Appendix 1

Details of the Selected Alternative

Discussion of specific vegetation management treatments and associated activities of the Selected Alternative are discussed below.

Vegetation Management

A. Salvage Harvest:

The purpose of this entry is to remove dead, dying, or damaged trees from treatment areas to recover economic value that would otherwise be lost. The primary agent of damage is wind, which has resulted in trees that are uprooted, broken, and/or severely leaning. Merchantable trees, which have been killed by other damage agents and are located within the treatment areas, may also be removed in this entry. Damage severity is variable within and across treatment areas. In severely affected areas, reforestation may be necessary. Regeneration would likely result from a combination of natural seeding and planted seedlings. Mechanical logging systems would be used to extract merchantable material and reduce logging slash/fuel loadings. It is likely that some incidental live or dead, non-wind damaged trees would need to be felled to facilitate skid trails, yarding corridors, and/or landings. The exact location of these features would be agreed upon between the Forest Service and the Timber Sale Purchaser. Salvage harvest will occur on **605 acres**.

B. Fuel Treatments:

In order to reduce fuel loadings with the salvage units, a number of prescribed treatments are designed to reduce natural and activity generated fuels within the proposed treatment areas. These treatments include mechanical methods and the use of prescribed fire. Mechanical treatments could include a combination of the following: whole tree yarding, lopping and scattering, and/or excavator piling. Fuel accumulations at landings will be addressed through burning, chipping/masticating, and/or removal from NFS lands. Prescribed fire treatments could include pile burning and/or jackpot burning. See Appendix C in this document for more descriptions and visual illustrations of these fuel treatments.

C. Site Preparation:

Depending on wind damage severity, existing vegetation, and ground conditions, site preparation may be prescribed to help create favorable conditions to help ensure adequate regeneration. These treatments are often prescribed in both artificial and natural regeneration situations and typically address competing vegetation, seedbed preparation, fuel accumulations, and duff reduction. Site preparation can be accomplished through hand, mechanical, or prescribed fire methods. Hand methods usually involve creating favorable conditions at the time of planting using hand tools. Mechanical treatments are often accomplished during harvest operations or shortly afterwards and involve scarification and seedbed preparation through the use of mechanized equipment. Prescribed fire can also be used to recycle nutrients, consume excess fuels, reduce competing vegetation, and create a favorable seedbed.

D. Reforestation:

Within the proposed salvage units, reforestation is only proposed in areas where wind damage has resulted in an unstocked condition. As mentioned earlier, areas with severe wind damage are the exception in this project. All or portions of Units 6, 8, 10, and 11 are likely to have reforestation needs. The estimated total area that would require reforestation, by alternative, is shown below. This will occur on **65 acres.**

TABLE 1-1
PROPOSED TREATMENT ACTIVITIES FOR THE SELECTED ALTERNATIVE

Unit No.	Unit Acres	Alternative Treatment	Logging System	Hazardous (Fuels) Reduction	Forest Plan Direction (MA)
1	15	Salvage	Tractor	Lop and Scatter	MA 9
3	27	Salvage	Tractor	WTY/Excavator Pile/Burn Piles	MA 9
4	15	Salvage	Tractor/Cable	WTY/Excavator Pile/Burn Piles/Jackpot Burn	MA 9
6	12	Salvage	Tractor/Cable	WTY	MA 9
8	23	Salvage	Tractor/Cable	WTY/Excavator Pile/Burn Piles	MA 9
9	6	Salvage	Tractor/Cable	Lop and Scatter/Jackpot Burn	MA 9
10	63	Salvage	Tractor	WTY/Excavator Pile/Burn Piles/Jackpot Burn	MA 9
11	177	Salvage	Tractor	WTY/Excavator Pile/Burn Piles/Jackpot Burn	MA 9
14	24	Salvage	Tractor	Lop and Scatter	MA 9
15	13	Salvage	Tractor	Lop and Scatter	MA 9
16	34	Salvage	Tractor	WTY/Excavator Pile/Burn Piles	MA 9
17	6	Salvage	Tractor	Lop and Scatter	MA 9
19	11	Salvage	Tractor	Lop and Scatter	MA 9
20	24	Salvage	Tractor	WTY/Excavator Pile/Burn Piles	MA 9
21	20	Salvage	Tractor	WTY/Excavator Pile/Burn Piles	MA 9
22	65	Salvage	Tractor	WTY/Excavator Pile/Burn Piles	MA 9
23	40	Salvage	Tractor	WTY/Excavator Pile/Burn Piles	MA 9
24	2	Salvage	Cable	WTY	MA 9
25	1	Salvage	Cable	WTY	MA 9
26	27	Salvage	Tractor	Lop and Scatter	MA 9
TOTAL	**605 acres**				

Road Management

Road management activities for the Selected Alternative include road maintenance, use of historic road templates and skid trails. No new temporary roads will be constructed with the Selected Alternative.

