Note: *Assessing all fields and metrics is strongly encouraged. Fields and metrics with* * *are the minimum required to propose a new WHCV. If doing the minimum, skip 'Roll-up Calculation' on page 15. Contact tynan.ramm-granberg@dnr.wa.gov with questions.*

***Site Name: _____ *AA Name (if >1 AAs): _____**

Classification (pg. 15)

*Manual Vers. #: _____ *HGM: _____

Cowardin:

System	Subsystem	Class	Subclass	Water Regime	Water Chemistry	Soil	Special

*NVC Formation: _____

*NVC Subgroup (S Rank): _____

*NVC Plant Association (G/S Rank): _____

*Observer(s): _____ *Date: _____ County: _____

VegPlot(s): _____ TRS: _____ Photos: _____

EO ID: _____ SF ID:_____ Owner(s): _____

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

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

*Plot Type:	☐ Relevé	☐ Site-Walkthrough	Plot Size / Dimensions:
	☐ Transect	☐ Other:	

*AA size (ac/ha): _____ *AA Description (see field form pg. 13 for additional space):

Environmental (pg. 18 in EIA Manual)

Slope (deg/%): _____ Aspect (downslope): _____

*Topographic Position (check):

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10
Slope (deg/%)										
Aspect (downslope)										
Topographic Position*										

*Interfluve (crest, summit, ridge), High slope (shoulder, upper), Midslope, Low slope (lower, colluvial foot), Toeslope (alluvial foot/toe), High level (mesa/plateau), Step in slope (ledge; bench), Low level (lake/river terrace), Channel wall (sloping side of channel), Channel bed (channel bottom), Basin floor (depression), Other

Comments:

*Water Source (enter numeric codes along with "P" for primary and "S" for secondary); 1=precipitation; 2=groundwater; 3=overbank flooding; 4=natural surface flow; 5=snowmelt; 6=tidal; 7=alluvial aquifer; 8= irrigation seepage; 9=point discharge (pipe); 10=irrigation runoff; 11=irrigation direct application; 12=urban run-off/culverts

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10
Water Source										

1	Comments:
2	
3	
4	
5	
6	
7	
8	
9	
10	

Hydrodynamics: 1=stagnant; 2=sluggish; 3=mobile; 4=dynamic; 5=very dynamic

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10
Hydrodynamics										

1	Comments:
2	
3	
4	
5	
6	
7	
8	
9	
10	

*Soil Type:

☐ Mineral ☐ Organic (sapric – von Post 7-10) ☐ Organic (hemic – von Post 4-6) ☐ Organic (fibric – von Post 1-3)

Mineral Soil Texture: _____ pH: _____ Conductivity: _____ Temp: _____

Instrument: _____ Sample source: _____

Natural Disturbance Comments:

Anthropogenic Disturbance Comments:

Geology Comments:

Environmental Comments:

*Species Cover (pg. 22)

__Cover (midpt)__: Trace (**0.25**), 0-1% (**0.5**), 1-2% (**1.5**), 2-5% (**3.5**), 5-10% (**7.5**), 10-25% (**17.5**), 25-50% (**37.5**), 50-75% (**62.5**), 75-95% (**85**), >95% (**97.5**);
__Strata Codes__: **C** (tree canopy); **SC** (tree subcanopy > 5m); **SH** (shrub or tree 0.5 to 5m); **H** (herb or shrub < 0.5m); **G** (moss/lichen on soil surface)

Species	Stratum Code	Cover Class Midpoint Plots/Assessment Points/Sub-AAs 1-10										Avg. Cover	Exo / Inv (E/I)	Diag (Y)	Incr / Decr (I/D)
		1	2	3	4	5	6	7	8	9	10				

*Species Cover (pg. 22)

Cover (midpt): Trace (**0.25**), 0-1% (**0.5**), 1-2% (**1.5**), 2-5% (**3.5**), 5-10% (**7.5**), 10-25% (**17.5**), 25-50% (**37.5**), 50-75% (**62.5**), 75-95% (**85**), >95% (**97.5**);
Strata Codes: C (tree canopy); **SC** (tree subcanopy > 5m); **SH** (shrub or tree 0.5 to 5m); **H** (herb or shrub < 0.5m); **G** (moss/lichen on soil surface)

