

PLOT FORM SUMMARY



Landowner _____ Date _____
 Management Unit (MU) _____ # Plots in MU _____ # Acres in MU _____

Calculation Instructions for tables 1 (Slope), 2 (Aspect), 3 (Forest Structure), 4 (Shrub Understory), 5 (Soil Considerations), 6 (Tree Crown Cover).

Using your plot forms, count and record the number of plots in each category for tables 1-6. Use the Dot Count Method to complete “# of plots” column.

Next, complete the percent of plots column for each table. “% of plots” is calculated by dividing the number of plots in each category by the total number of plots in the MU.

Example:

	# of plots	% of plots
0-20%	••	20%
20-40%	••••	60%
40%+	••	20%

The Example shows 6 of 10 plots in the 20 - 40% slope category. To calculate “% of plots”, divide 6 by 10 = .6, and multiply by 100 for % (60%). So, 60% of the plots in this MU had slopes of 20 - 40%, 20% were 0 - 20% or 40%+. Check your math mentally by adding the % of plots column. It should total 100%.

1. Slope Percent

	# of plots	% of plots
0-20%		
20-40%		
40%+		

2. Aspect

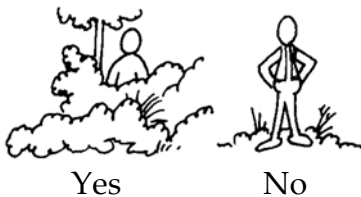
	# of plots	% of plots
North		
South		
East		
West		
Flat		

3. Forest Structure

Structure #	# of plots	% of plots

4. Shrub Understory

	# of plots	% of plots
Yes		
No		



6. % Tree Crown Cover

	# of plots	% of plots
20%		
40%		
60%		
80%+		



5. Soil Considerations

<u>Organic Layer Depth</u>	# of plots	% of plots
Heavy > 2 inches		
Light < 2 inches		

<u>Soil Depth</u>	# of plots	% of plots
Deep > 2 feet		
Shallow < 2 feet		
Absent 0 feet or rock		

<u>Texture/Compaction</u>	# of plots	% of plots
Rocky		
Gravelly		
Fine textured		

Write any other soil comments like “active erosion issues.”

<u>Drainage</u>	# of plots	% of plots
Well drained		
Poorly drained		

NEXT: Before going further, calculate the “**Primary**” and “**Secondary**” species for the MU. Go to the data in #9 on the Plot Form, the columns titled “Primary Species” and “Secondary Species.” Using your plot forms, tally the primary and secondary tree species on the table below (use Dot Count Method).

	DF	LPP	PP	WL	ES	GF	SAF	QA				PRIMARY
Primary Species	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
												SECONDARY
Secondary Species	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Look across the Primary Species line, the species with the highest tally is the primary species in your Management Unit. Record the species in the box on the right. Repeat the procedure to determine the Secondary Species in your Management Unit. *This will be your Primary and Secondary Species for all future reference throughout this form.*

7. Seedling & Sapling Information

The information collected on the fixed plot (#7 on Plot Forms) is used to calculate the average number of seedlings and saplings per acre in the management unit.

To calculate seedlings per acre (next page):

1. Write the *Primary*, *Secondary* and *Other* species abbreviations in the appropriate box in the tables on pages 3 through 7. (Use the Primary and Secondary species determined for the large trees (above) for all calculations even if there are more seedlings of a different species). Be sure to include **all Other Species** abbreviations from your plot forms.
2. Look through each plot form. Count the total number of seedlings for each condition (Good, Poor) by species. Use line 1 to record your count. At the bottom of line 1, write the total count.
3. Divide each answer on line 1 (total number of seedlings by condition) by the number of plots in your management unit. Record the answer on line 2.
4. Multiply each answer on line 2 (Average number of seedlings per plot) by 50. Record the answer on line 3. This is the average number of seedlings/acre by condition (good vs. poor).
5. Add the “good” & “poor” seedlings. Record the total on line 4.
6. Add the Primary, Secondary and Other species. Record the total on line 5. This represents the total # of seedlings per acre (all species, all conditions).



Primary Species

--

Good Poor

Secondary Species

--

Good Poor

Other Species

--

Good Poor

Line 1.
Number of seedlings found on all plots by condition.

Good

Line

	Primary Species		Secondary Species		Other Species	
	Good	Poor	Good	Poor	Good	Poor
Line 1. Good						
Line 1. Total						

Line 2.
Average # of seedlings per plot.

Divide totals from line 1 by the number of plots in your management unit

--	--	--	--	--	--	--	--

Line 3.
Average # of seedlings per acre by condition.

Multiply by 50		Multiply by 50		Multiply by 50				
	+			+			+	

Line 4.
Total (good & poor) seedlings per acre, (by species).

