Wildlife Habitat	**Alternative**
Where hand piling is the prescribed fuel treatment method, leave 10-30% of the piles unburned and distributed throughout the units where visual quality objectives can be met.	C,D,E,G,H
Existing down wood, included those cut during fire suppression, within commercial salvage units, may be removed to the extent that a minimum of 80 lineal feet per acre will remain.	C,D,E,G,H
Trees needing removal for road maintenance purposes will be removed	
To the extent possible, no conifer seedlings will be planted within 50-150 feet of any deciduous vegetation.	C,D,E,G,H
Timing Restrictions	**Alternative**
Restrict all activities during the bald eagle breeding season as follows (January 15-August 31):	
1. 0.25 mile buffer around nest for visually disturbing activities (e.g. parking vehicles, tree marking, planning, etc.) and noise disturbing activities (e.g. falling, hauling, chainsaws, heavy equipment use, etc.). Maps on file at the Silver Lake Ranger District.	
Harvest units 19 and 21	C,D,E,G
All activities taking place within 0.25 mile buffer	C,D,E,G,H
2. 0.5 mile buffer around nest for visually disturbing activities (e.g. parking vehicles, tree marking, planning, etc.) and noise disturbing activities (e.g. falling, hauling, chainsaws, heavy equipment use, etc.) that are in line of site of the nest. Maps on file at the Silver Lake Ranger District.	
Harvest Unit 21	C,D,E,G
3. 0.5 mile buffer around three known nests for helicopter use (e.g. flight paths, landings, etc.) Maps on file at the Silver Lake Ranger District.	C,D,E,G,H
In areas that are using a buffer to minimize disturbance, monitoring would occur during the first three days of operation, if activities were to occur during the breeding season. The monitoring would be used to determine if the buffer is effective at preventing disturbance. If a buffer is found to be ineffective, a larger buffer would be designed, based on site-specific observations made during monitoring.	
If a Forest Service Wildlife Biologist determines that an activity will not result in reproductive failure or cause adverse affects to nesting eagles for that year, activity may be allowed on a case-by-case basis. Any activities allowed should occur as late in the breeding season as possible and after the eggs have hatched. If an activity is allowed to proceed, monitoring of the nest site must take place to determine if adverse affects to nesting eagles are occurring. If monitoring determines there are unacceptable affects to nesting eagles, the activity must be terminated immediately. If it is determined the eagles have not successfully nested by May15, the restrictions may be lifted around the nest site for that year.	

Wildlife (continued):

Timing Restrictions	Alternative
Restrict all project activities during the peregrine breeding season as follows (February 1-August 15): 1. 0.25 mile buffer around nest for visually disturbing activities (e.g. parking vehicles, tree marking, planning, etc.) and noise disturbing activities (e.g. falling, hauling, chainsaws, heavy equipment use, etc.). Maps on file at the Silver Lake Ranger District. All activities taking place within 0.25 mile buffer 2. 0.5 mile buffer around the nest for helicopter use (e.g. flight paths, landings, etc.). Maps on file at the Silver Lake Ranger District. The first three days of implementation of a buffer to minimize disturbance would be monitored if activities occur during the breeding season, specifically to determine if the buffer if effective at preventing disturbance. If the buffer is found to not be effective, a larger buffer would be implemented based on recommendations from the monitoring regarding site-specific observations. If a Forest Service Wildlife Biologist determines that an activity will not result in reproductive failure or cause adverse affects to nesting falcons for that year, it may be allowed on a case-by-case basis. Any activities allowed should occur as late in the breeding season as possible and after the eggs have hatched. Monitoring of the nest site must take place if an activity is allowed to determine if adverse affects to nesting falcons are occurring. If monitoring determines there are unacceptable affects to nesting falcons, the activity must be terminated immediately. At the discretion of a wildlife biologist, if it is determined the falcons have not successfully nested by May15 the restrictions may be lifted around the nest site for that year.	C,D,E,G,H C,D,E,G,H
Restrict all activities during fawning season between May 1 – June 30 except for a short-term entry for planting which may occur between May 1 – May 15. Units 129, 130, 131, 195, 196, 197	C,G,H
Restrict all activities during fawning season between May 1 – June 30 except for a short-term entry for planting which may occur between May 1 – May 15. Units 129, 131, 197	D
Restrict all activities during fawning season between May 1 – June 30 except for a short-term entry for planting which may occur between May 1 – May 15. Units 130, 131	E
Should any listed endangered, threatened, or sensitive species be found during project activities within, adjacent, or near enough to the project that that activities could be a disturbance, activities will be halted until their effects can be determined and their significance assessed.	C,D,E,G,H
If an active raptor nest is found during operation, LRMP Standards and Guidelines will be followed at a minimum. The LRMP states that "major activities such as logging and road construction adjacent (300 yards) to active raptor nests, should be postponed until young have fledged (usually around July 30)" (LRMP, page 108). The Forest Service Wildlife Biologist will be contacted.	C,D,E,G,H
Snags Retention	**Alternative**
Distribution – Retain snags in groups of varying size distributed across a treatment area. **<50% Mortality Areas:** Within a 10 acre area, a *minimum* of 1 snag clump with 20 trees is required, with the exception of narrow units or parts of units that are less than 500 feet wide and are surrounded on one side of the 500 foot band by a stand in which 50% of the trees >10 inches are dead. Snag clumps would range from 2-30 snags per clump. In areas where snags are intermixed within a green overstory, smaller clumps are encouraged to provide for a better distribution of snags across the unit. In areas of localized mortality >5 acres, larger snag clumps are encouraged. **>50% Mortality Areas:** Within a 10 acre area, a *minimum* of 1 snag clump with 50 trees is required, with the exception of narrow units or parts of units that are less than 500 feet wide and are surrounded on one side of the 500 foot band by a stand in which 50% of the trees >10 inches are dead. Snag clumps would range from 50-100 snags per clump, and clumps would be distributed every 5-10 acres. **Areas requiring site-prep outside of harvest units and plantations:** Leave a one acre snag clump every 5 acres.	C,D,E,G,H

Wildlife (continued):

Snags Retention	Alternative
Shape – Groups of snags should vary in size (see above), shape (circle, oblong, etc.), orientation (vertical – parallel to slope or horizontal - across slope), and snag stocking.	C,D,E,G,H
Species – The desired species of snags in order of preference is: ponderosa pine, lodgepole pine, and white fir. However, tree species in snag clumps should be representative of the stand.	C,D,E,G,H
Size of Individuals – The size in terms of diameter at breast height should reflect the size classes present in the stand, favoring larger diameter snags where available.	C,D,E,G,H
Placement –No area greater than 10 acres should be left completely deficient of snags. Generally, snag groups should be located greater than 200' from a road. If snag groups are located within 200' of a road for visual quality, snags should be selectively marked to ensure they are not tall enough to fall on a road.	C,D,E,G,H
Older snags - Older snags (snags which existed as snags prior to the fires) and broken top trees will be protected to the extent practicable. Groups of new snags should be focused in the area around older snags where the opportunity exists. OSHA standards for providing safety from falling snags shall be adhered to. Where conflicts between logging systems, safety, and the need to retain snags exist, a wildlife biologist will be consulted.	C,D,E,G,H

Recreation:

Recreation Facility Protection – During Salvage Operations	Facility/ Unit "Pool" (* = helicopter unit)	Alternative
1. Material to be salvaged within 150 feet of the Fremont National Recreation Trail (NRT) or a developed recreation site will be directionally felled, skidded, or yarded away from the constructed feature wherever practical.	NRT – 1,6,11,12*,18,19,20,36*41,142,143,148,149, 150,169,170,171,172,173,174,175,176,216, 217,218,219,221,234,245, 249	C & G - All Units Listed at Left D – 6,12*,19,35,41,142,148, 169,175, 216,217, 234,245,249 E – All Units except 12*,36*,150, 170,176,231 H – All units except 12*,36*,231
	Fremont Pt - 174,175	C, E, G, H – All Units Listed D – 175 only
	Bunyard Crossing - 177*, 182	C & G – 177*, 182 D, E, & H – 182
	Silver Cr CG - 217	C – 217
2. Crossings of the NRT with skidding equipment will be minimized, with the optimum number of crossings being none.	NRT – 1,6,11,12*,18,19,20,36*41,142,143,148,149, 150,169,170,171,172,173,174,175,176,216, 217,218,219,221,234,245, 249	C & G - All Units Listed at Left D – 6,12*,19,35,41,142,148, 169,175, 216,217, 234,245,249 E – All Units except 12*,36*,150, 170,176,231 H – All units except 12*,36*,231
3. If crossings of the NRT are unavoidable, within practical limits, the impacted portions of trail tread will be rehabilitated.	NRT – 1,6,11,12*,18,19,20,36*41,142,143,148,149, 150,169,170,171,172,173,174,175,176,216, 217,218,219,221,234,245, 249	C & G - All Units Listed at Left D – 6,12*,19,35,41,142,148, 169,175, 216,217, 234,245,249 E – All Units except 12*,36*,150, 170,176,231 H – All units except 12*,36*,231

