

The following findings are made based on the environmental analysis and the silvicultural prescription:

**Consistency [36 CFR 219.8(e)]:**

- 1. Timber harvest would occur on lands suited for timber production or would occur in areas where timber harvest is permitted and is necessary to help achieve other resource management objectives;

West Rim Project	Timber Production	Harvest Permitted for Multiple-Use Objectives
Alternative B	13,261 acres	118 acres
Alternative C	13,261 acres	118 acres

Timber harvest is proposed on lands classified as not suited for timber production. These areas include 34 acres of pine removal from hardwood stands to conserve and restore hardwood communities (Forest Plan objective 201) and 84 acres of proposed commercial timber harvest designed to meet fuel reduction and wildlife habitat objectives.

- 2. Silvicultural treatments are consistent with the Forest Plan.

The proposed treatments in both action alternatives comply with the Forest Plan Acceptable Silvicultural Systems (Forest Plan II-25), including intermediate harvests (commercial thinning) and the even-aged regeneration systems of shelterwood and clearcut. Even-aged regeneration harvests are appropriate to meet the objectives and requirements of the Forest Plan. Specific desired conditions include: reduced risks to mountain pine beetles, a better balance of structural stages, improved age class distribution, adequate restocking and improved wildlife habitat.

**Timber Harvest [16 U.S.C. 1604 (g)(3)(E)]:**

- 1. Soil, slope, or other watershed conditions will not be irreversibly damaged;

see the Soils and Hydrology Resource Reports for the West Rim EIS

- 2. There is assurance that the lands can be adequately restocked within five years after final regeneration harvest;

Adequate stocking is 150 conifer seedlings per acre, assuming no intermediate treatments; where intermediate treatments will be done 300 conifer seedlings per acre are required.

Research and experience indicate the shelterwood method should be the primary regeneration method and is ideally suited and widely applicable in the Black Hills. It is a scientifically sound method of regeneration for Ponderosa pine.

The areas planned for clearcutting would not be required to meet the minimum stocking requirement, though they will be monitored for response. The clearcut was not recommended for regeneration, but to meet other resource requirements (structural stage 1).

3. Streams, streambanks, shorelines, lakes, wetlands, and other bodies of water are protected from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment where harvests are likely to seriously and adversely affect water conditions or fish habitat; and

see the Soils and Hydrology Resource Reports for the West Rim EIS

4. The harvesting system to be used was not selected primarily because it will give the greatest dollar return or the greatest unit output of timber.

Proposed systems for the West Rim Project include Shelterwood, and Clearcut which are acceptable systems under the Forest Plan (II-25). Clearcutting is proposed to move toward specific habitat requirements (Structural Stage 1). The shelterwood system is proposed on a larger area. Research and past experience has shown the shelterwood method to be the most reliable in managing ponderosa pine in the Black Hills.

### **Even-aged Regeneration Harvests [16 U.S.C. 1604 (g)(3)(F)]:**

1. For clearcutting, it is the optimum method;

Clearcutting was chosen to create structural stage 1 (grass/forb). Retaining overstory trees would have maintained a seed source, resulting in a quicker conversion out of structural stage 1. While these areas are not planned to be maintained as openings in perpetuity, the 5 year restocking guideline would not apply to them.

2. Clearcuts, coppice cuts, seed tree, and shelterwood regeneration harvests are appropriate to meeting the objectives and requirements of the Forest Plan;

See number 2 above in the consistency statement.

3. An interdisciplinary review was completed and the potential environmental, biological, aesthetic, engineering, and economic impacts were assessed and the cutting methods are consistent with the multiple use of the Project Area;

This analysis and finding are part of the Environmental Analysis and subsequent decision conducted under NFMA and NEPA provisions.

4. Cut blocks, patches, or strips are shaped and blended to the extent practicable with the natural terrain; see the Scenery Resource Report for the West Rim EIS. Treatments are proposed to correspond to naturally occurring stand boundaries except where overriding concerns such as private ownership, water influence zones, visual objectives, and archeological resources identify a different boundary line.

5. Even-aged regeneration harvests made in one operation meet the 40-acre maximum size limit requirement; and

None of the proposed clearcuts would create openings greater than 40 acres (see West Rim Project design criteria). The seed cuts do not qualify as an opening as a sufficient number of trees are retained.

6. Harvest will be consistent with the protection of soil, watershed, fish, wildlife, recreation, esthetic resources, cultural and historic resources, and the regeneration of timber resources.