Primary Species	Secondary Species	Other Species	Other Species

Line 5.
Total # of seedlings per acre (all conditions, all species).

--

Use the same procedure to calculate saplings per acre:



Primary Species

--

Good Poor

Secondary Species

--

Good Poor

Other Species

--

Good Poor

Line 1. Number of sapling found on all plots by condition.

Line 1. Total

	Primary Species		Secondary Species		Other Species	
	Good	Poor	Good	Poor	Good	Poor
Line 1. Good						
Line 1. Total						

Line 2. Average # of saplings per plot.

Divide totals from line 1 by the number of plots in your management unit

--	--	--	--	--	--	--	--

Line 3. Average # of saplings per acre by condition.

Multiply by 50		Multiply by 50		Multiply by 50				
	+			+			+	

Line 4. Total (good & poor) saplings per acre, (by species).

Primary Species	Secondary Species	Other Species	Other Species

Line 5. Total # of saplings per acre (all conditions, all species).

--

9 - 15" DBH Trees:

	Primary Species			Secondary Species			Other Species			
	Condition	Good	Poor	Dead	Good	Poor	Dead	Good	Poor	Dead
Line 1. Number of 9 - 15" trees found on all plots by condition.										
Divide total by the number of plots in management unit										
Line 2. Average number of 9 - 15" trees per plot by condition.										
Circle plot size used and multiply by corresponding factor: 1/10 acre = 10 1/50 acre = 50										
Line 3. Average number of 9 - 15" trees per acre by condition.										
		Add			Add			Add		
Line 4. Average number of live 9 - 15" trees per acre, (by species).		Primary Species			Secondary Species			Other Species		
Line 5. Total number of live 9 - 15" trees per acre (all conditions, all species).										

15 - 20" DBH Trees:

	Primary Species			Secondary Species			Other Species			
	Condition	Good	Poor	Dead	Good	Poor	Dead	Good	Poor	Dead
Line 1. Number of 15 - 20" trees found on all plots by condition.										
Divide total by the number of plots in management unit										
Line 2. Average number of 15 - 20" trees per plot by condition.										
Circle plot size used and multiply by corresponding factor: 1/10 acre = 10 1/50 acre = 50										
Line 3. Average number of 15 - 20" trees per acre by condition.										
		Add			Add			Add		
Line 4. Average number of live 15 - 20" trees per acre, (by species).		Primary Species			Secondary Species			Other Species		
Line 5. Total number of live 15 - 20" trees per acre (all conditions, all species).										

Line 3. Average number of 20"+ trees per acre by condition.

Line 5. Total number of live 20"+ trees per acre (all conditions, all species).

↓

Total Dead

Total Trees Per Acre:

Use the following boxes to combine all line 5 data (total **live** trees per acre) from pages 3, 4, and 5 for Seedlings, Saplings, 5 - 9", 9 - 15", 15 - 20" and 20"+ trees per acre.

Seedlings	Saplings	5 - 9"	9 - 15"	15 - 20"	20" +	Total Trees Per Acre						
<input style="width: 50px; height: 40px;" type="text"/>	+	<input style="width: 50px; height: 40px;" type="text"/>	+	<input style="width: 50px; height: 40px;" type="text"/>	+	<input style="width: 50px; height: 40px;" type="text"/>	+	<input style="width: 50px; height: 40px;" type="text"/>	+	<input style="width: 50px; height: 40px;" type="text"/>	=	<input style="width: 100px; height: 40px; border: 2px solid black;" type="text"/>

Count the **dead** trees in each size class and enter the number.

	5 - 9"	9 - 15"	15 - 20"	20" +	Total Dead TPA				
Snags	<input style="width: 50px; height: 40px;" type="text"/>	+	<input style="width: 50px; height: 40px;" type="text"/>	+	<input style="width: 50px; height: 40px;" type="text"/>	+	<input style="width: 50px; height: 40px;" type="text"/>	=	<input style="width: 100px; height: 40px; border: 2px solid black;" type="text"/>



9. 1st Fixed Plot Large Tree

- Record the Management Unit (MU) Primary and Secondary species (see top of page 2) in box A below.
- Review the plot form data under number 9 (1st Fixed Plot Large Tree). Look for any "1st Tree" information collected about your **MU Primary Species**. Remember, the tree species designated as your MU Primary Species may not match the Primary Species for each individual plot. The object is to obtain and record as much DBH, Age, and rings/1 inch increment data about your MU Primary Species as possible. Repeat the procedure for MU Secondary Species.
- Add the values for each category, and record the total in the top half of box B.
- In the bottom half of box B, enter the # of plots for which data was entered.
- Divide the total of each category (top of box B) by the # of plots with primary species trees (bottom of box B) to determine the average DBH. Record your answer in box C.
- RANGE:** Enter the smallest to largest values for each category.