Recreation (continued):

Recreation Facility Protection – During Salvage Operations	Facility/ Unit "Pool" (* = helicopter unit)	Alternative
4. Use existing landings or new landings 200 feet or further away from the NRT or developed recreation sites, preferably screened from the trail by residual forest or topography, unless no practical options exist.	NRT – 1,6,11,12*,18,19,20,36*41,142,143,148,149, 150,169,170,171,172,173,174,175,176,216, 217,218,219,221,234,245, 249	C & G - All Units Listed at Left D – 6,12*,19, 35,41,142,148, 169,175, 216,217, 234,245,249 E – All Units except 12*,36*,150, 170,176,231 H – All units except 12*,36*,231
	Fremont Pt - 174,175	C, E, G, H – All Units Listed D – 175 only
	Bunyard Crossing - 177*, 182	C & G – 177*, 182 D, E, & H – 182
	Silver Cr Marsh CG - 217	C - 217
5. Areas of light project-generated slash in close proximity to trails will be lopped and scattered a minimum of 15 feet off of trail tread.	NRT – 1,6,11,12*,18,19,20,36*41,142,143,148,149, 150,169,170,171,172,173,174,175,176,216, 217,218,219,221,234,245, 249	C & G - All Units Listed at Left D – 6,12*,19, 35,41,142,148, 169,175, 216,217, 234,245,249 E – All Units except 12*,36*,150, 170,176,231 H – All units except 12*,36*,231
6. Heavy project-generated slash requiring piling in the vicinity of trails or developed recreation sites will be piled a minimum of 50 to 75 feet away from the trail, any constructed feature, or other improvements, utilizing natural visual screening wherever practical.	NRT – 1,6,11,12*,18,19,20,36*41,142,143,148,149, 150,169,170,171,172,173,174,175,176,216, 217,218,219,221,234,245, 249	C & G - All Units Listed at Left D – 6,12*,19, 35,41,142,148, 169,175, 216,217, 234,245,249 E – All Units except 12*,36*,150, 170,176,231 H – All units except 12*,36*,231
	Fremont Pt - 174,175	C, E, G, H – All Units Listed D – 175 only
	Bunyard Crossing - 177*, 182	C & G – 177*, 182 D, E, & H - 182
	Silver Cr Marsh CG - 217	C - 217
7. Pole Butte Snowmobile & Nordic Trail will be temporarily closed during project operations upon, or immediately adjacent to, the roads that comprise the route.	Pole Butte Snowmobile and Nordic Trail – 131, 132, 133, 134	C, D, E, G, H – All units listed at left

Recreation (continued):

Recreation Facility Protection – During Salvage Operations	Facility/ Unit "Pool" (* = helicopter unit)	Alternative
8. All developed recreation sites and any portions of the NRT adjacent to helicopter units and located under fly-over routes to be used for aerial log retrieval operations will be temporarily closed until such operations are completed.	NRT – 12*, 36*	C & G - 12*, 36* D – 12*
	Bunyard Crossing – 177*	C & G – 177*
9. Planting will not occur within the constructed eighteen to thirty-six inch width of the NRT tread and within 6 feet of either side of the centerline of the NRT.	NRT – 1,6,11,12*,18,19,20,36*41,142,143,148,149, 150,169,170,171,172,173,174,175,176,216, 217,218,219,221,234,245, 249	C & G - All Units Listed at Left D – 6,12*,19, 35,41,142,148, 169,175, 216,217, 234,245,249 E – All Units except 12*,36*,150, 170,176,231 H – All units except 12*,36*,231
10. Future thinning of reforested areas immediately adjacent to the trails or developed recreation sites will avoid impacting the constructed features with slash by utilizing the strategies outlined in Mitigation Measures 5 & 6 listed above.	NRT – 1,6,11,12*,18,19,20,36*41,142,143,148,149, 150,169,170,171,172,173,174,175,176,216, 217,218,219,221,234,245, 249	C & G - All Units Listed at Left D – 6,12*,19, 35,41,142,148, 169,175, 216,217, 234,245,249 E – All Units except 12*,36*,150, 170,176,231 H – All units except 12*,36*,231
	Fremont Pt - 174,175	C, E, G, H – All Units Listed D – 175 only
	Bunyard Crossing - 177*, 182	C & G – 177*, 182 D, E, & H - 182
	Silver Cr Marsh CG - 217	C - 217

Aquatics and Soils:

RHCAs (All Alternatives/All Units)

If unmapped RHCAs are discovered during layout or implementation, for example isolated seeps and springs, the same protective measures that are detailed earlier in Chapter 2, would be applied.

Roadside Hazard RHCA Units (All Alternatives)

- Individual tree marking will occur in roadside hazard units within Riparian Habitat Conservation Areas, where determined necessary to provide RHCA protection.
- Minimize line-pulling distances to limit soil disturbance and avenues of sediment transport to stream channels.
- No mechanized ground based skidding equipment allowed within the first 150 feet on Category 1 RHCAs and within 50 feet of stream channel on Category 3 & 4 RHCAs. Harvest activity will be permitted within the entire width of RHCAs by operating on existing roads.

- In order to decrease the hazard of culvert plugging, minimize the amount of slash and debris remaining on the ground immediately upstream of any culvert. Whole tree yard trees where possible, and scatter any slash away from culvert openings.

RHCA 1 – Unit Numbers 179, 217, 220, 236, 245, 261

RHCA 3 – Unit Numbers 10, 13, 15, 17, 33, 49, 52, 54, 69, 77, 88, 89, 90, 118, 123, 124, 126, 179, 182, 191, 193, 217, 220, 225, 227, 230, 236, 296, 301, 302, 303, 309, 310

RHCA 4 – Unit Numbers 29, 30, 49, 77, 84, 131, 236, 273, 274, 275, 278, 291

Soils (All Alternatives)

The guidelines in the soil productivity guide (USDA, 2000) shall be followed for the protection of soil during any project activity (See Appendix C – Mitigation Details, for the complete content of the Soil Productivity Guide).

Best Management Practices/Fremont N.F. Supplement (All Alternatives)

Best management practices (BMPs) are the primary mechanisms to enable the achievement of water quality standards (Environmental Protection Agency, 1987). BMPs have been selected and tailored for site-specific conditions. The BMPs are a supplement to the General Water Quality Best Management Practices, Pacific Northwest Region, 1988. The Practices apply to road management activities implemented through timber sale contracts, public works contracts, and forest accounts. BMPs can be found in Appendix C – Mitigation Details.

The interdisciplinary team (soil/water/fish) specialists are responsible for including the BMPs in the Environmental Assessment (EA) or Environmental Impact Statement (EIS) for purposes of implementation on the ground. The interdisciplinary team should review the marking guide and contract documents to ensure inclusion of the BMPs.

Mitigation measures shown in the BMPs shall be incorporated into the timber sale marking guide and the timber sale contract, as appropriate. Completion of environmental analyses and project implementation is the responsibility of the District Ranger. The Silviculturist should ensure inclusion of the BMPs in the marking guide and the Timber Management Assistant (TMA) in the timber sale contract. The Sale Administrator is responsible for following through with implementation of the BMPs and EA as incorporated into the timber sale contract. It is the responsibility of the pre-construction engineer to ensure inclusion of BMPs into the road survey and design package. The Engineering Representative (ER) is responsible for following through with implementation on the ground.

In both timber sale contracts and public works contracts, mitigations found in the following BMPs should be included in the contract provisions and special project specifications. It is the responsibility of the pre-construction engineer to ensure inclusion of BMPs in the public works package. The Contracting Officer's Representative (COR) is responsible for following through with implementation on the ground.

