



Sample No.

Date YYY/MM/DD Evaluator(s)

### PRE-FIELD DESKTOP INFORMATION

T.1.1 Wetland Identification
Wetland ID Source:       FWA Site Plan       Other – describe:         Bio-geoclimatic Classification:       NDT Total Wetland Area (m²):         UTM Coordinate Wetland Center: Zone       Easting Northing         Hydrogeomorphic System:       Estuarine       Fluvial         Basins & Hollows       Seepage Slopes       Marine       Ponds & Potholes         Wetland is hydrologically connected to a Stream?       Y       N
T.1.2. First Nations Information
List First Nations territories that overlap with wetland/block:
Has/have the relevant First Nation office(s) been informed about this assessment?       Y □ N □         Has/have the relevant First Nation community(ies) been invited to join the assessment?       Y □ N □

T.1.3. Opening Information (Complete this section if located within 2 RMA widths of a cut-block):									
District: Opening ID: Licensee:									
Forest License: Block: Harvest year:									
Harvest Location (Select all sides that apply): North 🗌 East 🗌 West 🗌 South 🗌									
Wetland Riparian Class: <i>on Plans</i> (e.g., unclassified, W1 – W5): <i>in Field</i> : Riparian Mgmt Area: m   Riparian Reserve Zone: m   Riparian Mgmt Zone: m (pg. 13)									
T.1.4. Riparian/Buffer Retention Information (Do not factor road crossings into measurements):									
Length of perimeter within assessment polygon (m):; Length along wetland perimeter with full retention (m):; with partial retention (m):									
Avg. width of full treed retention present (max 100m):; Avg. width of treed retention present on section represented by recent harvest (from wetland edge) (max 100m):									

Average treed retention on section represented by recent harvest (% of basal area): \_

#### T.1.5. Description of dominant upland vegetation strata around perimeter of wetland. Consider a width of 0m - 100 m away from wetland perimeter.

Consider a		100 m awag	y nonn wetiand	i perimeter.				
Upland Descriptor for Vegetation Strata and age	Disturbance(s) (e.g., Pinebeetle, road, cutblock)	Width (if >100 m mark >100 m)	Length along perimeter (m)	Fraction along wetland perimeter. (Entire perimeter should equal 1) (Fb)	Number of Transects	perime (Use Ra Genera in mete from st	on(s) of ct(s) alon ter sectio andom N ator and r ers clocky art of ney tion type)	on umber ecord vise v



#### T.1.6. Other Developments

Number of road crossings: in assessment polygon \_\_\_\_\_, in wetland \_\_\_\_ on any upstream tributaries of the wetland

% of watershed developed upstream \_\_\_\_\_ Main development: \_\_\_\_

# PRE-FIELD DESKTOP INFORMATION CONTINUED

T.2. L/	ANDSCAPE INDICATORS			NA
14a	% of upland area from wetland edge modified by human activities (30 m wide if small wetland (0-5 ha) and 50 m wide if large (>5 ha)) (pg. 44)		%	
14b	% of wetland's shoreline visible from any point on a road, pipeline or powerline within 300 m of small wetlands or 500 m of large wetlands (pg. 44)		%	
14c	% of wetland perimeter with right-of-ways within 100 m impinging on wetland's perimeter (pg. 45)		%	
14d	Percent coverage of mature and old forest within 2 kilometers of the wetland perimeter greater than the minimal target for coverage for the area's respective bio-geoclimatic zone and natural disturbance type. (pg. 46)		%	
		Υ	Ν	NA
15a	Do all mapped and unmapped streams at roads and ROWs appear to be in their original water courses? (pg. 47)			
15b	% of contributing basin intercepted by roads or ROWs (pg. 48)		%	

# SUPPLEMENTARY INFORMATION

T.3. SUPPLEMENTARY MANAGEMENT OBSERVATIONS	Υ	Ν	NA
Boundaries on site plan for wetland coincide with observations in field:			
Retention around other wetlands observed on block?			
Four-wheel drive access blocked on roads within 100 m from wetland edge?			
If rangeland present, measures taken to reduce/block livestock access to wetland edge?			



BRITISH COLUMBIA Forest and Range Evaluation Program

Wetland Management **Routine Effectiveness Evaluation** 

# FIELD SAMPLING INFORMATION

Entire Wetland Sampled Partial Wetland Sampled

For all samples, record:

Total Polygon Assessed (m<sup>2</sup>) (Wetland assessed + 10 m upland riparian): \_ 10 m Riparian Area Upland of Wetland Assessed (m<sup>2</sup>): Wetland Assessed Size (m<sup>2</sup>):

T.4.1	. TRAN	SECT INFO	ORMATION	4						
UTM	Coordin	ates at Wetl	and Edge						5.	b)/2
	UTM Zone	Easting	Northing	Transect Bearing into Wetland (0-360°)	Transect is representing wetland influenced from upland strata area composed of: (e.g., cut-block, mature forest, etc.)	End Type <sup>1</sup>	Trans.Length (TL) (m)	Fraction (Fa) Fa = TL / TTL	Upland Fraction (Fb) From T.1.	Weighted Fraction WF= (Fa +Fb)/2
T1										
T2										
T3										
				Total T	ransect Lengths (TTI	_) (m)		1	1	NA

 $^{1}$  C= Channel, Ww = Shallow open water, Ow = open water, Ot = other, E = End of 50 m transect, M = middle of wetland, NA = Not Applicable.