See resource reports for the West Rim EIS for specifics.

**Culmination of Mean Annual Increment [16 U.S.C. 1604 (m)]:**

Stands of trees harvested have generally reached the culmination of mean annual increment of growth (CMAI).

“Generally reached culmination” is defined as the age at which the stand achieves at least 95 percent of the cubic foot volume at culmination. The CMAI requirement only applies to even-aged management on lands suited for timber production. The CMAI requirement does not apply to thinning, salvage, or sanitation harvests or to harvests designed to achieve non-timber resource objectives (FSM 1921.12f).

The assessment of CMAI uses an analysis completed for the West Rim Project and is based on site index and stand age (Stiller 2007). Some of the stands assessed are multi-storied and contain more than one age group. When inventoried, these components are all combined and an average age for the stand is computed. In these stands one component may have reached the age of CMAI while a younger component has not. The following stands were assessed for CMAI:

FSVEG_LINK	Site Species	Alt_B/C	Site Index	Stand Age '08	Age of 95% CMAI	Assessment
70101001203	PIPO	CC/rxburn	63	112	85	Meets requirement
70101001403	PIPO	OSR/pct/rxburn	59	111	85	Meets requirement
70101002503	PIPO	CC/rxburn	58	116	85	Meets requirement
70101002603	PIPO	CC/rxburn	55	117	85	Meets requirement
70101005603	PIPO	OSR/pct/rxburn	63	104	85	Meets requirement
70101005703	PIPO	SC30/pct/rxburn	61	156	85	Meets requirement
70101005803	PIPO	OSR/pct	55	112	85	Meets requirement
70101005903	PIPO	OSR/pct	65	98	80	Meets requirement
70101006003	PIPO	OSR/pct	61	134	85	Meets requirement
70101007803	PIPO	CC/rxburn	56	157	85	Meets requirement
70101009903	PIPO	CC/rxburn	69	126	80	Meets requirement
70101010003	PIPO	CC/rxburn	49	111	100	Meets requirement
70101010103	PIPO	CC/rxburn	65	125	80	Meets requirement
70101010203	PIPO	CC/rxburn	67	116	80	Meets requirement
70101010303	PIPO	CC/rxburn	53	107	100	Meets requirement
70101010403	PIPO	CC/rxburn	68	137	80	Meets requirement
70102002803	PIPO	OSR/pct	58	144	85	Meets requirement
70102003303	PIPO	SC30/pct/rxburn	55	143	85	Meets requirement
70102006503	PIPO	SC30/pct/rxburn	71	113	80	Meets requirement

FSVEG_LINK	Site Species	Alt_B/C	Site Index	Stand Age '08	Age of 95% CMAI	Assessment
70102007403	PIPO	OSR/pct	70	92	80	Meets requirement
70102008003	PIPO	SC30/pct/rxburn	70	98	80	Meets requirement
70102008203	PIPO	OSR/pct	54	104	100	Meets requirement
70102009603	PIPO	OSR/pct	63	104	85	Meets requirement
70102012003	PIPO	SC30/pct/rxburn	74	101	80	Meets requirement
70105004103	PIPO	SC30/pct/rxburn	58	155	85	Meets requirement
70105004603	PIPO	SC30/pct/rxburn	73	102	80	Meets requirement
70105005703	PIPO	SC30/pct/rxburn	64	116	85	Meets requirement
70201000103	PIPO	OSR/pct	60	112	85	Meets requirement
70201000403	PIPO	OSR/pct	59	122	85	Meets requirement
70201000803	PIPO	OSR/pct	67	106	80	Meets requirement
70201000903	PIPO	SC30/pct/rxburn	67	101	80	Meets requirement
70201001703	PIPO	OSR/pct	60	133	85	Meets requirement
70201001803	PIPO	SC30/pct/rxburn	61	122	85	Meets requirement
70201003003	PIPO	SC30/pct/rxburn	62	94	85	Meets requirement
70201003503	PIPO	SC30/pct/rxburn	78	105	75	Meets requirement
70201005303	PIPO	SC30/pct/rxburn	71	118	80	Meets requirement
70201006003	PIPO	SC30/pct/rxburn	68	130	80	Meets requirement
70202002103	PIPO	SC30/pct/rxburn	62	102	85	Meets requirement
70202002303	PIPO	SC30/pct/rxburn	68	123	80	Meets requirement
70202005203	PIPO	OSR/pct	62	120	85	Meets requirement
70203000503	PIPO	OSR/pct	66	129	80	Meets requirement
70203002103	PIPO	SC30/pct/rxburn	59	93	85	Meets requirement
70203004103	PIPO	OSR/pct	65	111	80	Meets requirement
70203004803	PIPO	OSR/pct	60	98	85	Meets requirement
70301000203		OSR/pct	60	121	85	Meets requirement
70301000303	PIPO	OSR/pct	57	137	85	Meets requirement
70301000403		OSR/pct	60	143	85	Meets requirement
70301000603	PIPO	OSR/pct	49	181	100	Meets requirement
70301000703	PIPO	OSR/pct	54	166	100	Meets requirement
70301002203	PIPO	SC30/pct/rxburn	73	157	80	Meets requirement