Sensitive Plants/Noxious Weeds:

Objectives/Mitigation Measures & Management Requirements	**Alternatives**
Protect TES plant populations and their habitat	
Protected *Castilleja chlorotica* habitats are to be excluded during layout from all ground disturbing activities to comply with the Conservation Strategy for *Castilleja chlorotica*.	C, D, E, G, H
Harvest Unit #166 borders **protected** *Castilleja chlorotica* habitat. Within this harvest unit, trees that could potentially reach the protected habitat will be directionally felled to avoid the *Castilleja chlorotica*. Trained Botanical personnel will monitor the unit boundary location to ensure *Castilleja chlorotica* is excluded.	C, D, E, G, H

Sensitive Plants/Noxious Weeds (continued):

Objectives/Mitigation Measures & Management Requirements	Alternatives
Harvest Units #173 and #174 border **protected** *Castilleja chlorotica* habitat. Within these harvest units, trees that could potentially reach the protected habitat will be directionally felled to avoid the *Castilleja chlorotica*. Trained botanical personnel will monitor the unit boundary to ensure *Castilleja chlorotica* is excluded.	C, E, G, H
Managed *Castilleja chlorotica* habitat falls within Harvest Units #131, #134, and #173. To minimize damage to existing plants, trained botanical personnel will monitor unit layout to ensure skid trails and landings have minimal impacts on the plants. In addition, trees within these units that could potentially reach the managed habitat when cut should be directionally felled to avoid the managed habitat area.	C, E, G, H
Managed *Castilleja chlorotica* habitat falls within Harvest Unit #172. To minimize damage to existing plants, trained botanical personnel will monitor unit layout to ensure skid trails and landings have minimal impacts on the plants. In addition, trees within this unit that could potentially reach the managed habitat when cut should be directionally felled to avoid the managed habitat area.	C, G, H
Prescribed burning in areas buffering private lands will occur in Harvest Units #131 and #134. The **managed** *Castilleja chlorotica* habitat within these harvest units will be excluded from the burn boundary. Trained botanical personnel will monitor the burn boundary to ensure managed habitat is excluded.	C, E, G, H
In Harvest Unit 134, a temporary road is proposed to border the edge or into the **managed** *Castilleja chlorotica* habitat. To ensure all *Castilleja chlorotica* plants are excluded from the proposed roadbed, trained botanical personnel will assist in the temporary road location.	C, E, G, H
In Harvest Units 134, a temporary road is proposed to border the edge of the **managed** *Castilleja chlorotica* habitat. To ensure all *Castilleja chlorotica* is excluded from the proposed roadbed, trained botanical personnel will assist the Sale Administrator in locating the temporary road.	C, E, G, H
In Harvest Units 172 and 173, there is a proposed temporary road is proposed going into the **managed** *Castilleja chlorotica* habitat. Trained botanical personnel will work with the Sale Administrator to ensure that a minimal number of plants are affected.	C, E, G, H
Harvest Units 131and 134 are subject to fuel treatment activities. Botanical personnel will mark the boundaries of the **managed** *Castilleja chlorotica* habitat within these units to ensure areas of plants are excluded from fuel treatment activities.	C, G, H
Harvest Unit #131 is subject to fuel treatments activities. Botanical personnel will mark the boundary of the **managed** *Castilleja chlorotica* habitat within the unit to ensure areas of plants are excluded from fuel treatment activities.	E
If site prep is needed within **managed** *Castilleja chlorotica* habitat within Harvest Units #131, #134, and #173, trained botanical personnel will locate each clump of *Castilleja chlorotica*. The site prep method conducted within the managed habitat will be the least invasive method, with no burning permitted.	C, E, G, H
If site prep is needed within **managed** *Castilleja chlorotica* habitat within Harvest Unit #172, trained botanical personnel will locate each clump of *Castilleja chlorotica*. The site prep method conducted within the managed habitat will be the least invasive method, with no burning permitted.	C, G, H
After surveying during the summer of 2003 for burn intensity within the **managed** *Castilleja chlorotica* habitats, the extent of damage will be determined. If a managed site does not have sagebrush remaining, then it can be assumed *Castilleja chlorotica* will vanish from the area. If some sagebrush habitat survived the fire, then *Castilleja chlorotica* can be expected to remain on the site. With the current stocking standards, no more than 40 percent canopy closure should occur. Therefore, habitat for *Castilleja chlorotica* will continue to exist. At this point, it will be assumed that Harvest Units #131, #134, and #173 have sagebrush habitat remaining. The fall before planting is scheduled to occur, trained botanical personnel will place flag pins at each clump of *Castilleja chlorotica*. This will allow the planters to avoid planting the trees directly on *Castilleja chlorotica* plants.	C, E, G, H

Sensitive Plants/Noxious Weeds (continued):

Objectives/Mitigation Measures & Management Requirements	Alternatives
After surveying during the summer of 2003 for burn intensity within the **managed** *Castilleja chlorotica* habitats, the extent of damage will be determined. If a managed site does not have sagebrush remaining, then it can be assumed *Castilleja chlorotica* will vanish from the area. If some sagebrush habitat survived the fire, then *Castilleja chlorotica* can be expected to remain on the site. With the current stocking standards, no more than 40 percent canopy closure should occur. Therefore, habitat for *Castilleja chlorotica* will continue to exist. At this point, it will be assumed that Harvest Unit #172 has sagebrush habitat remaining. The fall before planting is scheduled to occur, trained botanical personnel will place pin flags at each clump of *Castilleja chlorotica*. This will allow the planters to avoid planting the trees directly on *Castilleja chlorotica* plants.	C, G, H
If *Eriogonum umbellatum* var *glaberrimum* is added to the R6 Sensitive Species Plant List, then surveys will be completed during the summer of 2003 to determine locations. If it is found to be within the Toolbox project boundaries, mitigations will be addressed at that time.	C, D, E, G, H
Should any listed endangered, threatened, or additional sensitive plant species be found within the project boundaries during any ground disturbing activity, all activities in these areas will be halted until their effects can be determined and their significance assessed.	C, D, E, G, H
Objectives/Mitigation Measures & Management Requirements	**Alternatives**
Prevent the spread/infestation of noxious weeds	
The Invasive Plants Contract Provisions will be included into all contracts dealing with off-road equipment (harvest activities, road maintenance, road construction/decommissioning, etc.). This provision requires certification that off-road equipment is free of noxious weeds prior to the start up of operations. For more information, see the Noxious Weed section in Chapter 3.	C, D, E, G, H
If field surveys during the summer of 2003 reveal new noxious weed sites, building temporary roads through them will be prohibited until eradication of the site is achieved. Trained botanical personnel will assist with the temporary road layout to ensure the noxious weed site is excluded.	C, E, G, H
If field surveys during the summer of 2003 reveal new noxious weed sites within proposed harvest units, harvest activities should occur as early in the year as possible when the weeds are not in bloom or producing seed. Upon finding new noxious weed sites within proposed harvest units, trained botanical personnel will notify timber personnel of the discovery so appropriate action can be taken regarding proposed harvest activities	C, D, E, G, H
To ensure that landings and skid trails are not constructed on or through noxious weed sites, trained botanical personnel will provide the Sale Administrator with maps displaying the location of any known or newly discovered noxious weed sites in all units. During timber harvest no landings or skid trails are to be constructed on or through noxious weed sites, unless otherwise agreed to following consultation with the Botanist. Only one proposed salvage unit has a known site. Unit 131 (Alts. C,E,G,H) historically had Canada thistle. July 2003 monitoring indicates that it has been successfully eradicated through treatment.	C, D, E, G, H
Rock pits where material is used for road maintenance/construction containing known noxious weed sites will not be used. Currently, the three sites listed for use are noxious weed free. However, if future surveys reveal noxious weeds within these administrative areas, these sites will not be used unless otherwise agreed to following consultation with the Botanist.	C, D, E, G, H
Education/awareness is considered a central element of an overall prevention strategy. On-going training in noxious weed identification, early detection, reporting, mapping, and initial control will be continued. This has been an annual occurrence at the Silver Lake Ranger District since at least 1998. On July 29, 2003 a district-wide meeting continued this element of prevention with a presentation by the Forest Noxious Weed Coordinator and the District Botanist/Noxious Weed Coordinator, to all District employees, on noxious weed identification and prevention, including a focus on the fact that areas burned in 2002 were now prime habitat for invasive species.	A, C, D, E, G, H

Range:

Non Forested Vegetation:

Minimize loss of non-forested vegetation and ecosystem function.