Species	**Stratum Code**	**Cover Class Midpoint Plots/Assessment Points/Sub-AAs 1-10**										**Avg. Cover**	**Exo / Inv (E/I)**	**Diag (Y)**	**Incr / Decr (I/D)**
		1	2	3	4	5	6	7	8	9	10				

*Species Cover (pg. 22)

__Cover (midpt)__: Trace (**0.25**), 0-1% (**0.5**), 1-2% (**1.5**), 2-5% (**3.5**), 5-10% (**7.5**), 10-25% (**17.5**), 25-50% (**37.5**), 50-75% (**62.5**), 75-95% (**85**), >95% (**97.5**);
__Strata Codes__: C (tree canopy); **SC** (tree subcanopy > 5m); **SH** (shrub or tree 0.5 to 5m); **H** (herb or shrub < 0.5m); **G** (moss/lichen on soil surface)

Species	**Stratum Code**	**Cover Class Midpoint Plots/Assessment Points/Sub-AAs 1-10**										**Avg. Cover**	**Exo / Inv (E/I)**	**Diag (Y)**	**Incr / Decr (I/D)**
		1	2	3	4	5	6	7	8	9	10				

*Species Cover (pg. 22)

<u>Cover (midpt)</u>: Trace (**0.25**), 0-1% (**0.5**), 1-2% (**1.5**), 2-5% (**3.5**), 5-10% (**7.5**), 10-25% (**17.5**), 25-50% (**37.5**), 50-75% (**62.5**), 75-95% (**85**), >95% (**97.5**);
<u>Strata Codes</u>: C (tree canopy); **SC** (tree subcanopy > 5m); **SH** (shrub or tree 0.5 to 5m); **H** (herb or shrub < 0.5m); **G** (moss/lichen on soil surface)

Species	Stratum Code	Cover Class Midpoint Plots/Assessment Points/Sub-AAs 1-10										Avg. Cover	Exo / Inv (E/I)	Diag (Y)	Incr / Decr (I/D)
		1	2	3	4	5	6	7	8	9	10				

Landscape Context

LAN1 Contiguous Natural Land Cover (pg. 24)

Metric Rating	Overall NLC (0 - 500 m	*Subzones*		Comments
		Inner Landscape: 0-100 m	*Outer Landscape (100-500m)*	
EXCELLENT (A)				
GOOD (B)				
FAIR (C)				
POOR (D)				

LAN2 Land Use Index (pg. 26; use table below to calculate score, then check rank)

☐ EXCELLENT (A) Avg. LU score = 9.5-10	☐ GOOD (B) Avg. LU score = 8.0-9.4	☐ FAIR (C) Avg. LU score = 4.0-7.9	☐ POOR (D) Avg. LU score = < 4.0

Worksheet : Land Use Categories	Weight	Inner Landscape (0-100 m)		Outer Landscape (100-500m)	
		% Area (0 to 1.0)	Score	% 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				
Total Land Use Score					
Score/rating conversion: A = ≥9.5, **B** = 8.0-9.4, **C** = 4.0-7.9, **D** = <4.0	**Multiple by Weight**	x 0.6		X 0.4	
	Weighted Score				
	Total Score (Inner + Outer score)				

Comments:

Buffer

BUF1 Perimeter with Natural Buffer (pg. 30)

☐ EXCELLENT (A) 100% 4 pts	☐ GOOD (B) 75-99% 3 pts	☐ FAIR (C) 25-75% 2 pts	☐ POOR (D) <25% 1 pt

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10
Metric Rating										

	Comments:
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

*BUF2 Width of Natural Buffer (pg. 31)

☐ EXCELLENT (A) 4 pts; ≥ 100m	☐ GOOD (B) 3 pts; 75-99m	☐ FAIR (C) 2 pts; 25-75m	☐ POOR (D) 1 pt; <25m

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10
Metric Rating										
Average Width										