FSVEG_LINK	Site Species	Alt_B/C	Site Index	Stand Age '08	Age of 95% CMAI	Assessment
70301002503	PIPO	OSR/pct	55	119	85	Meets requirement
70301004303	PIPO	OSR/pct	53	138	100	Meets requirement
70301004603	PIPO	OSR/pct	50	170	100	Meets requirement
70301005203	PIPO	OSR/pct	69	154	80	Meets requirement
70302006703	PIPO	OSR/pct	64	142	85	Meets requirement
70302007303	PIPO	SC30/pct/rxburn	72	133	80	Meets requirement
70303000803	PIPO	OSR/pct	58	146	85	Meets requirement
70303000903	PIPO	SC30/pct/rxburn	56	116	85	Meets requirement
70303001003	PIPO	OSR/pct	62	108	85	Meets requirement
70303001103	PIPO	OSR/pct	49	89	100	Multiple-use objective
70303001303	PIPO	OSR/pct	54	123	100	Meets requirement
70303004803	PIPO	OSR/pct	43	120	105	Meets requirement
70303007103	PIPO	OSR/pct	71	128	80	Meets requirement
70303007503	PIPO	SC30/pct/rxburn	59	126	85	Meets requirement
70303008103	PIPO	SC30/pct/rxburn	51	98	100	Will reach age of 95% CMAI in two years about time stand would be harvested.
70303009103	PIPO	SC30/pct/rxburn	51	108	100	Meets requirement
70303009203	PIPO	OSR/pct	56	103	85	Meets requirement
70305000603	PIPO	OSR/pct	65	109	80	Meets requirement
70305002103	PIPO	OSR/pct	72	82	80	Meets requirement
70305002203	PIPO	OSR/pct	68	101	80	Meets requirement
70305002903	PIPO	OSR/pct	66	103	80	Meets requirement
70305005203		SC30/pct/rxburn	60	117	85	Meets requirement
70305005303	PIPO	OSR/pct	58	107	85	Meets requirement
70305005903	PIPO	SC30/pct/rxburn	60	107	85	Meets requirement
70309000403	PIPO	SC30/pct/rxburn	51	157	100	Meets requirement
70309000503	PIPO	SC30/pct/rxburn	53	137	100	Meets requirement
70309001703	PIGL	SC30/pct/rxburn	77	98	75	Multiple-use objective
70309003203	PIPO	SC30/pct/rxburn	50	125	100	Meets requirement
70309008803	PIPO	SC30/pct/rxburn	49	143	100	Meets requirement

FSVEG_LINK	Site Species	Alt_B/C	Site Index	Stand Age '08	Age of 95% CMAI	Assessment
70309008903	PIGL	SC30/pct/rxburn	77	99	75	Meets requirement
70309010103	PIPO	OSR/pct	59	115	85	Meets requirement
70404000203	PIPO	SC30/pct/rxburn	64	118	85	Meets requirement
70404000303	PIPO	OSR/pct	64	125	85	Meets requirement
70405000403	PIPO	OSR/pct	65	18	80	Overstory is 116 years old. Meets requirement
70405000603	PIPO	OSR/pct	59	10	85	Age reflects established regeneration. Liberation cut.
70405000703	PIPO	SC30/pct/rxburn	59	95	85	Meets requirement
70405001103	PIPO	SC30/pct/rxburn	61	150	85	Meets requirement
70405001703	PIPO	OSR/pct	63	131	85	Meets requirement
70405001803	PIPO	SC30/pct/rxburn	56	147	85	Meets requirement
70405001903	PIPO	OSR/pct	61	125	85	Meets requirement
70405002403	PIPO	OSR/pct	65	116	80	Meets requirement
70405003503	PIPO	OSR/pct	57	131	85	Meets requirement
70406001003	PIPO	SC30/pct/rxburn	61	116	85	Meets requirement
70409000103	PIPO	OSR/pct	52	114	100	Meets requirement
70409001803	PIPO	OSR/pct	62	133	85	Meets requirement
70409002303	PIPO	OSR/pct/rxburn	70	122	80	Meets requirement
70409005003	PIPO	SC30/pct/rxburn	79	119	75	Meets requirement
70603003903	PIPO	SC30/pct/rxburn	72	102	80	Meets requirement
70603004403	PIPO	SC30/pct/rxburn	64	103	85	Meets requirement
70603006003	PIPO	OSR/pct	75	95	75	Meets requirement
70603006503	PIPO	SC30/pct/rxburn	60	103	85	Meets requirement
70603006603	PIPO	OSR/pct	64	122	85	Meets requirement
70603006803	PIPO	OSR/pct	66	127	80	Meets requirement
70604004403	PIPO	OSR/pct	58	168	85	Meets requirement
70806004803	PIPO	OSR/pct	68	96	80	Meets requirement
70807000603	PIPO	SC30/pct/rxburn	76	99	75	Meets requirement
70807003003	PIPO	OSR/pct	80	91	75	Meets requirement
70807003203	PIPO	SC30/pct/rxburn	82	109	75	Meets requirement

FSVEG_LINK	Site Species	Alt_B/C	Site Index	Stand Age '08	Age of 95% CMAI	Assessment
70807003803	PIPO	SC30/pct/rxburn	79	106	75	Meets requirement
70807003903	PIPO	SC30/pct/rxburn	79	103	75	Meets requirement
70807004403	PIPO	OSR/pct	74	113	80	Meets requirement
70807004703	PIPO	SC30/pct/rxburn	71	106	80	Meets requirement
70807006503	PIPO	SC30/pct/rxburn	65	120	80	Meets requirement
70807007003	PIPO	OSR/pct	78	103	75	Meets requirement
70807007803	PIPO	OSR/pct	69	135	80	Meets requirement
70808000103	PIPO	OSR/pct	66	118	80	Meets requirement
70808001903	PIPO	OSR/pct	67	101	80	Meets requirement
70808002103	PIPO	SC30/pct/rxburn	57	100	85	Meets requirement
70808002603	PIPO	OSR/pct	62	127	85	Meets requirement
70808002903	PIPO	OSR/pct	67	108	80	Meets requirement
70808003703	PIPO	OSR/pct	67	151	80	Meets requirement
71006000903	PIPO	SC30/pct/rxburn	67	102	80	Meets requirement
71006001603	PIPO	OSR/pct	60	112	85	Meets requirement
71006002203	PIPO	OSR/pct	59	166	85	Meets requirement
71006002403	PIPO	SC30/pct/rxburn	59	114	85	Meets requirement
71006002703	PIPO	OSR/pct	57	134	85	Meets requirement
71006002903	PIPO	OSR/pct	66	95	80	Meets requirement
71006003603	PIPO	SC30/pct/rxburn	63	127	85	Meets requirement
71006004703	PIPO	OSR/pct	56	96	85	Meets requirement
71006004803	PIPO	SC30/pct/rxburn	67	115	80	Meets requirement
71006005203	PIPO	OSR/pct	65	172	80	Meets requirement
71006005603	PIPO	OSR/pct	66	103	80	Meets requirement
71006005703	PIPO	SC30/pct/rxburn	56	125	85	Meets requirement
71006005803	PIPO	SC30/pct/rxburn	62	120	85	Meets requirement
71006006203	PIPO	OSR/pct	55	118	85	Meets requirement
71007000303	PIPO	OSR/pct	79	111	75	Meets requirement
71007005203	PIPO	OSR/pct	79	108	75	Meets requirement
71201001703	PIPO	OSR/pct	67	116	80	Meets requirement
71201002203	PIPO	SC30/pct/rxburn	68	99	80	Meets requirement

FSVEG_LINK	Site Species	Alt_B/C	Site Index	Stand Age '08	Age of 95% CMAI	Assessment
71201002303	PIPO	SC30/pct/rxburn	74	115	80	Meets requirement
71201002703	PIPO	SC30/pct/rxburn	64	131	85	Meets requirement
71201002803	PIPO	OSR/pct/rxburn	64	125	85	Meets requirement
71201002903	PIPO	OSR/pct/rxburn	62	130	85	Meets requirement
71201003103	PIPO	OSR/pct/rxburn	59	119	85	Meets requirement
71201004003	PIPO	OSR/pct	73	107	80	Meets requirement
71201004603	PIPO	OSR/pct	48	108	100	Meets requirement
71201005903	PIPO	OSR/pct	62	119	85	Meets requirement
71201006903	PIPO	OSR/pct/rxburn	60	127	85	Meets requirement
71201007903	PIPO	OSR/pct/rxburn	64	117	85	Meets requirement
71201008903	PIPO	OSR/pct	60	102	85	Meets requirement
71202000403	PIPO	OSR/pct	58	130	85	Meets requirement
71202001103	PIPO	OSR/pct	64	141	85	Meets requirement
71202002603	PIPO	OSR/pct/rxburn	61	103	85	Meets requirement
71202002903	PIPO	OSR/pct/rxburn	51	105	100	Meets requirement
71202003103	PIPO	OSR/pct/rxburn	53	110	100	Meets requirement
71202003403	PIPO	OSR/pct	56	111	85	Meets requirement
71202003903	PIPO	OSR/pct	70	107	80	Meets requirement
71202004003	PIPO	OSR/pct/rxburn	64	131	85	Meets requirement
71202004103	PIPO	SC30/pct/rxburn	63	111	85	Meets requirement
71202005103	PIPO	OSR/pct	41	166	105	Meets requirement
71202005503	PIPO	OSR/pct	64	149	85	Meets requirement
71203002603	PIPO	SC30/pct/rxburn	66	123	80	Meets requirement
71203004303	PIPO	SC30/pct/rxburn	57	101	85	Meets requirement
71203005403	PIPO	SC30/pct/rxburn	69	117	80	Meets requirement
71203007303	PIPO	SC30/pct/rxburn	48	115	100	Meets requirement
71204000103	PIPO	OSR/pct/rxburn	64	101	85	Meets requirement
71204001603	PIPO	OSR/pct/rxburn	61	116	85	Meets requirement
71204001703	PIPO	SC30/pct/rxburn	68	101	80	Meets requirement
71204002003	PIPO	OSR/pct/rxburn	62	107	85	Meets requirement
71204003003	PIPO	OSR/pct	44	159	105	Meets requirement

FSVEG_LINK	Site Species	Alt_B/C	Site Index	Stand Age '08	Age of 95% CMAI	Assessment
71204003303	PIPO	SC30/pct/rxburn	78	91	75	Meets requirement
71204004203	PIPO	SC30/pct/rxburn	56	112	85	Meets requirement
71204005203	PIPO	OSR/pct/rxburn	62	95	85	Meets requirement
71204005503	PIPO	OSR/pct/rxburn	57	125	85	Meets requirement
71204005703	PIPO	SC30/pct/rxburn	64	106	85	Meets requirement
71204005803	PIPO	SC30/pct/rxburn	69	110	80	Meets requirement
71204006403	PIPO	SC30/pct/rxburn	69	122	80	Meets requirement
71204007203	PIGL	SC30/pct/rxburn	83	114	75	Meets requirement
71205000103	PIPO	OSR/pct	63	142	85	Meets requirement
71205001303	PIPO	OSR/pct	65	106	80	Meets requirement
71205001903	PIPO	OSR/pct	53	153	100	Meets requirement
71205002703	PIPO	OSR/pct	66	124	80	Meets requirement
71205003103	PIPO	OSR/pct	56	43	85	Overstory is 135 years old. Meets requirement
71205003503	PIPO	OSR/pct	57	111	85	Meets requirement
71205004603	PIPO	OSR/pct	57	132	85	Meets requirement
71205005403	PIPO	OSR/pct	70	142	80	Meets requirement
71205005603	PIPO	OSR/pct	69	106	80	Meets requirement
71205005803	PIPO	OSR/pct	59	103	85	Meets requirement
71205005903	PIPO	OSR/pct	58	99	85	Meets requirement
71205006203	PIPO	OSR/pct	65	93	80	Meets requirement
71303001803	PIPO	OSR/pct	70	95	80	Meets requirement
71303002503	PIPO	SC30/pct/rxburn	73	98	80	Meets requirement

*West Rim Final Environmental Impact Statement*

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All the stands considered met either the exception to the requirement (multiple-use objective) or the requirement for CMAI itself.

Findings prepared by: Laura Scotford Date: 2-21-08

Findings recommended by: Laura Scotford Date: 5-1-08  
(Certified Silviculturist)

Findings accepted by: Theresa Byrne Date: 5/27/08  
(Line Officer)