

## Appendix 4: EVG Data Entry Form Definitions

Initials: \_\_\_\_\_

Date: \_\_\_\_\_

Stand Tag: e.g. 2IH16N980001 (2: denotes Wallowa Valley District, IH16: denotes quad designation, N: denotes quad half, 980001: denotes unique stand number. Acceptable tag identifier must be 12 characters in length.)

Data Source Code: CP (denotes walk thru exam was completed in 2001 as part of the “Community Planning” assessment.)

Ecoclass Information: derived from Charlie Johnson’s “Plant Associations of the Wallowa-Snake Province... copies provided.

### Tree Layer Information:

#### \* Age Class Layer

Code	Definition
R:	Residual component: 200+ years in age
1:	stratum consisting of trees: 150-199 years in age
2:	stratum consisting of trees: 120-149 years in age
3:	stratum consisting of trees: 70-119 years in age
4:	stratum consisting of trees: 40-69 years in age
8	stratum consisting of trees: 0-39 years in age

#### \* Basal Area per acre

Inventory basal area with 20 BAF and record density by layer (trees greater or equal to 5 inches DBH- size classes 4-11).

#### \* Seedlings/saplings per acre

Inventory trees less than or equal to 4.9 inches (size classes (size classes 1,2,3) with a 100<sup>th</sup> acre plot (11.8’ plot radius).

#### \* Clumpiness

Code	Definition
1	<u>Uniform:</u> Trees generally even-spaced; not many holes present in the canopy
2	<u>Clumped:</u> Trees tend to be found in clumps giving stand a patchy character with trees in group, along with unstocked openings. Unstocked openings are a function of past harvesting activities. Stands with past HPR activity (partial removal) have this characteristic
3	<u>Scattered:</u> Trees sparsely distributed throughout the stand
4	<u>Non-forest inclusions:</u> Stand displays inclusions of non-forested openings within forested matrix.

Non-forested inclusions were never forested.

\* Size Class

Code	Definition
1	Seedlings less than 1 inch in diameter
2	Seedlings/saplings mixed
3	Saplings: 1"-4.9" in diameter
4	Saplings/poles mixed
5	Poles: 5.0"-8.9" in diameter
6	Poles/small saw mixed
7	Small saw: 9.0"-20.9" in diameter
8	Small saw/medium saw mixed
9	Medium saw: 21.0"-31.9" in diameter
10	Medium saw/Large saw mixed
11	Large saw: 32" + in diameter

Relative Species Coverage by Layer:

\* Species composition prioritized by relative dominance by basal area

Code	Definition
PSME	Douglas-fir ( <u>Pseudotsuga menziesii</u> )
PIPO	Ponderosa pine ( <u>Pinus ponderosae</u> )
PICO	Lodgepole pine ( <u>Pinus contorta</u> )
LAOC	Western larch ( <u>Larix occidentalis</u> )
PIEN	Englemann spruce ( <u>Picea engelmannii</u> )
ABGR	Grand fir ( <u>Abies grandis</u> )
ABLA2	Subalpine fir ( <u>Abies lasiocarpa</u> )

Snag Densities per Acre: Swing 10 BAF prisim from plot centers... tally snags by diameter, condition class, and species. (Diagrams provided)

Diameter Classes

Code	Definition
1__	10"-20" DBH at least 10' in height
2__	20"+ DBH at least 10' in height

Condition Classes

Code	Definition
_1_	Hard snag: bark intact, branches/fine twigs present
_2_	Hard snag: bark loose, some branches remain- no fine twigs
_3_	Soft snag: no bark, sapwood deteriorated, no branches remain

Species

Code	Definition
__1	PIPO (ponderosa pine)
__2	LAOC (western larch)
__3	PSME (Douglas-fir)
__4	PICO (lodgepole pine)
__5	ABGR (grand fir)
__6	PIEN (Englemann spruce)
__7	ABLA2 (subalpine fir)

E.G. A 24" soft ABGR snag would be coded: 235

Fuel loads:

\* Photo Series: Indicate representative "Photo series for quantifying forest residues" (twelve most common series provided)

\* Height to live fuel crown:

Code	Definition
1	General height from fuel bed to lower live crown: 0-10 feet on at least 25 percent of forested stand
2	General height from fuel bed to lower live crown: 11-20 feet on at least 25 percent of forested stand
3	General height from fuel bed to lower live crown: 21+ feet.

Code stand to most restrictive (lowest value numeral) i.e. if 30% of the stand indicated fuel heights of 0-10 feet and 70% indicated 11-20 feet- code stand as 1.

**Stand Exam Summary**

\* Crown Density: total stand crown closure as derived with a densiometer (or some similar crown density measuring device)

\* Layers: total number of existing stand layers

\* BA/AC: total basal area per acre (summation of basal areas by layer)

\* Snags per Acre: Snag densities by diameter/condition class/ species summarized per acre

Narrative (General Observations):

Hiding Cover: Y or N

Vegetation capable of hiding 90% of a standing adult deer or elk from the view of a human at a distance of 200 feet. Classify the stand as providing hiding cover if 50% or more of the plots or transect meets definition.