	Comments:
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

*BUF3 Condition of Natural Buffer (pg. 37)

☐ EXCELLENT (A) 4 pts	☐ GOOD (B) 3 pts	☐ FAIR (C) 2 pts	☐ POOR (D) 1 pt

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10
Rank										

	Comments:
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Vegetation

(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 weight relative area of sub-AA to total AA area; check appropriate boxes for overall score)

***VEG1 Native Plant Species Cover (Relative)** (pg. 38; calculate relative cover of each stratum at each sample point/sub-AA; Use stratum with lowest relative cover for metric rating). Relative cover = (native cover / native+nonnative cover)*100)

☐ EXCELLENT (A) 4 pts; >99%	☐ VERY GOOD (A-) 3.5 pts; 95-99%	☐ GOOD (B) 3 pts; 85-94%	☐ FAIR (C) 2 pts; 60-84%	☐ POOR (D) 1 pt; <60%

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
Trees *Native*											
Nonnative											
Total Cover											
VEG1a. Native Tree Relative Cover											
Shrub/Herb *Native*											
Nonnative											
Total Cover											
VEG1b. Native Shrub/Herb Relative Cover											
Metric Rating											

1	Comments:
2	
3	
4	
5	
6	
7	
8	
9	
10	

***VEG2 Invasive Nonnative Plant Species Cover (Absolute)** (pg. 39)

☐ EXCELLENT (A) 4 pts; <1%	☐ GOOD (B) 3 pts; 1-4%	☐ FAIR (C) 2 pts; 4-10%	☐ FAIR/POOR (C-) 1.5 pts; 10-30%	☐ POOR (D) 1 pt; >30%

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
Metric Rating											

1	Comments:
2	
3	
4	
5	
6	
7	
8	
9	
10	

VEG3 Native Plant Species Composition (pg. 41; based on species cover table above)

☐ EXCELLENT (A; 4 pts)	☐ GOOD (B; 3 pts)	☐ FAIR (C; 2 pts)	☐ POOR (D; 1 pt)

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
Submetrics: 3a Diagnostic Species											
3b Species diversity											
3c Native Increasers											
3d Native Decreasers											
Metric Rating											

1	Comments:
2	
3	
4	
5	
6	
7	
8	
9	
10	

***VEG4 Vegetation Structure** (pg. 43; varies by USNVC Formation)

☐ EXCELLENT (A; 4 pts)	☐ GOOD (B; 3 pts)	☐ FAIR (C; 2 pts)	☐ POOR (D; 1 pt)

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
V1 Flooded & Swamp Forest											
Submetric: 1a. Canopy Structure											
1b. Large / Old Live Trees											
Metric Rating											
V2 Freshwater Marsh, Wet Meadow & Shrubland; V4 Salt Marsh; V6 Aquatic Vegetation and Mudflats (no submetrics)											
Metric Rating											
V5 Bog & Fen											
Submetric: 5a. Tree Cover											
5b. Shrub Cover											
5c.Microtopographic Diversity											
Metric Rating											

1	Comments:
2	
3	
4	
5	
6	
7	
8	
9	
10	

VEG5 Woody Regeneration (pg. 48)

☐ EXCELLENT (A; 4 pts)	☐ GOOD (B; 3 pts)	☐ FAIR (C; 2 pts)	☐ POOR (D; 1 pt)

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
Metric Rating											

1	Comments:
2	
3	
4	
5	
6	
7	
8	
9	
10	

VEG6 Coarse Woody Debris, Snags, & Litter (pg. 49; varies by USNVC Formation)

☐ EXCELLENT (A; 4 pts)	☐ GOOD (B; 3 pts)	☐ FAIR (C; 2 pts)	☐ POOR (D; 1 pt)

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
V1 Flooded & Swamp Forest											
Submetrics: V6v1a. CWD Size Diversity											
V6v1b. CWD Decay Class Diversity											
V6v1c. Snag Size Diversity											
V6v1d. Snag Decay Diversity											
Metric Rating											
V2 Nonforested Wetlands											
Submetrics: V6v2a. Litter Source											
V6v2b. Litter Accumulation											
Metric Rating											

