MU/Stand	
Estimated Acreage:	

Owner's Name _	
Plan Author (if not owner	)

# Stand Analysis Form

A "healthy forest" must be defined by the natural history of the area and the growth characteristics of the tree species that currently occupy the site. In general, a healthy forest has a majority of trees that are vigorous and resistant to uncharacteristic insect and disease outbreaks and has the ability to sustain itself as a forest through tree survival or tree regeneration when affected by wildfire.









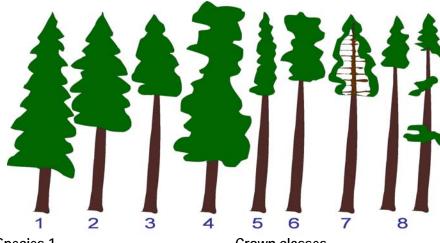
MONTANA

Forestry Program

## **Current Condition**

Total % cover by larger diame			ground > 30 ft tall)
Species  1 2 3 4 5 6 Total% cover by smaller diam (5-9 inches diameter 4.5 ft from 1.5 ft from	eter species - Poles om ground < 30 ft tall)	Age	PP Ponderosa pine DF Douglas-fir LPP Lodgepole pine WL Western Larch GF Grand fir ES Engelmann spruce WRC Western red cedar WH Western hemlock WP White pine SAF Subalpine fir LP Limber pine RMJ Rocky mtn. juniper QA Quaking aspen
Species	% of Forested Area	Age	CW Cottonwood Green Ash
1			Croonvion
2			
3			
4			
5			
6. Predominant stand tree struc			
Single canopy layer Two canopy layers (Overstory + Three canopy (Overstory + pole  Seedling Pole	seedlings)es, Poles + seedlings)	opy layer	Three canopy layer
Average age of size classes			
Seedlings/Saplings	Poles (5-9" diameter)	Large (>9"	diameter)
Insect and disease symptoms	noted (list species and percen	nt of the trees sho	owing symptoms)
Bark beetle attack	Mistletoe/br	ranch brooming _	
Excessive pitch streaming	Visible butt	/root decay	
Broken stems/windthrow	Stem galls	(western gall rus	t)

## Stand vigor rating (use diagram below and list percent of each tree species in major crown class)



Species 1 \_\_\_\_\_Crown classes \_\_\_\_\_

Species 2 \_\_\_\_\_Crown classes \_\_\_\_\_

Species 3 \_\_\_\_\_Crown classes \_\_\_\_\_

### Fire Hazard (circle High, Med, or Low in each category)

Trees with fuel ladders high  $\geq 30\%$  med 10 - 29% low  $\leq 10\%$ 

Tree Crowns touching high > 50% med 10 - 49% low < 10%

Fine fuels (grasses taller than 2ft, > 2" deep pine needles, brush, branches) <u>High</u> <u>Med</u> <u>Low</u>

Large fuels (branches larger than 2 inches diameter, logs) High Med Low

Ground Fuel Continuity <u>High</u> – mostly touching <u>Med</u> – occasionally touching <u>Low</u> – rarely touching

#### Overall Wildfire risk (total circled above)

High = any two highs marked Moderate = two or more med Low = one med or less

Adjacent Management Unit/Ownership Wildfire Risk: <u>High</u> <u>Moderate</u> <u>Low</u>

## Stream/wetland present in Management Unit

Streams Class I – length \_\_\_\_ Class II – length \_\_\_\_ Class III – length \_\_\_\_

# Ponds \_\_\_\_\_ approximate sizes \_\_\_\_\_

Lakeshore (name of lake and distance of shoreline)

Bogs/wetland (acreage)

