

**SIERRA NEVADA FOOTHILL WILDLIFE - HABITAT SAMPLING DATASHEET**

Date: \_\_\_\_\_ Sample Crew: \_\_\_\_\_ Sample\_ID: \_\_\_\_\_ Plot\_Number: \_\_\_\_\_ Veg\_Plot\_Number: \_\_\_\_\_ Aspect: \_\_\_\_\_ Max. Slope: \_\_\_\_\_

**LIVE STEM DENSITIES**

Species, crown position, dbh, and height of live woody stems  $\geq 10$  cm (4.0") dbh in the 0.05-0.10 ha circular plot (0.05-ha plot has radius = 12.6 m [41.4 ft]; 0.10 ha plot has radius = 17.8 m [58.5 ft]). Sampling begins with the 0.05-ha plot and increases to 0.10-ha plot when  $< 20$  trees are tallied with the smaller plot. When  $\geq 20$  trees are tallied in 0.05-ha plot, the larger plot isn't used but all trees within the 0.05-ha plot must be measured. All subsequent measurements are done in the plot size based on the tree measurements. DBH is measured to the nearest 0.25 cm (0.1") at 1.4 m (4.5 ft) height on the trunk. Tree height is measured to the nearest 0.3 m (1 ft) using 1 tree closest to plot center in each cardinal compass quarter [NE, SE, SW, NW]. Therefore, a total of four (4) trees (1 per quarter) are measured for heights. Over/under indicates whether tree is predominant, dominant, codominant, or intermediate tree in the overstory (Over) or an intermediate, overtopped or suppressed tree in the understory (Under). DBH is measured with a dbh tape, and height (HT) is measured with a clinometer. "Pt-ctr 1/4 comp quad" refers to appropriate compass quarter (e.g., NW, SE, etc.) in which the height-measured tree occurred. To be measured for DBH or HT,  $\geq 50\%$  of the tree's trunk must be rooted within the plot.

**PLOT SIZE:** 0.05 ha (0.12 acre): \_\_\_\_\_ (radius 12.6 m [41.4 ft]) 0.10 ha (0.25 acre): \_\_\_\_\_ (radius 17.8 m [58.5 ft])

Stem #	Species	Over/ under	dbh 0.1 in	Ht 1 ft	pt-ctr 1/4 comp quad	Stem #	Species	Over/ under	dbh 0.1 in	Ht 1 ft	pt-ctr 1/4 comp quad
1						26					
2						27					
3						28					
4						29					
5						30					
6						31					
7						32					
8						33					
9						34					
10						35					
11						36					
12						37					
13						38					
14						39					
15						40					
16						41					
17						42					
18						43					
19						44					
20						45					
21						46					
22						47					
23						48					
24						49					
25						50					

**SNAG DENSITIES**

Species, dbh, and decay class of all standing snags  $\geq 10$  cm (4.0") dbh and  $\geq 3$  m (9.8 ft) tall within the 0.05-0.10 ha (0.12-0.25-acre) circular plot. Identify to species or as "conifer" or "hardwood" if unable to determine species.

Snag No.	Species	dbh (0.1 in)	Decay Class	Snag No.	Species	dbh (0.1 in)	Decay Class
1				7			
2				8			
3				9			
4				10			
5				11			
6				12			

**VEGETATION COVER MEASUREMENT****TREE LAYER**

Hits and misses of the tree layer ( $\geq 2.0$  m [6.6 ft] tall) from the densitometer held at eye level while looking up at evenly-spaced intervals beginning at the plot center along eight (8) transects through the plots (total of 25 readings within plot; 3 per transect). Indicate species intersected at each point. The densitometer is held level and centered over sample point. Green leaves and living branches and twigs are tallied. Dead branches and main trunks are not counted. Overlapping trees may be encountered at each point and should be indicated as overstory, mid-canopy, and understory trees using the notion "BLOA/BLOA/CABU" for overstory/mid-canopy/understory trees; use a "-" to indicate missing layers as follows "-/BLOA/CABU" indicates a missing overstory tree.

Center:\_\_\_\_\_

0° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_ 45° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_

90° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_ 135° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_

180° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_ 225° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_

270° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_ 315° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_

**SHRUB LAYER**

Cover in the shrub layer is recorded at the same transect points as tree layer cover using the densitometer which is held upright or turned upside down to measure cover in the shrub layer. The densitometer is held at eye level while standing with the densitometer held over the sample point. Any live vegetation in the shrub layer (0.51 m to 2.0 m)(1.6 ft to 6.6 ft) in height is recorded if it is intersected by the sighting point including small shrubs and small trees that are seedlings and saplings within the shrub layer. Layering is not recorded here, only what is intersected by the densitometer at the top of the shrub vegetation layer. Any part of a live plant intersecting the sighting point in the shrub layer is tallied.