1	Comments:
2	
3	
4	
5	
6	
7	
8	
9	
10	

Hydrology

*HYD1 Water Source (pg. 52)

☐ EXCELLENT (A; 4 pts)	☐ GOOD (B; 3 pts)	☐ FAIR (C; 2 pts)	☐ POOR (D; 1 pt)

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
Metric Rating											

1	Comments:
2	
3	
4	
5	
6	
7	
8	
9	
10	

*HYD2 Hydroperiod (pg. 55; see Field Indicators of Hydrological Alteration on pg. 14 of this form)

☐ EXCELLENT (A; 4 pts)	☐ GOOD (B; 3 pts)	☐ FAIR (C; 2 pts)	☐ POOR (D; 1 pt)

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
Metric Rating											

1	Comments:
2	
3	
4	
5	
6	
7	
8	
9	
10	

*HYD3 Hydrological Connectivity (pg. 61)

☐ EXCELLENT (A; 4 pts)	☐ GOOD (B; 3 pts)	☐ FAIR (C; 2 pts)	☐ POOR (D; 1 pt)

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
Metric Rating											

1	Comments:
2	
3	
4	
5	
6	
7	
8	
9	
10	

Soil / Substrate

***SOI1 Soil Condition** (pg. 64)

☐ EXCELLENT (A; 4 pts)	☐ GOOD (B; 3 pts)	☐ FAIR (C; 2 pts)	☐ POOR (D; 1 pt)

Assessment Pt. / Sub-AA	1	2	3	4	5	6	7	8	9	10	Avg
Metric Rating											

1	Comments:
2	
3	
4	
5	
6	
7	
8	
9	
10	

Size

SIZ1 Comparative Size (Spatial Pattern) (pg. 66)

☐ EXCELLENT (A)	☐ GOOD (B)	☐ FAIR (C)	☐ POOR (D)

Spatial Pattern Type: _____ Estimated Size (ac/ha):_____

Comments:

SIZ2 Change in Size (optional) (pg. 68)

☐ EXCELLENT (A)	☐ GOOD (B)	☐ FAIR (C)	☐ POOR (D)

Comments:

AA Description (Continued):

Condition	Field Indicator of Hydrological Alteration	1	2	3	4	5	6	7	8	9	10
Condition	**Hydroperiod Field Indicators for Evaluating Tidal Wetlands (Estuarine)** (check all that apply)										
Tidal Prism	Changes in the relative abundance of plants indicative of either high or low marsh.										
	A preponderance of shrink cracks or dried pannes is indicative of decreased hydroperiod.										
	Inadequate tidal flushing may be indicated by algal blooms or by encroachment of freshwater vegetation.										
	Dikes, levees, ponds, ditches, and tide control structures are indicators of an altered hydroperiod resulting from management for flood control, salt production, waterfowl hunting, boating, etc.										
Condition	**Hydroperiod Field Indicators for Evaluating Riverine Wetlands** (check all that apply)										
Channel Equilibrium	The channel (or multiple channels in braided systems) has a well-defined usual high water line, or bankfull stage that is clearly indicated by an obvious floodplain, topographic bench that represents an abrupt change in the cross-sectional profile of the channel throughout most of the site.										
	The usual high water line or bankfull stage corresponds to the lower limit of riparian vascular vegetation.										
	The channel contains embedded woody debris of the size and amount consistent with what is available in the riparian area.										
	There is little or no active undercutting or burial of riparian vegetation.										
Active Degradation (Erosion)	Portions of the channel are characterized by deeply undercut banks with exposed living roots of trees or shrubs. There are abundant bank slides or slumps, or the banks are uniformly scoured and unvegetated.										
	Riparian vegetation may be declining in stature or vigor, and/or riparian trees and shrubs may be falling into the channel.										
	The channel bed lacks any fine-grained sediment.										
	Recently active flow pathways appear to have coalesced into one channel (i.e., a previously braided system is no longer braided).										
Active Aggradation (Sedimentation)	The channel through the site lacks a well-defined usual high water line.										
	There is an active floodplain with. fresh splays of sediment covering older soils or recent vegetation										
	There are partially buried tree trunks or shrubs.										
	Cobbles and/or coarse gravels have recently been deposited on the floodplain										
	There are partially buried, or sediment-choked, culverts.										
Condition	**Hydroperiod Field Indicators for Evaluating Non-Riverine, Non-tidal Freshwater Wetlands** (check all that apply)										
Reduced Extent and Duration of Inundation or Saturation	Upstream spring boxes, diversions, impoundments, pumps, ditching, or draining from the wetland.										
	Evidence of aquatic wildlife mortality.										
	Encroachment of terrestrial (upland) vegetation										
	Stress or mortality of hydrophytes.										
	Compressed or reduced plant zonation										
	Organic soils occurring well above contemporary water tables.										
	Water withdrawal (regional or local wells)										
	Encroachment of young, tall, vigorous trees										
	Drying or mortality of non-vascular species (e.g. *Sphagnum*)										
Increased Extent and Duration of Inundation or Saturation	Berms, dikes, or other water control features that increase duration of ponding (e.g., pumps)										
	Diversions, ditching, or draining into the wetland.										
	Late-season vitality of annual vegetation.										
	Recently drowned riparian or terrestrial vegetation.										
	Extensive fine-grain deposits on the wetland margins.										