T.4.2	. WET	LAND I	PLOT INFO	RMATION			Soil		Wate	r		Sum	mary
		UTM C plots	Coordinates	in wetland		÷		nir	s ace)				
Transect	Plot ID	UTM Zone	Easting	Northing	Vegetation Zone Length (m)	Plot Location (C = Centre of veg. zone, E = End of zone)	Mineral or Humic / Organic Soil within 30 cm? (pg. 19)	Fibric or Mesic Organic Soil within 30 cm? (pg. 19)	Depth to water (cm) (Note: pos. is below surface, neg. is above surface)	На	Temperature (Celsius)	Wetland Class (i.e. Wf = fen)	Wetland Plant Association (optional – if known) (e.g., Wf02)
T_	P1												
T_	P2												
T_	P3												
T_	P4												
T_	P5												
T_	P6												
T_	P7												
T_	P8												
T_	P9												
T_	P10												
T_	P11												
T_	P12												
T_	P13												
T_	P14												
				Questi	on Indi	cator				13b	13b		

Sample No. \_

# VEGETATION PLOT INFORMATION FOR 10m UPLAND AND WITHIN WETLAND

T.4.3	. VEG	ETATION INFORMATION							
, T2)	or P1)	Species Name		poor f or rec	N if the orm, vi ruitmer	gor			
F	U10	For Upland Plots (U), just record invasive		(pg. 2	6)		Checl	k if appl	
Transect (e.g., T1, T2)	Plot ID (e.g., U	or disturbance increasers. For Wetland Plots (P), record dominant, invasive (pg. 49), disturbance (pg. 23), and plants of cultural significance (pg. 52) (if known)	% Cover	Form	Vigor	Recruitment	Invasive	Disturbance/ Increaser	Cultural Value
								Π	
							1 🗆		





# TRANSECT OBSERVATIONS UPLAND FROM WETLAND EDGE

Question Indicator       Transect Observations       % large non- homogenous patches       Total = S         NA       Width (m) of retention treed upland from wetland (pg. 20) – Max 100 m       Transect Observations       % large non- boutside summary       Total = S         NA       Width (m) of retention treed upland from wetland (pg. 20) – Max 100 m       Weighted Average %       Weighted (use Fb)*       Mu within upland area         %       treed retention (basal area) upland from wetland (pg. 20)       Weighted Average %       Weighted Average %         3       % cover disturbance/increaser plants 10 m upland from wetland edge (pg. 22) – Tip: use Vegetation Plot Form to record details and tally percentages.       Weighted Average %         5a       % nonmerchantable conifers, understory deciduous trees, shrubs, and herbaceous vegetation retainment within 20 m upland from wetland edge (pg. 27)       Weighted Average %         5b,5c,5d       % mature co-dominant windfirm conifers retained within riparian management zone (pg. 27)       Weighted Average %         % deciduous trees retained within riparian management zone (pg. 27)       Weighted Average %         % deciduous trees retained within riparian management zone (pg. 27)       Weighted Average %         % deciduous trees retained within riparian management zone (pg. 27)       Weighted Average %         % deciduous trees retained within riparian management zone (pg. 27)       Weighted Average %         % deciduous trees retained w	ge %
TilT2T3Tassect Summary (use Fb)*patches patches (uside transects but within upland areaNAWidth (m) of retention treed upland from wetland (pg. 20) – Max 100 mImage: Comparison of the comparison of t	
NA       Width (m) of retention treed upland from wetland (pg. 20) – Max 100 m       Max 100 m       Image: transacts out within upland area wetland (pg. 20) – Max 100 m       Image: transacts out within upland area wetland (pg. 20)       Image: transacts out within upland area wetland (pg. 20)       Image: transacts out within upland area wetland (pg. 20)       Image: transacts out within upland area wetland (pg. 20)       Image: transacts out wetland (p	
NA       upland from wetland (pg. 20)       Average % (use Fb)*         3       % cover disturbance/increaser plants 10 m upland from wetland edge (pg. 22) – Tip: use Vegetation Plot Form to record details and tally percentages.       Weighted Average % (use Fb)*         5a       % nonmerchantable conifers, understory deciduous trees, shrubs, and herbaceous vegetation retainment within 20 m upland from wetland edge (pg. 27)       Weighted Average % (use Fb)*         5a       % mature co-dominant windfirm conifers retained within riparian management zone (pg. 27) RMZ width:m (pg. 13)       Weighted Average % (use Fb)*         % deciduous trees retained within riparian management zone (pg. 27) RMZ width:m (pg. 13)       Weighted Average % (use Fb)*	nous tches
3     plants 10 m upland from wetland edge (pg. 22) – Tip: use Vegetation Plot Form to record details and tally percentages.     Average % (use Fb)*       5a     % nonmerchantable conifers, understory deciduous trees, shrubs, and herbaceous vegetation retainment within 20 m upland from wetland edge (pg. 27)     Weighted Average % (use Fb)*       5b,5c,5d     % mature co-dominant windfirm conifers retained within riparian management zone (pg. 27) RMZ width:m (pg. 13)     Weighted Average % (use Fb)*       5b,5c,5d     % deciduous trees retained within riparian management zone (pg. 27) RMZ width:m (pg. 13)     Weighted Average % (use Fb)*	
5a       understory deciduous trees, shrubs, and herbaceous vegetation retainment within 20 m upland from wetand edge (pg. 27)       Average % (use Fb)*         5b,5c,5d       % mature co-dominant windfirm conifers retained within riparian management zone (pg. 27) RMZ width: m (pg. 13)       Weighted Average % (use Fb)*         5b,5c,5d       % deciduous trees retained within riparian management zone (pg. 27) RMZ width: m (pg. 13)       Weighted Average % (use Fb)*	
<b>5b,5c,5d</b> conifers retained within riparian management zone (pg.27) RMZ width:m (pg. 13)       Average % (use Fb)* <b>5b,5c,5d</b> % deciduous trees retained within riparian management zone (pg. 27) RMZ width:m (pg. 13)       Weighted Average % (use Fb)*	
<b>5b,5c,5d</b> riparian management zone (pg. 27) RMZ width:m (pg. 13)     Average % (use Fb)*	
*To colouisto the weighted every lock up table on page 2 for Meighted Average (Th) and use the	
following calculate the weighted average, look up table on page 3 for weighted Average (Fb), and use the	
Row 1 ( x) + ( x) + ( x) = Transect 1 (T1) width of treed retention (WTR) x T1 Fb + T2 WTR x T2 Fb + WTR x T3 Fb = Weighted Ave	erage
Row 2 (x) + (x) + (x) =	
q3 (x) + (x) + (x) =	
q5a (x) + (x) + (x) =	
q5b, 5c, 5d (x) + (x) + (x) =	
q5b, 5c, 5d (x) + (x) + (x) =	