EXAMPLE:

										DF					
MU Primary Species A										B		C		RANGE	
DBH	9	-	8	13	18	-	12	10	11		81	=		11.6	8" to 18"
Plot #	1	2	3	4	5	6	7	8	9	10	7			small	large

In the *EXAMPLE* above, the average of seven DBH values is 11.6 (Box C). It is calculated by dividing the sum of all diameters (top of Box B) by the number of plots with large trees (7) in the bottom of Box B. Blank boxes indicate that no increment bored tree on the plot was of the Management Unit's Primary Species. The **RANGE** of diameters is from 8" to 18".

MU Primary Species A										B		C		RANGE	
DBH												=			--- to ---
Plot #	1	2	3	4	5	6	7	8	9	10				small	large
Age												=			--- to ---
Plot #	1	2	3	4	5	6	7	8	9	10				small	large
Rings/1 inch												=			--- to ---
Plot #	1	2	3	4	5	6	7	8	9	10				small	large

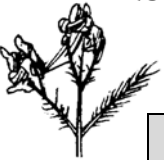

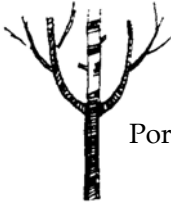

MU Secondary Species A										B		C		RANGE	
DBH												=			--- to ---
Plot #	1	2	3	4	5	6	7	8	9	10				small	large
Age												=			--- to ---
Plot #	1	2	3	4	5	6	7	8	9	10				small	large
Rings/1 inch												=			--- to ---
Plot #	1	2	3	4	5	6	7	8	9	10				small	large

Questions 10 - 16: Using the Dot Count Method, tally the # of plots in each category.

Calculate the % of plots in each category




10. Stand health and Appearance

Using the Dot Count Method, tally the # of plots for Insects, Disease, Animal Damage and Appearance categories. Calculate the % of plots in each category.

INSECT			DISEASE			ANIMAL DAMAGE			APPEARANCE		
	# of plots	% of plots		# of plots	% of plots		# of plots	% of plots		# of plots	% of plots
Bark Beetle			Mistletoe			Porcupine			Crook		
Budworm			Root Rot			Deer/Elk			Sweep		
Other			Gall rust			Livestock			Fire Scar		
			Other			Other			Other		

11. Down Woody Material

Using the Dot Count Method, tally the # of plots with down woody material by size class, and whether Dispersed, Piled, Solid or Decayed. Calculate the % of plots in each category.

	# of plots	% of plots		# of plots	% of plots
			Contiguous		
			Dispersed		
			Suspended		
			Piled		

SOLID		DECAYED	
# of plots	% of plots	# of plots	% of plots

12. Fire Hazard

Trees with fuel ladders	# of plots	% of plots
High		
Med		
Low		

Tree Crowns Touching	# of plots	% of plots
High		
Med		
Low		

Fine Fuels	# of plots	% of plots
High		
Med		
Low		

Large Fuels	# of plots	% of plots
High		
Med		
Low		

Fuel Continuity	# of plots	% of plots
High		
Med		
Low		

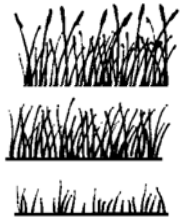
Wildfire Risk	# of plots	% of plots
High		
Med		
Low		

13. % Ground Cover

Under each category (Grasses, Forbs, Shrubs), tally the number of plots in each % of coverage group. Calculate the % for each.

	GRASSES								FORBS								SHRUBS								
	0-5%		5-20%		20-40%		40%+		0-5%		5-20%		20-40%		40%+		0-5%		5-20%		20-40%		40%+		
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Native/ Acceptable																									
Weeds/ Invaders		1-5%								1-5%								1-5%							
	0	0%							0	0%								0	0%						

14. Cattle Forage Use



Absent/Light
Moderate
Heavy

# of plots	% of plots

15. Deer/Elk Forage Over-Use



Yes
No

# of plots	% of plots

16. Presence of Pellets/Scat



Deer
Elk

# of plots	% of plots



Moose
Bear

# of plots	% of plots

Questions 17 & 18: Check the presence of wildlife sign and other observations noted on each plot form. Put a check in each box under the plot where the sign was found or the observation made. Total the number of checks. List any "Other Wildlife Sign" and "General Observations." Write in the plot numbers they were found on or near.

17. Other Wildlife Sign and 18. General Observations

Plot #	1	2	3	4	5	6	7	8	9	10	% plots	Other Wildlife Sign	Plot #
Snags													
Wallows													
Wetlands													
Endangered													
Tracks													
Noxious Weeds												General Observations	Plot #
Down Fences													
Rock Outcrops													
Riparian Areas													
Survey Markers													
Access Concerns													