Roll-up Calculations	Rating	Score (TABLE 1)
LAN1. Contiguous Natural Land Cover		
LAN2. Land Use Index		
LAN MEF Score = (LAN1+LAN2)/2 (TABLE 2)		
BUF1. Perimeter with Natural Buffer		
BUF2. Width of Natural Buffer		
BUF3. Condition of Natural Buffer		
BUF MEF Score = $(((BUF1*BUF2)^{1/2})*BUF3)^{1/2}$ [Note: ½ exponent = square root] **(TABLE 2)**		
LANDSCAPE CONTEXT FACTOR SCORE = (BUF Score*0.67)+(LAN Score*0.33) (TABLE 2)		
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		
VEG (non-forested) MEF Score = (VEG1+VEG2+VEG3+VEG4)/4 (TABLE 2)		
VEG (forested) MEF Score = (VEG1+VEG2+VEG3+VEG4+VEG5+VEG6)/6 (TABLE 2)		
HYD1. Water Source		
HYD2. Hydroperiod		
HYD3. Hydrological Connectivity		
HYD MEF Score = (HYD1+HYD2+HYD3)/3 (TABLE 2)		
SOI1. Soil Condition		
SOI MEF Score = SOI1		
CONDITION FACTOR SCORE = (VEG Score*0.55)+(HYD Score*0.35)+(SOI Score*0.1) (TABLE 2)		
EIA SCORE = (Condition Factor Score*0.7)+(Landscape Context Factor Score*0.3) (TABLE 2)		
SIZ1. Comparative Size		
SIZ2. Change in Size (optional)		
SIZ MEF Score = SIZ1 OR (SIZ1+SIZ2)/2 (TABLE 2)		
SIZE Points (TABLE 3)		
ELEMENT OCCURRENCE RANK (EORANK) = EIA Score + SIZE Points (TABLE 2)		

Table 1. Metric Rank / Score Conversions

Rank	A	A-	B	C	C-	D
Score	4	3.5	3	2	1.5	1

Table 2. Score / Rank Conversions for MEF, EIA and EORANK calculations

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

Table 3. Point Contribution of Size Primary Factor Score

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 WHCV Criteria

EORANK	Global Rank / State Rank	G1S1, G2S1, GNRS1, GUS1	G2S2, GNRS2, G3S1, G3S2, GUS2	GUS3, GNRS3, G3S3, G4S1, G4S2, G5S1, G5S2, any SNR	G4S3, G4S4, G5S3, G5S4, G5S5, 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	Not an Element Occurrence	
C- (1.5 to 1.99)		EO	Not an Element Occurrence		
D (1.0 to 1.49)		EO			

GENERAL NOTES: