

# ECONOMIC IMPACT ASSESSMENT

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## Introduction

This analysis will address the issues of economic impact of the various alternatives in the short term. Economic impact analysis is, in some ways, similar to social impact analysis. However, it focuses on jobs, employee compensation and other economic effects upon the people, primarily during the period that project activities are underway. Economic impact is not part of the present net value analysis. Rather it is one of the many subjective values that are considered in determining which alternative has the best net public benefit.

While the analysis strives to estimate impacts in as realistic a way as possible, there is little likelihood that a detailed post-project analysis would prove these estimates to be particularly accurate. This is due to the necessity of dealing with many possible variables in the economy by making realistic assumptions. The issue of absolute accuracy does not affect the utility of this analysis in the comparison of alternatives. The alternatives are all analyzed in an identical manner using identical assumptions. Thus, the relative economic impacts of the various alternatives can be accurately described and used in formulating the decision.

The key issue related to economic impact was raised during scoping as the desire for local jobs and income.

## Analysis

**Background.** Economic Impact is a concern in the Toolbox Salvage project. This concern can be expressed in the number of jobs estimated to be supported in the local area by the various alternatives. The main economic driver in this project is the production of timber. Thus, this analysis will focus on the number of timber-related jobs supported under the different alternatives. Other restoration activities also contribute to economic activity. It is difficult to estimate job impacts for this kind of work, so an estimate of the total expenditures to accomplish this work will be used as an indicator of the level of associated economic activity. The type of analysis used here will not produce extremely accurate job numbers, however the numbers will be close to reality and will be most useful in comparing the relative impact of the alternatives.

**Timber Sale Impacts.** Background for the process used here is included in Appendix A. The calculations are displayed in Appendix B. The estimated direct and total jobs supported by the various alternatives are as follows:

**Table 1 - Economic Impact of Timber Sale Activities**

ALTERNATIVE	DIRECT JOBS	TOTAL JOBS
<b>A – No Action</b>	0	0
<b>C</b>	550	825
<b>D</b>	253	379
<b>E</b>	495	744
<b>G</b>	549	824
<b>H</b>	479	718

Direct jobs are those that are directly related to the activity in question. For timber harvest this involves the jobs associated with logging and milling.

The calculation of direct jobs is based upon state-wide estimates of log consumption by industry and employment for 1998. The calculations are displayed in Appendix B.

Total jobs are the sum of direct, indirect and induced jobs. Indirect jobs are jobs that are closely related to the item that generates the direct impact, but don't deal with initial processing. This may, for example, include lumber haul (which deals with lumber rather than logs), purchases made by the mill to keep it operating and so on. Induced jobs are those that are

one step farther removed. These impacts are associated with expenditures made by the people that benefit from the direct and indirect activities. These would include services (grocery stores, gas stations, phone, electricity etc), retail and wholesale trade and anything manufactured or processed that these people might buy.

The number of total jobs is determined by expanding the number of direct jobs by a multiplier. Multipliers can be determined in economic base studies and are generally quite similar in certain kinds of economies. The multiplier of 1.5, used here, is typical of rural Oregon communities. Higher multipliers are indicative of more broad-based economies where more of the indirect and induced jobs occur within the local area. In the case of rural areas, like Lake County, many indirect and induced purchases, like parts for equipment, come from outside the area so their manufacture generates jobs elsewhere.

The estimates of jobs supported by the various alternatives, as noted above, reflect jobs across the state of Oregon and not just the local area. The direct jobs that might actually get filled by local workers is limited by the available local workforce rather than by the activity generated by these potential timber sales. In 2001, Lake County was home to 8 logging firms with a total of fewer than 30 employees (April 15, 2003: Steve Williams, Regional Economist, Workforce and Economic Research, Oregon Employment Department – Personal Communication). The sawmill in Lake County is limited to purchasing timber from within the Federal Sustained Yield Unit and is not eligible to process the timber from the Toolbox area. That mill is likely to have some timber harvest activities underway at the same time as the activities in the Toolbox area, so many of the local workers would already be employed. In April of 2003, for example, there were a total of 7 fallers and 5 logging tractor operators looking for work in the entire area encompassing Fort Rock, Christmas Valley, Silver Lake, Summer Lake, Paisley, Lakeview, Bly, and LaPine. In 13 other logging occupations, there were no individuals looking for work in this area (April 15, 2003: Steve Williams, Regional Economist, Workforce and Economic Research, Oregon Employment Department – Personal Communication). Thus, it is reasonable to conclude that none of the sawmill workers will come from Lake County and the immediate area around Silver Lake. Further, it is reasonable to conclude that all local individuals that are qualified in logging occupations and able to work will be working during the period these potential sales would be active.

Since there are not enough local workers to perform the direct work associated with harvesting and hauling the timber, purchasers will need to bring workers into the area from other communities. Most log truck drivers are likely to come from locations near the mill where the logs are processed. Thus, they can be expected to live outside the Silver Lake area during timber sale activities. Woods workers, on the other hand, are likely to want to stay near the operations. In some cases these workers may bring their families with them during the period in which timber is being harvested. This will benefit the local economy through local sales of products and services. Restaurants, motels, RV parks and other accommodations, grocery stores, gas stations and related firms in the area are likely to see a significant rise in business and will probably hire more, relatively low paid workers, to serve this business.

According to Steve Williams, Regional Economist, Workforce and Economic Research, Oregon Employment Department:

“The local economy of Lake County could use a boost. News from the area has not been great lately with the Warner Creek Correctional Facility being put on the waiting list, and potential projects such as the enlarging of the Safeway in Lakeview also on hold. The most current data available shows that the county is performing somewhat better than a year ago, with 60 additional jobs in February 2003 compared to February 2002. These jobs are primarily in services and trade, transportation, and utilities. The unemployment rate is still very high at 14 percent in February, and was 9.3 percent on average for all of 2002. The county saw no net job growth in 2002, as its population dropped by 50 people or 0.7 percent.” (April 15, 2003: Steve Williams, Regional Economist, Workforce and Economic Research, Oregon Employment Department – Personal Communication).

The economic impact of these potential timber sales will benefit local woods workers as well as local retail and service businesses. That impact will, however, be limited to the period during which logging operations are active. That period is expected to be one year although some work may go on for up to two years. There are no reasonably foreseeable activities that would continue a significant economic stimulus beyond this period although some stimulus would be expected from the other activities listed below. The duration of these economic stimuli is not sufficient to induce local businesses to expand their facilities or commit to long-term employment. Thus, the impacts of these potential timber sales will be important in the short term, but not of great importance to the long-term economic stability of the area.

**Local Impacts of Logging and Other Activities.** There are a number of activities that will be undertaken in this project beyond the timber harvest activities. Typically, contractors will be hired to perform this work. These activities along with

their estimated costs are displayed in the following table. These cost estimates include the cost of Forest Service contract administration and monitoring as well as contract costs. The same costs are reflected in the economic efficiency analysis presented in a separate report. Details about these projects are provided in various specialist reports in the project record.

**Table 2 - Economic Impact of Other Activities**

Activity	Years of Activity	Estimated Total Cost By Alternative					
		Alt. A	Alt. C	Alt. D	Alt. E	Alt. G	Alt. H
Aquatic Habitat Restoration	2	-	\$26,840	\$26,840	\$26,840	\$26,840	\$26,840
Road Reconstruction	1	-	\$108,400	\$60,100	\$108,400	\$108,400	\$108,400
Pre-Commercial Thinning	1-2	-	\$287,820	\$287,820	-	\$287,820	\$287,820
Fuels Treatment	1-2		\$1,721,000	\$954,000	\$1,129,000	\$3,027,000	\$1,524,000
Reforestation	1-6	-	\$8,318,000	\$8,891,000	\$8,183,000	\$8,096,000	\$8,136,000
Prescribed Fire	3		\$357,000	\$245,000	-	\$357,000	\$245,000
Riparian Planting	1	-	\$158,400	\$158,400	-	\$158,400	\$158,400
Aspen Enhancement	2 - 4	-	\$103,500	\$103,500	-	\$103,500	\$103,500
Road Decommissioning	6	-	\$48,000	\$50,000	\$10,000	\$50,000	\$50,000
Road Closure	6	-	\$27,000	\$28,000	\$25,000	\$4,000	\$27,000
Road 2917413 Improvement	1	-	\$1,821	\$1,821	-	\$1,821	\$1,821
<b>TOTAL</b>			\$11,158,000	\$10,806,000	\$9,842,000	\$12,221,000	\$10,669,000
<b>TOTAL Forestry</b>			\$10,973,000	\$10,666,000	\$9,699,000	\$12,057,000	\$10,482,000
<b>TOTAL Road Work</b>			\$185,000	\$140,000	\$143,000	\$164,000	\$187,000

The Forest Service recently developed models for several National Forests that estimate the number of jobs associated with this kind of work. A summary of the key information is included in Appendix C. The range and mean of the total job response coefficient are displayed in the following table. The mean is used in this analysis. These analyses also developed response coefficients for the portion of the timber harvest associated with logging camps and contractors. These reflect the jobs and associated workers that are more likely to be working in the immediate vicinity of the project and are a subset of the total jobs discussed above. These coefficients include indirect and induced jobs, some of which will be located outside of the local area.

