

**Note:** All fields and metrics are strongly encouraged to be assessed. However, fields and metrics with \* are the minimum required for element occurrence (EO) submission to WNHP. When doing the minimum, do not complete the 'Roll-up Calculation' table on page 12. Contact [joe.rocchio@dnr.wa.gov](mailto:joe.rocchio@dnr.wa.gov) or [tynan.ramm-granberg@dnr.wa.gov](mailto:tynan.ramm-granberg@dnr.wa.gov) for questions.

\***Site Name** \_\_\_\_\_ \***AA Name (if >1 AAs)** \_\_\_\_\_

**Classification** (pg. 28) Ecological System (S Rank): \_\_\_\_\_

\*NVC Plant Association (G/S Rank): \_\_\_\_\_

\*NVC Group: \_\_\_\_\_

\*Observer(s): \_\_\_\_\_ \*Date: \_\_\_\_\_ \*County: \_\_\_\_\_

VegPlot(s): \_\_\_\_\_ \*TRS: \_\_\_\_\_ Photos: \_\_\_\_\_

EOID: \_\_\_\_\_ Source FeatureID: \_\_\_\_\_ Owner(s): \_\_\_\_\_

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10
*Spatial Coordinates										
System: _____										

*Sampling Strategy:	<input type="checkbox"/> Polygon AA (< 50 ha / 125 ac; site walkthrough)	<input type="checkbox"/> Polygon AA (< 50 ha / 125 ac; systematic relevés)	Other:
	<input type="checkbox"/> Point-Based AA	<input type="checkbox"/> Combined Point/Polygon AA (> 50 ha / 125 ac)	

*Plot Type:	<input type="checkbox"/> Relevé	<input type="checkbox"/> Site-Walkthrough	Plot Size / Dimensions:
	<input type="checkbox"/> Transect	<input type="checkbox"/> Other:	

\*AA size (ac/ha): \_\_\_\_\_ \*AA Description: \_\_\_\_\_









**LAN2 Land Use Index** (use table below to calculate score, then check rank)

Worksheet : Land Use Categories		Weight	% Area (0 to 1.0)	Score
Paved roads / parking lots		0		
Domestic, commercial, or publicly developed buildings and facilities (non-vegetated)		0		
Gravel pit / quarry / open pit / strip mining		0		
Unpaved roads (e.g., driveway, tractor trail, 4-wheel drive, logging roads)		1		
Agriculture: tilled crop production		2		
Intensively developed vegetation (golf courses, lawns, etc.)		2		
Vegetation conversion (chaining, cabling, roto-chopping, clearcut)		3		
Agriculture: permanent crop (vineyard, orchard, nursery, hayed pasture, etc.)		4		
Intense recreation (ATV use / camping / popular fishing spot, etc.)		4		
Military training areas (armor, mechanized)		4		
Heavy grazing by livestock on pastures or native rangeland		4		
Heavy logging or tree removal (50-75% of trees >30 cm DBH removed)		5		
Commercial tree plantations / holiday tree farms		5		
Recent old fields and other disturbed fallow lands dominated by ruderal and exotic species		5		
Dam sites and flood disturbed shorelines around water storage reservoirs and boating		5		
Moderate grazing of native grassland		6		
Moderate recreation (high-use trail)		7		
Mature old fields and other fallow lands with natural composition		7		
Selective logging or tree removal (<50% of trees >30 cm DBH removed)		8		
Light grazing or haying of native rangeland		9		
Light recreation (low-use trail)		9		
Natural area / land managed for native vegetation		10		
			<b>Total Land Use Index</b>	
<input type="checkbox"/> EXCELLENT (A) Avg. LU score = 9.5 – 10	<input type="checkbox"/> GOOD (B) Avg. LU score = 8.0 – 9.4	<input type="checkbox"/> FAIR (C) Avg. LU score = 4.0 – 7.9	<input type="checkbox"/> POOR (D) Avg. LU score = < 4.0	

**EDGE (pg 38)**

**EDG1 Perimeter with Natural Edge**

<input type="checkbox"/> EXCELLENT (A) 100% 4 pts	<input type="checkbox"/> GOOD (B) 75-99% 3 pts	<input type="checkbox"/> FAIR (C) 25-75% 2 pts	<input type="checkbox"/> POOR (D) <25% 1 pt							
<b>Assessment Pt. / Sub-AA</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>Metric Rating</b>										

EDGE1 Comments

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**EDG2 Width of Natural Edge**

<input type="checkbox"/> EXCELLENT (A) 4 pts; ≥ 100m	<input type="checkbox"/> GOOD (B) 3 pts; 75-99m	<input type="checkbox"/> FAIR (C) 2 pts; 25-75m	<input type="checkbox"/> POOR (D) 1 pt; <25m
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Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10
Segment 1										
Segment 2										
Segment 3										
Segment 4										
Segment 5										
Segment 6										
Segment 7										
Segment 8										
<i>Average</i>										
<b>Metric Rating</b>										

**\*EDG3 Condition of Natural Edge** (Small AAs ONLY; if surveying lines used for EDG2, score each line and then average)

<input type="checkbox"/> EXCELLENT (A) 4 pts	<input type="checkbox"/> GOOD (B) 3 pts	<input type="checkbox"/> FAIR (C) 2 pts	<input type="checkbox"/> POOR (D) 1 pt
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Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10
<b>Metric Rating</b>										

BUF3 Comments:

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**Vegetation** (pg 45)

**\*VEG1 Native Plant Species Cover (Relative)** (calculate relative cover of each stratum at each sample point/sub-AA, then average across sample points; Use lower relative cover of either stratum for metric rating). Relative cover = (native cover / native+nonnative cover)\*100; roll-up of sub-AA scores should consider relative area of sub-AA to total AA area)

<input type="checkbox"/> EXCELLENT (A) 4 pts; >99%	<input type="checkbox"/> VERY GOOD (A-) 3.5 pts; 95-99%	<input type="checkbox"/> GOOD (B) 3 pts; 85-94%	<input type="checkbox"/> FAIR (C) 2 pts; 60-84%	<input type="checkbox"/> POOR (D) 1 pt; <60%
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Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
<b>Trees</b>											
<i>Native</i>											
<i>Nonnative</i>											
Total Cover											
<i>VEG1a. Native Tree Relative Cover</i>											
<b>Shrub/Herb</b>											
<i>Native</i>											
<i>Nonnative</i>											
Total Cover											
<i>VEG1b. Native Shrub/Herb Relative Cover</i>											
<b>Metric Rating</b>											

Veg1 Comments:

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**\*VEG2 Invasive Nonnative Plant Species Cover** (absolute cover; score at each sample point/sub-AA and enter numeric value (e.g. A = 4 pts), then average scores across sample points roll-up of sub-AA scores should consider relative area of sub-AA to total AA area; check appropriate box for overall score)

<input type="checkbox"/> EXCELLENT (A) 4 pts; <1%	<input type="checkbox"/> GOOD (B) 3 pts; 1-4%	<input type="checkbox"/> FAIR (C) 2 pts; 4-10%	<input type="checkbox"/> FAIR/POOR (C-) 1.5 pts; 10-30%	<input type="checkbox"/> POOR (D) 1 pt; >30%							
<b>Assessment Pt. / Sub-AA</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Avg</b>
<b>Metric Rating</b>											

Veg2 Comments:

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**VEG3 Native Plant Species Composition** (based on vegetation table above; score at each sample point/sub-AA and enter numeric value (e.g. A = 4 pts), then average scores across sample points; roll-up of sub-AA scores should consider relative area of sub-AA to total AA area; check appropriate box for overall score)

<input type="checkbox"/> EXCELLENT (A; 4 pts)	<input type="checkbox"/> GOOD (B; 3 pts)	<input type="checkbox"/> FAIR (C; 2 pts)	<input type="checkbox"/> POOR (D; 1 pt)								
<b>Assessment Pt. / Sub-AA</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Avg</b>
<i>Submetrics:</i>											
<i>3a Diagnostic Species</i>											
<i>3b Species diversity</i>											
<i>3c Native Increasers</i>											
<i>3d Native Decreasers</i>											
<b>Metric Rating</b>											

Veg3 Comments

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**\*VEG4 Vegetation Structure** (varies by EIA module; For Forest types, indicate the Stand Development Stage; then record a metric rank/score at each sample point/sub-AA and enter numeric value (e.g. A = 4 pts), then average scores across sample points; roll-up of sub-AA scores should consider relative area of sub-AA to total AA area; check appropriate box for overall score).

**Stand development stage codes:** cohort establishment (1); canopy closure (2); biomass accumulation/stem exclusion (3); maturation-eastside (4); maturation 1-westside (5); maturation 2-westside (6); vertical diversification-old growth (7); horizontal diversification-old growth (8); pioneer cohort loss-old growth (9).