Objective/Mitigation Measures and Management Requirements	Alternative
The North Zone Range Management Specialist or the Forest Soil Scientist will be involved in marking reforestation units with the following legal descriptions. These legal descriptions identify areas that include sites considered non-forested vegetation types. **T29 R13** Section 36 SE NE, SW NE, NE SE, SW SE, SW SW **T29 R14** Section 31 SW SW **T30 R13** Section 1 NE NE, NE NW, NW NW, SW NW Section 2 NE NE, SE NE, SW NE Section 12 NE NE, NW NE, SW NE Section 24 SE ME, SW SW, SE SW Section 35 NW NE, NE NE **T30 R14** Section 6 NE NW, NW NW Section 24 NW NE, SW NE, NE NW, SE NW Section 26 SW NE, NW SE, NE SE, SW SE **T30 R15** Section 8 SE SW, SW SE, SE SE Section 17 NE ¼, NW SE, NE SE Section 20 NW SE, NE SE, SW SE Section 21 S ½ Section 22 SW ¼ Section 27 NW NW, SW NW, NW SW Section 28 SE ¼, NE NW, SE NW, SW NW, NW SW, NE SW Section 33 NW ¼ **T30 R16** Section 15 NW SW, SW SW Section 20 SE SW Section 29 SE ¼, SW NE, SE NE **T31 R13** Section 12 SW SW Section 14 NE NE **T31 R14** Section 7 SW SW Section 8 NW SW Section 18 NW NW, NE NW **T31 R15** Section 2 NW ¼, NE SE, SW SW, NE SW, NW SW Section 11 NW SW	C, D, E, G and H

Scenery Resources:

These mitigation measures are designed to assure compliance with scenic quality standards outlined in the Forest Plan for Management Areas 6A (Foreground Partial Retention) and MA-6B (Maximum Modification with special guidelines).

Mitigation	Unit Numbers	Alternative
Landings may be located in the foreground-viewing zone, but toward the back of the zone as much as terrain and existing road locations allow.	26, 27, 139, 141, 148, 149, 150, 155, 161, 162, 163, 168, 181, 185, 190, 191, 192, 193, 194, 195, 204, 212, 213, 214, 215, 217, 223, 224, 236, 237	C, G, H
	All of the above except 185, 195, 204, 223, 224	D
	All of the above except 192, 194, 195, 204, 223	E
Units within MA-6A and MA-6B should utilize snag clumps to break up appearance. The clumps will be selected to insure that they are far enough from the road so as not to constitute a safety or maintenance problem.	26, 27, 139, 141, 148, 149, 150, 155, 161, 162, 163, 168, 181, 185, 190, 191, 192, 193, 194, 195, 204, 212, 213, 214, 215, 217, 223, 224, 236, 237	C, G, H
	All of the above except 185, 195, 204, 223, 224	D
	All of the above except 192, 194, 195, 204, 223	E
For units adjacent to MA-6A and MA-6B, logs should be yarded away from roads where possible, except for roadside hazard units within RHCAs.	26, 27, 139, 141, 148, 149, 150, 155, 161, 162, 163, 168, 181, 185, 190, 191, 192, 193, 194, 195, 204, 212, 213, 214, 215, 217, 223, 224, 236, 237	C, G, H
	All of the above except 185, 195, 204, 223, 224	D
	All of the above except 192, 194, 195, 204, 223	E
Slash piles should be located outside of MA-6A and MA-6B as much as possible and should be high priority for burning.	26, 27, 139, 141, 148, 149, 150, 155, 161, 162, 163, 168, 181, 185, 190, 191, 192, 193, 194, 195, 204, 212, 213, 214, 215, 217, 223, 224, 236, 237	C, G, H
	All of the above except 185, 195, 204, 223, 224	D
	All of the above except 192, 194, 195, 204, 223	E

Objective: To assure meeting Forest Plan scenic quality objectives during and following implementation.

Effectiveness: Locating landings toward the back of the foreground viewing zone as much as existing terrain allows, will minimize visual impacts from scenic corridors. Retaining snag clumps (where they do not pose a safety hazard) in roadside hazard treatment corridors breaks up the potentially objectionable "look" of long stretches of treeless landscape in the frontage zone along scenic corridors. Yarding logs away from scenic corridors will minimize the visibility of harvest activity from scenic corridors. Locating slash piles outside of MA-6A and MA-6B will minimize the visibility of harvest from scenic corridors.

Smoke Management:

Reduce smoke intrusion	Alternatives
All smoke producing operations associated with prescribed fire or activity fuels reduction will comply with the provisions of the State Implementation Plan.	Alts C, D, E, G, H / all units where prescribed fire or other burning is used

Cultural Resources:

Objectives/Mitigation Measures and Management Requirements	Alternatives
Protect Significant Cultural Resources During Commercial Timber Salvage Activities	
All significant cultural sites within or adjacent to any unit will be identified on the ground by North Zone Heritage personnel. No harvest of timber within cultural resource sites will be allowed. Trees adjacent to the site will be directionally felled away from the site location. Generally, no skidding will be allowed within cultural resource sites, except upon existing roads. Access to units through cultural resource sites upon existing classified or unclassified roads will be allowed.	C, D, E, G, H
There may be a few locations where skidding from a unit to an adjacent road may require skidding through a cultural resource site. Where there are well-established skid trails or old temporary roadbeds these may be used to skid the timber to the road. The Timber Sale Administrator will confer with the North Zone or Forest Archaeologist or Cultural Resource Technician for concurrence prior to authorizing the use of any skid trail through identified sites.	C, D, E, G, H
All temporary roads needed to access proposed units in all alternatives have been surveyed, and have been relocated, where needed, to protect significant cultural resource sites.	C, D, E, G, H
The beds of historic road routes will not be utilized as haul routes, or skid roads. These roads have been identified from historic maps and records, and are considered potentially eligible to the National Register of Historic Places. Heritage resource personnel will provide a map of these roads to the Sale Administrator. They will be protected from any activities during salvage operations.	C, D, E, G, H
Where changes in temporary road location are needed during implementation of the activity, the Sale Administrator will coordinate with the North zone or Forest Archaeologist or Cultural Resource Technician who will determine if additional inventory is necessary. The North Zone Heritage personnel or other qualified personnel will conduct an inventory of the proposed road route change, if needed. The North zone or Forest Archaeologist or Cultural Resource Technician will be coordinated with regarding any relocation prior to ground disturbing activity, and document such inventory and newly recorded sites to the Forest Archaeologist and Oregon SHPO.	C, E, G, H
Cultural Resource sites will be avoided during placement of Helicopter logging landings. The locations of these landings have been surveyed in 2002. If additional helicopter landings are needed, the Sale Administrator will coordinate with the North Zone or Forest Archaeologist or Cultural Resource Technician for agreement prior to use.	C, D, E, G
The Heritage Department will be notified by the Sale Administrator if a need for skid trails, temporary roads or landings outside of proposed units is discovered during the timber salvage operation. The North Zone or Forest Archaeologist or Cultural Resource Technician will be consulted before these locations are agreed to, prior to any ground-disturbing activity.	C, D, E, G, H
If sites are discovered during on-the-ground preparation of sale units or at any time prior to the ground disturbing activity, the North Zone Heritage department will be notified. The site will be reviewed on the ground by the North Zone or Forest Archaeologist or Cultural Resource Technician, who will develop protection measures, if needed. Once this review has been undertaken, and resources protected, project activity can proceed.	C, D, E, G, H

Cultural Resources (continued):