**Table 3 – Response Coefficients for Various Economic Sectors**  
**Total Jobs**

From IMPLAN Analysis on 11 National Forests – See Appendix C

Sector	High	Low	Mean
<b>Forestry Services</b> Total Jobs per \$million	76.2	51.3	<b>61.5</b>
<b>Road Construction and Rehabilitation</b> Total Jobs per \$million	18.4	16.8	<b>17.6</b>
<b>Logging Camps and Contractors</b> Total Jobs per mmbf	5.06	3.40	<b>3.93</b>

**Table 4 – Total Jobs by Localized Sector**

<b>Sector</b>	<b>Alt. A</b>	<b>Alt. C</b>	<b>Alt. D</b>	<b>Alt. E</b>	<b>Alt. G</b>	<b>Alt. H</b>
<b>Forestry Services</b>	0	675	656	596	742	645
<b>Road Construction</b>	0	3	2	3	3	3
<b>Logging Camps</b>	0	288	132	260	288	251
<b>Total</b>	0	966	790	859	1,033	899

It is important to understand that not all of these jobs occur continuously throughout the duration of the activities. They are associated with the expenditures that flow from or into the activities. For example, the \$8,318,000 spent on reforestation in Alternative C would be spent over a period of 6 years so about 1/6 of the total jobs would be in place in a given year.

## **Affected Environment and Consequences by Alternative**

### **Alternative A – No Action**

The No Action alternative continues the economic situation as it has been for the last few years. The most recent employment information for Lake County (Oregon Employment Department, Workforce Analysis, Central Oregon Labor Trends, May 2003 [<http://www.qualityinfo.org/pubs/llt/pdf/05-03/0503-co.pdf>]) indicates that of the 3,342 people in the labor force, 451 or 13.5% are unemployed. Of the 2,891 employed people, 771 (27%) are in farming, 1,250 (43%) are in other private enterprises and 870 (30%) are in government jobs. Employment in March of 2003 (2,891) showed some increase over employment a year ago (2,799). Some of this improvement is associated with logging, reforestation and related activities on private lands in the vicinity of the Toolbox and Winter Fires and can be expected to diminish over time.

### **Alternative C**

Alternative C has the largest timber salvage program and will produce the most jobs in that industry. A total of 835 jobs are expected to occur as a result of salvage. This figure represents total direct, indirect and induced employment across the state, not just in the local area. An estimated 288 jobs would occur in the local area as a result of salvage harvest, but even more jobs (678) are expected to be involved with related activities. Most of the jobs will be associated with planting and occur over a five to six year period during and after harvest activities. If roughly 1/6 of the total jobs were in place at one time (161 jobs) and there are very few qualified local people to take these jobs, we would expect to see Lake County employment rise to 3,052 and the labor force rise to 3,503. Thus the number of unemployed would stay about the same, but the unemployment rate would drop to about 13%. It may drop farther since some of the current unemployed people are likely to find jobs, mostly in retail services.

### **Alternative D**

Alternative D has the smallest timber salvage program and will produce the fewest jobs in that industry. A total of 379 jobs are expected to occur as a result of salvage. This figure represents total direct, indirect and induced employment across the state, not just in the local area. An estimated 132 jobs would occur in the local area as a result of salvage harvest, but even more jobs (658) are expected to be involved with related activities. Most of the jobs will be associated with planting and occur over a five to six year period during and after harvest activities. If roughly 1/6 of the total jobs were in place at one time (132 jobs) and there are very few qualified local people to take these jobs, we would expect to see Lake County employment rise to 3,023 and the labor force rise to 3,474. Thus the number of unemployed would stay about the same, but the unemployment rate would drop to about 13%. It may drop farther since some of the current unemployed people are likely to find jobs, mostly in retail services.

## **Alternative E**

A total of 744 jobs are expected to occur as a result of salvage in Alternative E. This figure represents total direct, indirect and induced employment across the state, not just in the local area. An estimated 260 jobs would occur in the local area as a result of salvage harvest, but even more jobs (599) are expected to be involved with related activities. Most of the jobs will be associated with planting and occur over a five to six year period during and after harvest activities. If roughly 1/6 of the total jobs were in place at one time (143 jobs) and there are very few qualified local people to take these jobs, we would expect to see Lake County employment rise to 3,034 and the labor force rise to 3,485. Thus the number of unemployed would stay about the same, but the unemployment rate would drop to about 13%. It may drop farther since some of the current unemployed people are likely to find jobs, mostly in retail services.