A. Road Maintenance (BMPs):

The objectives of road maintenance are to reduce the concentration of sub-surface and surface water runoff, minimize road surface erosion, filter ditch water before entering streams, and decrease the risk of culvert failures during peak runoff events. Maintenance work could include culvert installation, replacement of existing culverts with larger culverts, installation of drainage dips and surface water deflectors, placement of riprap to armor drainage structures, aggregate surface cleaning where needed, and surface blading to restore drainage efficiency of the road surface. These actions would bring the roads up to current BMP standards, better accommodate traffic and reduce deferred maintenance. Best Management Practices are required under Timber Sale Contracts prior to hauling of timber over these roads.

B. Historic Road Templates:

An historic road template can be defined as a constructed road surface that was once used for a transportation need but is not currently a part of the National Forest Road System. It has an overall template existing that has not been re-contoured, and is in a state that is impassible to full-sized motor vehicles due to water bars and culvert removals and/or closure by vegetation, earth berm, or other natural closure feature such as a slump or washout. Approximately **0.5 miles** of historic road templates will be used for accessing units in the Selected Alternative.

C. Skid Trails:

Skid trails will be used for forwarding logs with a tractor from the felled location to a landing, where they are loaded on trucks and hauled away. In some instances, it may be necessary to have a designated skid trail outside of the unit boundary a short distance to a nearby landing location adjacent to the haul route. Skid trails will be reclaimed following their use using drain dips, outsloping, scarifying, seeding, and recontouring. For the Selected Alternative, **0.5 miles** of skid trail will be used.

TABLE 1- 2
HISTORIC ROAD TEMPLATES and SKID TRAILS NEEDED FOR THE SELECTED ALTERNATIVE

Unit	Road Type	Access Needs	Miles
3	Historic Template	Access via FDR #9882	0.1
8	Historic Template	Access via FDR #5377	0.4
16	Skid Trail	Access via FDR #9769 to #10323	0.2
19	Skid Trail	Access via FDR #11630	0.3
TOTAL MILES OF HISTORIC ROAD TEMPLATES and SKID TRAILS NEEDED FOR THE SELECTED ALTERNATIVE			**1.0**

The **Selected Alternative** salvage harvest and associated activities are summarized in the table below.

TABLE 1-3
SUMMARY OF PROPOSED TREATMENT ACTIVITIES FOR THE SELECTED ALTERNATIVE

Commercial Harvest Treatment Acres	
Salvage	605
Logging System Acres	
Tractor	546
Tractor/Cable	56
Cable	3
Total Logging System Acres	**605**
Fuels Treatment Acres	
Lop and Scatter	96
Lop and Scatter/Jackpot Burn	6
Whole Tree Yard (WTY)*****	15
Whole Tree Yard/Excavator Pile/Burn Piles	233
Whole Tree Yard/Excavator Pile/Burn Piles/Jackpot Burn	255

TABLE 1-3

SUMMARY OF PROPOSED TREATMENT ACTIVITIES FOR THE SELECTED ALTERNATIVE

Road Management Miles	
Haul Routes (BMPs to be applied to meet Timber Sale Requirements)	15.3 miles
Use of Historic Template	0.5 miles
Skid Trails	0.5 miles

*****Within this project Whole Tree Yarding can include one or a combination of the following treatments:

1) Purchaser shall leave tops and limbs of felled trees attached to Included Timber and yard them to landings as shown on the Hazard Reduction and Site Preparation Map. Tops and limbs which are lost on the way to the landing site due to normal felling, skidding and/or yarding operations are not required to be yarded.

2) Purchaser shall leave the tops of felled trees attached to the top log and yard them to landings as shown on the Hazard Reduction and Site Preparation Map. Limbs on Included Timber portion are removed and left in woods and trees are tree-length or log-length skidded.

Design Criteria

Appendix 2 of this document describes the Design Criteria applied to this project to protect resources.

Monitoring

Monitoring and evaluation compares the end results being achieved to those projected in the Forest Plan. Monitoring is conducted on a sample basis to evaluate the overall progress in implementing the Forest Plan, the assumptions on which the Forest Plan is based, and to provide a feedback loop for determining effectiveness of project and mitigation implementation (USDA Forest Service 1987a). For this project, monitoring and evaluation will be conducted as described in Appendix 3. Those monitoring components not specifically discussed in this appendix tier to the monitoring described in the Forest Plan.