Objectives/Mitigation Measures and Management Requirements	Alternatives
If a site is discovered during harvest or any ground disturbing activity, all work will cease in the vicinity of the discovery. At that time, the North Zone Heritage department will be notified, and the location will be reviewed on the ground. The North Zone or Forest Archaeologist or Cultural Resource Technician will develop protection measures for these sites, if needed. Once this review has been undertaken, and resources protected, project activity can proceed.	C, E, G, H
Road reconstruction will avoid impacts to significant cultural resource sites. Where sites extend across the areas to be improved, the roadbeds will not be enlarged, or shaped, unless otherwise agreed to following consultation with the North Zone or Forest Archaeologist or Cultural Resource Technician. Cinders or other surfacing may be placed overtop of the disturbed site within the roadbed. Road reconstruction will not be undertaken where the road in question is a historic road route.	C, D, E, G, H
Protect Significant Cultural Resources During Post-Salvage, Site Preparation and Planting Activities	
If a site is discovered during post harvest ground disturbing activity, or other rehabilitation activity (slash piling, site scarification, planting), all work will cease in the vicinity of the discovery. At that time, the North Zone Heritage department will be notified, and the location will be reviewed on the ground. The North Zone or Forest Archaeologist or Cultural Resource Technician will develop protection measures and or mitigations for these sites, if needed. Once this review has been undertaken, and resources protected, project activity can proceed.	C, D, E, G, H
Slash piles will not be located immediately adjacent to un-piled slash within cultural resource sites if they are scheduled for burning. They will be located at a distance that would reasonably prevent the spread of fire into the cultural resource site during pile burning.	C, D, E, G, H
Hazard trees within significant cultural resource sites may be felled to protect the public. Such trees may be removed by hand as firewood, or other small products that could be carried to vehicles.	C, D, E, G, H
Significant cultural resource sites will be avoided during potentially ground disturbing slash treatment of plantation thinning. Sites may be avoided during thinning, leaving a thicker patch of trees on the site, or may be thinned with no slash treatment leaving heavier fuels on the site. Hand piling of slash from within the site to areas outside the site boundary may also be undertaken on cultural resource sites.	C, D, G, H
Significant cultural resource sites will be avoided during site preparation for reforestation. Sites will be left untreated unless specific circumstances dictate that fuels must be treated in order to protect public safety, or for very significant needs of other resource areas. Such situations will be rare. Such treatments will not be ground disturbing (hand piling, lop and scatter, etc.). The North Zone or Forest Archaeologist or Cultural Resource Technician will approve such treatment prior to implementation.	C, D, G, H
Significant cultural resource sites within existing plantations will not be re-planted using mechanized systems. The North Zone or Forest Archaeologist or Cultural Resource Technician on a site-by-site basis may approve hand planting using spade, "hodad", or planting bar. Scalping of the ground will not be undertaken at such planting locations. Trees will be planted at 20 by 20 foot spacing to prevent the need for future thinning and slash disposal on these sites.	C, D, G, H
Known or discovered historic peeled trees (dead or alive) will be protected during fuel treatment activities.	C, D, E, G, H
Protect Significant Cultural Resources During Prescribed Fire and Fuel Reduction Activities	
Significant sites will be avoided during prescribed fire activities (underburning, jackpot burning, pile burning). Lithic scatters and historic sites are adversely impacted by fire. Although the 2002 wildfires have burned over many of these sites, the impacts are cumulative, resulting in further degradation of the surface expression and features of these sites. Tree carvings are particularly susceptible to fire damage. Fuel reduction near sites should include measures to ensure the sites are not re-burned.	C, D, G, H
All significant sites will be avoided during construction of fire lines for prescribed fire.	C, D, G, H
Existing woody fuels within sites will not be piled using ground-disturbing methods if such activity will damage these sites. Hand piling would be allowed, but piles placed within sites will not be burned.	C, D, E, G, H

Cultural Resources (continued):

Objectives/Mitigation Measures and Management Requirements	Alternatives
Dead trees standing and down that are within significant cultural resources may be hand carried off site for firewood, or other uses to vehicles located on existing roads, or piled out side the site boundaries. These activities will be coordinated with the North Zone or Forest Archaeologist or Cultural Resource Technician.	C, D, E, G, H
In areas where high fuel loadings and high fire hazard exist within significant cultural resource sites, those fuels may be hand piled to break up continuous fuel beds, and/or removed by vehicle from roadsides within the sites. These hand piles will not be burned. These activities will be coordinated with the North Zone or Forest Archaeologist or Cultural Resource Technician.	C, D, E, G, H
Protect Significant Cultural Resources During Road Management Activities	
If an existing unclassified road or skid trail (through a significant cultural resource site, as discussed in the Timber Salvage Activity section above) is used, the road or skid trail bed will not be scarified, blocked with an earth berm, or otherwise obliterated with ground disturbing methods within the site boundary. Closures using log, brush, or slash to block or disguise the road will be utilized if needed.	C, D, E, G, H
Other closures of roads that pass through significant cultural resource sites will avoid ripping, berm construction or other ground disturbance within the boundaries of the sites. The roads may be obliterated or closed on either side of these sites, however. Closures using log, brush, or slash to block or disguise the road will be utilized if needed.	C, D, E, G, H
The beds of historic road routes will not be obliterated, though they may be closed at intersections with modern roads, or areas that have been obliterated by other activities in the past. These closure locations will be identified and or approved by the North Zone or Forest Archaeologist or Cultural Resource Technician.	C, D, E, G, H
Protect Significant Cultural Resources Soil and Riparian Protection and Restoration Projects	
Aspen thinning will avoid any historic aspen arborglyph trees. Any trees with writing on them will be avoided until they can be reviewed by the North Zone Heritage Department.	C, D, G, H
Aspen arborglyph sites with surviving arborglyph trees may have fuels piled and burned, as long as such activity does not impact the arborglyphs or the health of the surviving aspen on which the arborglyph lies.	C, D, G, H
Aspen arborglyph sites that have had all historic arborglyphs destroyed by the 2002 fires will no longer be managed as cultural resource sites. These sites may be harvested of salvageable timber, and replanted to aspen. Inspection and determination of the impacts to these sites will take place in summer of 2003.	All alternatives
Significant cultural resource sites that are susceptible to ground disturbance will be avoided during aspen and willow plantings. Planting may occur in aspen arborglyph sites with approval of the North Zone or Forest Archaeologist or Cultural Resource Technician. Generally, most other cultural resource sites lie outside the potential project impact zones of aspen and willow planting.	C, D, G, H
Road 2917431 improvement location will be surveyed in 2003. Any sites located at the project area will be avoided, or further mitigation will be required. Such mitigations will be developed by the North Zone or Forest Archaeologist or Cultural Resource Technician in conjunction with the Forest Archaeologist and approved under the auspices of the State Historic Preservation Officer.	C, D, G, H
One carving of initials and a date on a ponderosa pine was previously located along the West Fork of Silver Creek. The fire has destroyed the tree carving and will no longer be managed as a site. This is not within any proposed harvest units. It is within a RHCA.	All alternatives

Monitoring

Project-specific monitoring assesses how well the project design and mitigation measures protect the natural resources and their beneficial uses. The Toolbox Fire Recovery Project monitoring plan is tiered to and developed from the recommendations in the Fremont National Forest Land and Resource Management Plan (Forest Plan) (1989). Generally, the effects to be measured correspond to those described and listed in the mitigation and resource protection measures tables listed above.

While Forest Plan monitoring does not necessarily assess all aspects of individual projects, some aspects of this proposal, if implemented, would be included under various Forest Plan Monitoring items, along with other similar activities on the Forest. The Forest prepares an annual Monitoring and Evaluation Report to document the results.

Project Monitoring

This project monitoring will be followed if Alternative C, D, E, G, or H is selected. The plan focuses primarily on "implementation monitoring" to assure the alternatives and mitigations are implemented on the ground as designed and achieve the desired results. More importantly, it is designed wherever possible to catch and assess problems before or when they occur so corrective actions can be taken. As such, it is also a quality control / quality assurance plan.

By its nature, implementation monitoring, to be effective, requires an adaptive approach to management. That means when undesirable or unexpected results or conditions are identified through monitoring, the project will be assessed and altered as needed to meet the intent of the mitigation or proposed activity. This is explicitly described in some activities (1.e. if new heritage sites or sensitive plants are identified, unit boundaries or treatment types will be modified as necessary to protect the resource) but is also implicit for the project as a whole. If or when these situations arise, project adjustments will be made on the basis of the desired and predicted outcomes discussed in this DEIS.

Several monitoring items are intended to measure and evaluate the effectiveness of specific practices proposed in these alternatives. This effectiveness monitoring provides useful information to determine whether these practices should be use, or modified for use in the future.