Center:\_\_\_\_\_

0° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_ 45° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_

90° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_ 135° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_

180° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_ 225° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_

270° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_ 315° tran: 4/5 m:\_\_\_\_\_ 8/10 m:\_\_\_\_\_ 12/15 m:\_\_\_\_\_

**HERBACEOUS LAYER**

Cover in the herbaceous layer is recorded at the same transect points as tree and shrub layer cover using the densitometer which is turned upside down to measure cover. Anything  $\leq 0.5$  m (1.6 ft) in height is recorded if it is intersected by the sighting point, including small shrubs and small trees that are seedlings and saplings no taller than 0.5 m. Layering is not recorded here, only what is intersected by the densitometer at the top of the herbaceous vegetation layer. Any part of a live plant intersecting the sighting point at  $\leq 0.5$  m is tallied. Use CWHR element definitions for herbaceous layer plants.

Center:\_\_\_\_\_

<b>0° tran:</b>	4/5 m:_____	8/10 m:_____	12/15 m:_____	<b>45° tran:</b>	4/5 m:_____	8/10 m:_____	12/15 m:_____
<b>90° tran:</b>	4/5 m:_____	8/10 m:_____	12/15 m:_____	<b>135° tran:</b>	4/5 m:_____	8/10 m:_____	12/15 m:_____
<b>180° tran:</b>	4/5 m:_____	8/10 m:_____	12/15 m:_____	<b>225° tran:</b>	4/5 m:_____	8/10 m:_____	12/15 m:_____
<b>270° tran:</b>	4/5 m:_____	8/10 m:_____	12/15 m:_____	<b>315° tran:</b>	4/5 m:_____	8/10 m:_____	12/15 m:_____

**OAK AND CONIFER SEEDLINGS AND SAPLINGS**

No. of oak or conifer seedlings ( $< 1$ " dbh) and saplings ( $> 1$ " but  $< 6$ " dbh) are counted in nine (9) 0.56-m radius circular plots located in the habitat sampling plot. The first one is centered over the plot center stake, while the other eight (8) are located centered on the shrub and canopy cover transects from the center at 8 m or 10 m intervals depending on the plot size. Seedlings and saplings must be rooted within the plot.

Center Plot:	Species:_____	Species:_____	Species:_____
0°/360°-trans. 8/10 m Plot:	Seed:___ Sapl:___	Seed:___ Sapl:___	Seed:___ Sapl:___
45°-trans. 8/10 m Plot:	Seed:___ Sapl:___	Seed:___ Sapl:___	Seed:___ Sapl:___
90°-trans. 8/10 m Plot:	Seed:___ Sapl:___	Seed:___ Sapl:___	Seed:___ Sapl:___
135°-trans. 8/10 m Plot:	Seed:___ Sapl:___	Seed:___ Sapl:___	Seed:___ Sapl:___
180°-trans. 8/10 m Plot:	Seed:___ Sapl:___	Seed:___ Sapl:___	Seed:___ Sapl:___
225°-trans. 8/10 m Plot:	Seed:___ Sapl:___	Seed:___ Sapl:___	Seed:___ Sapl:___
270°-trans. 8/10 m Plot:	Seed:___ Sapl:___	Seed:___ Sapl:___	Seed:___ Sapl:___
315°-trans. 8/10 m Plot:	Seed:___ Sapl:___	Seed:___ Sapl:___	Seed:___ Sapl:___
Total:	Seed:___ Sapl:___	Seed:___ Sapl:___	Seed:___ Sapl:___

**LOGS AND DOWNED WOODY DEBRIS**

Logs and downed woody debris are counted using the eight (8) transects centered along the N-S, NE-SW, E-W, and NW-SE axis's used for the cover and seedling/sapling tallies. The entire length of each transect is sampled. Transect length depends on the plot size as with other measures. Logs and slash intersected by these transects are tallied by CWHR log class. Log and slash length must be  $\geq 1$  m (3.3 ft) to be tallied, and diameter is measured at the greatest diameter of the log or slash. Logs intersecting multiple transects are tallied once; multiple branching logs and slash are tallied once based on the largest diameter by following branches to the trunk or largest diameter branch. Branches and slash broken off larger branches and trees are tallied as individual items. The 0°/360° and 180° transects are the N-S transect, 45° and 225° transects are the NE-SW transect, the 90° and 270° transects are the E-W transect, and the 135° and 315° transects are the NW-SE transect.

Type:	N-S	NE-SW	E-W	NW-SE	Total
Large log ( $>20.0$ " diameter):	_____	_____	_____	_____	_____
Medium log (10.1-20.0" diameter):	_____	_____	_____	_____	_____
Large Slash (3.1-10.0" diameter):	_____	_____	_____	_____	_____