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	
Stand Development Stage (Van Pelt)											
<input type="checkbox"/> EXCELLENT (A; 4 pts)	<input type="checkbox"/> GOOD (B; 3 pts)				<input type="checkbox"/> FAIR (C; 2 pts)			<input type="checkbox"/> POOR (D; 1 pt)			
Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
<b>v7 Dry Forests &amp; Woodlands; v8 Mesic / Hypermaritime Forests</b>											
<i>Submetrics:</i>											
7/8a Canopy Structure (age class diversity)											
7/8b Old/Large Live Trees											
<b>Metric Rating</b>											
<b>v9 Shrublands</b>											
<i>Submetrics:</i>											
9a Shrub Cover											
9b Tree Encroachment											
<b>Metric Rating</b>											
<b>v10 Shrub-Steppe; v11 Grasslands / Meadows</b>											
<i>Submetrics:</i>											
10/11a Woody Vegetation Cover											
10/11b Bunchgrass Cover											
10/11c Biological Soil Crust											
<b>Metric Rating</b>											
<b>v12 Bedrock / Cliffs (no submetrics)</b>											
<b>Metric Rating</b>											

Veg4 Comments:

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**VEG5 Woody Regeneration** (v2 Dry Forests & Woodlands; v3 Mesic / Hypermaritime Forests) (Score at each sample point/sub-AA and enter numeric value (e.g. A = 4 pts), then average scores across sample points; roll-up of sub-AA scores should consider relative area of sub-AA to total AA area; check appropriate box for overall score)

<input type="checkbox"/> EXCELLENT (A; 4 pts)	<input type="checkbox"/> GOOD (B; 3 pts)	<input type="checkbox"/> FAIR (C; 2 pts)	<input type="checkbox"/> POOR (D; 1 pt)								
Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
<i>V4 Dry Forests &amp; Woodlands; V5 Mesic/Hypermaritime Forests &amp; Woodlands</i>											
Metric Rating											
<i>V6 Shrublands; Grassland / Meadows; Shrub-steppe</i>											
Metric Rating											

Veg5 Comments:

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**VEG6 Coarse Woody Debris and Snags** (Score at each sample point/sub-AA and enter numeric value (e.g. A = 4 pts), then average scores across sample points; roll-up of sub-AA scores should consider relative area of sub-AA to total AA area; check appropriate box for overall score)

<input type="checkbox"/> EXCELLENT (A; 4 pts)	<input type="checkbox"/> GOOD (B; 3 pts)	<input type="checkbox"/> FAIR (C; 2 pts)	<input type="checkbox"/> POOR (D; 1 pt)								
Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
<i>V3 Dry Forests &amp; Woodlands; V4 Mesic/Hypermaritime Forests &amp; Woodlands</i>											
<i>Submetrics: V6v3/4a CWD Size Diversity</i>											
<i>V6v3/4b. CWD Decay Class Diversity</i>											
<i>V6v3/4c. Snag Size Diversity</i>											
<i>V6v3/4d. Snag Decay Diversity</i>											
Metric Rating											
<i>V5 Shrublands; Grassland / Meadows; Shrub-steppe</i>											
<i>Submetrics: V6v5a Litter Source</i>											
<i>V6v5b. Litter Accumulation</i>											

<b>Metric Rating</b>											
Veg6 Comments:											
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**Soil / Substrate** (pg 72)

**\*SO11 Soil Condition v3** (Score at each sample point/sub-AA and enter numeric value (e.g. A = 4 pts), then average scores across sample points; roll-up of sub-AA scores should consider relative area of sub-AA to total AA area; check appropriate box for overall score)

<input type="checkbox"/> EXCELLENT (A; 4 pts)			<input type="checkbox"/> GOOD (B; 3 pts)			<input type="checkbox"/> FAIR (C; 2 pts)			<input type="checkbox"/> POOR (D; 1 pt)		
<b>Assessment Pt. / Sub-AA</b>	1	2	3	4	5	6	7	8	9	10	Avg
<b>Metric Rating</b>											

SO11 Comments

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**Size** (pg 74)

**SIZ1 Comparative Size (Patch Type)**

<input type="checkbox"/> EXCELLENT (A)			<input type="checkbox"/> GOOD (B)			<input type="checkbox"/> FAIR (C)			<input type="checkbox"/> POOR (D)		
Spatial Pattern Type: _____						Estimated Size (ac/ha): _____					
Comments:											

**SIZ2 Change in Size (optional)**

<input type="checkbox"/> EXCELLENT (A)			<input type="checkbox"/> GOOD (B)			<input type="checkbox"/> FAIR (C)			<input type="checkbox"/> POOR (D)		
Comments:											