## **Alternative G**

A total of 824 jobs are expected to occur as a result of salvage in Alternative G. This figure represents total direct, indirect and induced employment across the state, not just in the local area. An estimated 288 jobs would occur in the local area as a result of salvage harvest, but even more jobs (745) are expected to be involved with related activities. Most of the jobs will be associated with planting and occur over a five to six year period during and after harvest activities. If roughly 1/6 of the total jobs were in place at one time (172 jobs) and there are very few qualified local people to take these jobs, we would expect to see Lake County employment rise to 3,063 and the labor force rise to 3,514. Thus the number of unemployed would stay about the same, but the unemployment rate would drop to about 13%. It may drop farther since some of the current unemployed people are likely to find jobs, mostly in retail services.

## **Alternative H**

A total of 718 jobs are expected to occur as a result of salvage in Alternative H. This figure represents total direct, indirect and induced employment across the state, not just in the local area. An estimated 251 jobs would occur in the local area as a result of salvage harvest, but even more jobs (648) are expected to be involved with related activities. Most of the jobs will be associated with planting and occur over a five to six year period during and after harvest activities. If roughly 1/6 of the total jobs were in place at one time (150 jobs) and there are very few qualified local people to take these jobs, we would expect to see Lake County employment rise to 3,041 and the labor force rise to 3,492. Thus the number of unemployed would stay about the same, but the unemployment rate would drop to about 13%. It may drop farther since some of the current unemployed people are likely to find jobs, mostly in retail services.

## **Conclusions**

All of the action alternatives will contribute to the local economy, but more of the impact is likely to be associated with reforestation and activities other than the 1 to 2 year impact of timber harvest. Accordingly, Alternative G will have the largest impact upon the economy because it includes both high timber harvest levels and the largest amount of other activity. It is unique in that it includes more fuels treatment than the other alternatives. Due to the nature of the economy and the source of the workers, we are likely to see 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 food and lodging to the benefit of local businesses that can supply their needs.

## Appendix A: Analytical Background

### Timber related job estimates for Oregon

Source: Utilization of Oregon's Timber Harvest and Associated Direct Economic Effects, 1998  
 Krista M. Gebert, Charles E. Keegan III, Sue Willits, Al Chase, PNW-GTR-532, April 2002  
Gen. Tech. Rep. PNW-GTR-532

### State-wide estimates based on log consumption by industry, employment and labor income for 1998.

	Jobs	Jobs/MMCF	Jobs/MBF	Labor Income	Income per job
Forestry	7,033			\$281,980,000	\$40,094
Logging (749 MMCF)	13,187	17.6	3.5	\$424,903,965	\$32,221
Sawmills	11,605	20.2	4.0	\$448,036,387	\$38,607
Chipping	1,334	16.9	4.0	\$51,504,242	\$38,609
Pulp, Paper, Board	7,578	14.6	3.5	\$424,928,774	\$56,074
Plywood, Veneer	10,333	52.7	9.6	\$395,651,011	\$38,290
Log Export	248	22.5	4.5	\$9,566,733	\$38,576
Other	240	60.0	12.0	\$7,696,806	\$32,070
	51,558			\$2,044,267,918	\$39,650

### Job multipliers to calculate total (direct, indirect and induced) jobs and income

Source: Richard Phillips, Regional Economist, R6

	Job	Income
Oregon State	2.1	1.8
Diverse Urban Economy	1.7	1.5
Rural Economy	1.5	1.3

### Example for Klamath-Lake County, Oregon

Timber sale for 40 MMCF (10 MMCF Pole/Chips, 30 MMCF Sawlogs/Veneer)

Industry	Volume (MMCF)	Percent Local Processing	Locally Processed		Total Direct Jobs	Total Direct Income	Total Jobs	Total Income
			Volume	Jobs per MMCF				
Logging	40	20%	8	18	141	\$4,538,360	211	\$5,899,868
Sawmills	20	60%	12	20	242	\$9,350,325	363	\$12,155,422
Chipping	0	0%	0	17	0	\$0	0	\$0
Pulp, Paper, Board	10	100%	10	15	146	\$8,203,258	219	\$10,664,236
Plywood/Veneer	10	80%	8	53	422	\$16,149,021	633	\$20,993,727
<b>Total</b>					<b>951</b>	<b>\$38,240,964</b>	<b>1,427</b>	<b>\$49,713,253</b>

### Major Wood Products Industry Employment in Klamath-Lake Counties - 1999 (Implan)

Logging	296	
Sawmills	455	
Millwork	798	Note that millwork is a forward linkage and not estimated in the above totals.
Plywood/Veneer	771	
Reconstituted Wood Products	406	Reconstituted wood products is a component of Pulp, Paper and Board.

