WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): _____ Date of site visit: _____

Rated by_____ Trained by Ecology? Yes__No___ Date of training_____

SEC: ____ TWNSHP: ____ RNGE: ____ Is S/T/R in Appendix D? Yes___ No____

Map of wetland unit: Figure ____ Estimated size _____

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I____ II____ IV____

Category I = Score >=70 Category II = Score 51-69 Category III = Score 30-50 Category IV = Score < 30 Score for Water Quality Functions Score for Hydrologic Functions Score for Habitat Functions

TOTAL score for Functions



Category based on SPECIAL CHARACTERISTICS of wetland

I____ II___ Does not Apply____

Final Category (choose the "highest" category from above)



Summary of basic mormation about the wetiand unit			
Wetland Unit has Special	Wetland HGM Class		
Characteristics	used for Rating		
Estuarine	Depressional		
Natural Heritage Wetland	Riverine		
Bog	Lake-fringe		
Mature Forest	Slope		
Old Growth Forest	Flats		
Coastal Lagoon	Freshwater Tidal		
Interdunal			
None of the above	Check if unit has multiple		
	HGM classes present		

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Summary of basic information about the wetland unit

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection	YES	NO
(in addition to the protection recommended for its category)		
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?		
For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		
SP2. <i>Has the wetland unit been documented as habitat for any State listed</i> <i>Threatened or Endangered animal species?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		
SP4. <i>Does the wetland unit have a local significance in addition to its functions?</i> For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

 1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? NO – go to 2
 YES – the wetland class is Tidal Fringe

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)**

If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. NO – go to 3 YES – The wetland class is Flats

If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

- 3. Does the entire wetland unit **meet both** of the following criteria?
 - _____The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;
 - ____At least 30% of the open water area is deeper than 6.6 ft (2 m)?
 - NO go to 4 **YES** The wetland class is **Lake-fringe** (Lacustrine Fringe)
- 4. Does the entire wetland unit **meet all** of the following criteria?
 - _____The wetland is on a slope (*slope can be very gradual*),
 - _____The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
 - ____The water leaves the wetland **without being impounded**?
 - NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep).
 - NO go to 5 **YES** The wetland class is **Slope**

- 5. Does the entire wetland unit **meet all** of the following criteria?
 - ____ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river
 - ____ The overbank flooding occurs at least once every two years.

NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.

- NO go to 6 **YES** The wetland class is **Riverine**
- 6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*
 - NO go to 7 **YES** The wetland class is **Depressional**
- 7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
 - NO go to 8 **YES** The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater	Treat as ESTUARINE under
wetland	wetlands with special
	characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score per box)	
	improve water quality		
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)	
	D 1.1 Characteristics of surface water flows out of the wetland:	Figure	
Б	Unit is a depression with no surface water leaving it (no outlet) $points = 3$		
\mathbf{D}	Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (normanently flowing) points = 1		
	Unit has an unconstructed, of slightly constructed, surface outlet (<i>permanently flowing</i>) points = 1 Unit is a "flat" depression (O , 7 on key) or in the Flats class, with permanent surface outflow and		
	no obvious natural outlet and/or outlet is a man-made ditch points = 1		
	(If ditch is not permanently flowing treat unit as "intermittently flowing")		
	Provide photo or drawing		
	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS		
п	definitions)		
	YES points = 4		
	$\frac{1}{1} \frac{1}{1} \frac{1}$	F :	
	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent upgraded vegetation > = 0.5% of area	Figure	
D	We than that persistent, ungrazed, vegetation $> = 95\%$ of area points = 3 We than the persistent ungrazed vegetation $> = 1/2$ of area points = 3		
	We thank has persistent, ungrazed vegetation $> -1/10$ of area points -1		
	We than that persistent, ungrazed vegetation $> -1/10$ of area points $= 1$ We than that persistent ungrazed vegetation $< 1/10$ of area points $= 0$		
	we trand has persistent, ungrazed vegetation $<1/10$ of area points = 0 Map of Cowardin vegetation classes		
	D1.4 Characteristics of seasonal ponding or inundation.		
–	This is the area of the wetland unit that is ponded for at least 2 months, but dries out		
\mathbf{D}	sometime during the year. Do not count the area that is permanently ponded. Estimate		
	area as the average condition 5 out of 10 yrs.		
	Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4		
	Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 2		
	Area seasonally ponded $1s < \frac{1}{4}$ total area of wetland points = 0		
–	Total for D 1	¦	
D	Iotal for D I Add the points in the boxes above	, 	
D	D 2. Does the wetland unit have the <u>opportunity</u> to improve water quality?	(see p. 44)	
	Answer YES if you know or believe there are pollutants in groundwater or surface water		
	coming into the wetland that would otherwise reduce water quality in streams, lakes or		
	groundwater downgradient from the wetland. <i>Note which of the following conditions</i>		
	provide the sources of pollutants. A unit may have pollutants coming from several		
	sources, but any single source would qualify as opportunity.		
	Grazing in the wetland or within 150 ft Untreated stormwater discharges to wetland		
	 — Tilled fields or orchards within 150 ft of wetland 		
	 A stream or culvert discharges into wetland that drains developed areas, residential areas, 		
	farmed fields, roads, or clear-cut logging		
	 Residential, urban areas, golf courses are within 150 ft of wetland 	multiplier	
	 Wetland is fed by groundwater high in phosphorus or nitrogen 		
	— Other VES multiplier is 2 NO multiplier is 1		
	TOTAL Water Quality Functions Multiply the score from D1 by D2		
D	<u>IUTAL</u> - water Quanty Functions Withuppy the score from D1 by D2		
	Ada score to table on p. 1		

D	Depressional and Flats Wetlands	Points	
	HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to	(only 1 score per box)	
	reduce flooding and stream degradation		
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)	
D	D 3.1 Characteristics of surface water flows out of the wetland unit		
	Unit is a depression with no surface water leaving it (no outlet) $points = 4$		
	Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flow" demonstration (Q , 7 on here) on in the Eleter close with normalized surface outflow and		
	onit is a flat depression (Q. / on key), of in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch		
	(If ditch is not permanently flowing treat unit as "intermittently flowing")		
	Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>) points = 0		
D	D 3.2 Depth of storage during wet periods		
ν	Estimate the height of ponding above the bottom of the outlet. For units with no outlet		
	measure from the surface of permanent water or deepest part (if dry).		
	Marks of ponding are 3 ft or more above the surface or bottom of outlet $points = 7$		
	The wetland is a "headwater" wetland" points = 5		
	Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5		
	Marks are at least 0.5 It to < 2 it from surface or bottom of outlet points = 5 Unit is flat (yes to 0, 2 or 0, 7 on key) but has small depressions on the surface that trap		
	water $(yes to Q. 2 of Q. 7 of key) but has small depressions on the surface that trap$		
	Marks of ponding less than 0.5 ft $points = 0$		
р	D 3.3 Contribution of wetland unit to storage in the watershed		
υ	Estimate the ratio of the area of upstream basin contributing surface water to the wetland		
	to the area of the wetland unit itself.		
	The area of the basin is less than 10 times the area of unit $points = 5$		
	The area of the basin is 10 to 100 times the area of the unit $points = 3$		
	The area of the basin is more than 100 times the area of the unit $points = 0$		
	Entire unit is in the FLATS class points = 5		
D	Total for D 3Add the points in the boxes above	 	
D	D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?	(see p. 49)	
	Answer YES if the unit is in a location in the watershed where the flood storage, or	_	
	reduction in water velocity, it provides helps protect downstream property and aquatic		
	resources from flooding or excessive and/or erosive flows. Answer NO if the water		
	coming into the wetland is controlled by a structure such as flood gate, tide gate, flap		
	valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is		
	trom groundwater in areas where damaging groundwater flooding does not occur.		
	Note which of the following indicators of opportunity apply. Wetland is in a headwater of a river or stream that has flooding problems		
	— Wetland is in a headwater of a river or stream that has flooding problems		
	— Wetland drains to a river or stream that has flooding problems		
	— Wetland has no outlet and impounds surface runoff water that might otherwise		
	Other	muniphor	
	YES multiplier is 2 NO multiplier is 1		
П	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4		
ען	Add score to table on n. 1		

R	Riverine and Freshwater Tidal Fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	Points (only 1 score per box)	
R	R 1. Does the wetland unit have the <u>potential</u> to improve water quality?(
R	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: Depressions cover >3/4 area of wetland points = 8	Figure	
	Depressions cover > $1/2$ area of wetlandpoints = 4If depressions > $\frac{1}{2}$ of area of unit draw polygons on aerial photo or mapDepressions present but cover < $1/2$ area of wetlandpoints = 2No depressions presentpoints = 0		
R	R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): Trees or shrubs > 2/3 the area of the unit points = 8 Trees or shrubs > 1/3 area of the unit points = 6 Ungrazed, herbaceous plants > 2/3 area of unit points = 6 Ungrazed herbaceous plants > 1/3 area of unit points = 3 Trees, shrubs, and ungrazed herbaceous < 1/3 area of unit points = 0 Aerial photo or map showing polygons of different vegetation types	Figure	
R	Add the points in the boxes above		
R	R 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 feet of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — The river or stream linked to the wetland has a contributing basin where human activities have raised levels of sediment, toxic compounds or nutrients in the river water above standards for water quality		
	YES multiplier is 2 NO multiplier is 1		
R	TOTAL - Water Quality Functions Multiply the score from R 1 by R 2 Add score to table on p. 1		

R	Riverine and Freshwater Tidal Fringe Wetlands	Points	
	HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce	per box)	
	Itooding and stream erosion P 2 Desg the method unit have the notential to reduce floading and engine?	(200 - 54)	
	K 5. Does the wettand unit have the <u>potential</u> to reduce hooding and erosion?	(see p.54)	
R	R 3.1 Characteristics of the overbank storage the unit provides:	Figure	
	Estimate the average width of the wetland unit perpendicular to the direction of the		
	flow and the width of the stream or river channel (distance between banks). Calculate		
	Ine ratio: (average wiath of unit)/(average wiath of stream between banks).		
	If the ratio is between $10 - 20$ points = 6		
	If the ratio is $5 - < 10$ points -4		
	If the ratio is $1 - < 5$ points = 2		
	If the ratio is < 1 points = 1		
	Aerial photo or map showing average widths		
R	R 3.2 Characteristics of vegetation that slow down water velocities during floods: <i>Treat</i>	Figure	
I	large woody debris as "forest or shrub". Choose the points appropriate for the best		
	description. (polygons need to have >90% cover at person height NOT Cowardin classes):		
	Forest or shrub for $>1/3$ area OR herbaceous plants $> 2/3$ area points $= 7$		
	Forest or shrub for $> 1/10$ area OR herbaceous plants $> 1/3$ area points $= 4$		
	Vegetation does not meet above criteria $points = 0$		
	Aerial photo or map showing polygons of different vegetation types		
R	Add the points in the boxes above		
R	R 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?		
	Answer YES if the unit is in a location in the watershed where the flood storage, or		
	reduction in water velocity, it provides helps protect downstream property and aquatic		
	resources from flooding or excessive and/or erosive flows. Note which of the following		
	conditions apply.		
	— There are human structures and activities downstream (roads, buildings, bridges,		
	farms) that can be damaged by flooding.		
	— There are natural resources downstream (e.g. salmon redds) that can be damaged		
	by flooding		
	— Other	multiplier	
	(Answer NO if the major source of water to the wetland is controlled by a reservoir or the	Ĩ	
	wetland is tidal fringe along the sides of a dike)		
	YES multiplier is 2 NO multiplier is 1		
R	TOTAL - Hydrologic Functions Multiply the score from R 3 by R 4		
••	Add score to table on p. 1		

L	Lake-fringe Wetlands	Points	
	WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	(only 1 score per box)	
т	Improve water quality	(saa n 50)	
L	L 1. Does the wettand unit have the <u>potential</u> to improve water quanty:	(see <i>p.39</i>)	
L	L 1.1 Average width of vegetation along the lakeshore (use polygons of Cowardin classes):	Figure	
	Vegetation is more than 33ft (10m) wide $points = 6$		
	Vegetation is more than 16 (5m) wide and <33 ft points = 3 Vegetation is more than 6ft (2m) wide and <16 ft points = 1		
	Vegetation is less than 6 ft wide $r = 0$		
	Map of Cowardin classes with widths marked		
T.	L 1.2 Characteristics of the vegetation in the wetland: choose the appropriate description	Figure	
•	that results in the highest points, and do not include any open water in your estimate of		
	coverage. The herbaceous plants can be either the dominant form or as an understory in a		
	shrub or forest community. These are not Cowardin classes. Area of Cover is total cover		
	in the unit, but it can be in patches. NOTE: Herbaceous does not include aquatic bed.		
	Cover of herbaceous plants is >90% of the vegetated area $points = 6$		
	Cover of herbaceous plants is $>2/3$ of the vegetated area points = 4 Cover of herbaceous plants is $>1/3$ of the vegetated area points = 3		
	Other vegetation that is not acuatic bed or herbaceous covers $> 2/3$ unit points = 3		
	Other vegetation that is not aquatic bed in $> 1/3$ vegetated area points = 1		
	Aquatic bed vegetation and open water cover $> 2/3$ of the unit points = 0		
	Map with polygons of different vegetation types		
L	Add the points in the boxes above		
Т	L 2. Does the wetland have the opportunity to improve water quality?		
•	Answer YES if you know or believe there are pollutants in the lake water, or polluted		
	surface water flowing through the unit to the lake. Note which of the following conditions		
	provide the sources of pollutants. A unit may have pollutants coming from several		
	sources, but any single source would qualify as opportunity.		
	 Wetland is along the shores of a lake or reservoir that does not meet water quality standards 		
	— Grazing in the wetland or within 150ft		
	 Polluted water discharges to wetland along upland edge 		
	— Tilled fields or orchards within 150 feet of wetland		
	— Residential or urban areas are within 150 ft of wetland		
	— Parks with grassy areas that are maintained, ballfields, golf courses (all within		
	150 ft. of lake shore)		
	 Power boats with gasoline or diesel engines use the lake 		
	— Other		
	YES multiplier is 2 NO multiplier is 1		
T.	TOTAL - Water Quality Functions Multiply the score from L1 by L2		
	Add score to table on p. 1		