This monitoring is discussed in two parts. The first briefly introduces established monitoring and quality control procedures used in project development, design, contract preparation, and project administration. This is only summarized here, as much of this is required procedure and further requirements are documented in Forest Service Manuals and Handbooks. The second monitoring section describes the project specific items to be monitored. As mentioned above, the mitigation measures to be monitored are listed in Chapter 2. While most of the project is monitored through standard procedures and established practices described above, special additional monitoring items are described where appropriate.

Appendix C contains the selected Best Management Practices for this project. These describe the prescribed practice and also identify its expected effectiveness.

Implementation Monitoring Plan

Project implementation generally involves the efforts of a variety of individuals with both specialized and general skills and training. Employees are accustomed to working together to achieve the desired project objectives. For example, it is common for a contract preparation forester or contract administrator to discuss, on a regular basis, specific ground or project conditions with the wildlife biologist or hydrologist to apply the best practices on the ground. Joint field reviews are conducted as needed. These steady informal communications allow for incremental project adjustment throughout implementation to achieve the desired results. In addition to these less formal monitoring procedures, the following quality control and monitoring procedures take place.

Planning, Design, Contracts, and Project Administration

A series of quality controls are standard Forest Service or Fremont-Winema National Forests procedure and are built into the process. Initial monitoring commences during the NEPA process when the Interdisciplinary Team (ID Team) uses site-specific information, local knowledge, and resource issues in order to develop viable alternatives. Each specialist identifies specific mitigation measures for their individual resource concern and develops specific monitoring plans as needed so assure protection objectives are met. The ID Team reviews each mitigation and monitoring Plan. If Alternative C, D, E, G, or H is selected, the Record of Decision would select and incorporate the final mitigation measures and monitoring plans into the final decision.

The Core ID Team reviews the mitigations and the monitoring plans with the Implementation team. Overall resource concerns and site-specific mitigation measures are identified and explained for each resource.

The implementation personnel initiate project layout. During the layout process, resource specialists and layout personnel continually coordinate in order to find practical solutions for implementation. For example, if layout personnel identify an area of high mortality burn within a treatment area mapped as low mortality, the resource specialists would help identify the appropriate prescription and mitigations to be applied based on the intent of the Record of Decision and the Final EIS. The adjustments would be documented and tracked.

The field data and the final mitigation measures are incorporated into a formal contract. Specialists, the appropriate Line Officer, and the Contracting Officer review the contract prior to award. Signatures are required by all.

After award, but prior to commencement of work, a pre-operations meeting is conducted between the Forest Service, the Contractor, and sub-contractors. All mitigations (now contract provisions) and their objectives are reviewed and the intent of the EIS and Record of Decision is explained.

Individuals are identified in writing and assigned a specific delegation of authority as part of the project or contract administration team. These individuals conduct the daily operations of project monitoring and administration in the field. Contract administration is done frequently and regularly to ensure that contract clauses are adhered to and effective in adequately protecting the resources.

Resource specialists are encouraged to be engaged during implementation. They are required to be involved when questions arise that are specific to their resource. Specialists coordinate with the contract inspectors and provide the Contracting Officer with practical solutions to any problems encountered. The Contracting Officer is responsible for making final determinations that comply with the Record of Decision and in the best interest of the government.

Upon completion of the project, additional monitoring trips are coordinated with the Forest Plan Monitoring Program. This program reviews and evaluates how effectively the project complies with Forest Plan direction, objectives, and standards, as well as project specific objectives.

Project Specific Implementation Monitoring

Fire and Fuels Monitoring

The fuels program does not plan any additional monitoring for this project. The current plan for monitoring would remain the same as for the Silver Lake Ranger District prescribed fire program. This consists of a planer intersect method of fuels data collection for determining fuel loading, and visual surveys using common photo series. The process involves selecting some representative areas and conducting the surveys. Depending on the size of the area, usually one planer interest plot per 20 to 30 acres is sufficient to provide the data requirements needed for smaller units. In larger units, larger representative stands are selected. Using a photo series for interpreting data is less intensive and more area can be covered in less time. Some plots may also consist of photographs for comparative purposes. Pre- and post-activity monitoring is the normal pattern of operation.

Fisheries Monitoring

Concern for the effects of the fire and the Toolbox Fire Recovery Project on aquatic habitat will focus on the risk of accelerated erosion from the burned slopes, roads, and harvest units adjacent to Silver Creek, West Fork Silver Creek, North Fork Silver Creek, and Guyer Creek, recovery of riparian vegetation, and potential increased sediment effects on aquatic macroinvertebrates. The potential for increased inputs of fine sediment could adversely affect downstream aquatic life. The specific areas of concern lie within the Silver Fire portion of the Toolbox Complex Fire. The combination of moderate to very high mortality burn in riparian areas increases the risk that heavy precipitation or spring runoff may induce stream bank sloughing, gullying or mass movement of soil into the streams.

In order to determine if potential adverse impacts to riparian and aquatic habitats on fish bearing streams resulting from the Toolbox Complex Fire, the North Zone Fisheries Program of the Fremont National Forest proposes the following monitoring program to document any potential changes in key physical and biological watershed indicators.

Aquatic Macroinvertebrates

The primary emphasis for sampling aquatic macroinvertebrates will be to monitor changes in redband trout prey abundance and composition and to use this as an indicator for changes in fine sediments. Sampling will consist of three representative riffle habitats per fish-bearing stream using a Surber sampler with a 500 micron net enclosing an area of 0.3 square meters. Within each riffle, three samples will be collected and combined for a total estimated sampling area of 0.3 square meters. Samples will be obtained from riffles adjacent to redband trout spawning habitat, preserved in 80 percent ethanol, and shipped to a contracted laboratory for analysis. Sampling will occur in 2003, 2005 and 2008.

Data analysis of samples will require use of a Rapid Bioassessment Protocol that uses a variety of metrics used to describe stream condition and the structure of the aquatic macroinvertebrate community. Calculated metrics will be those most likely to detect change in habitat quality. These metrics will include richness measures, composition measures, tolerance/intolerance measures, and feeding measures.

Riparian vegetation

The response and recovery of riparian vegetation to different levels of burn intensity will be monitored. Photo points and transects will be established on each fish bearing stream. Attempts will be made to locate at least one photo point/transect in each type of burn intensity per stream, if applicable, with two to three sites per stream. The South Central Oregon riparian field guide will be used to identify plants and ecological type. The photo monitoring will be used to determine the progression of functional interactions between riparian vegetation and stream channels.

Riparian area and stream channel interactions combine to provide habitat for a wide variety of species. Streams and the associated riparian areas interact to create complex and diverse aquatic habitats used by fish, amphibians, and aquatic macroinvertebrates. The direct functional interactions between stream channels and the riparian area include:

- Recruitment of large organic debris such as snags and fallen trees into the stream channel.
- The addition on nutrients and organic matter such as leaf litter and insect fall into the stream channel.
- Stabilization of streambanks and streambed substrates, which in turn controls bedload movement.
- Modification of microclimates such as light/shade, temperature, and humidity.
- Control of flow of water, sediments, and nutrients from upland areas into the stream channel.

The riparian area provides an important physical stability to streams. Instream large organic debris acts to reduce water velocities and increase the hydraulic complexity of streams by forming a sequence of pools and riffles. The soil binding properties of root systems also reduces bank erosion thus maintaining bank stability and preventing sedimentation in the system. Riparian areas generate a large proportion of the food and prey items, which are important for fish. Aquatic macroinvertebrates, algae, terrestrial insects, leaves, and other organic materials are important food sources for fish and provide nutrients and mineral input to the stream.

Range Compliance Checks and Monitoring

To ensure management direction as outlined in the Annual Operating Instructions (AOI) is followed, range management staff conducts use supervision throughout the grazing season. This supervision allows for verification that the instructions are being adhered to. Allotment resource condition monitoring takes place throughout the grazing season. This day-to-day monitoring allows for adjustments to the instructions, if necessary, as a response to a change in resource conditions. End of season monitoring is completed on allotments as a measure of compliance with the allowable forage use standards set and is also an indicator of successful management. Use supervision, resource condition and end of season monitoring will be conducted on the allotments/pastures included in the analysis area at the end of the 2003 grazing season.

Recreation Monitoring

Monitoring of the developed recreation sites and the portion of the Fremont National Recreation Trail within the Toolbox Fire Recovery Project Area to track the short and long-term effects of the project activities and associated mitigation measures on these recreation resources will be accomplished by the following methods:

- Periodic condition review of developed facilities and the NRT corridor by Forest Recreation/Trail Coordination Staff.