**Damaging Agents and Severity**

Bark beetles

Code	Agent	Severity
_1_	Bark beetles (unknown)	_ _1_ unsuccessful
_2_	Mountain pine beetle	current attack
_3_	Douglas-fir beetle	
_4_	Spruce beetle	_ _2_ successful
_5_	Western pine beetle	current attack
_6_	Pine engraver	_ _3_ last years

_7_	Fir engraver	successful
_8_	Red turpentine beetle	attack

Defoliators

Code	Agent
_9_	Defoliators (unknown)
10_	Western spruce budworm
11_	Douglas-fir tussock moth

Code	(Severity: defoliation/top-kill)	
	<u>Defoliation</u>	<u>Top-kill</u>
_1_	light	no top kill
_2_	defoliation	1-10% dead crown
_3_	(1-25%)	11%+ dead crown
_4_	moderate	no top kill
_5_	defoliation	1-10% dead crown
_6_	(26-75%)	11%+ dead crown
_7_	heavy	no top kill
_8_	defoliation	1-10% dead crown
_9_	(76-100%)	11%+ dead crown

Dwarf Mistletoe: The 6-class Dwarf mistletoe rating system by Hawksworth (GTR RM-48) is used to code severity of infection. Code general incidence of mistletoe within stand. Host species of dwarf mistletoe consist of Douglas-fir and western larch within the analysis area.

Code	Definition
1	Light infections (general ratings of 1-2)
2	Moderate infections (general ratings of 3-4)
3	Severe infections (general ratings of 5-6)

Stem Decays: Note incidence within stand with following codes:

Code	Pathogen
47	Red ring rot ( <u>Phellinus pini</u> )
48	Indian paint fungus ( <u>Echinodontium tinctorium</u> )

Root Diseases: Note incidence within stand (i.e. rot centers visible; crowns of host species deteriorating adjacent to centers) with following codes:

Code	Pathogen
60	Root Diseases (unknown)
61	Annosus root rot ( <u>Heterobasidion annosum</u> )
62	Shoestring root rot ( <u>Armillaria ostoyea</u> )

- 63 Black stain (Ceratocystis wagneri)
- 64 Brown cubical rot (Phaeolus schweinitzii)
- 65 Laminated root rot (Phellinus weirii)

Silvicultural Opportunities: Identify potential treatment opportunities given existing stand conditions:

Code	Definition	Description
HRG	regen cut	Desireable/acceptable trees (relatively vigorous; i.e. free of insect and disease infestations, crown ratios in excess of 30%, distinct whorls, pointed top, strong excurrent growth form) below minimums for a given site. (Refer to attached photos for examples of desireable vs. undesireable phenotypes...) Assume the following minimum basal areas of desireable/acceptable trees in recommending a HRG prescription: CP associations: 30 BA CD associations: 40 BA CW, CE associations: 50 BA
HSC	selection cut/uneven aged mgmt.	Two to three+ storied structures with multiple age and size classes represented. Trees developing in lower canopy layers capable of release (i.e. possess desireable/acceptable tree characteristics- see above). Existing BA's exceed HRG minimums.



Desireable 4” diameter, “C” stratum Douglas-fir. Note pointed top, strong excurrent growth form, upturned branch angle, distinct whorls



Undesireable 4” diameter, “B” stratum grand fir. Note rounded top, poor crown ratio, indistinct whorls, horizontal to drooping branch angle

HSA	sanitation	Stand contains a salable quantity of dead, damaged, or undesirable trees. Remaining stocking of desirable, acceptable trees exceeds minimum levels. Generally, undesirable nature of excess trees due to insects/disease or damage. Sanitation cut also referred to as “cleaning and weeding”
HTH	commercial thinning	Single cohort structure (may have multiple crown classes represented) of immature or younger (120

years and less) pole to medium saw timber at densities exceeding the lower limits of full site occupancy. Assume the following basal areas by plant association types as minimum levels of full site occupancy:

CP: 60 BA

CD: 70 BA

CW,CE: 80 BA

HXX	non-commercial thinning	Existing stocking of desirable/acceptable sapling to pole stocking exceeds maximums for the given associations: CP: 250 TPA CD: 250 TPA CW, CE: 300 TPA
HNT	no treatment	Stands do not meet any of the above criteria. Stand density, condition appears adequate for site.

#### Damage Agents/Severity Indicators

Record the following damaging agents when observed:

- **Bark Beetles**

Mountain Pine beetle (*Dendroctonus ponderosae*)

Douglas-fir beetle (*Dendroctonus pseudotsugae*)

Western pine beetle (*Dendroctonus brevicomis*)

Red Turpentine beetle (*Dendroctonus valens*)

Spruce beetle (*Dendroctonus rufipennis*)

Pine engraver beetle (*Ips Pini*)

Fir engraver (*Scolytus ventralis*)

Note in narrative: Successful current attacks, unsuccessful current attacks, or last years successful attack.

- **Defoliators**

Western spruce budworm (*Choristoneura occidentalis*)

Douglas-fir tussock moth (*Orgyia pseudotsugata*)

Note in narrative: general incidence of crown loss and topkill: light defoliation (1-25% total complement of foliage- new and old- missing), moderate defoliation (25-75%), and heavy defoliation (76-100%).

Topkill categories: no top kill, 1-10 percent dead crown, 10 percent plus dead crown.

- **Dwarf Mistletoe**

The 6-class Dwarf Mistletoe Rating System by Hawksworth (GTR RM-48) is used to code severity of infection. (Live crown is divided into thirds and each third is assigned a numerical score of 0-3). The scores for each third of the crown are totaled to give a severity rating of 1 through 6.

Note in narrative: general incidence of mistletoe within stand... light infections (general ratings of 1-2), moderate infections (ratings of 3-4), and severe infections (ratings of 5-6)

- **Stem Decays**

Red Ring Rot (*Phellinus pini*)

Indian Paint Fungus (*Echinodontium tinctorium*)

Brown cubical butt rot (*Phaeolus schweinitzii*)

Note in narrative: general incidence of above pathogens

- **Root Diseases**

Annosus root rot (*Heterobasidion annosum*)

Shoestring root rot (*Armillaria ostoyae*)

Brown cubical rot (*Phaeolus schweinitzii*)

Laminated root rot (*Phellinus weirii*)

Note in narrative: general incidence within stand.