## Appendix B – Timber Sale Impact Calculations

### TOOLBOX

#### Estimated Economic Impact of Timber Sales

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28-Apr-03

##### TOOLBOX Alternative A- NO ACTION

Industry	Volume (MMBF)	Percent Local Processing	Locally Processed		Jobs per MMBF	Total Local Direct Jobs	Job Multiplier	Total Local Jobs
			Volume	Jobs per MMBF				
Logging	0	100%	0	0	3.5	0	1.5	0
Sawmills	0	100%	0	0	4.0	0	1.5	0
Chipping	0	0%	0	0	4.0	0	1.5	0
Pulp, Paper, Board	0	0%	0	0	3.5	0	1.5	0
Plywood/Veneer	0	0%	0	0	9.6	0	1.5	0
<b>Total</b>						<b>0</b>		<b>0</b>

##### TOOLBOX Alternative C

Industry	Volume (MMBF)	Percent Local Processing	Locally Processed		Jobs per MMBF	Total Local Direct Jobs	Job Multiplier	Total Local Jobs
			Volume	Jobs per MMBF				
Logging	73.3	100%	73.300	3.50	257	1.5	385	
Sawmills	73.3	100%	73.3	4.0	293	1.5	440	
Chipping	0	0%	0	4.0	0	1.5	0	
Pulp, Paper, Board	0	0%	0	3.5	0	1.5	0	
Plywood/Veneer	0	0%	0	9.6	0	1.5	0	
<b>Total</b>					<b>550</b>		<b>825</b>	

##### TOOLBOX Alternative D

Industry	Volume (MMBF)	Percent Local Processing	Locally Processed		Jobs per MMBF	Total Local Direct Jobs	Job Multiplier	Total Local Jobs
			Volume	Jobs per MMBF				
Logging	33.7	100%	33.7	3.5	118	1.5	177	
Sawmills	33.7	100%	33.7	4.0	135	1.5	202	
Chipping	0	0%	0	4.0	0	1.5	0	
Pulp, Paper, Board	0	0%	0	3.5	0	1.5	0	
Plywood/Veneer	0	0%	0	9.6	0	1.5	0	
<b>Total</b>					<b>253</b>		<b>379</b>	

##### TOOLBOX Alternative E

Industry	Volume (MMBF)	Percent Local Processing	Locally Processed		Jobs per MMBF	Total Local Direct Jobs	Job Multiplier	Total Local Jobs
			Volume	Jobs per MMBF				
Logging	66.1	100%	66.1	3.5	231	1.5	347	
Sawmills	66.1	100%	66.1	4.0	264	1.5	397	
Chipping	0	0%	0	4.0	0	1.5	0	
Pulp, Paper, Board	0	0%	0	3.5	0	1.5	0	
Plywood/Veneer	0	0%	0	9.6	0	1.5	0	
<b>Total</b>					<b>496</b>		<b>744</b>	

**TOOLBOX Alternative G**

Industry	Volume (MMBF)	Percent Local Processing	Locally Processed		Jobs per MMBF	Total Local Direct Jobs	Job Multiplier	Total Local Jobs
			Volume	Jobs per MMBF				
Logging	73.2	100%	73.20	3.50	256	1.5	384	
Sawmills	73.2	100%	73.2	4.00	293	1.5	439	
Chipping	0	0%	0	4.00	0	1.5	0	
Pulp, Paper, Board	0	0%	0	3.50	0	1.5	0	
Plywood/Veneer	0	0%	0	9.60	0	1.5	0	
<b>Total</b>					<b>549</b>		<b>824</b>	

**TOOLBOX Alternative H**

Industry	Volume (MMBF)	Percent Local Processing	Locally Processed		Jobs per MMBF	Total Local Direct Jobs	Job Multiplier	Total Local Jobs
			Volume	Jobs per MMBF				
Logging	63.8	100%	63.8	3.5	223.300	1.5	335	
Sawmills	63.8	100%	63.8	4.0	255.200	1.5	383	
Chipping	0	0%	0	4.0	0	1.5	0	
Pulp, Paper, Board	0	0%	0	3.5	0	1.5	0	
Plywood/Veneer	0	0%	0	9.6	0	1.5	0	
<b>Total</b>					<b>479</b>		<b>718</b>	

**NOTE:** These calculations were produced in a spreadsheet that carries lots of decimal precision even though that detail is not meaningful and is not displayed here. A byproduct of this is that some columns may not add up exactly due to rounding error. For example, in Alternative H the total direct jobs from logging calculates to 223.3 and the total direct jobs from sawmills calculates to 255.2 as displayed above. When they are added, the total is 478.5. The spreadsheet rounds that to 479 even though  $223 + 255 = 478$ . Other alternatives do not show all the decimals. Given the state-wide averages used in developing the jobs/mmbf estimates and the use of a generalized (to rural areas of Oregon) job multiplier, these kinds of variations in the calculations are meaningless to the decision at hand.