- Regular inspection and upward reporting of site/trail and surrounding area conditions by District maintenance crews.
- Forest and Ranger District follow-up of recreation visitor comments or concerns related to project-related conditions.

Sensitive Plant Monitoring

In an attempt to keep noxious weeds out of the bulldozer lines in and adjacent to *Castilleja chlorotica* habitat, the bulldozer lines will be monitored minimally once a year for three to five years.

Trained botanical personnel will monitor the unit boundaries to ensure *Castilleja chlorotica* is excluded.

Trained botanical personnel will monitor unit layout to ensure skid trails and landings avoid *Castilleja chlorotica* plants, to the extent possible.

The project area will be monitored for appearance of *Iliamna bakeri* and sites will be protected if they are discovered.

In the Winter Rim and Foster Butte Allotments, *Castilleja chlorotica* will be monitored to ensure the cattle are not overgrazing the plants.

Noxious Weed Monitoring

Noxious weed monitoring is an on-going element of the overall Noxious Weed management program on the Silver Lake Ranger District. In light of well documented potential for invasives to spread within the project area, regardless of which alternative is chosen, monitoring that will occur under that on-going program will sharply focus of the project area for the next several years. The fire created suitable habitat for weeds. Weed seeds are readily dispersed by wind, vehicles, and animals. Additionally, as described in the cumulative effects section, fire suppression activities may have introduced noxious weeds to the area, and ground-disturbing activities on adjacent land ownerships may increase weed spread in the area. Monitoring will focus not only on the areas where ground disturbing activity such as salvage harvest, fuels treatment or prescribed fire are proposed, but on timber haul routes as well. The District Botanist implements the monitoring program.

On federal lands, all noxious weed sites within and adjacent to the Toolbox project boundaries have been given top priority for treatment in 2003 and 2004. Gravel pits designated for use in road maintenance/construction for the Toolbox project have been surveyed and are currently weed free. The number of sites and locations of noxious weeds on industrial or non-industrial forestlands are unknown. The Canada thistle site in Harvest Unit #131 and any new sites discovered in or near units during monitoring and unit layout would receive priority for treatment in 2003 and 2004 in an attempt to eradicate the sites before harvest and other ground disturbing activities occur.

Soils monitoring

For prudent assessment, the area along the rocky draws in treatment units 130, 131, 134, and 138 of lodgepole pine forest in Case 7 will be visited by a soil scientist. With a slight, (14 percent) probability of treatment sediment in Case 7, the rocky draws in treatment units 130, 131, 134, and 138 will be monitored to check timely recovery.

Watershed Monitoring

Sediment sampling at existing and several new locations will be completed in the fall of each year for the next 5 years. The new locations will include the primary intermittent streams: East Duncan Creek, Duncan Creek, and Benny Creek. There will be five samples taken at each site. The sample will be dried, sieved, and weighed.

Riparian vegetation response will be monitored on perennial streams to verify where any deciduous planting will be necessary. Riparian vegetation response on intermittent streams will be monitored to ensure recovery. The monitoring will consist of walking the perennial streams and noting areas that lack riparian vegetation recovery, locate the sites with a Global Positioning System (GPS) device, and planting the site with native riparian plants.

During harvest within RHCA 1 and flowing RHCA 4 areas, the adjacent stream will be ocularly monitored for increases in turbidity.

Temperature monitoring will continue throughout the analysis area and will not be augmented as a result of the project.

Effectiveness of road closures and decommissioning will be monitored through photo point analysis. The monitoring will focus on the recovery of ground cover of the treated road, evidence of surface erosion, and effective drainage of treated roads.

Monitor Units 130, 131, 134, and 138 for sedimentation if they are treated through the activity.

Bank stability of Willow Creek (Lower Duncan Creek subwatershed) will be evaluated in 2003.

Wildlife Monitoring

Monitoring began in 2003 to monitor the effectiveness of salvage logging prescriptions designed to maintain habitat for sensitive woodpeckers including black-backed woodpeckers, Lewis' woodpeckers, and white-headed woodpeckers. Surveys will include nest searching and monitoring within some of the areas identified as suitable habitat for black-backed woodpeckers and Lewis' woodpeckers as described in the Existing Condition Section of this report, and vegetation sampling. See Appendix D for more information on this study. The objectives of the study are:

1. To determine the nest occurrences and reproductive success of black-backed, white-headed, and Lewis' woodpecker within predicted "suitable" and random sites within the Toolbox and Silver Fires.

2. To determine the effectiveness of the salvage logging prescriptions designed to provide habitat for sensitive woodpecker species in the Toolbox and Silver Fires compared to traditional methods of snag retention in post fire conditions on the Fremont National Forest.

3. To determine habitat characteristics at multiple spatial scales associated with nest sites of sensitive woodpecker species and to compare those habitat characteristics with random sites to determine habitat preferences.

4. To conduct an accuracy assessment of the vegetation mortality mapped by aerial photos with that recorded at ground locations by cover type and crown closure.

5. Determine if vegetation mortality and fire severity are important for nest site selection by woodpeckers.

Results from this study will help managers evaluate the effectiveness of varying salvage logging prescriptions for maintaining habitat for sensitive woodpecker species. Results will also help in assessing the ecological trade-offs associated with salvage logging, such as potential conflicts among sensitive species of woodpeckers and the removal of commercial material. Information from existing studies and from this proposed work will be used for evaluating salvage logging projects through National Environmental Policy Act (NEPA) analyses, appeals and litigation, sub-basin reviews, watershed analyses, forest plan revisions, long-term monitoring strategies, and consultations, including recovery plans, and biological assessments, evaluations, and opinions. Thus, by addressing the ecological consequences of various levels of salvage logging, this study will provide crucial information for planning and implementing salvage logging projects in ponderosa pine forests of the Interior West.

Net Civil Rights Impact

As a whole, the activities proposed to implement the Toolbox Fire Recovery Project EIS are not expected to adversely affect any individual's civil rights (religion, race, color, national origin, age, gender, disability, marital status, sexual orientation, or political beliefs). The proposed activities may have a beneficial impact with regards to enhanced wildlife populations for hunting, and economic opportunities including direct, indirect, and service-related jobs associated with the activities of the project.

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Appendix One
Legislation, Regulations, and Authorities

Civil Rights and Environmental Justice

- **Civil Rights Act of 1964 -** provides for nondiscrimination in Voting, Public Accommodations, Public Facilities, Public Education, Federally Assisted Programs, and Equal Employment Opportunity. It established the Commission On Civil Rights (investigators); provided intervention and removal authority for the Attorney General in Civil Rights Cases; and established a Community Relations Service under the Department of Commerce to provide assistance to persons or communities requiring help with civil rights problems where discriminatory practices impair constitutional rights or affect interstate commerce. The Service is authorized to cooperate with both public and private agencies either on its own initiative or upon request from local officials or interested persons in situations where disputes threaten peaceful relations among the citizens of a community. This law also gives a right to injury trial in criminal contempt cases arising out of Titles II, III, IV, V, VI and VII.

- **Title VI** of the **Civil Rights Act of 1964 -** Nondiscrimination in Federally Assisted Programs, as amended, (42 U.S.C. 2000d through 2000d-6), prohibits discrimination based on race, color, or national origin. It covers all forms of Federal aid except contracts of insurance and guaranty. It does not cover employment, except where employment practices result in discrimination against program beneficiaries or where the purpose of the Federal assistance is to provide employment.

- **The Architectural Barriers Act of 1968, 42 U.S.C. 4157,** requires public buildings constructed, altered, leased or financed with Federal funds to be accessible to individuals with disabilities.

- **Section 501** of the **Rehabilitation Act of 1973,** requires Federal agencies to develop and implement annual affirmative action plans for the hiring, placement, and advancement of individuals with disabilities and submit them to EEOC. (This was expanded by the Vietnam Era Readjustment Assistance Act of 1974 to include separate actions for disabled veterans.) Affirmative action plans for veterans with disabilities are submitted to OPM.

- **Section 502** of the **Rehabilitation Act of 1973,** as amended, prohibits discrimination based on physical and mental disability and requires employers to make reasonable accommodations for individuals with disabilities. It establishes the Architectural and Transportation Barriers Compliance Board and provides for removal of architectural and transportation barriers.