**Calculate EIA Scores**

Roll-up Calculations	Rating	Score (TABLE 1)
LAN1. Contiguous Natural Land Cover		
LAN2. Land Use Index		
<b>LAN MEF Score = (LAN1+LAN2)/2 (TABLE 2)</b>		
EDG1. Perimeter with Natural Edge		

EDG2. Width of Natural Edge							
EDG3. Condition of Natural Edge (do not include in calculation if not scored)							
<b>EDG MEF Score = (((EDGF1*EDG2)<sup>1/2</sup>*EDG3)<sup>1/2</sup> [Note: ½ exponent = square root] (TABLE 2)</b>							
<b>LANDSCAPE CONTEXT PRIMARY FACTOR SCORE = (EDG Score*0.67)+(LAN Score*0.33) (TABLE 2)</b>							
Matrix = (EDG Score*0.33)+(LAN Score*0.67)							
Large-Patch = (EDG Score*0.50)+(LAN Score*0.50)							
Small-Patch = (EDG Score*0.67)+(LAN Score*0.33)							
VEG1. Native Plant Species Cover							
VEG2. Invasive Nonnative Plant Species Cover							
VEG3. Native Plant Species Composition							
VEG4. Vegetation Structure							
VEG5. Woody Regeneration							
VEG6. Coarse Woody Debris							
<b>(FORESTED) VEG MEF Score = [((VEG1+VEG2+VEG3)*0.4)+((VEG4+VEG5+VEG6)*0.6)]/6 (Table 2)</b>							
<b>(NONFORESTED) VEG MEF Score = (VEG1+VEG2+VEG3+VEG4+VEG5+VEG6)/6 (Table 2)</b>							
[Note: Divide by number of metrics scored (i.e. divide by four if VEG1-VEG4 scored)]							
SOI1. Soil Condition							
SOI MEF Score = SOI1							
<b>CONDITION PRIMARY FACTOR SCORE = (VEG Score*0.85)+(SOI Score*0.15) (TABLE 2)</b>							
<b>ECOLOGICAL INTEGRITY (EIA) SCORE (TABLE 2)</b>							
Matrix/Large-Patch = (CONDITION SCORE*0.55)+(LANDSCAPE CONTEXT SCORE*0.45)							
Small-Patch = (CONDITION SCORE*0.7)+(LANDSCAPE CONTEXT SCORE*0.3)							
SIZ1. Comparative Size							
SIZ2. Change in Size (optional)							
SIZ MEF Score = SIZ1 OR (SIZ1+SIZ2)/2 (TABLE 2)							
SIZE Points (TABLE 3)							
<b>ELEMENT OCCURRENCE RANK (EORANK) = EIA Score + SIZE Points (TABLE 2)</b>							
<b>Table 1. Metric Rank / Score Conversions</b>							
Rank	A	A-	B	BC	C	C-	D
Score	4	3.5	3	2.5	2	1.5	1
<b>Table 2. Score / Rank Conversions for MEF, EIA and EORANK calculations</b>							
Rank	A+	A-	B+	B-	C+	C-	D
Score	3.8 - 4.00	3.5 - 3.79	3.0 - 3.49	2.5 - 2.99	2.0 - 2.49	1.5 - 1.99	1 - 1.49
<b>Table 3. Point Contribution of Size Primary Factor Score</b>							
Size Primary Factor Rating		Very Small/Small Patch		Large Patch		Matrix	
A = Size meets A ranked rating		+ 0.75		+ 1.0		+1.5	
B = Size meets B ranked rating		+ 0.25		+ 0.33		+0.5	
C = Size meets C ranked rating		- 0.25		- 0.33		-0.5	
D = Size meets D ranked rating		- 0.75		-1.0		-1.5	

**Determine Whether AA Meets EO Criteria**

EORANK	Global Rank	G1S1, G2S1, GNRS1,	G2S2, GNRS2, G3S1,	GUS3, GNRS3, G3S3, G4S1,	G4S3, G4S4, G5S3, G5S4, G5S5,
	State Rank	GUS1	G3S2, GUS2	G4S2, G5S1, G5S2, any SNR	GNRS4, GNRS5, GUS4, GUS5
A+ (3.8 to 4.0)		EO	EO	EO	EO
A- (3.5 to 3.79)		EO	EO	EO	EO
B+ (3.0 to 3.49)		EO	EO	EO	Not an Element Occurrence
B- (2.5 to 2.99)		EO	EO	EO	
C+ (2.0 to 2.49)		EO	EO		
C- (1.5 to 1.99)		EO	Not an Element Occurrence	Not an Element Occurrence	
D (1.0 to 1.49)		EO			