L	Lake-fringe Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce shoreline erosion	Points (only 1 score per box)
L	L 3. Does the wetland unit have the <u>potential</u> to reduce shoreline erosion?	(see p.62)
L	L 3 Distance along shore and average width of Cowardin classes along the lakeshore (do not include aquatic bed): (choose the highest scoring description that matches conditions in the wetland) > ³ / ₄ of distance is shrubs or forest at least 33 ft (10m) wide points = 6 > ³ / ₄ of distance is shrubs or forest at least 6 ft. (2 m) wide points = 4 > ¹ / ₄ distance is shrubs or forest at least 33 ft (10m) wide points = 4 Vegetation is at least 6 ft (2m) wide (any type except aquatic bed) points = 2 Vegetation is less than 6 ft (2m) wide (any type except aquatic bed) points = 0 Aerial photo or map with Cowardin vegetation classes	
L	<i>Record the points from the box above</i>	
L	 L 4. Does the wetland unit have the <u>opportunity</u> to reduce erosion? Are there features along the shore that will be impacted if the shoreline erodes? Note which of the following conditions apply. There are human structures and activities along the upland edge of the wetland (buildings, fields) that can be damaged by erosion. There are undisturbed natural resources along the upland edge of the wetland (e.g. mature forests other wetlands) than can be damaged by shoreline erosion 	(see p.63)
	 Other YES multiplier is 2 NO multiplier is 1 	multiplier
L	TOTAL - Hydrologic Functions Multiply the score from L 3 by L 4 Add score to table on p. 1	

S	Slope Wetlands	Points
	improve water quality	per box)
S	S 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.64)
S	S 1.1 Characteristics of average slope of unit:Slope is1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance)points = 3Slope is 1% - 2%Slope is 2% - 5%Slope is greater than 5%	
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic <i>(use NRCS definitions)</i> YES = 3 points NO = 0 points	
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 Dense, woody, vegetation > 1/2 of area points = 2 Dense, uncut, herbaceous vegetation > 1/4 of area points = 1 Does not meet any of the criteria above for vegetation points = 0 Aerial photo or map with vegetation polygons	Figure
S	Total for S 1Add the points in the boxes above	
S	S 2. Does the wetland unit have the <u>opportunity</u> to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. <i>Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.</i>	
	 Grazing in the wetland or within 150ft Untreated stormwater discharges to wetland 	
	 Tilled fields, logging, or orchards within 150 feet of wetland Residential, urban areas, or golf courses are within 150 ft upslope of wetland Other YES multiplier is 2 NO multiplier is 1 	
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 Add score to table on p. 1	

S	Slope Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream erosion	Points (only 1 score per box)
	S 3. Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?	(see p.68)
S S	 S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. <i>Choose the points appropriate for the description that best fit conditions in the wetland.</i> <i>(stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain</i> <i>erect during surface flows)</i> Dense, uncut, rigid vegetation covers > 90% of the area of the wetland. points = 6 Dense, uncut, rigid vegetation > 1/2 area of wetland points = 3 Dense, uncut, rigid vegetation > 1/4 area points = 1 More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0 S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows: The slope wetland has small surface depressions that can retain water over at least 10% of its area VES points = 2 	
0	$\frac{125}{NO} = 0$	
S	Add the points in the boxes above	
S	 S 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion? Is the wetland in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows? <i>Note which of the following conditions apply</i>. — Wetland has surface runoff that drains to a river or stream that has flooding problems 	(see p. 70)
	— Other (Answer NO if the major source of water is controlled by a reservoir (e.g. wetland is a seep that is on the downstream side of a dam)	multiplier
	YES multiplier is 2 NO multiplier is 1	
S	TOTAL - Hydrologic Functions Multiply the score from S 3 by S 4 Add score to table on p. 1	