\*Retrieve Fb from table 1.5.



Table 5.2. Windthrow upland 20 m of wetland with no RRZ; or upland 10 m of wetland with RRZ									
Skip this	question and	mark NA if new win						NA	
Question Indicator		d or very minimal.	Transect Observation: T1 T2 T3		ions		% large non- homogenous patches out- side transects but within up-land areas	Total = Sum of average % plus % from any non- homogenous large patches encountered	
10a+b	still intact) (p Note: If no v	vindthrow is en record NA for				Eq. 7 (see below)			
10a+b		hrow (live trees n – snaps or root				Eq. 8 (see below)			
10a+b	# standing li	ve trees				$\geq$			
eq. 1 = () ÷ ( +) T1%New W.T. = (T1New W.T.) ÷ (T1#standing trees + T1New W.T.)									
T2	%New W.T.	_ = () = (T2New W.T.)	÷ (T	2#sta	nding	trees +	T2New W.T.)		
тз	%New W.T.	_ = () = (T3New W.T.) _ = ()	÷(T	3#sta	nding	trees +	T3New W.T.)	ì	
T1	%Old W.T.	_ = () = (T10ld W.T.) _ = ()	÷ (T	1#sta	nding	trees +	T1New W.T. + T	IOld W.T.)	
T2	%Old W.T.	= (T2Old W.T.)	÷ (T	2#sta	nding	trees +	T2New W.T. + T2	20ld W.T.)	
тз	%Old W.T.	= (T3Old W.T.)	÷ (T	3#sta	nding	trees +	T3New W.T. + T3		
%	Old W.T.	_ = ( x ) = (eq.4 *T1Fb)	+ (eo	q.5 * <sup>-</sup>	T2Fb)	+ (eq.6.	*T3Fb)		
		_ = ( x ) = (eq.1.*T1Fb)							
	space at the b v are observed	ack of form to com d.	olete	simila	ar calo	culations if la	arge homogenous	patches of	

\*Retrieve Fb from table 1.5

# CONTINUOUS FEATURES 10m UPLAND OF THE WETLAND EDGE

T.5.3. Bar	T.5.3. Bare Ground Hydrologically Connected to Wetland										
7b	If the transport of sediment from upland surrounding areas is observed to enter the wetland (within or outside of transects) then estimate the % bare and compacted ground hydrologically connected upslope of polygon (pg. 31)	Tally (m <sup>2</sup> ) of hydrologically connected areas	% (m² total/ m² polygon)								

# T.6. FORM VIGOR AND RECRUITMENT OF BUFFER FEATURES

Using the table below, estimate the percent (%) of layers and features that are observed or have been 100% lost due to a disturbance. Additionally, using Yes or No answers, determine if layers and features show good form, recruitment, and vigor. This estimation is based only on the upland portion of the polygon. (Q4c+d, pg. 25)

Layer Check if present OR evidence of 100% lost			NA		١	Remaining after a disturbance (%)	Form (Y/N)	Vigor (Y/N)	Recruitment (Y/N)	
Snags									NA	
Over-story Trees										
Under-story Trees										
Tall Shrubs										
Low Shrubs										
Herbs										
Gaps									NA	
Mosses										
Lichens										
CWD									NA	
						Total (Sum of %'s)		al possib of Yes a	le number nswers	
								A	Actual nu Yes ans	
							Average (%) (Q4c)	Y	% of cel es answe	lls with ers (Q4d)

# TRANSECT OBSERVATIONS: BOTH WITHIN WETLAND AND 10 M UPLAND PORTION FROM WETLAND EDGE

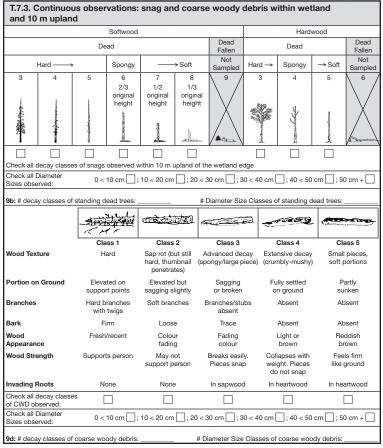
T.7.1. FU	LL POLYGON ASSESSMENT O	BSE	RVA	TION	S		
Question Indicator	Transect summary info in both wetland and 10 m upland from wetland edge	T1	T2	T3	Transect Summary	Large non- homogeneous patches outside transects but within assessment polygon (% of poly)	Total = Transect summary plus large patches
1	% vegetation cover (pg. 21)				Weighted Average % use WF*		
2a	% cover invasive species (pg. 49)				Weighted Average % use WF*	-	
5e	% live woody vegetation removal in the wetland (other than browsing) (pg. 28)				Weighted Average % use WF*		
7a	% bare and compacted ground (pg. 30)				Weighted Average % use WF*		
9a	% Dead or Decadent trees of all trees (pg. 35)				Weighted Average % use WF*		
9c	Old (O) or New(N) Coarse Woody Debris (>7.5 cm diameter) – that crosses transect % old to new (pg. 36) Note: Talley O and N within each transect for CWD that intersects with rotary tape.				Weighted Average % use WF*		
10c	# of wildlife trees no longer functioning as wildlife trees				Sum		
	ate the weighted average, look up tal calculations:	ble or	n pag	e 3 fo	or Weighted	Fractions (WF), and	use the
	x) + (x weg.cover.*T1WF) + (T2%veg.cove						
q2a (	x) + (x _		)	+(_	x	) =	
q5e (	X) + (X _		)	+(_	x	) =	
q7a (	X) + (X _		)	+(	x _	) =	
	X) + (X _		,			,,	
q9c (	x) + (x _		)	+(_	x	) =	

<sup>\*</sup>Retrieve WF from table T.4.1.



T.7.2. Select the density distribution code of Invasive Species that approximates their

extent. G	(2b (pg. 22	) or mark I						
•	•		•					
Code 1	Code 2	Code 3	Code 4	Code 5	Code 6	Code 7	Code 8	Code 9
Rare individual, a single occurrence	Few sporadically occurring individuals	Single patch or clump of a species	Several sporadically occurring individuals	A few patches or clumps of a species	Several well spaced patches or clumps of a species	Continuous uniform occurrence of well spaced individuals	Continuous occurrence of a species with a few gaps in the distribution	Continuous dense occurrence of a species



# CONTINUOUS OBSERVATIONS FOR VEGETATION

	T.7.4. ADDITIONAL VEGETATION INDICATORS WITHIN WETLAND AND 10 M UPLAND				
4e	% of impact affecting the long term trajectory of the climax plant community				
6a	Maximum % browsed of 2nd year & older leaders in polygon (pg. 28)				
6b	Maximum % grazed of available grazing area in polygon (pg. 29)				
6c	% seedings/saplings of palatable species. To indicated recruitment (pg. 29)				

# FEATURES WITHIN WETLAND

#### T.8. FORM, VIGOR, AND RECRUITMENT WITHIN WETLAND

Using the table below, estimate the percent (%) of all observed layers or those 100% lost due to a disturbance. Additionally, using Yes or No answers, determine if all expected layers and components show good form, recruitment, and vigor. This estimation is based only on the wetland portion of the polygon. (Q4a+b)

Layer/ Feature	Typical Associated Wetland Class	Check if present OR evidence of 100% lost	NA	Remaining after a disturbance (%)	Form (Y/N)	Vigor (Y/N)	Recruitment (Y/N)
Snags	Wb, Ws					NA	
Over-story Trees	Wb, Ws						
Under-story Trees	Wb, Ws						
Tall Shrubs	Wb, Ws						
Low Shrubs	Wb, Ws, Wf						
Herbs – Terrestrial/ Emergent	Wb, Ws, Wf, Wm, Ww						
Herbs – Aquatic	Wm, Wf, Ws					NA	
Elevated Microsites	Wb, Wf, Ws						
Mosses/ Lichens	Wb, Wf, Ws						
CWD	Wb, Ws						
Open Water Pools (>4m <sup>2</sup> )	Wb, Wf, Wm, Ws					NA	
				Total (Sum of %'s)		al possib of Yes a	le number nswers
					A	Actual nu Yes ans	swers
				Average (%) (Q4c)	Ye	% of cel es answe	lls with ers (Q4d)

\*Depending on the site you are evaluating, certain structural features may not be relevant. Wetland Class(es) listed in the 2nd column might be more common for the features. Features for wetland classes not listed are generally less common for those classes. Put NA for features not observed at the site or where the evaluator is not confident if the layer is missing due to disturbance. Note: Wb = bog, Wf = fen, Wm = marsh, Ws = swamp, Ww = shallow open water



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T.9.	T.9. PHYSICAL AND HYDROLOGICAL ALTERATION INDICATORS								
		Tally of occurrences (m <sup>2</sup> )	To	tal	%				
8a	% total polygon altered (pg. 32)								
8b	severity of physical alteration <sup>1</sup> (pg. 33)	severe moderate slight	no	alterati	on				
			Y	Ν	NA				
11a	Are hydrologic changes minor or non-exister	nt?							
11b	Are recent dead trees or shrubs absent from indicate a rise in water level? (pg. 39)	the wetland edge that would							
11c	Upland plant or tree species are not encroad shrinking (pg. 39)	hing, and the wetland is not							
11d	If the wetland has a defined stream channel incisement is minor or non-existent (i.e., min vegetation) (pg. 40)								
11e	Natural surface or subsurface areas are not a If drainage tiles, ditches, dikes, gullies are pr minor to non-existent impact to vegetation ir	resent they are having a							
12a	If an outlet structure is present, is it structure at the outlet)? (pg. 41)	ally stable (i.e. not eroding							
12c	% of the streambank or shoreline is structura water and vegetation communities) (pg. 41)	ally altered (interface of open		%					
12d	% streambank with deep binding rootmass? (pg. 42)	(Lotic (moving water) only)		%					
13a	Does the wetland lack any signs of excessive matts, blooms, fish kills?	e nutrient loading such as algae							
13b	Do basic water quality parameters (smell, co appear to be within a reasonable range of na								

<sup>I</sup>No alteration: No human-caused physical alteration observed on the polygon; Slight: Physical site integrity is near natural. Alteration (including recovery from any past severe alterations) is apparent, but reflects minimal impact to plant communities and hydrological function in the altered areas (e.g., the plant community is little changed from that on nearby sites lacking physical alteration, any changes to microtopography are slight and they are well vegetated with appropriate species); Moderate: As compared with nearby unaltered sites, human-caused physical alteration on the polygon (including recovery from any past severe alterations) has noticeably altered the physical site integrity to the point that plant communities and hydrological function on the altered areas (s.g., the plant community differs noticeably (by having introduced or missing components) from nearby sites that are on similar landscape position and that lack physical alterations. Changes to the microtopography or the soil profile is moderate in depth. Such alteration is either becoming re-vegetated with appropriate species or is well covered with a mix of less desirable and appropriate species. Severe: Human-caused physical site alterations have not recovered and are still affecting the vegetation or hydrological functions have not recovered and are still affecting the vegetation or hydrological alterations, reflecting altered hydrologic and/or soil conditions). Disruption of the microtopography of the soil profile is severe in depth of disturbance. Alterations more or undersize or plant cover, are no longer



# HEALTH ASSESSMENT CHECKLIST

VEGETATION	·			
Question 1. Vegetative cover is sufficient to perform various	Y	N		Reference Table
ecological functions? a) Is vegetative cover of the entire polygon (i.e., wetland portion of polygon AND upland portion of polygon representing 10 m from				T.7.1.
wetland edge that is within the assessment area) greater than 85%?				
Question 2. Is the presence of Invasive and/or Noxious Species minimal to non-existent in the entire polygon?	Y	N	NA	Reference Table
a) Is Invasive and/or Noxious Plant Canopy Cover less than 5% of the entire polygon?				T.7.1.
b) Is the distribution of Invasive and/or Noxious Plants less than Code 4in the entire polygon?				T.7.2.
If there are any "No" answers, mark the "No" box for Question 2. Otherwi	se mar	k "Yes'	"	
Question 3. Have the number of disturbance-increaser species	Y	N		Reference
been limited to a satisfactory level?				Table
<ul> <li>a) Is the coverage of disturbance-caused undesirable species (e.g., domestic grasses, dandelions, pineapple weed, buttercups, etc.) less than 25% of total area in the riparian upland area 10 m from wetland edge?</li> </ul>				T.5.1.
Question 4. Is the vegetation of the entire polygon generally	Y	N		Reference
characteristic of what the healthy unmanaged wetland and				Table
riparian plant communities are normally?				
<ul> <li>a) Is greater than 85% of the layers and features in the wetland portion of the polygon intact?</li> </ul>				T.8.
b) Does greater than 85% of all expected layers and components show good recruitment, form, and vigor in the wetland?				T.8.
<ul> <li>c) Is greater than 75% of the layers and features in the 10 m upland portion of the polygon intact?</li> </ul>				T.6.
d) Does greater than 75% of all expected layers and components show good recruitment, form and vigor in the upland portion of the polygon?				T.6.
e) Is the % of the long-term trajectory of the vegetation community altered less than 15% for the entire polygon?				T.7.4.
**For yes/no consider both natural and human caused impacts. For value, re				caused only.
If there are any "No" answers, mark the "No" box for Question 4. Otherwi				- /
Question 5. Has sufficient vegetation been retained to minimize windthrow, maintain adequate screening, visual cover and an LWD supply?	Y	N		Reference Table
a) On all wetlands, have most (apx. 95%) non-merchantable conifers,				
understory deciduous trees, shrubs and herbaceous vegetation been retained within 20m upland of the wetland edge?				T.5.1.
b) For wetlands in the CDF, PP, BG, CWHxm, dm, ds and IDFxh, xw, xmbiogeoclimatic units, have all wildlife trees, 70% of the mature co-dominant windfirm conifers and all deciduous trees been retained in the Riparian Management Zone?				T.5.1.
<ul> <li>c) For wetlands in the ESSF, MS,ICH, MH, CWHvm, mm, ms, ws and IDFdm, dk1, dk2 biogeoclimatic units, have all wildlife trees, 40% of the mature co-dominant windfirm conifers and all deciduous trees been retained in the Riparian Management Zone?</li> </ul>				T.5.1.
d) For wetlands in the SWB, SBS, SBPS, BWBS, CWHvh and IDFww, mw, dk3, dk4 biogeoclimatic units, have all wildlife trees, 10% of the mature co-dominant windfirm conifers, and 30% of the deciduous trees been retained in the Riparian Management Zone?				T.5.1.
e) Is the wetland free of woody vegetation removal?				
If there are any "No" answers, mark the "No" box for Question 5. Otherwi	se mar	k "Yes'	"	

Sample No. \_\_\_\_\_

Question 6. Is heavy browse and grazing absent in assessment polygon?	Y	N	NA	Reference Table		
a) Is less than 50% of second and older leaders of palatable species browsed in the entire polygon?				T.7.4.		
b) Is 90% or more of the available grazing area free of heavy grazing?				T.7.4.		
c) Do seedlings or saplings of palatable tree and shrub species make up more than 5% of those species in the entire polygon?						
If there are any "No" answers, mark the "No" box for Question 6. Otherwise mark "Yes"						

TIP: Heavy grazing is defined as less than the recommended target stubble height for the dominant forage species present.

#### SOILS

Question 7. Has bare and compacted ground been minimized in the entire polygon?	Y	N	NA	Reference Table		
a) Is there less than 5% bare and compacted ground in the entire polygon?				T.7.1.		
b) Is the amount of bare soil within and/or hydrologically connected to the entire polygon less than 15%?				T.5.3.		
If there are any "No" answers, mark the "No" box for Question 7. Otherwise mark "Yes"						

#### MORPHOLOGY

Question 8. Is less than 15% of the entire polygon physically altered with noticeable impacts to vegetative communities and hydrologic function?	Y	N		Reference Table
a) Is less than 15% of the entire polygon physically altered?				T.9.
b) Is the severity of the physical alteration slight or non-existent?				Т.9.
If both questions have "No" answers, mark the "No" box for Question 8.	Otherw	vise ma	rk "Ye	s"
Question 9. Are wetland woody debris processes intact 10 m upland of the wetland?	Y	N	NA	Reference Table
a) Does the number or density of standing dead trees (snags) in the upland area and forested wetland areas (i.e., forested bogs and swamps), appear within the range of natural variability, not counting catastrophic events such as wildfire, i.e. neither too much or too little?				T.7.1.
b) Are the standing dead trees composed of different diameter and decay classes?				T.7.3.
c) Is more than half of the coarse woody debris present old, stable and well incorporated into the wetland, with no evidence of recent movement?				T.7.1.
d) Does the coarse woody debris present show distinct multiple modes with regard to diameter and decay?				Т.7.3.
If there are 2 or more "No" answers, mark the "No" box for Question 9. C	Otherwi	se mar	k "Yes	"

