Economic Analysis for the Mt.Ashland LSR Habitat Restoration and Fuels Reduction Project
10/24/06

Introduction

The purpose of this report is to compare the economic factors and values associated with the different alternatives considered in the Mt. Ashland LSR Habitat Restoration and Fuels Reduction Project.

The analysis performed to compare the alternatives dealt with monetary values that are normally associated with a timber sale. This project is proposing to use timber harvest as a tool to meet the objectives identified in the EIS and therefore the economic impacts of each alternative can be quantified in terms of costs and values associated with harvesting timber. Prediction of revenues and costs even for short periods into the future is highly speculative. While predictions may not represent absolute value, deviation from actual revenues and costs would remain constant for all alternatives, making it possible to compare the relative value among alternatives.

Analysis Criteria

The primary objective of this analysis was to calculate a residual value, also known as a stumpage value, for each alternative being considered in this project. This monetary value is derived by subtracting the costs associated with the timber harvest from the value of the timber as it would be sold to a mill. The costs being considered in this report are generated by the different logging systems being proposed, the various fuel treatments associated with each unit, and the construction and decommissioning of temporary spur roads.

The residual value method was done using the software created by The Region 5 Timber Sale Marketing Analysis and Sale Evaluation Study prepared by Steve Rheinberger and Gerald Smith of Forest Resource Enterprises. Logging costs were calculated using the LogCost program also created by Rheinberger. Logging costs were developed using the units as they are found in Alternative 2 and then using the average costs for each logging system throughout all three alternatives. Volumes and species being removed were estimated by using the proposed silvicultural treatments. Values for the timber being removed were gathered from Oregon Department of Forestry Log Price Information Report for the second quarter of 2006 in the Klamath Unit. The appendix to this report has the printouts from the sale value program showing the costs and residual values for each unit, by logging system and alternative. Also included are the log prices used for all alternatives.

Important influences on residual values for this project were logging systems and fuels treatments. Table 1 (page 4) shows the respective costs used for different logging systems and fuels treatments used throughout the alternatives. Logging systems vary throughout the alternatives according to which units are proposed to be treated and what systems can accommodate the given topographic limitations and access. Fuels treatments vary between units

being proposed and were determined by the fuels specialist on the project. Helicopter logging is the most expensive system being proposed and has an overall negative residual value for all units attached with it. The most expensive fuels treatment is the combination of hand piling and burning followed by a broadcast or under burn.

As both logging costs and fuels treatments costs increase, residual value decreases. A project with a positive residual value may be able to pay for fuel treatments without depending on additional appropriated dollars. However with the logging systems and fuel treatments being proposed for this project, accompanied by the small diameter and lower value product being removed, it appears additional funding will be needed.

In addition to residual value, this report will give an estimate of the total number of jobs created for each alternative. The number of jobs that would be generated is an indicator that addresses specific concerns about effects on the local timber dependent communities within the region. Appendix H in the Klamath National Forest LMP provides estimates of employment provided by timber harvest. The figures are based on models which are more accurate at a state wide level than the local area, but they are what will be used. The models estimate between 10 and 20 jobs created directly or indirectly for each million board feet (MMBF) of timber harvested. This analysis will use the lower estimate of 10 jobs per MMBF.

Comparison of Alternatives-General

There are four alternatives being considered for this project. They are as follows:

Alternative 1-No Action

Alternative 2-Proposed Action
This is the final proposal to meet the purpose and need of the project as identified in Chapter 1 of the EIS.

Alternative 4-Cumulative Watershed Effects
This alternative was developed to address concerns about cumulative watershed effects. This alternative reduces the total acres treated, reduces acres treated using ground-based systems, and constructs fewer temporary spur roads.

Alternative 5- Spur Road Construction Effects
This alternative was developed to address concerns about the effects of spur road construction on habitat and cumulative watershed effects. This alternative also has fewer acres treated, reduces the use of both ground-based and skyline systems, and has the least amount of temporary spur construction among the action alternatives.

Comparison of Alternatives-Economic

All action alternatives in this analysis resulted in a negative residual value. As stated previously, logging systems, fuels treatments, and amount and size of material removed all contribute to this conclusion. All alternatives were analyzed by logging system first and then combined for a total

value. Through this method it was shown that all helicopter units resulted in negative residual values which surpassed any positive value generated by skyline and ground-based systems. However, all the action alternatives may still provide for jobs and the production of wood commodities that have economic benefits for the surrounding communities and abroad. The addition of appropriated dollars will most likely be needed to achieve all actions proposed in each alternative.

Alternative 1- This alternative would produce no monetary values and create no jobs.

Alternative 2- This alternative harvests the most timber over the largest amount of acreage. It also has the most amount of proposed temporary spur construction. The residual value for the conventional systems (skyline and ground based) is positive at $541,029.00. The residual value for the helicopter units is negative at -$973,196.00. Combining the temporary spur construction cost of $34,300 the combined residual value for this alternative is -$466,467.00.

With an estimated volume of 15.7 MMBF this alternative could create 157 jobs. It would also provide the wood commodity to support local mills and provide the basis of numerous products sold abroad.

Alternative 4- This alternative harvests the least amount of volume over the fewest acres. It also has the least amount of acres using helicopter yarding. This alternative shows the least negative residual value. The residual value for the conventional systems is positive at $483,431.00. The helicopter units show a negative value of -$745,778.00. The temporary spur construction costs are estimated at $24,800.00 bringing the combined residual value to a negative at -$287,147.00.

With an estimated volume to be removed at 13.6 MMBF this alternative could provide 136 jobs.

Alternative 5- This alternative proposes the greatest amount of acres to be helicopter yarded while constructing the least amount of temporary roads. This alternative has the lowest, or most negative, residual value. The residual value for the conventional systems is $523,189.00. The residual value for the helicopter units is negative at -$1,138,591.00. Subtracting the cost of the temporary spur construction at $11,350.00, the total residual value is estimated to be a negative at -$626,752.00.

The volume to be removed for this alternative is approximately 15.2 MMBF which could provide 152 jobs.

Table 1. Summary of Key Economic Factors for the Mt. Ashland LSR Habitat Restoration and Fuels Reduction Project

(All costs are estimates and are used for relative comparison)

	Alternatives			
	No Action	**2**	**4**	**5**
Economic Factor				
Estimated Volume (CCF)	0	31,385	27,294	30,468
Costs by Logging System ($/CCF)				
Tractor	N/A	$88.92	$88.92	$88.92
Mechanical	N/A	$96.70	$96.70	$96.70
Skyline	N/A	$106.14	$106.14	$106.14
Helicopter	N/A	$229.65	$229.65	$229.65
Costs by Fuels Treatment ($/CCF)				
Underburn	N/A	$18.75	$18.75	$18.75
Mastication	N/A	$59.38	$59.38	$59.38
Hanpile/Burn Piles	N/A	$68.75	$68.75	$68.75
Hanpile/Burn Piles/Undrburn	N/A	$87.50	$87.50	$87.50
Total Cost for Temp Spur Const./	N/A	$34,300.00	$24,800.00	$11,350.00
Decom.(Est. @ ($5000/mi)				
Number of Jobs Created	0	157	136	152
Residual Value	0	-$466,467	-$287,147	-$626,752

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