## Appendix C – Response Coefficients from 11 National Forests

# RESPONSE COEFFICIENTS FROM FOREST LEVEL IMPLAN ANALYSES

BITTERROOT NATIONAL FOREST			CLEARWATER NATIONAL FOREST		
RESPONSE COEFFICIENTS			RESPONSE COEFFICIENTS		
<b>Forestry Services (Sector 26)</b>			<b>Forestry Services (Sector 26)</b>		
	Employment (Jobs/MM \$)	Employee Comp ('97 \$) (\$/MM \$)		Employment (Jobs/MM \$)	Employee Comp ('97 \$) (\$/MM \$)
Direct	63.50	290,868.00	Direct	46.40	446,774.00
Indirect	4.10	72,462.00	Indirect	3.50	75,754.00
Induced	4.50	69,786.00	Induced	5.10	96,799.00
Total	72.10	433,116.00	Total	55.00	619,327.00
<b>Road Construction &amp; Rehabilitation (Sector 51)</b>			<b>Road Construction &amp; Rehabilitation (Sector 51)</b>		
	Employment (Jobs/MM \$)	Employee Comp ('97 \$) (\$/MM \$)		Employment (Jobs/MM \$)	Employee Comp ('97 \$) (\$/MM \$)
Direct	9.60	180,998.00	Direct	9.10	218,136.00
Indirect	4.50	75,386.00	Indirect	4.10	89,732.00
Induced	4.10	63,795.00	Induced	4.40	82,454.00
Total	18.20	320,179.00	Total	17.60	390,322.00

<b>Logging Camps &amp; Contractors (Sector 133)</b>			<b>Logging Camps &amp; Contractors (Sector 133)</b>		
	Employment	Employee Comp ('97 \$)		Employment	Employee Comp ('97 \$)
	(Jobs/MMBF)	(\$/MMBF)		(Jobs/MMBF)	(\$/MMBF)
Direct	2.00	\$47,634	Direct	2.40	\$68,561
Indirect & Induced	1.62	\$24,174	Indirect & Induced	2.66	\$46,963
<b>Total</b>	<b>3.62</b>	<b>\$71,808</b>	<b>Total</b>	<b>5.06</b>	<b>\$115,524</b>

<b>CUSTER NATIONAL FOREST</b>			<b>FLATHEAD NATIONAL FOREST</b>		
<b>RESPONSE COEFFICIENTS</b>			<b>RESPONSE COEFFICIENTS</b>		
<b>Forestry Services (Sector 26)</b>			<b>Forestry Services (Sector 26)</b>		
	Employment	Employee Comp ('97 \$)		Employment	Employee Comp ('97 \$)
	(Jobs/MM \$)	(\$/MM \$)		(Jobs/MM \$)	(\$/MM \$)
Direct	43.00	272,729.00	Direct	68.10	275,012.00
Indirect	3.30	62,580.00	Indirect	4.00	67,618.00
Induced	5.30	86,895.00	Induced	3.70	59,538.00
<b>Total</b>	<b>51.60</b>	<b>422,204.00</b>	<b>Total</b>	<b>75.80</b>	<b>402,168.00</b>
<b>Road Construction &amp; Rehabilitation (Sector 51)</b>			<b>Road Construction &amp; Rehabilitation (Sector 51)</b>		
	Employment	Employee Comp ('97 \$)		Employment	Employee Comp ('97 \$)
	(Jobs/MM \$)	(\$/MM \$)		(Jobs/MM \$)	(\$/MM \$)
Direct	9.60	194,780.00	Direct	9.50	184,562.00
Indirect	4.70	83,253.00	Indirect	3.90	68,694.00
Induced	4.10	66,998.00	Induced	3.60	57,848.00
<b>Total</b>	<b>18.40</b>	<b>345,031.00</b>	<b>Total</b>	<b>17.00</b>	<b>311,104.00</b>