These questions apply to wetlands of all HGM	M classes.		Points	
HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat			(only 1 score per box)	
H 1. Does the wetland unit have the <u>potential</u> to pr	ovide habitat for many	species?	_	
H 1.1 Vegetation structure (see p. 72)				
Check the types of vegetation classes present (as defined	l by Cowardin)- Size thresh	old for each		
class is 4 acre or more than 10% of the area if unit is	s smaller than 2.5 acres.			
Emergent plants				
Scrub/shrub (areas where shrubs have >30%)	cover)			
Forested (areas where trees have >30% cover)			
If the unit has a forested class check if:				
The forested class has 3 out of 5 strata (cano	py, sub-canopy, shrubs, he	rbaceous,		
moss/ground-cover) that each cover 20%	within the forested polygo	1		
Add the number of vegetation structures that qualify. If	you have:	$\mathbf{points} = 1$		
	3 structures of more	points = 4 points = 2		
Map of Cowardin vegetation classes	2 structures	points = 2 points = 1		
	1 structure	points = 0		
H 1.2. <u>Hydroperiods (see p. 73)</u>				
Check the types of water regimes (hydroperiods) present within the wetland. The water				
regime has to cover more than 10% of the wetland or	1 /4 acre to count. (see text)	for		
descriptions of hydroperiods)	A or more types present	points - 3		
Seasonally flooded or inundated	3 types present	points = 3		
Occasionally flooded or inundated	2 types present	point = 1		
Saturated only	1 type present	points = 0		
Permanently flowing stream or river in, or adja	acent to, the wetland	_		
Seasonally flowing stream in, or adjacent to, th	ne wetland			
<i>Lake-fringe wetland</i> = 2 points				
<i>Freshwater tiadi wetiana = 2</i> points	iviap of hydr	operioas		
H 1.3. <u>Richness of Plant Species</u> (see p. 75)	$(10.6)^2$			
Count the number of plant species in the wetland that	at cover at least 10 ft. (<i>alf</i>	ferent patches		
You do not have to name the species.	e mresnota)			
Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife. Canadian Thistle				
If you counted:	> 19 species	points = 2		
List species below if you want to:	5 - 19 species	points = 1		
	< 5 species	points = 0		



H 2. Does the wetland unit have the opportunity to provide habitat for many species	?
H 2.1 Buffers (see p. 80)	Figure
<i>Choose the description that best represents condition of buffer of wetland unit. The highest scorin</i>	1g
criterion that applies to the wetland is to be used in the rating. See text for definition of	.0
"undisturbed."	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	, 0
of circumference. No structures are within the undisturbed part of buffer. (relatively	
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5	
- 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >	
50% circumference. Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
circumference. Points = 4	
- 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%	, D
circumference, . Points = 3	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >	
50% circumference. Points = 3	
If buffer does not meet any of the criteria above	
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95%	
circumference. Light to moderate grazing, or lawns are OK. Points = 2	
— No paved areas or buildings within 50m of wetland for >50% circumference.	
Light to moderate grazing, or lawns are OK. Points = 2	
Heavy grazing in buffer.Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tille	ed
fields, paving, basalt bedrock extend to edge of wetland $Points = 0$.	
- Buffer does not meet any of the criteria above. Points = 1	
Aerial photo showing buffers	
H 2.2 Corridors and Connections (see p. 81)	
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, fores	st
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	
roads, paved roads, are considered breaks in the corridor).	
$YES = 4 \text{ points} (go to H 2.3) \qquad NO = go to H 2.2.2$	
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either ringeries or unlend) that is at least 50ft wide, has at least $200($ source of shrules or	
forest and connects to estudies, other wetlands or undisturbed unlands that are at least 25	
acres in size? OR a Lake fringe wetland if it does not have an undisturbed corridor as in	
the question above?	
VES = 2 moints (ao to H 2 3) NO - H 2 2 3	
H 2 2 3 Is the wetland.	
within 5 mi (8km) of a brackish or salt water estuary OR	
within 3 mi of a large field or pasture (>40 acres) OR	
within 1 mi of a lake greater than 20 acres?	
YES = 1 point NO = 0 points	

Total for page_____

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report <u>http://wdfw.wa.gov/hab/phslist.htm</u>)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? <i>NOTE: the</i>	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (<u>Mature forests</u>) Stands	
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (<i>full descriptions in WDFW PHS</i>	
report p. 158).	
Riparian : The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (<i>full descriptions in WDF W PHS report p. 161</i>).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional file mistory requirements for instream fish and wildlife	
Resources.	
Open Coast Nearshore, and Puget Sound Nearshore, (full descriptions of habitats and the	
definition of relatively undisturbed are in WDEW report: pp. 167-160 and clossery in	
Appendix A)	
Cayes: A naturally occurring cavity recess youd or system of interconnected passages under	
the earth in soils rock ice or other geological formations and is large enough to contain a	
human	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft).	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dving and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that	
best fits) (see p. 84)	
There are at least 3 other wetlands within ¹ / ₂ mile, and the connections between them are	
relatively undisturbed (light grazing between wetlands OK, as is lake shore with some	
boating, but connections should NOT be bisected by paved roads, fill, fields, or other	
development. points = 5	
The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe	
wetlands within $\frac{1}{2}$ mile points = 5	
There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are	
disturbed points = 3	
The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe	
wetland within $\frac{1}{2}$ mile points = 3	
There is at least 1 wetland within $\frac{1}{2}$ mile. points = 2	
There are no wetlands within $\frac{1}{2}$ mile. points = 0	
H 2. TOTAL Score - opportunity for providing habitat	
Add the scores from H2.1,H2.2, H2.3, H2.4	
TOTAL for H 1 from page 14	
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on	
p. 1	

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met.	
SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
— The dominant water regime is tidal,	
— Vegetated, and	
— With a salinity greater than 0.5 ppt.	
$YES = Go \text{ to } SC 1.1 \qquad \text{NO} \$	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental or Scientific Reserve designated under WAC 332-30-1512	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the	
following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling,	Cat. II
cultivation, grazing, and has less than 10% cover of non-native plant	
species. If the non-native Spartina spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual	Dual
rating (I/II) The area of Sparting would be rated a Category II while the	Dual rating
relatively undisturbed upper marsh with native species would be a	1/11
Category I. Do not, however, exclude the area of Spartina in	1/11
determining the size threshold of 1 acre.	
— At least ³ / ₄ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland.	
— The wetland has at least 2 of the following features: tidal channels,	
depressions with open water, or contiguous freshwater wetlands.	

SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) S/T/R information from Appendix D or accessed from WNHP/DNR web site YES contact WNHP/DNR (see p. 79) and go to SC 2.2 NO SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NO not a Heritage Wetland	Cat. I
SC 3.0 Bogs (see p. 87) Does the wetland unit (or any part of the unit) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.	
 Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes - go to Q. 3 No - go to Q. 2 	
 2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? 	
 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? 	
Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.	
 Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)? 	
2. YES = Category I No Is not a bog for purpose of rating	Cat. I

 SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? <i>If you answer yes you will still need to rate the wetland based on its functions.</i> Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more. 	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	
YES = Category I NOnot a forested wetland with special characteristics	Cat. I
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
 Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) YES = Go to SC 5.1 NO not a wetland in a coastal lagoon 	
 SC 5.1 Does the wetland meets all of the following three conditions? The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). At least 34 of the landward edge of the wetland has a 100 ft buffer of 	
shrub, forest, or un-grazed or un-mowed grassland.	Cat. I
— The wetland is larger than 1/10 acre (4350 square feet) YES = Category I NO = Category II	Cat. II

SC 6.0 Interdunal Wetlands (see p. 93)	
Is the wetland unit west of the 1889 line (also called the Western Boundary of Upland	
Ownership or WBUO)?	
YES - go to SC 6.1 NO not an interdunal wetland for rating	
If you answer yes you will still need to rate the wetland based on its	
functions.	
In practical terms that means the following geographic areas:	
 Long Beach Peninsula- lands west of SR 103 	
Grayland-Westport- lands west of SR 105	
 Ocean Shores-Copalis- lands west of SR 115 and SR 109 	
SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?	
$YES = Category II \qquad NO - go to SC 6.2$	Cat. II
SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?	
YES = Category III	Cat. III
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories, and record on	
<i>p.</i> 1.	
If you answered NO for all types enter "Not Applicable" on p.1	