Sample No. \_\_\_\_\_

Question 10. Has vegetation around the wetland been adequately protected from windthrow?	Y	N	NA	Reference Table
a) Is the incidence of post-treatment windthrow 20 m upland around small (0-5 ha) wetlands with no RRZ less than 10% of the living stems over and above what occurs naturally in the area? If there is an RRZ then mark NA, and answer 10b.				T.5.2.
b) Is the incidence of post-treatment windthrow in the RRZ of the riparian area around large (> 5 ha) wetlands or small wetlands (0-5 ha) with a RRZ less than 5% of the living stems present over and above what occurs naturally in the area? If there is no RRZ then mark NA, and answer 10a.				T.5.2.
c) Are wildlife trees (e.g. nest sites, bear dens) still standing, or if not, still functioning as wildlife trees?				T.5.2.
If there are any "No" answers, mark the "No" box for Question 10. Other	wise m	ark "Ye	s"	

#### HYDROLOGY

	the wetland and its riparian area anges in the hydrologic regime?	Y	N	NA	Reference Table		
a) Are hydrologic changes minor	or non-existent?				T.9.		
<li>b) Are recent dead trees or shrub that would indicate a change in</li>	n water level?				T.9.		
<ul> <li>c) Is the wetland free of progressi trees extending into the wetlan or adjacent upland area?</li> </ul>	vely younger age class plants or d from the drier edges of the wetland				T.9.		
d) If the wetland has a defined str incisement by the channel have the wetland vegetation?	eam flowing through it, is any ing a minor to non-existent effect on				T.9.		
e) If any drainage tiles, ditches, d wetland, are they having only a wetland vegetation?	ikes or gullies are present by the a minor to non-existent impact on the				T.9.		
If there are any "No" answers, mark the "No" box for Question 11. Otherwise mark "Yes"							
		100 110		,			
Question 12. Is there an abser water levels in the wetland?		Y	N	NA	Reference Table		
Question 12. Is there an abservater levels in the wetland? a) If present, is the outlet structur							
Question 12. Is there an abservator levels in the wetland? a) If present, is the outlet structure securely? Mark Yes if outlet structure leakage. b) If the wetland has a channel, the wetland has a channel, the second se	nce of significant threats to e stable and allows water to pass ucture lacks animal burrows, erosion,				Table		
Question 12. Is there an abservater levels in the wetland?           a) If present, is the outlet structure securely? Mark Yes if outlet structure leakage.           b) If the wetland has a channel, the head-cuts below or within the security below or within the secure security below or within the security below or wi	nce of significant threats to e stable and allows water to pass ucture lacks animal burrows, erosion, here is no presence of active wetland (i.e., locations of active ne of the wetland or any stream				Table T.9.		
Question 12. Is there an abservater levels in the wetland?           a) If present, is the outlet structur securely? Mark Yes if outlet structur leakage.           b) If the wetland has a channel, the head-cuts below or within the downcutting in channel)?           c) Is less than 15 % of the shoreli	nce of significant threats to e stable and allows water to pass ucture lacks animal burrows, erosion, here is no presence of active wetland (i.e., locations of active ine of the wetland or any stream vetland disturbed in any way? annel, does the channel bank have				Table T.9. T.9.		

Sample No. \_

## WATER QUALITY

Question 13. Does the water quality of the wetland appear to be within reasonable range of natural variation?	Y	N	Reference Table			
a) Does the wetland lack any signs of excessive nutrient loading such as algae matts, blooms, fish kills?			Т.9.			
b) Do basic water quality parameters (smell, colour, pH, turbidity, temperature) appear to be within a reasonable range of natural variation?			Т.9.			
If there are any "No" answers, mark the "No" box for Question 13. Otherwise mark "Yes"						

## LANDSCAPE

Question 14: Is the riparian and upland habitat beside the wetland of adequate size and quality to mitigate impacts on critical activities (movements, feeding, breeding) by the area's desired wildlife (e.g., grizzly, ungulates, martin, raptors, woodpeckers, songbirds, waterfowl, reptiles, amphibians, etc.)?	Y		NA	Reference Table
a) Does 75% or more of the wetland have a riparian area around it that has not been modified by human activities, 30 m wide in the case of small wetlands (0-5 ha), or 50 m wide for large (> 5 ha) wetlands?				T.2.
b) Is 10% or less of the wetland's shoreline visible from any point on a road, pipeline or powerline within 300 m of small wetlands, or 500 m of large wetlands?				T.2.
c) Do right-of-ways within 100 m of the wetland impinge on no more than 10% of the wetland's perimeter?				T.2.
d) Is the percent cover of mature and old forest within 2 kilometers of the wetland perimeter greater than the minimal target for the area's respective bio-geoclimatic zone and natural disturbance type?				T.2.
If there are more than one "No" answers, mark the "No" box for Question	14. O	therwis	e marl	k "Yes"
Question 15. Are surface and subsurface flows to the wetland intact?	Y	N	NA	Reference Table
a) Do all mapped and unmapped streams at roads and ROWs appear to be in their original water courses?				
<li>b) Is less than 25% of contributing basin intercepted by roads or ROWs</li>				T.2.
If there are any "No" answers, mark the "No" box for Question 15. Otherw	vise ma	ark "Ye	s"	