<b>Logging Camps &amp; Contractors (Sector 133)</b>			<b>Logging Camps &amp; Contractors (Sector 133)</b>		
	Employment	Employee Comp ('97 \$)		Employment	Employee Comp ('97 \$)
	(Jobs/MMBF)	(\$/MMBF)		(Jobs/MMBF)	(\$/MMBF)
Direct	2.00	\$47,634	Direct	2.00	\$47,634
Indirect & Induced	1.61	\$31,385	Indirect & Induced	1.40	\$21,659
<b>Total</b>	<b>3.61</b>	<b>\$79,019</b>	<b>Total</b>	<b>3.40</b>	<b>\$69,293</b>

<b>GALLATIN NATIONAL FOREST</b>			<b>HELENA NATIONAL FOREST</b>		
<b>RESPONSE COEFFICIENTS</b>			<b>RESPONSE COEFFICIENTS</b>		
<b>Forestry Services (Sector 26)</b>			<b>Forestry Services (Sector 26)</b>		
	Employment	Employee Comp ('97 \$)		Employment	Employee Comp ('97 \$)
	(Jobs/MM \$)	(\$/MM \$)		(Jobs/MM \$)	(\$/MM \$)
Direct	43.30	278,689.00	Direct	54.60	243,835.00
Indirect	3.00	54,425.00	Indirect	3.20	53,331.00
Induced	5.00	80,801.00	Induced	3.90	60,262.00
<b>Total</b>	<b>51.30</b>	<b>413,915.00</b>	<b>Total</b>	<b>61.70</b>	<b>357,428.00</b>
<b>Road Construction &amp; Rehabilitation (Sector 51)</b>			<b>Road Construction &amp; Rehabilitation (Sector 51)</b>		
	Employment	Employee Comp ('97 \$)		Employment	Employee Comp ('97 \$)
	(Jobs/MM \$)	(\$/MM \$)		(Jobs/MM \$)	(\$/MM \$)
Direct	9.60	194,883.00	Direct	9.50	183,893.00
Indirect	4.50	77,277.00	Indirect	3.90	71,196.00
Induced	3.90	62,726.00	Induced	3.40	53,011.00
<b>Total</b>	<b>18.00</b>	<b>334,886.00</b>	<b>Total</b>	<b>16.80</b>	<b>308,100.00</b>

<b>Logging Camps &amp; Contractors (Sector 133)</b>			<b>Logging Camps &amp; Contractors (Sector 133)</b>		
	Employment	Employee Comp ('97 \$)		Employment	Employee Comp ('97 \$)
	(Jobs/MMBF)	(\$/MMBF)		(Jobs/MMBF)	(\$/MMBF)
Direct	2.00	\$47,634	Direct	2.00	\$47,634
Indirect & Induced	1.52	\$29,396	Indirect & Induced	1.46	\$22,737
<b>Total</b>	<b>3.52</b>	<b>\$77,030</b>	<b>Total</b>	<b>3.46</b>	<b>\$70,371</b>

<b>IDAHO PANHANDLE NF</b>			<b>KOOTENAI NATIONAL FOREST</b>		
<b>Forestry Services (Sector 26)</b>			<b>Forestry Services (Sector 26)</b>		
	Employment	Employee Comp ('97 \$)		Employment	Employee Comp ('97 \$)
	(Jobs/MM \$)	(\$/MM \$)		(Jobs/MM \$)	(\$/MM \$)
Direct	47.10	436,369.00	Direct	60.50	328,523.00
Indirect	3.50	76,268.00	Indirect	4.10	71,249.00
Induced	5.20	96,426.00	Induced	4.60	72,379.00
<b>Total</b>	<b>55.80</b>	<b>609,063.00</b>	<b>Total</b>	<b>69.20</b>	<b>472,151.00</b>
<b>Road Construction &amp; Rehabilitation (Sector 51)</b>			<b>Road Construction &amp; Rehabilitation (Sector 51)</b>		
	Employment	Employee Comp ('97 \$)		Employment	Employee Comp ('97 \$)
	(Jobs/MM \$)	(\$/MM \$)		(Jobs/MM \$)	(\$/MM \$)
Direct	9.10	216,525.00	Direct	9.60	179,049.00
Indirect	4.00	89,855.00	Indirect	4.50	74,352.00
Induced	4.40	82,444.00	Induced	4.10	64,005.00
<b>Total</b>	<b>17.50</b>	<b>388,824.00</b>	<b>Total</b>	<b>18.20</b>	<b>317,406.00</b>
<b>Logging Camps &amp; Contractors (Sector 133)</b>			<b>Logging Camps &amp; Contractors (Sector 133)</b>		