#### Soil considerations (circle all that apply)

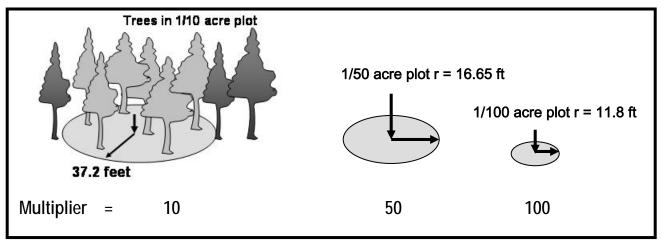
May have a mix of textures

<u>rocky</u> <u>gravelly</u> <u>fine</u> <u>sandy</u> <u>clay</u> <u>well drained</u> <u>poorly drained</u>

Other considerations:

**Tree Density** (For dense forest of mature trees choose smaller plot size that will include 5 to 10 trees)

deep (>2 feet) shallow (<2 feet)



# Large diameter tree	s (>9" DBI	H) per	acre	plot(# of trees	X	= er)	trees p	oer acre
# Snags per plot per $_{\overline{0}}$	choose plot size	acre plot _	(# of trees)	X(multiplier)	_=_	large sna	ags per acre	
# Pole sized trees (5-	9″ DBH) pe	er (choose plot s	acre plo	(# of trees)	X(multiplied	<u>·)</u> =	poles pe	er acre
# Snags per plot per (	choose plot size	acre plot	f of trees)	X(multiplier)	_ =	small sna	ags per acre	
# Seedling/Sapling tre	es per 1/1	00 acre plo	ot	x 100 = _	S	eedlings p	er acre	
% of soil covered by understory vegetation per 1/100 acre plot x 100 =% vegetation cover per acre								
Site index – (Opti	ional)							
Species	_ Age	Heigh	t	Site index_		-		
Species Age Height Site index								
Tree growth rates								
Large tree averages (based on 3 or more trees sampled per species)								
Species					Species			
DBH					DBH			
Age					Age			
Rings/last 1 inch				Rings/la	ast 1 inch			
Avera	age DBH				Ave	rage DBH		
Aver	age Age				Ave	erage Age		
Average total incre	ement (1/2	DBH/Age	)	Averag	e total incr	ement (1/2	DBH/Age)	
Species					Species			
DBH					DBH			
Age					Age			
Rings/last 1 inch				Rings/la	ast 1 inch	<u> </u>		

Average DBH

Average Age

Average total increment (1/2 DBH/Age)

Average DBH

Average Age

Average total increment (1/2 DBH/Age)

## Desired Future Condition - Timber

MU

Desired mature tree species (% of forested area) and expected longevity (maximum age you expect

trees to reach before they die of natural causes or are harvested)

Species	% of Forested Area	Age
1		
2	<u> </u>	
3		
4		
5		
6		
Desired species to naturally re	generate	

**PP** Ponderosa pine **DF** Douglas-fir

LPP Lodgepole pine

WL Larch

**GF** Grand fir

**ES** Engelmann spruce

WRC W. Red cedar

WH Western hemlock

WP White pine

**SAF** Sub-alpine fir

**LP** Limber pine

RMJ rocky mtn. juniper

QA Aspen

CW Cottonwood Green ash

Desired species to plant \_\_\_\_\_

Bird's-eye view of forest (check one)

Wild stand	Evenly spaced	Evenly spaced with openings	Variable density spaced with openings
\$%.			

Some wildlife

Maximizes growth

Growth + regeneration

Some growth + regeneration + wildlife

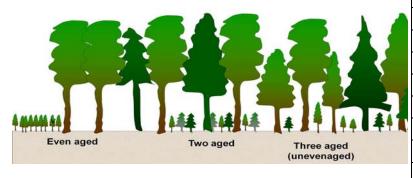
Spacing (feet)

Desired spacing (in feet) Large (>9"DBH)\_\_\_\_\_\_(ft)

Pole (5-8"DBH) (ft) Seedling(<5"DBH) (ft)

Size and shape of openings \_\_\_\_\_

Desired structure:



3x3	4,840
5 <b>x</b> 5	1,742
7x7	889
10x10	436
12x12	302
14x14	222
16x16	170
18x18	134
20x20	87
25x25	70
30x30	48
40x40	27

Two canopy layer
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Three canopy
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Trees/acre