Sample No. \_\_\_\_\_

SUMMARY WETLAND ASSESSMENT HEALTH FORM	Y	N	NA
Question 1. Vegetative Cover of the Polygon > 85%?			
Question 2. Invasive Plant Species are not well established and not threatening the site?			
Question 3. Coverage of disturbance-caused undesirable species <25%?			
Question 4. Is the wetland vegetation generally characteristic of what the healthy unmanaged wetland plant communities are normally?			
Question 5. Has sufficient vegetation been retained to reduce windthrow, maintain adequate screening, visual cover and an LWD supply?			
Question 6. Is heavy browse and grazing absent?			
Question 7. % Bare and compacted ground from a disturbance is less than 5%			
Question 8. Less than 15% of wetland polygon is physically altered with noticeable impacts to vegetative communities and hydrologic function?			
Question 9. Are wetland woody debris processes intact?			
Question 10. Has the vegetation retained in the RMA been sufficiently protected from windthrow?			
Question 11. Is vegetation in the wetland and its riparian area free of any impacts due to changes in the hydrologic regime?			
Question 12. Is there an absence of significant threats to water levels in the wetland?			
Question 13. Does the water quality of the wetland appear to be within reasonable range of natural variation?			
Question 14: Wetland is well connected with adjacent habitat?			
Question 15. Are surface and subsurface flows to the wetland intact?			
# of "No" Answers:			
Conclusion on Functioning Condition:			
$\Box$ 0 to 2 No's = Properly Euroctioning $\Box$ 3 to 4 No's = Euroctioning t	out at ri	sk	

 0 to 2 No's = Properly Functioning
 3 to 4 No's = Functioning, but at risk

 5 to 6 No's = Functioning, but at high risk
 >6 No's = Not Properly Functioning

"No" answer questions		Causes of "No" Answers														
	Current Logging	Old Logging	Animals	Roads	Other Impacts	Natural Impacts	Upstream Factors									



# $\begin{array}{c} BRITISH\\ COLUMBIA\\ \hbox{Evaluation Program} \end{array}$

# Wetland Management Routine Effectiveness Evaluation

Specific Causes of "No" Answers. Record "1" where the cause of a "No" answer lies within the wetland/riparian polygon, "2" where the cause is outside the polygon, and "3" where the cause is both within and outside the polygon													oth			
Caus (Che	es of "No" Answers ck the Questions with answers)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
INO	Low retention															
(5	Falling & yarding															
ž	Machine disturbance Windthrow															
g																
OLD LOGGING	Mass wasting															
9	Stream diversions															
0	Road/debris blockages															
	Forest structure issues															
	Other															
	Low retention															
5 2	Falling & yarding															
١D	Machine disturbance															
Ö	Windthrow															
CURRENT LOGGING	Mass wasting															
<u>ل</u> ي ا	Stream diversions															
Ë	Road/debris blockages															
ರ	Forest structure issues															
	Other															
	Encroachment on RMA															
LN LN	Running surface erosion															
ROADS, TRAILS	Other ROW erosion															
⊢ 	Mass wasting															
Å.	Crossing structure															
ò	Drainage alteration															
	Other															
핏	Livestock															
ANIMAL DISTURBANCE	Beavers															
ĮЯ																
A L	Other ungulates															
B	Other															
	High sediment levels															
CTS	Fire															
NATURAL IMPACTS	Insects															
Σ	Diseases															
A	Wind															
Ľ.	Mass wasting															
AT AT	Floods															
-	Other															
	Non-logging roads, trails															
CTS	Utility corridors															
AC	Recreation															
ž	Agriculture															
Ë	Mining															
OTHER IMPACTS	Urban, industry															-
Ö	Other															-
	UNKNOWN															-

# Sample No. \_

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SITE MAP (Please draw the wetland site as accurately as possible or include markups on digital map):

On map mark boundary of wetland assessed, major changes in wetland vegetation, locations of transects (T#) and plots (P#), direction of surface water flow, outlets, inlets, approx. scale

Comments about Boundary selected: \_

# EXTRA SHEET FOR VEGETATION PLOT INFORMATION FOR 10m UPLAND AND WITHIN WETLAND

T.4.3	. VEG	ETATION INFORMATION									
T1, T2)	1 or P1)	Species Name For Upland Plots (U), just record invasive		poor f	N if the orm, vi ruitmei 6)	igor	Check if applicable				
Transect (e.g., T1, T2)	Plot ID (e.g., U1 or	or disturbance increasers. For Wetland Plots (P), record dominant, invasive (pg. 49), disturbance (pg. 23), and plants of cultural significance (pg. 52) (if known)	% Cover	Form	Vigor	Recruitment	Invasive	Disturbance/ Increaser	Cultural Value		

Sample No. \_\_\_\_\_ COMMENTS/NOTES/ASSUMPTIONS

#### PHOTO DESCRIPTIONS