	Employment (Jobs/MMBF)	Employee Comp ('97 \$) (\$/MMBF)			Employment (Jobs/MMBF)	Employee Comp ('97 \$) (\$/MMBF)	
Direct	2.40	\$68,561			Direct	2.00	\$47,634
Indirect & Induced	2.60	\$46,857			Indirect & Induced	1.65	\$24,593
Total	5.00	\$115,418			Total	3.65	\$72,227

<b>LEWIS AND CLARK NF</b>				<b>LOLO NATIONAL FOREST</b>			
<b>Forestry Services (Sector 26)</b>				<b>Forestry Services (Sector 26)</b>			
	Employment (Jobs/MM \$)	Employee Comp ('97 \$) (\$/MM \$)			Employment (Jobs/MM \$)	Employee Comp ('97 \$) (\$/MM \$)	
Direct	45.20	216,270.00		Direct	68.50	277,007.00	
Indirect	2.90	49,312.00		Indirect	4.00	67,950.00	
Induced	4.60	73,123.00		Induced	3.70	58,941.00	
Total	52.70	338,705.00		Total	76.20	403,898.00	
<b>Road Construction &amp; Rehabilitation (Sector 51)</b>				<b>Road Construction &amp; Rehabilitation (Sector 51)</b>			
	Employment (Jobs/MM \$)	Employee Comp ('97 \$) (\$/MM \$)			Employment (Jobs/MM \$)	Employee Comp ('97 \$) (\$/MM \$)	
Direct	9.40	196,731.00		Direct	9.50	183,862.00	
Indirect	3.90	67,123.00		Indirect	3.90	68,681.00	
Induced	3.70	57,954.00		Induced	3.60	57,740.00	
Total	17.00	321,808.00		Total	17.00	310,283.00	
<b>Logging Camps &amp; Contractors (Sector 133)</b>				<b>Logging Camps &amp; Contractors (Sector 133)</b>			
	Employment (Jobs/MM \$)	Employee Comp ('97 \$) (\$/MM \$)			Employment (Jobs/MM \$)	Employee Comp ('97 \$) (\$/MM \$)	

	(Jobs/MMB F)	(\$/MMBF)				(Jobs/MMB F)	(\$/MMBF)	
Direct	2.00	\$47,634			Direct	2.00	\$47,634	
Indirect & Induced	1.47	\$27,784			Indirect & Induced	1.40	\$22,059	
Total	3.47	\$75,418			Total	3.40	\$69,693	

## NEZ PERCE NATIONAL FOREST

### Forestry Services (Sector 26)

	Employment (Jobs/MM \$)	Employee Comp ('97 \$) (\$/MM \$)						
Direct	46.40	446,774.00						
Indirect	3.50	75,754.00						
Induced	5.10	96,799.00						
Total	55.00	619,327.00						

### Road Construction & Rehabilitation (Sector 51)

	Employment (Jobs/MM \$)	Employee Comp ('97 \$) (\$/MM \$)						
Direct	9.10	218,136.00						
Indirect	4.10	89,732.00						
Induced	4.40	82,454.00						
Total	17.60	390,322.00						

### Logging Camps & Contractors (Sector 133)

	Employment (Jobs/MMB F)	Employee Comp ('97 \$) (\$/MMBF)						
Direct	2.40	\$68,561						
Indirect &	2.66	\$46,963						

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Induced								
Total	5.06	\$115,524						

## Use of This Report

This Toolbox Fire Recovery Project specialist report was prepared during March, April and May of 2003. It will be used, along with specialist reports from multiple resource areas, to prepare a Draft Environmental Impact Statement (DEIS) for the Toolbox Fire Recovery project. This specialist report will become a part of the planning record for the project, filed under:

“Toolbx/ Planning Record/ E\_Specialists\_reports\_data\_inventory\_and\_collection”

This report will be filed both in the ‘hard-copy’ planning record binders, on file at the Silver Lake Ranger District, and on the Fremont National Forest “K-Drive”. In the interest of planning process efficiency, particularly in light of time and budget constraints, editing that occurs to the content of this report during the preparation of the DEIS will be reflected in the DEIS and will not necessarily be entered back into the content of this report. To insure the accuracy of such edits, I will review the content of both the DEIS and the (Final) FEIS and certify that their content is consistent with the analytical conclusions in this report. If during DEIS or FEIS editing, substantially different conclusions or interpretations are reached or substantial additional analysis is prepared from that displayed in this report, an addendum to this report will be prepared.

Specialist: /S/ Jerry Haugen

Discipline: Economics

Date: 5/14/03