- **Section 504** of the **Rehabilitation Act of 1973,** as amended (29 U.S.C 794), prohibits discrimination based on physical and mental disability in Federally- Assisted programs, not only in employment but in the provision of services (education, building accessibility, provision of health services, etc.)

- **American Indian Religious Freedom Act (PL 95-341),** dated **August 11, 1978.** This Act establishes policy to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian, Eskimo, Aleut, and Native Hawaiians, including but not limited to, access to sites, use of possessions of sacred objects and the freedom to worship through ceremonials and traditional rites. In addition this Act requires specific sections in environmental impact statements addressing the involvement of traditional Indian lands.

- **Small Business Investment Act, (PL 95-507),** passed on **October 24, 1978.** Section 211 of this Act authorizes each Federal agency to provide appropriate incentives within negotiated contracts in order to encourage subcontracting opportunities with small business firms and minority-owned business.

- **Americans with Disabilities Act of 1990** (42 U.S.C., 12101 Public Law 101-336), prohibits discrimination on the basis of disability in public employment, public accommodations, transportation, state and local government services, and telecommunications. Congress also legislated an annual tax credit of 5,000 "for the purpose of enabling…eligible small business to comply with applicable requirements."

- **Native American Graves Protection and Repatriation Act of 1990 (P.L. 101-601).** This act provides for the protection of Native American graves and establishes ownership, claim, museum, inventory, repatriation regulations and policy.

This Act, along with the American Indian Religious Freedom Act, adds special sections in environmental impact statements involving traditional Indian lands.

- **Executive Order 12898, Federal Actions to address Environmental Justice in Minority Populations and low Income Populations, dated February 11, 1994**. The purpose of the order is to ensure that the Forest Service conducts its programs policies and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs policies, and activities, because of their race, color, or national origin. This regulation strengthens or heightens the Forest service focus on the impacts of our programs based on economic or minority status and requires the Agency to use this information to determine whether our programs, policies and activities have disproportionately high and adverse human health or environmental effects on minority and low income populations.

Agreements Specific to The Klamath Tribes

Memorandum of Agreement, The Klamath Tribes and U.S. Forest Service, dated **February 19, 1999** – The intent of this Memorandum of Agreement is to establish policies and procedures that implement a government-to-government consultation process between the two parties. The objective of the parties is to clarify, define, and implement the government-to-government consultation process between and USDA Forest Service on behalf of the United States, and the Klamath Tribes, regarding the resources which Tribal members have utilized and provided stewardship for since time immemorial. This agreement **(1)** establishes a formal consultation process for agency and Tribal officials and their staffs, **(2)** details a working protocol for initial contact with The Tribes at the Forest and Districts levels, **(3)** establishes quarterly meetings for communicating natural resource information, **(4)** creates a process for the Forest Service to receive and review proposals brought forward by The Tribes, **(5)** provides a process for gathering firewood to be administered by The Tribes and coordinated with the Forest Service, **(6)** provides a system for maintaining cultural camps that are used for youth education and to perpetuate Tribal cultural activities, **(7)** creates timelines for Tribal involvement in agency planning efforts, **(8)** provides a mechanism for developing educational materials about treaty rights and Tribal priorities, **(9)** provides for policy issues to be elevated to the Regional Forester for discussion, if questions are unresolved at the Forest level, or where agency policy is directed from sources in Washington, D.C., **(10)** maintains that the actions are consistent with existing laws and regulations.

Appendix Two
Scoping

United States Department of Agriculture

Fremont-Winema National Forests

Silver Lake Ranger District

65600 Highway 31
P.O. Box 129
Silver Lake, OR 97638
541-576-2107

File Code: 1950 Toolbox Fire Recovery Project
Date: November 12, 2002

REQUEST FOR PUBLIC COMMENT

Please find enclosed a proposed action for the Toolbox Fire Recovery Project. This proposed project resulted from the need to begin recovery of lands burned by the 85,000-acre Toolbox Fire Complex, which was ignited by lightning on July 12, 2002. The proposed action is simply an alternative developed early in the NEPA planning process based on the best information available at the time. It is the first alternative offered and offers one means to accomplish stated purposes, needs and goals. We will use it to identify issues and develop other alternatives for further study that also accomplish stated purpose and need.

I am asking for your comments or concerns about this proposal. Public involvement is an important element in properly scoping issues, determining how to best manage the resources, and fully analyzing environmental effects.

Project Title: Toolbox Fire Recovery Project

Project Description: The proposal is designed to assist the recovery of areas burned in 2002 by the Toolbox Complex Fires (includes Toolbox Fire, Silver Fire and small portion of Winter Fire). The proposed project would include salvage of burned timber, implementation of re-forestation and other projects to alleviate the potential for future damage to riparian and aquatic resources as a result of the Toolbox Complex Fires.

Location: The 48,000 acre project area is located on the Silver Lake Ranger District, centered approximately 13 miles south of Silver Lake, Oregon within: T 29 S, R 13-16 E, T 30 S, R 13-16 E and T 31 S, R 13-15 E, Willamette Meridian.

For further information, contact Rick Elston, Silver Lake Ranger District, P.O. Box 129, Silver Lake, OR 97638; Phone: (541) 576-7569; E-mail relston@fs.fed.us. Send written comments to Carolyn Wisdom, Silver Lake District Ranger, P.O. Box 129, Silver Lake, OR 97638

Scoping is ongoing throughout the analysis process; however, to facilitate the analysis it would be helpful to have your comments or concerns on this proposed action, by December 16, 2002.

Sincerely,

/s/ Carolyn Wisdom

CAROLYN A. WISDOM
District Ranger

Enclosure

United States Department of Agriculture

Fremont-Winema National Forests

Silver Lake Ranger District

65600 Highway 31
P.O. Box 129
Silver Lake, OR 97638
541-576-2107

File Code: 1950
Date: April 9, 2003

Dear Community Member:

The Silver Lake Ranger District of the Fremont-Winema National Forests is analyzing a proposal to restore federal lands that burned on the District in last year's Toolbox and Silver wildfires (see attached map). This proposal is called the Toolbox Fire Recovery project and is being analyzed in a federal environmental impact statement (EIS).

The EIS will discuss the environmental and social effects likely to result from the Toolbox project, so that the public is informed and the Forest Supervisor considers these effects before deciding to proceed with the project. When evaluating proposed Forest Service projects we conduct what is known as a civil rights impact analysis (CRIA). This analysis considers how our project might affect the interests of historically underserved communities, such as ethnic or cultural minority populations, so we can find ways to reduce adverse impacts the project might have on those populations, or identify positive effects.

You are receiving this letter because you are a member of an underserved community (or you are a contact person for such a community) that in the past may not have been reached with information about these kinds of federal land management proposals. **We are interested in any comments or concerns you might have!**

The actions proposed in the Toolbox project include restoration activities such as planting conifers and aspens, closing roads, and recovering the commercial value of fire-killed trees through salvage harvesting. This information could be of interest or concern to you because of its effects on your economic or recreational opportunities, or those of your clients. For example, if you or people you know use Forest Service lands near Silver Lake for hunting, camping, fishing or gathering mushrooms or pine cones, you might be interested in how the Toolbox project would affect these activities. Or, if you or people you know work in forest-related industries such as logging, mill work, or tree planting, you might be interested in the economic effects of this project.

Your name has been added to the mailing list for this project, which means you will receive updates, notices of upcoming public workshops about the project, and copies of the draft and final environmental impact statements when they are published. There is a formal 45-day public comment period between the draft and final EIS. I encourage you to provide any thoughts you might have on the Toolbox project that you think we need to consider to improve the project.

We expect to publish the draft EIS toward the end of the summer, which will begin the formal comment period. In the meantime, if you have any questions or thoughts about the proposed Toolbox project, feel free to contact project team leader Rick Elston at (541) 576-7569 or send your written comments or questions to Rick Elston, care of the Silver Lake Ranger District, P.O. Box 129, Silver Lake, OR 97638. Or, if you **don't** want us cluttering up your mailbox with this information, feel free to let us know that as well. You can contact us at the phone number or address in the previous sentence and we will remove your name from our mailing list.

Sincerely,

/S/ *Carolyn A Wisdom*
CAROLYN A. WISDOM
District Ranger

Enclosure