

Appendix C— WDOE Wetland Rating Forms

This Appendix includes the rating sheets for all of the wetlands located within the project limits.

Wetland name or number Wetland A

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): Wetland A Date of site visit: 9-7-07

Rated by: Thomas D. Kohl Trained by Ecology? Yes X No _____ Date of training: 11-8-07

SEC: 10 TWSHP: 1N RNGE: 5E Is S/T/R in Appendix D? Yes _____ No X

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I _____ II X III _____ IV _____

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	16
Score for Hydrologic Functions	18
Score for Habitat Functions	18
TOTAL Score for Functions	52

Category based on SPECIAL CHARACTERISTICS of Wetland I _____ II _____ Does not apply X

Final Category (choose the “highest” category from above”) II

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		Depressional	
Natural Heritage Wetland		Riverine	X
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	<input type="checkbox"/>

Does the wetland 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 Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?</i> For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.		X
SP2. <i>Has the wetland unit been documented as habitat for any State listed 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 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		X
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.		X

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 in to 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 Vegetated Wetlands for 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 a Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were call 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 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 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) where at least 20 acres (8ha) in size;
 _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
 NO – go to 4 **YES – The wetland class is Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland 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 types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
 NO – go to 5 **YES – The wetland class is Slope**

5. Does the entire wetland 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 of 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 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 classes. 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.

<i>HGM Classes within the wetland unit being rated</i>	<i>HGM Class to Use in Rating</i>
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 wetland	Treat as ESTUARINE under wetlands with special characteristics

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

R Riverine and Freshwater Tidal Fringe Wetlands		Points
WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.		(only 1 score per box)
R 1	Does the wetland have the <u>potential</u> to improve water quality? (see p.52)	
	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: <ul style="list-style-type: none"> • Depressions cover > 3/4 area of wetland points = 8 • Depressions cover > 1/2 area of wetland points = 4 (If depressions > 1/2 of area of unit draw polygons on aerial photo or map) • Depressions present but cover < 1/2 area of wetland points = 2 • No depressions present points = 0 	2
	R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): <ul style="list-style-type: none"> • Trees or shrubs > 2/3 area of the unit points = 8 • Trees or shrubs > 1/3 area of the wetland 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 <p style="text-align: center;">Aerial photo or map showing polygons of different vegetation types</p>	6
Add the points in the boxes above		8
R 2	Does the wetland have the <u>opportunity</u> to improve water quality?	(see p. 53)
	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> <ul style="list-style-type: none"> ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland <u>X</u> 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. ___ Other _____ <p style="text-align: center;">YES multiplier is 2 NO multiplier is 1</p>	Multiplier <u>2</u>
◆	TOTAL – Water Quality Functions Multiply the score from R1 by R2; then <i>add score to table on p. 1</i>	16
HYDROLOGIC FUNCTIONS – Indicators that wetland functions to reduce flooding and stream erosion.		
R 3	Does the wetland have the <u>potential</u> to reduce flooding and erosion?	(see p.54)
	R 3.1 Characteristics of the overbank storage the wetland provides: <i>Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit) / (average width of stream between banks).</i> <ul style="list-style-type: none"> • If the ratio is more than 20 points = 9 • 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 <p style="text-align: center;">Aerial photo or map showing average widths</p>	2
	R 3.2 Characteristics of vegetation that slow down water velocities during floods: <i>Treat 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):</i> <ul style="list-style-type: none"> • 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 <p style="text-align: center;">Aerial photo or map showing polygons of different vegetation types</p>	7
Add the points in the boxes above		9
R 4	Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?	(see p.57)
	Answer YES if the wetland 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. <i>Note which of the following conditions apply.</i> <ul style="list-style-type: none"> <u>X</u> 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 _____ <p>(Answer NO if the major source of water to the wetland is controlled by a reservoir or the wetland is tidal fringe along the sides of a dike)</p> <p style="text-align: center;">YES multiplier is 2 NO multiplier is 1</p>	Multiplier <u>2</u>
◆	TOTAL – Hydrologic Functions Multiply the score from R3 by R4; then <i>add score to table on p. 1</i>	18

Comments:

	<p>H 2.3 <u>Near or adjacent to other priority habitats listed by WDFW</u> (see p. 82): Which of the following priority habitats are within 330 ft. (100m) of the wetland? <i>NOTE: the connections do not have to be relatively undisturbed. These are DFW definitions. Check with your local DFW biologist if there are any questions.</i></p> <p>___ Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p>___ Aspen Stands: Pure or mixed stands of aspen greater than 0.8 ha (2 acres)</p> <p>___ Cliffs: Greater than 7.6m (25 ft) high and occurring below 5000 ft.</p> <p>___ Old-growth 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) > 81cm (32 in) dbh or > 200 years of age.</p> <p>___ Mature forests: Stands with average diameters exceeding 53cm (21 in) dbh; crown cover may be less than 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.</p> <p>___ Prairies: Relatively undisturbed areas (as indicated by dominance of native plants) where greases and/or forbs form the natural climax plant community.</p> <p>___ Talus: Homogenous areas of rock rubble ranging in average size 0.15 – 2.0m (0.5 – 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p>___ Caves: A naturally occurring cavity, recess, void, or system of interconnected passages.</p> <p>___ Oregon white Oak: Woodlands stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p>___ Urban Natural Open Space: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p>___ Estuary/Estuary-like: Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5 ppt. during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p>___ Marine/Estuarine Shorelines: Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has 3 or more priority habitats..= 4 points If wetland has 1 priority habit .. = 1 point If wetland has 2 priority habitats.....= 3 points 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).</p>	0
	<p>H 2.4 <u>Wetland Landscape:</u> <i>Choose the one description of the landscape around the wetland that best fits (see p. 84)</i></p> <ul style="list-style-type: none"> • 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 1/2 milepoints = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed.points = 3 • The wetland fringe on a lake with disturbance and there are 3 other lake-fringe wetlands within 1/2 milepoints = 3 • There is at least 1 wetland within 1/2 milepoints = 2 • There are no wetlands within 1/2 mile.....points = 0 	3
	<p>H 2 TOTAL Score – opportunity for providing habitat <i>Add the scores from H2.1, H2.2, H2.3, H2.4</i></p>	11
	<p style="text-align: right;"><i>TOTAL for H 1 from page 8</i></p>	7
◆	<p>Total Score for Habitat Functions Add the points for H 1 and H 2; then record the result on p. 1</p>	18

Comments:

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type – Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC1	<p>Estuarine wetlands? (see p.86)</p> <p>Does the wetland unit meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal,</p> <p><input type="checkbox"/> Vegetated, and</p> <p><input type="checkbox"/> With a salinity greater than 0.5 ppt.</p> <p style="text-align: center;">YES = Go to SC 1.1 NO <u>X</u></p>
	<p>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 332-30-151? YES = Category I NO = go to SC 1.2</p>
	<p>SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions?</p> <p style="text-align: center;">YES = Category I NO = Category II</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp., are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of <i>Spartina</i> would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of <i>Spartina</i> in determining the size threshold of 1 acre.</p> <p><input type="checkbox"/> 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</p> <p><input type="checkbox"/> The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p>
	<p>Cat. I</p> <p>Cat. II</p> <p>Dual Rating I/II</p>
SC2	<p>Natural Heritage Wetlands (see p. 87)</p> <p>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.</p> <p>SC 2.1 Is the wetland 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.)</p> <p>S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____</p> <p style="text-align: center;">YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO <u>X</u></p> <p>SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species?</p> <p style="text-align: center;">YES = Category 1 NO <u>X</u> not a Heritage Wetland</p>
	<p>Cat I</p>
SC3	<p>Bogs (see p. 87)</p> <p>Does the wetland (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. <i>If you answer yes you will still need to rate the wetland based on its function.</i></p> <ol style="list-style-type: none"> 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 soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 Does the wetland 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? YES = go to question 3 NO = is not a bog for purpose of rating 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)? <p style="text-align: center;">YES = Is a bog for purpose of rating NO = go to question 4</p> <p>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.</p> <ol style="list-style-type: none"> 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)? <p style="text-align: center;">YES = Category I NO = Is not a bog for purpose of rating</p>
	<p>Cat. I</p>

SC4	<p>Forested Wetlands (see p. 90)</p> <p>Does the wetland 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 function.</i></p> <p>___ Old-growth forests: (west of Cascade Crest) Stands of at least two three 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).</p> <p>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.</p> <p>___ Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.</p> <p>YES = Category I NO = <u>X</u> not a forested wetland with special characteristics</p>	Cat. I
SC5	<p>Wetlands in Coastal Lagoons (see p. 91)</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p>___ 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.</p> <p>___ 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>)</p> <p>YES = Go to SC 5.1 NO <u>X</u> not a wetland in a coastal lagoon</p> <p>SC 5.1 Does the wetland meet all of the following three conditions?</p> <p>___ 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).</p> <p>___ 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.</p> <p>___ The wetland is larger than 1/10 acre (4350 square ft.)</p> <p>YES = Category I NO = Category II</p>	Cat. I Cat. II
SC6	<p>Interdunal Wetlands (see p. 93)</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)?</p> <p>YES = Go to SC 6.1 NO <u>X</u> not an interdunal wetland for rating</p> <p><i>If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> • 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 <p>SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger?</p> <p>YES = Category II NO = go to SC 6.2</p> <p>SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?</p> <p>YES = Category III</p>	Cat. II Cat. III
◆	<p>Category of wetland based on Special Characteristics</p> <p><i>Choose the "highest" rating if wetland falls into several categories, and record on p. 1.</i></p> <p>If you answered NO for all types enter "Not Applicable" on p. 1</p>	

Comments:

Wetland name or number Wetland B

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): Wetland B Date of site visit: 9-7-07

Rated by: Thomas D. Kohl Trained by Ecology? Yes X No _____ Date of training: 11-8-07

SEC: 10 TOWNSHIP: 1N RANGE: 5E Is S/T/R in Appendix D? Yes _____ No X

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I _____ II _____ III X IV _____

Category I =	Score > 70
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Score for Water Quality Functions	6
Score for Hydrologic Functions	5
Score for Habitat Functions	19
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Category based on SPECIAL CHARACTERISTICS of Wetland I _____ II _____ Does not apply X

Final Category (choose the “highest” category from above)

III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		Depressional	
Natural Heritage Wetland		Riverine	X
Bog		Lake-fringe	
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Interdunal			
None of the above		Check if unit has multiple HGM classes present	<input type="checkbox"/>

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Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?</i> For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.		X
SP2. <i>Has the wetland unit been documented as habitat for any State listed 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 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		X
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.		X

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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 a Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were call 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 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 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) where at least 20 acres (8ha) in size;
 _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
 NO – go to 4 **YES – The wetland class is Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland 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 types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
 NO – go to 5 **YES – The wetland class is Slope**

5. Does the entire wetland 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 of 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 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**

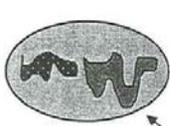
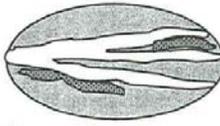
8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH 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 wetland	Treat as ESTUARINE under wetlands with special characteristics

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

R Riverine and Freshwater Tidal Fringe Wetlands		Points
WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.		(only 1 score per box)
R 1	Does the wetland have the <u>potential</u> to improve water quality? (see p.52)	
	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: <ul style="list-style-type: none"> • Depressions cover > 3/4 area of wetland points = 8 • Depressions cover > 1/2 area of wetland points = 4 (If depressions > 1/2 of area of unit draw polygons on aerial photo or map) • Depressions present but cover < 1/2 area of wetland points = 2 • No depressions present points = 0 	0
	R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): <ul style="list-style-type: none"> • Trees or shrubs > 2/3 area of the unit points = 8 • Trees or shrubs > 1/3 area of the wetland 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 <p style="text-align: center;">Aerial photo or map showing polygons of different vegetation types</p>	3
Add the points in the boxes above		3
R 2	Does the wetland have the <u>opportunity</u> to improve water quality?	(see p. 53)
	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> <ul style="list-style-type: none"> ___ Grazing in the wetland or within 150 ft ___ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland <u>X</u> 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. ___ Other _____ <p style="text-align: center;">YES multiplier is 2 NO multiplier is 1</p>	Multiplier <u>2</u>
◆	TOTAL – Water Quality Functions Multiply the score from R1 by R2; then <i>add score to table on p. 1</i>	6
HYDROLOGIC FUNCTIONS – Indicators that wetland functions to reduce flooding and stream erosion.		
R 3	Does the wetland have the <u>potential</u> to reduce flooding and erosion?	(see p.54)
	R 3.1 Characteristics of the overbank storage the wetland provides: <i>Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit) / (average width of stream between banks).</i> <ul style="list-style-type: none"> • If the ratio is more than 20 points = 9 • 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 <p style="text-align: center;">Aerial photo or map showing average widths</p>	1
	R 3.2 Characteristics of vegetation that slow down water velocities during floods: <i>Treat 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):</i> <ul style="list-style-type: none"> • 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 <p style="text-align: center;">Aerial photo or map showing polygons of different vegetation types</p>	4
Add the points in the boxes above		5
R 4	Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?	(see p.57)
	Answer YES if the wetland 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. <i>Note which of the following conditions apply.</i> <ul style="list-style-type: none"> ___ 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 _____ <p>(Answer NO if the major source of water to the wetland is controlled by a reservoir or the wetland is tidal fringe along the sides of a dike)</p> <p style="text-align: center;">YES multiplier is 2 NO multiplier is 1</p>	Multiplier <u>1</u>
◆	TOTAL – Hydrologic Functions Multiply the score from R3 by R4; then <i>add score to table on p. 1</i>	5

Comments:

<i>These questions apply to wetlands of all HGM classes.</i> HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.		Points (only 1 score per box)												
H 1	Does the wetland have the <u>potential</u> to provide habitat for many species?													
	H 1.1 <u>Vegetation structure</u> (see P. 72): Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres. <input type="checkbox"/> Aquatic Bed <input checked="" type="checkbox"/> Emergent plants <input checked="" type="checkbox"/> Scrub/shrub (areas where shrubs have > 30% cover) <input type="checkbox"/> Forested (areas where trees have > 30% cover) If the unit has a forested class check if: <input type="checkbox"/> The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. Add the number of vegetation types that qualify. If you have: <table style="float: right; margin-left: 20px;"> <tr> <td>Map of Cowardin vegetation classes</td> <td></td> </tr> <tr> <td>4 structures or more.....</td> <td>points = 4</td> </tr> <tr> <td>3 structures.....</td> <td>points = 2</td> </tr> <tr> <td>2 structures.....</td> <td>points = 1</td> </tr> <tr> <td>1 structure.....</td> <td>points = 0</td> </tr> </table>	Map of Cowardin vegetation classes		4 structures or more.....	points = 4	3 structures.....	points = 2	2 structures.....	points = 1	1 structure.....	points = 0	1		
Map of Cowardin vegetation classes														
4 structures or more.....	points = 4													
3 structures.....	points = 2													
2 structures.....	points = 1													
1 structure.....	points = 0													
	H 1.2 <u>Hydroperiods</u> (see p.73): 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). <input type="checkbox"/> Permanently flooded or inundated <input checked="" type="checkbox"/> Seasonally flooded or inundated <input type="checkbox"/> Occasionally flooded or inundated <input type="checkbox"/> Saturated only <input checked="" type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake-fringe wetland..... = 2 points <input type="checkbox"/> Freshwater tidal wetland..... = 2 points <table style="float: right; margin-left: 20px;"> <tr> <td>4 or more types present</td> <td>points = 3</td> </tr> <tr> <td>3 or more types present.....</td> <td>points = 2</td> </tr> <tr> <td>2 types present.....</td> <td>points = 1</td> </tr> <tr> <td>1 type present.....</td> <td>points = 0</td> </tr> </table> <p style="text-align: right;">Map of hydroperiods</p>	4 or more types present	points = 3	3 or more types present.....	points = 2	2 types present.....	points = 1	1 type present.....	points = 0	1				
4 or more types present	points = 3													
3 or more types present.....	points = 2													
2 types present.....	points = 1													
1 type present.....	points = 0													
	H 1.3 <u>Richness of Plant Species</u> (see p. 75): Count the number of plant species in the wetland that cover at least 10 ft ² (different patches of the same species can be combined to meet the size threshold) You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle. If you counted: <table style="float: right; margin-left: 20px;"> <tr> <td>> 19 species.....</td> <td>points = 2</td> </tr> <tr> <td>5 – 19 species.....</td> <td>points = 1</td> </tr> <tr> <td>< 5 species.....</td> <td>points = 0</td> </tr> </table> List species below if you want to: <hr/> <hr/> <hr/> <hr/>	> 19 species.....	points = 2	5 – 19 species.....	points = 1	< 5 species.....	points = 0	1						
> 19 species.....	points = 2													
5 – 19 species.....	points = 1													
< 5 species.....	points = 0													
	H 1.4 <u>Interspersion of Habitats</u> (see p. 76): Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none. <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  None = 0 points </div> <div style="text-align: center;">  Low = 1 point </div> <div style="text-align: center;">  Moderate = 2 points </div> <div style="text-align: center;">  High = 3 points </div> </div> <div style="margin-top: 20px;">    <p style="text-align: center;">[riparian braided channels]</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always “high”. Use map of Cowardin classes. </div>	2												
	H 1.5 <u>Special Habitat Features</u> (see p. 77): Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;"><input checked="" type="checkbox"/></td> <td style="width: 95%;">Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long)</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Standing snags (diameter at the bottom > 4 inches) in the wetland</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m)</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)</td> </tr> <tr> <td><input type="checkbox"/></td> <td>At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Invasive plants cover less than 25% of the wetland area in each stratum of plants</td> </tr> </table> <p><i>NOTE: The 20% stated in early printings of the manual on page 78 is an error.</i></p>	<input checked="" type="checkbox"/>	Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long)	<input checked="" type="checkbox"/>	Standing snags (diameter at the bottom > 4 inches) in the wetland	<input checked="" type="checkbox"/>	Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m)	<input type="checkbox"/>	Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)	<input type="checkbox"/>	At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians)	<input checked="" type="checkbox"/>	Invasive plants cover less than 25% of the wetland area in each stratum of plants	3
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<input checked="" type="checkbox"/>	Invasive plants cover less than 25% of the wetland area in each stratum of plants													
H 1 TOTAL Score – potential for providing habitat		Add the points in the column above												
		8												

	<p>H 2.3 <u>Near or adjacent to other priority habitats listed by WDFW</u> (see p. 82): Which of the following priority habitats are within 330 ft. (100m) of the wetland? <i>NOTE: the connections do not have to be relatively undisturbed. These are DFW definitions. Check with your local DFW biologist if there are any questions.</i></p> <p>_____ Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p>_____ Aspen Stands: Pure or mixed stands of aspen greater than 0.8 ha (2 acres)</p> <p>_____ Cliffs: Greater than 7.6m (25 ft) high and occurring below 5000 ft.</p> <p>_____ Old-growth 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) > 81cm (32 in) dbh or > 200 years of age.</p> <p>_____ Mature forests: Stands with average diameters exceeding 53cm (21 in) dbh; crown cover may be less than 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.</p> <p>_____ Prairies: Relatively undisturbed areas (as indicated by dominance of native plants) where greases and/or forbs form the natural climax plant community.</p> <p>_____ Talus: Homogenous areas of rock rubble ranging in average size 0.15 – 2.0m (0.5 – 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p>_____ Caves: A naturally occurring cavity, recess, void, or system of interconnected passages.</p> <p>_____ Oregon white Oak: Woodlands stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p>_____ Urban Natural Open Space: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p>_____ Estuary/Estuary-like: Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5 ppt. during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p>_____ Marine/Estuarine Shorelines: Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has 3 or more priority habitats..= 4 points If wetland has 1 priority habit .. = 1 point If wetland has 2 priority habitats.....= 3 points 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).</p>	0
	<p>H 2.4 <u>Wetland Landscape:</u> <i>Choose the one description of the landscape around the wetland that best fits (see p. 84)</i></p> <ul style="list-style-type: none"> • 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 1/2 milepoints = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed.points = 3 • The wetland fringe on a lake with disturbance and there are 3 other lake-fringe wetlands within 1/2 milepoints = 3 • There is at least 1 wetland within 1/2 milepoints = 2 • There are no wetlands within 1/2 mile.....points = 0 	3
	<p>H 2 TOTAL Score – opportunity for providing habitat <i>Add the scores from H2.1, H2.2, H2.3, H2.4</i></p>	11
	<p><i>TOTAL for H 1 from page 8</i></p>	8
◆	<p>Total Score for Habitat Functions Add the points for H 1 and H 2; then <i>record the result on p. 1</i></p>	19

Comments:

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type – Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC1	<p>Estuarine wetlands? (see p.86)</p> <p>Does the wetland unit meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal,</p> <p><input type="checkbox"/> Vegetated, and</p> <p><input type="checkbox"/> With a salinity greater than 0.5 ppt.</p> <p style="text-align: center;">YES = Go to SC 1.1 NO <u>X</u></p>
	<p>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 332-30-151? YES = Category I NO = go to SC 1.2</p> <p style="text-align: right;">Cat. 1</p>
	<p>SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions?</p> <p style="text-align: center;">YES = Category I NO = Category II</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp., are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of <i>Spartina</i> would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of <i>Spartina</i> in determining the size threshold of 1 acre.</p> <p><input type="checkbox"/> 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</p> <p><input type="checkbox"/> The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p> <p style="text-align: right;">Cat. I Cat. II Dual Rating I/II</p>
SC2	<p>Natural Heritage Wetlands (see p. 87)</p> <p>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.</p> <p>SC 2.1 Is the wetland 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 <u>X</u></p> <p>SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO <u>X</u> not a Heritage Wetland</p>
	<p style="text-align: right;">Cat I</p>
SC3	<p>Bogs (see p. 87)</p> <p>Does the wetland (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. <i>If you answer yes you will still need to rate the wetland based on its function.</i></p> <p>1. 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 soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2</p> <p>2. Does the wetland 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? YES = go to question 3 NO = is not a bog for purpose of rating</p> <p>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 question 4</p> <p>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.</p> <p>4. 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)? YES = Category I NO = Is not a bog for purpose of rating</p>
	<p style="text-align: right;">Cat. I</p>

SC4	<p>Forested Wetlands (see p. 90)</p> <p>Does the wetland 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 function.</i></p> <p>____ Old-growth forests: (west of Cascade Crest) Stands of at least two three 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).</p> <p>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.</p> <p>____ Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.</p> <p>YES = Category I NO = <u>X</u> not a forested wetland with special characteristics</p>	Cat. I
SC5	<p>Wetlands in Coastal Lagoons (see p. 91)</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p>____ 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.</p> <p>____ 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>)</p> <p>YES = Go to SC 5.1 NO <u>X</u> not a wetland in a coastal lagoon</p> <p>SC 5.1 Does the wetland meet all of the following three conditions?</p> <p>____ 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).</p> <p>____ 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.</p> <p>____ The wetland is larger than 1/10 acre (4350 square ft.)</p> <p>YES = Category I NO = Category II</p>	Cat. I Cat. II
SC6	<p>Interdunal Wetlands (see p. 93)</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)?</p> <p>YES = Go to SC 6.1 NO <u>X</u> not an interdunal wetland for rating</p> <p><i>If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> • 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 <p>SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger?</p> <p>YES = Category II NO = go to SC 6.2</p> <p>SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?</p> <p>YES = Category III</p>	Cat. II Cat. III
◆	<p>Category of wetland based on Special Characteristics</p> <p><i>Choose the "highest" rating if wetland falls into several categories, and record on p. 1.</i></p> <p>If you answered NO for all types enter "Not Applicable" on p. 1</p>	

Comments:

Wetland name or number Wetland C

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): Wetland C Date of site visit: 9-7-07

Rated by: Thomas D. Kohl Trained by Ecology? Yes X No _____ Date of training: 11-8-07

SEC: 10 TWSHP: 1N RNGE: 5E Is S/T/R in Appendix D? Yes _____ No X

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I _____ II X III _____ IV _____

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	12
Score for Hydrologic Functions	24
Score for Habitat Functions	17
TOTAL Score for Functions	53

Category based on SPECIAL CHARACTERISTICS of Wetland I _____ II _____ Does not apply X

Final Category (choose the “highest” category from above)

II

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		Depressional	X
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	

Does the wetland 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 Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?</i> For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.		X
SP2. <i>Has the wetland unit been documented as habitat for any State listed 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 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		X
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.		X

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 in to 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 Vegetated Wetlands for 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 a Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were call 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 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 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) where at least 20 acres (8ha) in size;
 _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
 NO – go to 4 **YES – The wetland class is Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland 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 types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
 NO – go to 5 **YES – The wetland class is Slope**

5. Does the entire wetland 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 of 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 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 classes. 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 wetland	Treat as ESTUARINE under wetlands with special characteristics

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

Wetland name or number Wetland C _____

	<p>groundwater in areas where damaging groundwater flooding does not occur. <i>Note which of the following indicators of opportunity apply.</i></p> <p><input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems.</p> <p><input type="checkbox"/> Wetland drains to a river or stream that has flooding problems</p> <p><input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems</p> <p><input checked="" type="checkbox"/> Other <u>SR-14 is located downgradient</u></p> <p style="text-align: center;">YES multiplier is 2 NO multiplier is 1</p>	2
◆	TOTAL – Hydrologic Functions Multiply the score from D3 by D4; then <i>add score to table on p. 1</i>	24

Comments:

<i>These questions apply to wetlands of all HGM classes.</i>		Points (only 1 score per box)								
HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.										
H 1	Does the wetland have the <u>potential</u> to provide habitat for many species?									
	H 1.1 <u>Vegetation structure</u> (see P. 72): Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres. <input checked="" type="checkbox"/> Aquatic Bed <input checked="" type="checkbox"/> Emergent plants <input type="checkbox"/> Scrub/shrub (areas where shrubs have > 30% cover) <input type="checkbox"/> Forested (areas where trees have > 30% cover) If the unit has a forested class check if: <input type="checkbox"/> The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. Add the number of vegetation types that qualify. If you have: <table style="float: right; margin-left: 20px;"> <tr> <td>Map of Cowardin vegetation classes</td> <td></td> </tr> <tr> <td>3 structures.....</td> <td>points = 2</td> </tr> <tr> <td>2 structures.....</td> <td>points = 1</td> </tr> <tr> <td>1 structure.....</td> <td>points = 0</td> </tr> </table>	Map of Cowardin vegetation classes		3 structures.....	points = 2	2 structures.....	points = 1	1 structure.....	points = 0	1
Map of Cowardin vegetation classes										
3 structures.....	points = 2									
2 structures.....	points = 1									
1 structure.....	points = 0									
	H 1.2 <u>Hydroperiods</u> (see p.73): 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). <input checked="" type="checkbox"/> Permanently flooded or inundated <input checked="" type="checkbox"/> Seasonally flooded or inundated <input checked="" type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Saturated only <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake-fringe wetland..... = 2 points <input type="checkbox"/> Freshwater tidal wetland..... = 2 points <table style="float: right; margin-left: 20px;"> <tr> <td>4 or more types present</td> <td>points = 3</td> </tr> <tr> <td>3 or more types present.....</td> <td>points = 2</td> </tr> <tr> <td>2 types present.....</td> <td>points = 1</td> </tr> <tr> <td>1 type present.....</td> <td>points = 0</td> </tr> </table> <p style="text-align: right;">Map of hydroperiods</p>	4 or more types present	points = 3	3 or more types present.....	points = 2	2 types present.....	points = 1	1 type present.....	points = 0	1
4 or more types present	points = 3									
3 or more types present.....	points = 2									
2 types present.....	points = 1									
1 type present.....	points = 0									
	H 1.3 <u>Richness of Plant Species</u> (see p. 75): Count the number of plant species in the wetland that cover at least 10 ft ² (different patches of the same species can be combined to meet the size threshold) You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle. If you counted: <table style="float: right; margin-left: 20px;"> <tr> <td>> 19 species.....</td> <td>points = 2</td> </tr> <tr> <td>5 – 19 species.....</td> <td>points = 1</td> </tr> <tr> <td>< 5 species.....</td> <td>points = 0</td> </tr> </table> List species below if you want to: _____ _____ _____	> 19 species.....	points = 2	5 – 19 species.....	points = 1	< 5 species.....	points = 0	1		
> 19 species.....	points = 2									
5 – 19 species.....	points = 1									
< 5 species.....	points = 0									
	H 1.4 <u>Interspersion of Habitats</u> (see p. 76): Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none. <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 10px;"> <div style="text-align: center;">  None = 0 points </div> <div style="text-align: center;">  Low = 1 point </div> <div style="text-align: center;">  Moderate = 2 points </div> <div style="text-align: center;">  High = 3 points </div> </div> <div style="margin-top: 20px;">    <p style="text-align: center;">[riparian braided channels]</p> </div> <div style="margin-top: 20px; border: 1px solid black; padding: 5px;"> <p>Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always “high”.</p> <p style="text-align: center;">Use map of Cowardin classes.</p> </div>	2								
	H 1.5 <u>Special Habitat Features</u> (see p. 77): Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) <input type="checkbox"/> Standing snags (diameter at the bottom > 4 inches) in the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) <input checked="" type="checkbox"/> At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) <input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants <p><i>NOTE: The 20% stated in early printings of the manual on page 78 is an error.</i></p>	3								
H 1 TOTAL Score – potential for providing habitat		Add the points in the column above								
		8								

	<p>H 2.3 <u>Near or adjacent to other priority habitats listed by WDFW</u> (see p. 82): Which of the following priority habitats are within 330 ft. (100m) of the wetland? <i>NOTE: the connections do not have to be relatively undisturbed. These are DFW definitions. Check with your local DFW biologist if there are any questions.</i></p> <p>___ Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p>___ Aspen Stands: Pure or mixed stands of aspen greater than 0.8 ha (2 acres)</p> <p>___ Cliffs: Greater than 7.6m (25 ft) high and occurring below 5000 ft.</p> <p>___ Old-growth 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) > 81cm (32 in) dbh or > 200 years of age.</p> <p>___ Mature forests: Stands with average diameters exceeding 53cm (21 in) dbh; crown cover may be less than 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.</p> <p>___ Prairies: Relatively undisturbed areas (as indicated by dominance of native plants) where greases and/or forbs form the natural climax plant community.</p> <p>___ Talus: Homogenous areas of rock rubble ranging in average size 0.15 – 2.0m (0.5 – 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p>___ Caves: A naturally occurring cavity, recess, void, or system of interconnected passages.</p> <p>___ Oregon white Oak: Woodlands stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p>___ Urban Natural Open Space: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p>___ Estuary/Estuary-like: Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5 ppt. during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p>___ Marine/Estuarine Shorelines: Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has 3 or more priority habitats..= 4 points If wetland has 1 priority habit .. = 1 point If wetland has 2 priority habitats.....= 3 points 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).</p>	0
	<p>H 2.4 <u>Wetland Landscape:</u> <i>Choose the one description of the landscape around the wetland that best fits (see p. 84)</i></p> <ul style="list-style-type: none"> • 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 1/2 milepoints = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed.points = 3 • The wetland fringe on a lake with disturbance and there are 3 other lake-fringe wetlands within 1/2 milepoints = 3 • There is at least 1 wetland within 1/2 milepoints = 2 • There are no wetlands within 1/2 mile.....points = 0 	3
	<p>H 2 TOTAL Score – opportunity for providing habitat <i>Add the scores from H2.1, H2.2, H2.3, H2.4</i></p>	9
	<p style="text-align: right;"><i>TOTAL for H 1 from page 8</i></p>	8
◆	<p>Total Score for Habitat Functions Add the points for H 1 and H 2; then <i>record the result on p. 1</i></p>	17

Comments:

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type – Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC1	<p>Estuarine wetlands? (see p.86) Does the wetland unit meet the following criteria for Estuarine wetlands? <input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO <u>X</u></p>
	<p>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 332-30-151? YES = Category I NO = go to SC 1.2 Cat. 1</p>
	<p>SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? YES = Category I NO = Category II <input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp., are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of <i>Spartina</i> would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of <i>Spartina</i> in determining the size threshold of 1 acre. <input type="checkbox"/> 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 <input type="checkbox"/> The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Cat. I Cat. II Dual Rating I/II</p>
SC2	<p>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.</p> <p>SC 2.1 Is the wetland 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 <u>X</u></p> <p>SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO <u>X</u> not a Heritage Wetland Cat I</p>
SC3	<p>Bogs (see p. 87) Does the wetland (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. <i>If you answer yes you will still need to rate the wetland based on its function.</i></p> <ol style="list-style-type: none"> 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 soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 Does the wetland 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? YES = go to question 3 NO = is not a bog for purpose of rating 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 question 4 <p>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.</p> <ol style="list-style-type: none"> 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)? YES = Category I NO = Is not a bog for purpose of rating Cat. I

<p>SC4</p>	<p>Forested Wetlands (see p. 90) Does the wetland 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 function.</i> ___ Old-growth forests: (west of Cascade Crest) Stands of at least two three 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 an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = <u>X</u> not a forested wetland with special characteristics</p>	<p>Cat. I</p>
<p>SC5</p>	<p>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 <u>X</u> not a wetland in a coastal lagoon SC 5.1 Does the wetland meet 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 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 is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II</p>	<p>Cat. I Cat. II</p>
<p>SC6</p>	<p>Interdunal Wetlands (see p. 93) Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO <u>X</u> not an interdunal wetland for rating <i>If you answer yes you will still need to rate the wetland based on its functions.</i> 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 one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland 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</p>	<p>Cat. II Cat. III</p>
<p>◆</p>	<p>Category of wetland based on Special Characteristics Choose the "highest" rating if wetland falls into several categories, and record on p. 1. If you answered NO for all types enter "Not Applicable" on p. 1</p>	

Comments:

Wetland name or number Wetland D _____

Wetland name or number Wetland D

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): Wetland D Date of site visit: 9-7-07

Rated by: Thomas D. Kohl Trained by Ecology? Yes X No _____ Date of training: 11-8-07

SEC: 10 TWSHP: 1N RNGE: 5E Is S/T/R in Appendix D? Yes _____ No X

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I _____ II _____ III X IV _____

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	6
Score for Hydrologic Functions	16
Score for Habitat Functions	19
TOTAL Score for Functions	41

Category based on SPECIAL CHARACTERISTICS of Wetland I _____ II _____ Does not apply X

Final Category (choose the “highest” category from above)

III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		Depressional	
Natural Heritage Wetland		Riverine	X
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	<input type="checkbox"/>

Does the wetland 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 Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?</i> For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.		X
SP2. <i>Has the wetland unit been documented as habitat for any State listed 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 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		X
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.		X

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 in to 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 Vegetated Wetlands for 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 a Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were call 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 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 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) where at least 20 acres (8ha) in size;
 _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
 NO – go to 4 **YES – The wetland class is Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland 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 types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
 NO – go to 5 **YES – The wetland class is Slope**

5. Does the entire wetland meet all of the following criteria?
 X The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
 X 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 of 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 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**

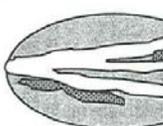
8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH 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.

<i>HGM Classes within the wetland unit being rated</i>	<i>HGM Class to Use in Rating</i>
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 wetland	Treat as ESTUARINE under wetlands with special characteristics

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

R Riverine and Freshwater Tidal Fringe Wetlands		Points
WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.		(only 1 score per box)
R 1	Does the wetland have the <u>potential</u> to improve water quality? (see p.52)	
	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: <ul style="list-style-type: none"> • Depressions cover > 3/4 area of wetland points = 8 • Depressions cover > 1/2 area of wetland points = 4 (If depressions > 1/2 of area of unit draw polygons on aerial photo or map) • Depressions present but cover < 1/2 area of wetland points = 2 • No depressions present points = 0 	0
	R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): <ul style="list-style-type: none"> • Trees or shrubs > 2/3 area of the unit points = 8 • Trees or shrubs > 1/3 area of the wetland 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	6
Add the points in the boxes above		6
R 2	Does the wetland have the <u>opportunity</u> to improve water quality?	(see p. 53)
	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. <ul style="list-style-type: none"> ___ 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 ___ 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. ___ Other _____ YES multiplier is 2 NO multiplier is 1	Multiplier <u>1</u>
◆	TOTAL – Water Quality Functions Multiply the score from R1 by R2; then <i>add score to table on p. 1</i>	6
HYDROLOGIC FUNCTIONS – Indicators that wetland functions to reduce flooding and stream erosion.		
R 3	Does the wetland have the <u>potential</u> to reduce flooding and erosion?	(see p.54)
	R 3.1 Characteristics of the overbank storage the wetland provides: Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit) / (average width of stream between banks). <ul style="list-style-type: none"> • If the ratio is more than 20 points = 9 • 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	1
	R 3.2 Characteristics of vegetation that slow down water velocities during floods: Treat 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): <ul style="list-style-type: none"> • 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	7
Add the points in the boxes above		8
R 4	Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?	(see p.57)
	Answer YES if the wetland 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. <ul style="list-style-type: none"> <u>X</u> 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 _____ (Answer NO if the major source of water to the wetland is controlled by a reservoir or the wetland is tidal fringe along the sides of a dike) YES multiplier is 2 NO multiplier is 1	Multiplier <u>2</u>
◆	TOTAL – Hydrologic Functions Multiply the score from R3 by R4; then <i>add score to table on p. 1</i>	16

Comments:

<i>These questions apply to wetlands of all HGM classes.</i> HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.		Points (only 1 score per box)										
H 1	Does the wetland have the <u>potential</u> to provide habitat for many species?											
	H 1.1 <u>Vegetation structure</u> (see P. 72): Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres. <input type="checkbox"/> Aquatic Bed <input checked="" type="checkbox"/> Emergent plants <input checked="" type="checkbox"/> Scrub/shrub (areas where shrubs have > 30% cover) <input type="checkbox"/> Forested (areas where trees have > 30% cover) If the unit has a forested class check if: <input type="checkbox"/> The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. Add the number of vegetation types that qualify. If you have: <table style="float: right; margin-left: 20px;"> <tr> <td>Map of Cowardin vegetation classes</td> <td></td> </tr> <tr> <td>4 structures or more.....</td> <td>points = 4</td> </tr> <tr> <td>3 structures.....</td> <td>points = 2</td> </tr> <tr> <td>2 structures.....</td> <td>points = 1</td> </tr> <tr> <td>1 structure.....</td> <td>points = 0</td> </tr> </table>	Map of Cowardin vegetation classes		4 structures or more.....	points = 4	3 structures.....	points = 2	2 structures.....	points = 1	1 structure.....	points = 0	1
Map of Cowardin vegetation classes												
4 structures or more.....	points = 4											
3 structures.....	points = 2											
2 structures.....	points = 1											
1 structure.....	points = 0											
	H 1.2 <u>Hydroperiods</u> (see p.73): 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). <input type="checkbox"/> Permanently flooded or inundated <input type="checkbox"/> Seasonally flooded or inundated <input checked="" type="checkbox"/> Occasionally flooded or inundated <input type="checkbox"/> Saturated only <input checked="" type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake-fringe wetland..... = 2 points <input type="checkbox"/> Freshwater tidal wetland..... = 2 points <table style="float: right; margin-left: 20px;"> <tr> <td>4 or more types present</td> <td>points = 3</td> </tr> <tr> <td>3 or more types present.....</td> <td>points = 2</td> </tr> <tr> <td>2 types present.....</td> <td>points = 1</td> </tr> <tr> <td>1 type present.....</td> <td>points = 0</td> </tr> </table> <p style="text-align: right;">Map of hydroperiods</p>	4 or more types present	points = 3	3 or more types present.....	points = 2	2 types present.....	points = 1	1 type present.....	points = 0	1		
4 or more types present	points = 3											
3 or more types present.....	points = 2											
2 types present.....	points = 1											
1 type present.....	points = 0											
	H 1.3 <u>Richness of Plant Species</u> (see p. 75): Count the number of plant species in the wetland that cover at least 10 ft ² (different patches of the same species can be combined to meet the size threshold) You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle. If you counted: <table style="float: right; margin-left: 20px;"> <tr> <td>> 19 species.....</td> <td>points = 2</td> </tr> <tr> <td>5 – 19 species.....</td> <td>points = 1</td> </tr> <tr> <td>< 5 species.....</td> <td>points = 0</td> </tr> </table> List species below if you want to: <hr/> <hr/> <hr/> <hr/>	> 19 species.....	points = 2	5 – 19 species.....	points = 1	< 5 species.....	points = 0	1				
> 19 species.....	points = 2											
5 – 19 species.....	points = 1											
< 5 species.....	points = 0											
	H 1.4 <u>Interspersion of Habitats</u> (see p. 76): Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none. <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  None = 0 points </div> <div style="text-align: center;">  Low = 1 point </div> <div style="text-align: center;">  Moderate = 2 points </div> <div style="text-align: center;">  High = 3 points </div> </div> <div style="margin-top: 20px;">    <p style="text-align: center;">[riparian braided channels]</p> </div> <div style="margin-left: 20px; border: 1px solid black; padding: 5px;"> <p>Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always “high”.</p> <p>Use map of Cowardin classes.</p> </div>	3										
	H 1.5 <u>Special Habitat Features</u> (see p. 77): Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. <ul style="list-style-type: none"> <input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) <input type="checkbox"/> Standing snags (diameter at the bottom > 4 inches) in the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) <input type="checkbox"/> At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants <p><i>NOTE: The 20% stated in early printings of the manual on page 78 is an error.</i></p>	2										
H 1 TOTAL Score – potential for providing habitat		Add the points in the column above										
		8										

	<p>H 2.3 <u>Near or adjacent to other priority habitats listed by WDFW</u> (see p. 82): Which of the following priority habitats are within 330 ft. (100m) of the wetland? <i>NOTE: the connections do not have to be relatively undisturbed. These are DFW definitions. Check with your local DFW biologist if there are any questions.</i></p> <p>___ Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p>___ Aspen Stands: Pure or mixed stands of aspen greater than 0.8 ha (2 acres)</p> <p>___ Cliffs: Greater than 7.6m (25 ft) high and occurring below 5000 ft.</p> <p>___ Old-growth 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) > 81cm (32 in) dbh or > 200 years of age.</p> <p>___ Mature forests: Stands with average diameters exceeding 53cm (21 in) dbh; crown cover may be less than 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.</p> <p>___ Prairies: Relatively undisturbed areas (as indicated by dominance of native plants) where greases and/or forbs form the natural climax plant community.</p> <p>___ Talus: Homogenous areas of rock rubble ranging in average size 0.15 – 2.0m (0.5 – 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p>___ Caves: A naturally occurring cavity, recess, void, or system of interconnected passages.</p> <p>___ Oregon white Oak: Woodlands stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p>___ Urban Natural Open Space: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p>___ Estuary/Estuary-like: Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5 ppt. during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p>___ Marine/Estuarine Shorelines: Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has 3 or more priority habitats..= 4 points If wetland has 1 priority habit .. = 1 point If wetland has 2 priority habitats.....= 3 points 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).</p>	0
	<p>H 2.4 <u>Wetland Landscape:</u> <i>Choose the one description of the landscape around the wetland that best fits (see p. 84)</i></p> <ul style="list-style-type: none"> • 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 1/2 milepoints = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed.points = 3 • The wetland fringe on a lake with disturbance and there are 3 other lake-fringe wetlands within 1/2 milepoints = 3 • There is at least 1 wetland within 1/2 milepoints = 2 • There are no wetlands within 1/2 mile.....points = 0 	3
	<p>H 2 TOTAL Score – opportunity for providing habitat <i>Add the scores from H2.1, H2.2, H2.3, H2.4</i></p>	11
	<p style="text-align: right;"><i>TOTAL for H 1 from page 8</i></p>	8
◆	<p>Total Score for Habitat Functions Add the points for H 1 and H 2; then <i>record the result on p. 1</i></p>	19

Comments:

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type – Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC1	<p>Estuarine wetlands? (see p.86)</p> <p>Does the wetland unit meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt.</p> <p>YES = Go to SC 1.1 NO <u>X</u></p>
	<p>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 332-30-151? YES = Category I NO = go to SC 1.2</p>
	<p>SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions?</p> <p>YES = Category I NO = Category II</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp., are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of <i>Spartina</i> would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of <i>Spartina</i> in determining the size threshold of 1 acre.</p> <p><input type="checkbox"/> 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</p> <p><input type="checkbox"/> The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p>
	<p>Cat. I</p> <p>Cat. II</p> <p>Dual Rating I/II</p>
SC2	<p>Natural Heritage Wetlands (see p. 87)</p> <p>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.</p> <p>SC 2.1 Is the wetland 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 <u>X</u></p> <p>SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO <u>X</u> not a Heritage Wetland</p>
	<p>Cat I</p>
SC3	<p>Bogs (see p. 87)</p> <p>Does the wetland (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. <i>If you answer yes you will still need to rate the wetland based on its function.</i></p> <p>1. 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 soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2</p> <p>2. Does the wetland 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? YES = go to question 3 NO = is not a bog for purpose of rating</p> <p>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 question 4</p> <p>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.</p> <p>4. 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)? YES = Category I NO = Is not a bog for purpose of rating</p>
	<p>Cat. I</p>

SC4	<p>Forested Wetlands (see p. 90)</p> <p>Does the wetland 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 function.</i></p> <p>_____ Old-growth forests: (west of Cascade Crest) Stands of at least two three 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).</p> <p>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.</p> <p>_____ Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.</p> <p>YES = Category I NO = <u>X</u> not a forested wetland with special characteristics</p>	Cat. I
SC5	<p>Wetlands in Coastal Lagoons (see p. 91)</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p>_____ 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.</p> <p>_____ 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>)</p> <p>YES = Go to SC 5.1 NO <u>X</u> not a wetland in a coastal lagoon</p> <p>SC 5.1 Does the wetland meet all of the following three conditions?</p> <p>_____ 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).</p> <p>_____ 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.</p> <p>_____ The wetland is larger than 1/10 acre (4350 square ft.)</p> <p>YES = Category I NO = Category II</p>	Cat. I Cat. II
SC6	<p>Interdunal Wetlands (see p. 93)</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)?</p> <p>YES = Go to SC 6.1 NO <u>X</u> not an interdunal wetland for rating</p> <p><i>If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> • 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 <p>SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger?</p> <p>YES = Category II NO = go to SC 6.2</p> <p>SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?</p> <p>YES = Category III</p>	Cat. II Cat. III
◆	<p>Category of wetland based on Special Characteristics</p> <p>Choose the "highest" rating if wetland falls into several categories, and record on p. 1.</p> <p>If you answered NO for all types enter "Not Applicable" on p. 1</p>	

Comments:

Wetland name or number Wetland E

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): Wetland E Date of site visit: 10-25-07

Rated by: Thomas D. Kohl Trained by Ecology? Yes X No _____ Date of training: 11-8-07

SEC: 16 TWNShp: 1N RNgE: 5E Is S/T/R in Appendix D? Yes _____ No X

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I _____ II _____ III X IV _____

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	5
Score for Hydrologic Functions	10
Score for Habitat Functions	21
TOTAL Score for Functions	36

Category based on SPECIAL CHARACTERISTICS of Wetland I _____ II _____ Does not apply X

Final Category (choose the “highest” category from above”) **III**

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	Wetland HGM Class used for Rating
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	
	Depressional
	Riverine X
	Lake-fringe
	Slope
	Flats
	Freshwater Tidal
	Check if unit has multiple HGM classes present <input type="checkbox"/>

Does the wetland 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 Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?</i> For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.		X
SP2. <i>Has the wetland unit been documented as habitat for any State listed 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 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		X
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.		X

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 in to 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 Vegetated Wetlands for 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 a Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were call 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 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 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) where at least 20 acres (8ha) in size;
 _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
 NO – go to 4 **YES – The wetland class is Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland 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 types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
 NO – go to 5 **YES – The wetland class is Slope**

5. Does the entire wetland 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 of 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 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**

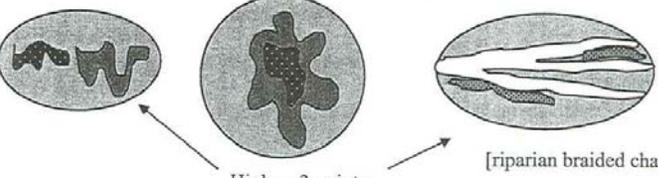
8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH 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 wetland	Treat as ESTUARINE under wetlands with special characteristics

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

R Riverine and Freshwater Tidal Fringe Wetlands		Points
WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.		(only 1 score per box)
R 1	Does the wetland have the <u>potential</u> to improve water quality? (see p.52)	
	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: <ul style="list-style-type: none"> • Depressions cover > 3/4 area of wetland points = 8 • Depressions cover > 1/2 area of wetland points = 4 (If depressions > 1/2 of area of unit draw polygons on aerial photo or map) • Depressions present but cover < 1/2 area of wetland points = 2 • No depressions present points = 0 	2
	R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): <ul style="list-style-type: none"> • Trees or shrubs > 2/3 area of the unit points = 8 • Trees or shrubs > 1/3 area of the wetland 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	3
Add the points in the boxes above		5
R 2	Does the wetland have the <u>opportunity</u> to improve water quality?	(see p. 53)
	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> <ul style="list-style-type: none"> <input type="checkbox"/> Grazing in the wetland or within 150 ft <input type="checkbox"/> Untreated stormwater discharges to wetland <input type="checkbox"/> Tilled fields or orchards within 150 ft. of wetland <input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging <input type="checkbox"/> Residential, urban areas, golf courses are within 150 ft. of wetland <input type="checkbox"/> 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. <input type="checkbox"/> Other _____ <p style="text-align: center;">YES multiplier is 2 NO multiplier is 1</p>	Multiplier <u>1</u>
◆	TOTAL – Water Quality Functions Multiply the score from R1 by R2; then <i>add score to table on p. 1</i>	5
HYDROLOGIC FUNCTIONS – Indicators that wetland functions to reduce flooding and stream erosion.		
R 3	Does the wetland have the <u>potential</u> to reduce flooding and erosion?	(see p.54)
	R 3.1 Characteristics of the overbank storage the wetland provides: <i>Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit) / (average width of stream between banks).</i> <ul style="list-style-type: none"> • If the ratio is more than 20 points = 9 • 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	1
	R 3.2 Characteristics of vegetation that slow down water velocities during floods: <i>Treat 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):</i> <ul style="list-style-type: none"> • 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	4
Add the points in the boxes above		5
R 4	Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?	(see p.57)
	Answer YES if the wetland 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. <i>Note which of the following conditions apply.</i> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> There are human structures and activities downstream (roads, buildings, bridges, farms) that can be damaged by flooding. <input type="checkbox"/> There are natural resources downstream (e.g. salmon redds) that can be damaged by flooding <input type="checkbox"/> Other _____ (Answer NO if the major source of water to the wetland is controlled by a reservoir or the wetland is tidal fringe along the sides of a dike) <p style="text-align: center;">YES multiplier is 2 NO multiplier is 1</p>	Multiplier <u>2</u>
◆	TOTAL – Hydrologic Functions Multiply the score from R3 by R4; then <i>add score to table on p. 1</i>	10

Comments:

<i>These questions apply to wetlands of all HGM classes.</i> HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.		Points (only 1 score per box)										
H 1	Does the wetland have the <u>potential</u> to provide habitat for many species?											
	H 1.1 Vegetation structure (see P. 72): Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres. <input type="checkbox"/> Aquatic Bed <input checked="" type="checkbox"/> Emergent plants <input checked="" type="checkbox"/> Scrub/shrub (areas where shrubs have > 30% cover) <input type="checkbox"/> Forested (areas where trees have > 30% cover) If the unit has a forested class check if: <input type="checkbox"/> The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. Add the number of vegetation types that qualify. If you have: <table style="float: right; margin-left: 20px;"> <tr> <td>Map of Cowardin vegetation classes</td> <td></td> </tr> <tr> <td>4 structures or more.....</td> <td>points = 4</td> </tr> <tr> <td>3 structures.....</td> <td>points = 2</td> </tr> <tr> <td>2 structures.....</td> <td>points = 1</td> </tr> <tr> <td>1 structure.....</td> <td>points = 0</td> </tr> </table>	Map of Cowardin vegetation classes		4 structures or more.....	points = 4	3 structures.....	points = 2	2 structures.....	points = 1	1 structure.....	points = 0	1
Map of Cowardin vegetation classes												
4 structures or more.....	points = 4											
3 structures.....	points = 2											
2 structures.....	points = 1											
1 structure.....	points = 0											
	H 1.2 Hydroperiods (see p.73): 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). <input type="checkbox"/> Permanently flooded or inundated <input type="checkbox"/> Seasonally flooded or inundated <input type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Saturated only <input checked="" type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input checked="" type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake-fringe wetland..... = 2 points <input type="checkbox"/> Freshwater tidal wetland..... = 2 points <table style="float: right; margin-left: 20px;"> <tr> <td>4 or more types present</td> <td>points = 3</td> </tr> <tr> <td>3 or more types present.....</td> <td>points = 2</td> </tr> <tr> <td>2 types present.....</td> <td>points = 1</td> </tr> <tr> <td>1 type present.....</td> <td>points = 0</td> </tr> </table> <p style="text-align: right;">Map of hydroperiods</p>	4 or more types present	points = 3	3 or more types present.....	points = 2	2 types present.....	points = 1	1 type present.....	points = 0	1		
4 or more types present	points = 3											
3 or more types present.....	points = 2											
2 types present.....	points = 1											
1 type present.....	points = 0											
	H 1.3 Richness of Plant Species (see p. 75): Count the number of plant species in the wetland that cover at least 10 ft ² (different patches of the same species can be combined to meet the size threshold) You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle. If you counted: <table style="float: right; margin-left: 20px;"> <tr> <td>> 19 species.....</td> <td>points = 2</td> </tr> <tr> <td>5 – 19 species.....</td> <td>points = 1</td> </tr> <tr> <td>< 5 species.....</td> <td>points = 0</td> </tr> </table> List species below if you want to: _____ _____ _____	> 19 species.....	points = 2	5 – 19 species.....	points = 1	< 5 species.....	points = 0	1				
> 19 species.....	points = 2											
5 – 19 species.....	points = 1											
< 5 species.....	points = 0											
	H 1.4 Interspersion of Habitats (see p. 76): Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none. <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  None = 0 points </div> <div style="text-align: center;">  Low = 1 point </div> <div style="text-align: center;">  Moderate = 2 points </div> <div style="text-align: center;">  High = 3 points </div> </div> <div style="margin-top: 20px;">  <p style="text-align: center;">[riparian braided channels]</p> </div> <div style="margin-left: 20px; border: 1px solid black; padding: 5px;"> <p>Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always “high”.</p> <p>Use map of Cowardin classes.</p> </div>	2										
	H 1.5 Special Habitat Features (see p. 77): Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) <input type="checkbox"/> Standing snags (diameter at the bottom > 4 inches) in the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) <input type="checkbox"/> At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) <input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants <p><i>NOTE: The 20% stated in early printings of the manual on page 78 is an error.</i></p>	2										
H 1 TOTAL Score – potential for providing habitat		Add the points in the column above										
		7										

	<p>H 2.3 <u>Near or adjacent to other priority habitats listed by WDFW</u> (see p. 82): Which of the following priority habitats are within 330 ft. (100m) of the wetland? <i>NOTE: the connections do not have to be relatively undisturbed. These are DFW definitions. Check with your local DFW biologist if there are any questions.</i></p> <p>_____ Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p>_____ Aspen Stands: Pure or mixed stands of aspen greater than 0.8 ha (2 acres)</p> <p>_____ Cliffs: Greater than 7.6m (25 ft) high and occurring below 5000 ft.</p> <p>_____ Old-growth 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) > 81cm (32 in) dbh or > 200 years of age.</p> <p>_____ Mature forests: Stands with average diameters exceeding 53cm (21 in) dbh; crown cover may be less than 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.</p> <p>_____ Prairies: Relatively undisturbed areas (as indicated by dominance of native plants) where greases and/or forbs form the natural climax plant community.</p> <p>_____ Talus: Homogenous areas of rock rubble ranging in average size 0.15 – 2.0m (0.5 – 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p>_____ Caves: A naturally occurring cavity, recess, void, or system of interconnected passages.</p> <p>_____ Oregon white Oak: Woodlands stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p>_____ Urban Natural Open Space: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p>_____ Estuary/Estuary-like: Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5 ppt. during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p>_____ Marine/Estuarine Shorelines: Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has 3 or more priority habitats..= 4 points If wetland has 1 priority habit .. = 1 point If wetland has 2 priority habitats.....= 3 points 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).</p>	0
	<p>H 2.4 <u>Wetland Landscape:</u> <i>Choose the one description of the landscape around the wetland that best fits (see p. 84)</i></p> <ul style="list-style-type: none"> • 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 1/2 milepoints = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed.points = 3 • The wetland fringe on a lake with disturbance and there are 3 other lake-fringe wetlands within 1/2 milepoints = 3 • There is at least 1 wetland within 1/2 milepoints = 2 • There are no wetlands within 1/2 mile.....points = 0 	5
	<p>H 2 TOTAL Score – opportunity for providing habitat <i>Add the scores from H2.1, H2.2, H2.3, H2.4</i></p>	14
	<p><i>TOTAL for H 1 from page 8</i></p>	7
◆	<p>Total Score for Habitat Functions Add the points for H 1 and H 2; then <i>record the result on p. 1</i></p>	21

Comments:

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type – Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC1	<p>Estuarine wetlands? (see p.86)</p> <p>Does the wetland unit meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal,</p> <p><input type="checkbox"/> Vegetated, and</p> <p><input type="checkbox"/> With a salinity greater than 0.5 ppt.</p> <p>YES = Go to SC 1.1 NO <u>X</u></p>
	<p>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 332-30-151? YES = Category I NO = go to SC 1.2 Cat. 1</p>
	<p>SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions?</p> <p>YES = Category I NO = Category II</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp., are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of <i>Spartina</i> would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of <i>Spartina</i> in determining the size threshold of 1 acre.</p> <p><input type="checkbox"/> 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</p> <p><input type="checkbox"/> The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p> <p style="text-align: right;">Cat. I Cat. II Dual Rating I/II</p>
SC2	<p>Natural Heritage Wetlands (see p. 87)</p> <p>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.</p> <p>SC 2.1 Is the wetland 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.)</p> <p>S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____</p> <p>YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO <u>X</u></p> <p>SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species?</p> <p>YES = Category 1 NO <u>X</u> not a Heritage Wetland</p>
	<p style="text-align: right;">Cat I</p>
SC3	<p>Bogs (see p. 87)</p> <p>Does the wetland (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. <i>If you answer yes you will still need to rate the wetland based on its function.</i></p> <p>1. 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 soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2</p> <p>2. Does the wetland 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? YES = go to question 3 NO = is not a bog for purpose of rating</p> <p>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)?</p> <p>YES = Is a bog for purpose of rating NO = go to question 4</p> <p>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.</p> <p>4. 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)?</p> <p>YES = Category I NO = Is not a bog for purpose of rating</p>
	<p style="text-align: right;">Cat. I</p>

SC4	<p>Forested Wetlands (see p. 90)</p> <p>Does the wetland 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 function.</i></p> <p>_____ Old-growth forests: (west of Cascade Crest) Stands of at least two three 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).</p> <p>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.</p> <p>_____ Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.</p> <p>YES = Category I NO = <u>X</u> not a forested wetland with special characteristics</p>	Cat. I
SC5	<p>Wetlands in Coastal Lagoons (see p. 91)</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p>_____ 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.</p> <p>_____ 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>)</p> <p>YES = Go to SC 5.1 NO <u>X</u> not a wetland in a coastal lagoon</p> <p>SC 5.1 Does the wetland meet all of the following three conditions?</p> <p>_____ 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).</p> <p>_____ 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.</p> <p>_____ The wetland is larger than 1/10 acre (4350 square ft.)</p> <p>YES = Category I NO = Category II</p>	Cat. I Cat. II
SC6	<p>Interdunal Wetlands (see p. 93)</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)?</p> <p>YES = Go to SC 6.1 NO <u>X</u> not an interdunal wetland for rating</p> <p><i>If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> • 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 <p>SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger?</p> <p>YES = Category II NO = go to SC 6.2</p> <p>SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?</p> <p>YES = Category III</p>	Cat. II Cat. III
◆	<p>Category of wetland based on Special Characteristics</p> <p><i>Choose the "highest" rating if wetland falls into several categories, and record on p. 1.</i></p> <p>If you answered NO for all types enter "Not Applicable" on p. 1</p>	

Comments:

Wetland name or number Wetland F

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): Wetland F Date of site visit: 10-25-07

Rated by: Thomas D. Kohl Trained by Ecology? Yes X No _____ Date of training: 11-8-07

SEC: 16 TWNShp: 1N RNge: 5E Is S/T/R in Appendix D? Yes _____ No X

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I _____ II _____ III X IV _____

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	5
Score for Hydrologic Functions	10
Score for Habitat Functions	21
TOTAL Score for Functions	36

Category based on SPECIAL CHARACTERISTICS of Wetland I _____ II _____ Does not apply X

Final Category (choose the “highest” category from above”) **III**

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		Depressional	
Natural Heritage Wetland		Riverine	X
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	<input type="checkbox"/>

Does the wetland 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 Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?</i> For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.		X
SP2. <i>Has the wetland unit been documented as habitat for any State listed 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 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		X
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.		X

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 in to 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 Vegetated Wetlands for 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 a Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were call 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 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 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) where at least 20 acres (8ha) in size;
 _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
 NO – go to 4 **YES – The wetland class is Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland 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 types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
 NO – go to 5 **YES – The wetland class is Slope**

5. Does the entire wetland 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 of 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 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 classes. 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 wetland	Treat as ESTUARINE under wetlands with special characteristics

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

R Riverine and Freshwater Tidal Fringe Wetlands		Points
WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.		(only 1 score per box)
R 1	Does the wetland have the <u>potential</u> to improve water quality? (see p.52)	
	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: <ul style="list-style-type: none"> • Depressions cover > 3/4 area of wetland points = 8 • Depressions cover > 1/2 area of wetland points = 4 (If depressions > 1/2 of area of unit draw polygons on aerial photo or map) • Depressions present but cover < 1/2 area of wetland points = 2 • No depressions present points = 0 	2
	R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): <ul style="list-style-type: none"> • Trees or shrubs > 2/3 area of the unit points = 8 • Trees or shrubs > 1/3 area of the wetland 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	3
Add the points in the boxes above		5
R 2	Does the wetland have the <u>opportunity</u> to improve water quality?	(see p. 53)
	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> <ul style="list-style-type: none"> <input type="checkbox"/> Grazing in the wetland or within 150 ft <input type="checkbox"/> Untreated stormwater discharges to wetland <input type="checkbox"/> Tilled fields or orchards within 150 ft. of wetland <input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging <input type="checkbox"/> Residential, urban areas, golf courses are within 150 ft. of wetland <input type="checkbox"/> 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. <input type="checkbox"/> Other _____ YES multiplier is 2 NO multiplier is 1	Multiplier <u>1</u>
◆ TOTAL – Water Quality Functions Multiply the score from R1 by R2; then <i>add score to table on p. 1</i>		5
HYDROLOGIC FUNCTIONS – Indicators that wetland functions to reduce flooding and stream erosion.		
R 3	Does the wetland have the <u>potential</u> to reduce flooding and erosion?	(see p.54)
	R 3.1 Characteristics of the overbank storage the wetland provides: <i>Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit) / (average width of stream between banks).</i> <ul style="list-style-type: none"> • If the ratio is more than 20 points = 9 • 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	1
	R 3.2 Characteristics of vegetation that slow down water velocities during floods: <i>Treat 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):</i> <ul style="list-style-type: none"> • 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	4
Add the points in the boxes above		5
R 4	Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?	(see p.57)
	Answer YES if the wetland 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. <i>Note which of the following conditions apply.</i> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> There are human structures and activities downstream (roads, buildings, bridges, farms) that can be damaged by flooding. <input type="checkbox"/> There are natural resources downstream (e.g. salmon redds) that can be damaged by flooding <input type="checkbox"/> Other _____ (Answer NO if the major source of water to the wetland is controlled by a reservoir or the wetland is tidal fringe along the sides of a dike) YES multiplier is 2 NO multiplier is 1	Multiplier <u>2</u>
◆ TOTAL – Hydrologic Functions Multiply the score from R3 by R4; then <i>add score to table on p. 1</i>		10

Comments:

<i>These questions apply to wetlands of all HGM classes.</i> HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.		Points (only 1 score per box)										
H 1	Does the wetland have the <u>potential</u> to provide habitat for many species?											
	H 1.1 <u>Vegetation structure</u> (see P. 72): Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres. <input type="checkbox"/> Aquatic Bed <input checked="" type="checkbox"/> Emergent plants <input checked="" type="checkbox"/> Scrub/shrub (areas where shrubs have > 30% cover) <input type="checkbox"/> Forested (areas where trees have > 30% cover) If the unit has a forested class check if: <input type="checkbox"/> The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. Add the number of vegetation types that qualify. If you have: <table style="float: right; margin-left: 20px;"> <tr> <td>Map of Cowardin vegetation classes</td> <td></td> </tr> <tr> <td>4 structures or more.....</td> <td>points = 4</td> </tr> <tr> <td>3 structures.....</td> <td>points = 2</td> </tr> <tr> <td>2 structures.....</td> <td>points = 1</td> </tr> <tr> <td>1 structure.....</td> <td>points = 0</td> </tr> </table>	Map of Cowardin vegetation classes		4 structures or more.....	points = 4	3 structures.....	points = 2	2 structures.....	points = 1	1 structure.....	points = 0	1
Map of Cowardin vegetation classes												
4 structures or more.....	points = 4											
3 structures.....	points = 2											
2 structures.....	points = 1											
1 structure.....	points = 0											
	H 1.2 <u>Hydroperiods</u> (see p.73): 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). <input type="checkbox"/> Permanently flooded or inundated <input type="checkbox"/> Seasonally flooded or inundated <input type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Saturated only <input checked="" type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input checked="" type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake-fringe wetland..... = 2 points <input type="checkbox"/> Freshwater tidal wetland..... = 2 points <table style="float: right; margin-left: 20px;"> <tr> <td>4 or more types present</td> <td>points = 3</td> </tr> <tr> <td>3 or more types present.....</td> <td>points = 2</td> </tr> <tr> <td>2 types present.....</td> <td>points = 1</td> </tr> <tr> <td>1 type present.....</td> <td>points = 0</td> </tr> </table> <p style="text-align: right;">Map of hydroperiods</p>	4 or more types present	points = 3	3 or more types present.....	points = 2	2 types present.....	points = 1	1 type present.....	points = 0	1		
4 or more types present	points = 3											
3 or more types present.....	points = 2											
2 types present.....	points = 1											
1 type present.....	points = 0											
	H 1.3 <u>Richness of Plant Species</u> (see p. 75): Count the number of plant species in the wetland that cover at least 10 ft ² (different patches of the same species can be combined to meet the size threshold) You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle. If you counted: <table style="float: right; margin-left: 20px;"> <tr> <td>> 19 species.....</td> <td>points = 2</td> </tr> <tr> <td>5 – 19 species.....</td> <td>points = 1</td> </tr> <tr> <td>< 5 species.....</td> <td>points = 0</td> </tr> </table> List species below if you want to: <hr/> <hr/> <hr/> <hr/>	> 19 species.....	points = 2	5 – 19 species.....	points = 1	< 5 species.....	points = 0	1				
> 19 species.....	points = 2											
5 – 19 species.....	points = 1											
< 5 species.....	points = 0											
	H 1.4 <u>Interspersion of Habitats</u> (see p. 76): Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none. <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  None = 0 points </div> <div style="text-align: center;">  Low = 1 point </div> <div style="text-align: center;">  Moderate = 2 points </div> <div style="text-align: center;">  High = 3 points </div> </div> <div style="margin-top: 20px;">    <p style="text-align: center;">[riparian braided channels]</p> </div> <div style="margin-left: 600px; margin-top: 20px;"> <p>Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always “high”.</p> <p>Use map of Cowardin classes.</p> </div>	2										
	H 1.5 <u>Special Habitat Features</u> (see p. 77): Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) <input type="checkbox"/> Standing snags (diameter at the bottom > 4 inches) in the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) <input type="checkbox"/> At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) <input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants <p><i>NOTE: The 20% stated in early printings of the manual on page 78 is an error.</i></p>	2										
H 1 TOTAL Score – potential for providing habitat		Add the points in the column above 7										

	<p>H 2.3 <u>Near or adjacent to other priority habitats listed by WDFW</u> (see p. 82): Which of the following priority habitats are within 330 ft. (100m) of the wetland? <i>NOTE: the connections do not have to be relatively undisturbed. These are DFW definitions. Check with your local DFW biologist if there are any questions.</i></p> <p>___ Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p>___ Aspen Stands: Pure or mixed stands of aspen greater than 0.8 ha (2 acres)</p> <p>___ Cliffs: Greater than 7.6m (25 ft) high and occurring below 5000 ft.</p> <p>___ Old-growth 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) > 81cm (32 in) dbh or > 200 years of age.</p> <p>___ Mature forests: Stands with average diameters exceeding 53cm (21 in) dbh; crown cover may be less than 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.</p> <p>___ Prairies: Relatively undisturbed areas (as indicated by dominance of native plants) where greases and/or forbs form the natural climax plant community.</p> <p>___ Talus: Homogenous areas of rock rubble ranging in average size 0.15 – 2.0m (0.5 – 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p>___ Caves: A naturally occurring cavity, recess, void, or system of interconnected passages.</p> <p>___ Oregon white Oak: Woodlands stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p>___ Urban Natural Open Space: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p>___ Estuary/Estuary-like: Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5 ppt. during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p>___ Marine/Estuarine Shorelines: Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has 3 or more priority habitats..= 4 points If wetland has 1 priority habit .. = 1 point If wetland has 2 priority habitats.....= 3 points 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).</p>	0
	<p>H 2.4 <u>Wetland Landscape:</u> <i>Choose the one description of the landscape around the wetland that best fits (see p. 84)</i></p> <ul style="list-style-type: none"> • 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 1/2 milepoints = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed.points = 3 • The wetland fringe on a lake with disturbance and there are 3 other lake-fringe wetlands within 1/2 milepoints = 3 • There is at least 1 wetland within 1/2 milepoints = 2 • There are no wetlands within 1/2 mile.....points = 0 	5
	<p>H 2 TOTAL Score – opportunity for providing habitat <i>Add the scores from H2.1, H2.2, H2.3, H2.4</i></p>	14
	<p style="text-align: right;"><i>TOTAL for H 1 from page 8</i></p>	7
◆	<p>Total Score for Habitat Functions Add the points for H 1 and H 2; then <i>record the result on p. 1</i></p>	21

Comments:

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type – Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC1	<p>Estuarine wetlands? (see p.86)</p> <p>Does the wetland unit meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal,</p> <p><input type="checkbox"/> Vegetated, and</p> <p><input type="checkbox"/> With a salinity greater than 0.5 ppt.</p> <p>YES = Go to SC 1.1 NO <u>X</u></p>
	<p>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 332-30-151? YES = Category I NO = go to SC 1.2 Cat. 1</p>
	<p>SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions?</p> <p>YES = Category I NO = Category II</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp., are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of <i>Spartina</i> would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of <i>Spartina</i> in determining the size threshold of 1 acre.</p> <p><input type="checkbox"/> 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</p> <p><input type="checkbox"/> The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p> <p style="text-align: right;">Cat. I Cat. II Dual Rating I/II</p>
SC2	<p>Natural Heritage Wetlands (see p. 87)</p> <p>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.</p> <p>SC 2.1 Is the wetland 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 <u>X</u></p> <p>SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? YES = Category 1 NO <u>X</u> not a Heritage Wetland</p> <p style="text-align: right;">Cat I</p>
SC3	<p>Bogs (see p. 87)</p> <p>Does the wetland (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. <i>If you answer yes you will still need to rate the wetland based on its function.</i></p> <p>1. 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 soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2</p> <p>2. Does the wetland 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? YES = go to question 3 NO = is not a bog for purpose of rating</p> <p>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 question 4</p> <p>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.</p> <p>4. 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)? YES = Category I NO = Is not a bog for purpose of rating</p> <p style="text-align: right;">Cat. I</p>

SC4	<p>Forested Wetlands (see p. 90)</p> <p>Does the wetland 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 function.</i></p> <p>___ Old-growth forests: (west of Cascade Crest) Stands of at least two three 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).</p> <p>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.</p> <p>___ Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.</p> <p>YES = Category I NO = <u>X</u> not a forested wetland with special characteristics</p>	Cat. I
SC5	<p>Wetlands in Coastal Lagoons (see p. 91)</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p>___ 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.</p> <p>___ 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>)</p> <p>YES = Go to SC 5.1 NO <u>X</u> not a wetland in a coastal lagoon</p> <p>SC 5.1 Does the wetland meet all of the following three conditions?</p> <p>___ 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).</p> <p>___ 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.</p> <p>___ The wetland is larger than 1/10 acre (4350 square ft.)</p> <p>YES = Category I NO = Category II</p>	Cat. I Cat. II
SC6	<p>Interdunal Wetlands (see p. 93)</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)?</p> <p>YES = Go to SC 6.1 NO <u>X</u> not an interdunal wetland for rating</p> <p><i>If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> • 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 <p>SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger?</p> <p>YES = Category II NO = go to SC 6.2</p> <p>SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?</p> <p>YES = Category III</p>	Cat. II Cat. III
◆	<p>Category of wetland based on Special Characteristics</p> <p><i>Choose the "highest" rating if wetland falls into several categories, and record on p. 1.</i></p> <p>If you answered NO for all types enter "Not Applicable" on p. 1</p>	

Comments:

Wetland name or number Wetland G

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): Wetland G Date of site visit: 10-25-07

Rated by: Thomas D. Kohl Trained by Ecology? Yes X No _____ Date of training: 11-8-07

SEC: 17 TOWNSHIP: 1N RANGE: 5E Is S/T/R in Appendix D? Yes _____ No X

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I _____ II _____ III X IV _____

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	6
Score for Hydrologic Functions	5
Score for Habitat Functions	23
TOTAL Score for Functions	34

Category based on SPECIAL CHARACTERISTICS of Wetland I _____ II _____ Does not apply X

Final Category (choose the “highest” category from above)

III

Summary of basic information about the wetland unit.

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

Does the wetland 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 Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?</i> For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.		X
SP2. <i>Has the wetland unit been documented as habitat for any State listed 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 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		X
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.		X

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 in to 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 Vegetated Wetlands for 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 a Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were call 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 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 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) where at least 20 acres (8ha) in size;
 _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
 NO – go to 4 **YES – The wetland class is Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland 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 types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
 NO – go to 5 **YES – The wetland class is Slope**

5. Does the entire wetland 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 of 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 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**

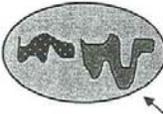
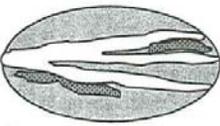
8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH 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 wetland	Treat as ESTUARINE under wetlands with special characteristics

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

S Slope Wetlands		Points
WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.		(only 1 score per box) (see p.64)
S 1	Does the wetland have the <u>potential</u> to improve water quality?	
S 1.1	Characteristics of average slope of unit: <ul style="list-style-type: none"> Slope is 1% or less (a 1% slope has a 1 ft. vertical drop in elevation for every 100 ft. horizontal distance)..... points = 3 Slope is 1% - 2% points = 2 Slope is 2% - 5% points = 1 Slope is greater than 5% points = 0 	0
S 1.2	The soil 2 inches below the surface (or duff layer) is clay, organic (Use NRCS definitions). YES = 3 points NO = 0 points	0
S 1.3	Characteristics of the vegetation in the wetland that trap sediments and pollutants: <i>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.</i> <ul style="list-style-type: none"> 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	3
Total for S 1 <i>Add the points in the boxes above</i>		3
S 2	Does the wetland 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> <input type="checkbox"/> Grazing in the wetland or within 150 ft <input checked="" type="checkbox"/> Untreated stormwater discharges to wetland <input type="checkbox"/> Tilled fields, logging, or orchards within 150 ft. of wetland <input type="checkbox"/> Residential, urban areas, or golf courses are within 150 ft. upslope of wetland <input type="checkbox"/> Other _____ YES multiplier is 2 NO multiplier is 1	(see p. 67) Multiplier 2
◆ TOTAL – Water Quality Functions Multiply the score from S1 by S2; then add score to table on p. 1		6
HYDROLOGIC FUNCTIONS – Indicators that wetland functions to reduce flooding and stream erosion.		
S 3	Does the wetland have the <u>potential</u> to reduce flooding and stream erosion?	(see p.68)
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 fits conditions in the wetland (stems of plants should be thick enough (usually > 1/8in), or dense enough to remain erect during surface flows).</i> <ul style="list-style-type: none"> 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 	3
S 3.2	Characteristics of slope wetland that holds back small amounts of flood flows. The slope has small surface depressions that can retain water over at least 10% of its area. YES = 2 points NO = 0 points	2
Add the points in the boxes above		5
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> <input type="checkbox"/> Wetland has surface runoff that drains to a river or stream that has flooding problems <input type="checkbox"/> 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) YES multiplier is 2 NO multiplier is 1	(see p. 70) Multiplier 1
◆ TOTAL – Hydrologic Functions Multiply the score from S3 by S4; then add score to table on p. 1		5

Comments:

<i>These questions apply to wetlands of all HGM classes.</i>		Points (only 1 score per box)										
HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.												
H 1	Does the wetland have the <u>potential</u> to provide habitat for many species?											
	H 1.1 <u>Vegetation structure</u> (see P. 72): Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres. <input type="checkbox"/> Aquatic Bed <input checked="" type="checkbox"/> Emergent plants <input checked="" type="checkbox"/> Scrub/shrub (areas where shrubs have > 30% cover) <input checked="" type="checkbox"/> Forested (areas where trees have > 30% cover) If the unit has a forested class check if: <input checked="" type="checkbox"/> The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. Add the number of vegetation types that qualify. If you have: <table style="float: right; margin-left: 20px;"> <tr> <td>Map of Cowardin vegetation classes</td> <td></td> </tr> <tr> <td>4 structures or more.....</td> <td>points = 4</td> </tr> <tr> <td>3 structures.....</td> <td>points = 2</td> </tr> <tr> <td>2 structures.....</td> <td>points = 1</td> </tr> <tr> <td>1 structure.....</td> <td>points = 0</td> </tr> </table>	Map of Cowardin vegetation classes		4 structures or more.....	points = 4	3 structures.....	points = 2	2 structures.....	points = 1	1 structure.....	points = 0	2
Map of Cowardin vegetation classes												
4 structures or more.....	points = 4											
3 structures.....	points = 2											
2 structures.....	points = 1											
1 structure.....	points = 0											
	H 1.2 <u>Hydroperiods</u> (see p.73): 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). <input type="checkbox"/> Permanently flooded or inundated <input type="checkbox"/> Seasonally flooded or inundated <input checked="" type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Saturated only <input checked="" type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input checked="" type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake-fringe wetland..... = 2 points <input type="checkbox"/> Freshwater tidal wetland..... = 2 points <table style="float: right; margin-left: 20px;"> <tr> <td>4 or more types present</td> <td>points = 3</td> </tr> <tr> <td>3 or more types present.....</td> <td>points = 2</td> </tr> <tr> <td>2 types present.....</td> <td>points = 1</td> </tr> <tr> <td>1 type present.....</td> <td>points = 0</td> </tr> </table> <p style="text-align: right;">Map of hydroperiods</p>	4 or more types present	points = 3	3 or more types present.....	points = 2	2 types present.....	points = 1	1 type present.....	points = 0	2		
4 or more types present	points = 3											
3 or more types present.....	points = 2											
2 types present.....	points = 1											
1 type present.....	points = 0											
	H 1.3 <u>Richness of Plant Species</u> (see p. 75): Count the number of plant species in the wetland that cover at least 10 ft ² (different patches of the same species can be combined to meet the size threshold) You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle. If you counted: <table style="float: right; margin-left: 20px;"> <tr> <td>> 19 species.....</td> <td>points = 2</td> </tr> <tr> <td>5 – 19 species.....</td> <td>points = 1</td> </tr> <tr> <td>< 5 species.....</td> <td>points = 0</td> </tr> </table> List species below if you want to: _____ _____ _____	> 19 species.....	points = 2	5 – 19 species.....	points = 1	< 5 species.....	points = 0	1				
> 19 species.....	points = 2											
5 – 19 species.....	points = 1											
< 5 species.....	points = 0											
	H 1.4 <u>Interspersion of Habitats</u> (see p. 76): Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none. <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 10px;"> <div style="text-align: center;">  None = 0 points </div> <div style="text-align: center;">  Low = 1 point </div> <div style="text-align: center;">  Moderate = 2 points </div> <div style="text-align: center;">  High = 3 points </div> </div> <div style="margin-top: 20px;">    <p style="text-align: center;">[riparian braided channels]</p> </div> <div style="margin-top: 20px; border-left: 1px solid black; padding-left: 10px;"> <p>Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always “high”.</p> <p style="text-align: center;">Use map of Cowardin classes.</p> </div>	2										
	H 1.5 <u>Special Habitat Features</u> (see p. 77): Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) <input type="checkbox"/> Standing snags (diameter at the bottom > 4 inches) in the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) <input type="checkbox"/> At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) <input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants <p><i>NOTE: The 20% stated in early printings of the manual on page 78 is an error.</i></p>	2										
H 1 TOTAL Score – potential for providing habitat		Add the points in the column above 9										

	<p>H 2.3 <u>Near or adjacent to other priority habitats listed by WDFW</u> (see p. 82): Which of the following priority habitats are within 330 ft. (100m) of the wetland? <i>NOTE: the connections do not have to be relatively undisturbed. These are DFW definitions. Check with your local DFW biologist if there are any questions.</i></p> <p><input type="checkbox"/> Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p><input type="checkbox"/> Aspen Stands: Pure or mixed stands of aspen greater than 0.8 ha (2 acres)</p> <p><input type="checkbox"/> Cliffs: Greater than 7.6m (25 ft) high and occurring below 5000 ft.</p> <p><input type="checkbox"/> Old-growth 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) > 81cm (32 in) dbh or > 200 years of age.</p> <p><input type="checkbox"/> Mature forests: Stands with average diameters exceeding 53cm (21 in) dbh; crown cover may be less than 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.</p> <p><input type="checkbox"/> Prairies: Relatively undisturbed areas (as indicated by dominance of native plants) where greases and/or forbs form the natural climax plant community.</p> <p><input type="checkbox"/> Talus: Homogenous areas of rock rubble ranging in average size 0.15 – 2.0m (0.5 – 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p><input type="checkbox"/> Caves: A naturally occurring cavity, recess, void, or system of interconnected passages.</p> <p><input type="checkbox"/> Oregon white Oak: Woodlands stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p><input type="checkbox"/> Urban Natural Open Space: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p><input type="checkbox"/> Estuary/Estuary-like: Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5 ppt. during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p><input type="checkbox"/> Marine/Estuarine Shorelines: Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has 3 or more priority habitats..= 4 points If wetland has 1 priority habit .. = 1 point If wetland has 2 priority habitats.....= 3 points 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).</p>	0
	<p>H 2.4 <u>Wetland Landscape:</u> <i>Choose the one description of the landscape around the wetland that best fits (see p. 84)</i></p> <ul style="list-style-type: none"> • 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 1/2 milepoints = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed.points = 3 • The wetland fringe on a lake with disturbance and there are 3 other lake-fringe wetlands within 1/2 milepoints = 3 • There is at least 1 wetland within 1/2 milepoints = 2 • There are no wetlands within 1/2 mile.....points = 0 	5
	<p>H 2 TOTAL Score – opportunity for providing habitat <i>Add the scores from H2.1, H2.2, H2.3, H2.4</i></p>	14
	<p><i>TOTAL for H 1 from page 8</i></p>	9
◆	<p>Total Score for Habitat Functions Add the points for H 1 and H 2; then record the result on p. 1</p>	23

Comments:

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type – Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC1	<p>Estuarine wetlands? (see p.86)</p> <p>Does the wetland unit meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal,</p> <p><input type="checkbox"/> Vegetated, and</p> <p><input type="checkbox"/> With a salinity greater than 0.5 ppt.</p> <p>YES = Go to SC 1.1 NO <u>X</u></p>
	<p>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 332-30-151? YES = Category I NO = go to SC 1.2</p>
	<p>SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions?</p> <p>YES = Category I NO = Category II</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp., are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of <i>Spartina</i> would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of <i>Spartina</i> in determining the size threshold of 1 acre.</p> <p><input type="checkbox"/> 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</p> <p><input type="checkbox"/> The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p>
	<p>Cat. I</p> <p>Cat. II</p> <p>Dual Rating I/II</p>
SC2	<p>Natural Heritage Wetlands (see p. 87)</p> <p>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.</p> <p>SC 2.1 Is the wetland 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.)</p> <p>S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____</p> <p>YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO <u>X</u></p> <p>SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species?</p> <p>YES = Category 1 NO <u>X</u> not a Heritage Wetland</p>
	<p>Cat I</p>
SC3	<p>Bogs (see p. 87)</p> <p>Does the wetland (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. <i>If you answer yes you will still need to rate the wetland based on its function.</i></p> <ol style="list-style-type: none"> 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 soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 Does the wetland 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? YES = go to question 3 NO = is not a bog for purpose of rating 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)? <p>YES = Is a bog for purpose of rating NO = go to question 4</p> <p>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.</p> <ol style="list-style-type: none"> 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)? <p>YES = Category I NO = Is not a bog for purpose of rating</p>
	<p>Cat. I</p>

<p>SC4</p>	<p>Forested Wetlands (see p. 90) Does the wetland 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 function.</i> ___ Old-growth forests: (west of Cascade Crest) Stands of at least two three 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 an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. YES = Category I NO = <u>X</u> not a forested wetland with special characteristics</p>	<p>Cat. I</p>
<p>SC5</p>	<p>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 <u>X</u> not a wetland in a coastal lagoon SC 5.1 Does the wetland meet 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 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 is larger than 1/10 acre (4350 square ft.) YES = Category I NO = Category II</p>	<p>Cat. I Cat. II</p>
<p>SC6</p>	<p>Interdunal Wetlands (see p. 93) Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? YES = Go to SC 6.1 NO <u>X</u> not an interdunal wetland for rating <i>If you answer yes you will still need to rate the wetland based on its functions.</i> 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 one acre or larger? YES = Category II NO = go to SC 6.2 SC 6.2 Is the wetland 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</p>	<p>Cat. II Cat. III</p>
<p>◆</p>	<p>Category of wetland based on Special Characteristics Choose the "highest" rating if wetland falls into several categories, and record on p. 1. If you answered NO for all types enter "Not Applicable" on p. 1</p>	

Comments:

Wetland name or number Wetland H

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): Wetland H Date of site visit: 10-25-07

Rated by: Thomas D. Kohl Trained by Ecology? Yes X No _____ Date of training: 11-8-07

SEC: 17 TWNShp: 1N RNgE: 5E Is S/T/R in Appendix D? Yes _____ No X

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I _____ II _____ III X IV _____

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	16
Score for Hydrologic Functions	12
Score for Habitat Functions	8
TOTAL Score for Functions	36

Category based on SPECIAL CHARACTERISTICS of Wetland I _____ II _____ Does not apply X

Final Category (choose the “highest” category from above)

III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		Depressional	
Natural Heritage Wetland		Riverine	
Bog		Lake-fringe	
Mature Forest		Slope	X
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above		Check if unit has multiple HGM classes present	<input type="checkbox"/>

Does the wetland 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 Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?</i> For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.		X
SP2. <i>Has the wetland unit been documented as habitat for any State listed 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 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		X
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.		X

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 in to 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 Vegetated Wetlands for 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 a Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were call 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 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 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) where at least 20 acres (8ha) in size;
 _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
 NO – go to 4 **YES – The wetland class is Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland 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 types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
 NO – go to 5 **YES – The wetland class is Slope**

5. Does the entire wetland 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 of 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 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 classes. 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 wetland	Treat as ESTUARINE under wetlands with special characteristics

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

S Slope Wetlands		Points
WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.		(only 1 score per box) (see p.64)
S 1	Does the wetland have the <u>potential</u> to improve water quality?	
S 1.1	Characteristics of average slope of unit: <ul style="list-style-type: none"> Slope is 1% or less (a 1% slope has a 1 ft. vertical drop in elevation for every 100 ft. horizontal distance)..... points = 3 Slope is 1% - 2% points = 2 Slope is 2% - 5% points = 1 Slope is greater than 5% points = 0 	2
S 1.2	The soil 2 inches below the surface (or duff layer) is clay, organic (Use NRCS definitions). YES = 3 points NO = 0 points	0
S 1.3	Characteristics of the vegetation in the wetland that trap sediments and pollutants: <i>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.</i> <ul style="list-style-type: none"> 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 <p style="text-align: right;">Aerial photo or map with vegetation polygons</p>	6
Total for S 1		<i>Add the points in the boxes above</i> 8
S 2	Does the wetland 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> <input type="checkbox"/> Grazing in the wetland or within 150 ft <input checked="" type="checkbox"/> Untreated stormwater discharges to wetland <input type="checkbox"/> Tilled fields, logging, or orchards within 150 ft. of wetland <input type="checkbox"/> Residential, urban areas, or golf courses are within 150 ft. upslope of wetland <input type="checkbox"/> Other _____ YES multiplier is 2 NO multiplier is 1	(see p. 67) Multiplier <u>2</u>
◆ TOTAL – Water Quality Functions Multiply the score from S1 by S2; then add score to table on p. 1		16
HYDROLOGIC FUNCTIONS – Indicators that wetland functions to reduce flooding and stream erosion.		
S 3	Does the wetland have the <u>potential</u> to reduce flooding and stream erosion?	(see p.68)
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 fits conditions in the wetland (stems of plants should be thick enough (usually > 1/8in), or dense enough to remain erect during surface flows).</i> <ul style="list-style-type: none"> 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 	6
S 3.2	Characteristics of slope wetland that holds back small amounts of flood flows. The slope has small surface depressions that can retain water over at least 10% of its area. YES = 2 points NO = 0 points	0
<i>Add the points in the boxes above</i>		6
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> <input type="checkbox"/> Wetland has surface runoff that drains to a river or stream that has flooding problems <input checked="" type="checkbox"/> Other <u>The wetland protects adjacent roadway infrastructure</u> (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) YES multiplier is 2 NO multiplier is 1	(see p. 70) Multiplier <u>2</u>
◆ TOTAL – Hydrologic Functions Multiply the score from S3 by S4; then add score to table on p. 1		12

Comments:

<i>These questions apply to wetlands of all HGM classes.</i>		Points (only 1 score per box)												
HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.														
H 1	Does the wetland have the <u>potential</u> to provide habitat for many species?													
H 1.1 <u>Vegetation structure</u> (see P. 72): Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres. <input type="checkbox"/> Aquatic Bed <input checked="" type="checkbox"/> Emergent plants <input type="checkbox"/> Scrub/shrub (areas where shrubs have > 30% cover) <input type="checkbox"/> Forested (areas where trees have > 30% cover) If the unit has a forested class check if: <input type="checkbox"/> The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. Add the number of vegetation types that qualify. If you have:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <table style="width: 100%; border: none;"> <tr> <td>4 structures or more.....</td> <td>points = 4</td> </tr> <tr> <td>2 structures.....</td> <td>points = 1</td> </tr> </table> </td> <td style="width: 50%; border: none;"> <table style="width: 100%; border: none;"> <tr> <td colspan="2" style="text-align: center;">Map of Cowardin vegetation classes</td> </tr> <tr> <td>3 structures.....</td> <td>points = 2</td> </tr> <tr> <td>1 structure.....</td> <td>points = 0</td> </tr> </table> </td> </tr> </table>	<table style="width: 100%; border: none;"> <tr> <td>4 structures or more.....</td> <td>points = 4</td> </tr> <tr> <td>2 structures.....</td> <td>points = 1</td> </tr> </table>	4 structures or more.....	points = 4	2 structures.....	points = 1	<table style="width: 100%; border: none;"> <tr> <td colspan="2" style="text-align: center;">Map of Cowardin vegetation classes</td> </tr> <tr> <td>3 structures.....</td> <td>points = 2</td> </tr> <tr> <td>1 structure.....</td> <td>points = 0</td> </tr> </table>	Map of Cowardin vegetation classes		3 structures.....	points = 2	1 structure.....	points = 0	0
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2 structures.....	points = 1													
Map of Cowardin vegetation classes														
3 structures.....	points = 2													
1 structure.....	points = 0													
H 1.2 <u>Hydroperiods</u> (see p.73): 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). <input type="checkbox"/> Permanently flooded or inundated <input type="checkbox"/> Seasonally flooded or inundated <input checked="" type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Saturated only <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake-fringe wetland..... = 2 points <input type="checkbox"/> Freshwater tidal wetland..... = 2 points	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <table style="width: 100%; border: none;"> <tr> <td>4 or more types present</td> <td>points = 3</td> </tr> <tr> <td>3 or more types present.....</td> <td>points = 2</td> </tr> <tr> <td>2 types present.....</td> <td>points = 1</td> </tr> <tr> <td>1 type present.....</td> <td>points = 0</td> </tr> </table> </td> <td style="width: 50%; border: none;"> <table style="width: 100%; border: none;"> <tr> <td colspan="2" style="text-align: center;">Map of hydroperiods</td> </tr> </table> </td> </tr> </table>	<table style="width: 100%; border: none;"> <tr> <td>4 or more types present</td> <td>points = 3</td> </tr> <tr> <td>3 or more types present.....</td> <td>points = 2</td> </tr> <tr> <td>2 types present.....</td> <td>points = 1</td> </tr> <tr> <td>1 type present.....</td> <td>points = 0</td> </tr> </table>	4 or more types present	points = 3	3 or more types present.....	points = 2	2 types present.....	points = 1	1 type present.....	points = 0	<table style="width: 100%; border: none;"> <tr> <td colspan="2" style="text-align: center;">Map of hydroperiods</td> </tr> </table>	Map of hydroperiods		1
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2 types present.....	points = 1													
1 type present.....	points = 0													
Map of hydroperiods														
H 1.3 <u>Richness of Plant Species</u> (see p. 75): Count the number of plant species in the wetland that cover at least 10 ft ² (different patches of the same species can be combined to meet the size threshold) You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle. If you counted: > 19 species..... points = 2 5 – 19 species..... points = 1 < 5 species..... points = 0 List species below if you want to: _____ _____ _____	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <table style="width: 100%; border: none;"> <tr> <td>> 19 species.....</td> <td>points = 2</td> </tr> <tr> <td>5 – 19 species.....</td> <td>points = 1</td> </tr> <tr> <td>< 5 species.....</td> <td>points = 0</td> </tr> </table> </td> <td style="width: 50%; border: none;"> <table style="width: 100%; border: none;"> <tr> <td colspan="2" style="text-align: center;"> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%;"></td> </tr> </table> </td> </tr> </table> </td> </tr> </table>	<table style="width: 100%; border: none;"> <tr> <td>> 19 species.....</td> <td>points = 2</td> </tr> <tr> <td>5 – 19 species.....</td> <td>points = 1</td> </tr> <tr> <td>< 5 species.....</td> <td>points = 0</td> </tr> </table>	> 19 species.....	points = 2	5 – 19 species.....	points = 1	< 5 species.....	points = 0	<table style="width: 100%; border: none;"> <tr> <td colspan="2" style="text-align: center;"> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%;"></td> </tr> </table> </td> </tr> </table>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%;"></td> </tr> </table>				1
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H 1.4 <u>Interspersion of Habitats</u> (see p. 76): Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	<p style="text-align: center;">None = 0 points Low = 1 point Moderate = 2 points</p> <p style="text-align: center;">High = 3 points [riparian braided channels]</p>	<p>Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always “high”.</p> <p style="text-align: center;">Use map of Cowardin classes.</p>	0											
H 1.5 <u>Special Habitat Features</u> (see p. 77): Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.	<input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) <input type="checkbox"/> Standing snags (diameter at the bottom > 4 inches) in the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) <input type="checkbox"/> At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants NOTE: The 20% stated in early printings of the manual on page 78 is an error.	0												
H 1 TOTAL Score – potential for providing habitat		Add the points in the column above	2											

	<p>H 2.3 <u>Near or adjacent to other priority habitats listed by WDFW</u> (see p. 82): Which of the following priority habitats are within 330 ft. (100m) of the wetland? <i>NOTE: the connections do not have to be relatively undisturbed. These are DFW definitions. Check with your local DFW biologist if there are any questions.</i></p> <p>___ Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p>___ Aspen Stands: Pure or mixed stands of aspen greater than 0.8 ha (2 acres)</p> <p>___ Cliffs: Greater than 7.6m (25 ft) high and occurring below 5000 ft.</p> <p>___ Old-growth 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) > 81cm (32 in) dbh or > 200 years of age.</p> <p>___ Mature forests: Stands with average diameters exceeding 53cm (21 in) dbh; crown cover may be less than 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.</p> <p>___ Prairies: Relatively undisturbed areas (as indicated by dominance of native plants) where greases and/or forbs form the natural climax plant community.</p> <p>___ Talus: Homogenous areas of rock rubble ranging in average size 0.15 – 2.0m (0.5 – 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p>___ Caves: A naturally occurring cavity, recess, void, or system of interconnected passages.</p> <p>___ Oregon white Oak: Woodlands stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p>___ Urban Natural Open Space: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p>___ Estuary/Estuary-like: Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5 ppt. during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p>___ Marine/Estuarine Shorelines: Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has 3 or more priority habitats..= 4 points If wetland has 1 priority habit .. = 1 point If wetland has 2 priority habitats.....= 3 points 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).</p>	0
	<p>H 2.4 <u>Wetland Landscape:</u> <i>Choose the one description of the landscape around the wetland that best fits (see p. 84)</i></p> <ul style="list-style-type: none"> • 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 1/2 milepoints = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed.points = 3 • The wetland fringe on a lake with disturbance and there are 3 other lake-fringe wetlands within 1/2 milepoints = 3 • There is at least 1 wetland within 1/2 milepoints = 2 • There are no wetlands within 1/2 mile.....points = 0 	3
	<p>H 2 TOTAL Score – opportunity for providing habitat <i>Add the scores from H2.1, H2.2, H2.3, H2.4</i></p>	6
	<p style="text-align: right;"><i>TOTAL for H 1 from page 8</i></p>	2
◆	<p>Total Score for Habitat Functions Add the points for H 1 and H 2; then record the result on p. 1</p>	8

Comments:

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type – Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC1	<p>Estuarine wetlands? (see p.86)</p> <p>Does the wetland unit meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal,</p> <p><input type="checkbox"/> Vegetated, and</p> <p><input type="checkbox"/> With a salinity greater than 0.5 ppt.</p> <p style="text-align: center;">YES = Go to SC 1.1 NO <u> X </u></p>
	<p>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 332-30-151? YES = Category I NO = go to SC 1.2</p>
	<p>SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions?</p> <p style="text-align: center;">YES = Category I NO = Category II</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp., are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of <i>Spartina</i> would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of <i>Spartina</i> in determining the size threshold of 1 acre.</p> <p><input type="checkbox"/> 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</p> <p><input type="checkbox"/> The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p>
	<p>Cat. I</p> <p>Cat. II</p> <p>Dual Rating I/II</p>
SC2	<p>Natural Heritage Wetlands (see p. 87)</p> <p>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.</p> <p>SC 2.1 Is the wetland 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.)</p> <p>S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____</p> <p style="text-align: center;">YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO <u> X </u></p> <p>SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species?</p> <p style="text-align: center;">YES = Category 1 NO <u> X </u> not a Heritage Wetland</p>
	<p>Cat I</p>
SC3	<p>Bogs (see p. 87)</p> <p>Does the wetland (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. <i>If you answer yes you will still need to rate the wetland based on its function.</i></p> <ol style="list-style-type: none"> 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 soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2 Does the wetland 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? YES = go to question 3 NO = is not a bog for purpose of rating 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)? <p style="text-align: center;">YES = Is a bog for purpose of rating NO = go to question 4</p> <p>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.</p> <ol style="list-style-type: none"> 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)? <p style="text-align: center;">YES = Category I NO = Is not a bog for purpose of rating</p>
	<p>Cat. I</p>

SC4	<p>Forested Wetlands (see p. 90)</p> <p>Does the wetland 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 function.</i></p> <p>____ Old-growth forests: (west of Cascade Crest) Stands of at least two three 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).</p> <p>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.</p> <p>____ Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.</p> <p>YES = Category I NO = <u>X</u> not a forested wetland with special characteristics</p>	Cat. I
SC5	<p>Wetlands in Coastal Lagoons (see p. 91)</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p>____ 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.</p> <p>____ 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>)</p> <p>YES = Go to SC 5.1 NO <u>X</u> not a wetland in a coastal lagoon</p> <p>SC 5.1 Does the wetland meet all of the following three conditions?</p> <p>____ 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).</p> <p>____ 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.</p> <p>____ The wetland is larger than 1/10 acre (4350 square ft.)</p> <p>YES = Category I NO = Category II</p>	Cat. I Cat. II
SC6	<p>Interdunal Wetlands (see p. 93)</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)?</p> <p>YES = Go to SC 6.1 NO <u>X</u> not an interdunal wetland for rating</p> <p><i>If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> • 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 <p>SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger?</p> <p>YES = Category II NO = go to SC 6.2</p> <p>SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?</p> <p>YES = Category III</p>	Cat. II Cat. III
◆	<p>Category of wetland based on Special Characteristics</p> <p><i>Choose the "highest" rating if wetland falls into several categories, and record on p. 1.</i></p> <p>If you answered NO for all types enter "Not Applicable" on p. 1</p>	

Comments:

Wetland name or number Wetland I

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): Wetland I Date of site visit: 10-25-07

Rated by: Thomas D. Kohl Trained by Ecology? Yes X No _____ Date of training: 11-8-07

SEC: 17 TWSHP: 1N RNGE: 5E Is S/T/R in Appendix D? Yes _____ No X

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I _____ II _____ III X IV _____

Category I =	Score > 70
Category II =	Score 51 - 69
Category III =	Score 30 – 50
Category IV =	Score < 30

Score for Water Quality Functions	20
Score for Hydrologic Functions	12
Score for Habitat Functions	16
TOTAL Score for Functions	48

Category based on SPECIAL CHARACTERISTICS of Wetland I _____ II _____ Does not apply X

Final Category (choose the “highest” category from above)

III

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		Depressional	X
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	

Does the wetland 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 Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?</i> For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.		X
SP2. <i>Has the wetland unit been documented as habitat for any State listed 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 1 Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		X
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.		X

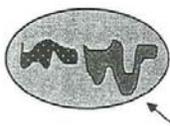
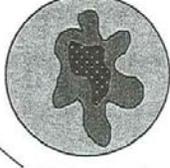
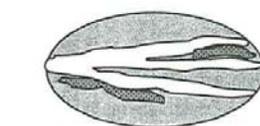
To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands in to 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.

Wetland name or number Wetland I

	<p>groundwater in areas where damaging groundwater flooding does not occur. <i>Note which of the following indicators of opportunity apply.</i></p> <p><input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems.</p> <p><input type="checkbox"/> Wetland drains to a river or stream that has flooding problems</p> <p><input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems</p> <p><input checked="" type="checkbox"/> Other <u>Wetland is storing water that would otherwise undermine adjacent roadway</u></p> <p style="text-align: center;">YES multiplier is 2 NO multiplier is 1</p>	2
◆	TOTAL – Hydrologic Functions	12

Comments:

<i>These questions apply to wetlands of all HGM classes.</i>		Points (only 1 score per box)										
HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.												
H 1	Does the wetland have the <u>potential</u> to provide habitat for many species?											
	H 1.1 <u>Vegetation structure</u> (see P. 72): Check the types of vegetation classes present (as defined by Cowardin) – Size threshold for each class is 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres. <input type="checkbox"/> Aquatic Bed <input checked="" type="checkbox"/> Emergent plants <input checked="" type="checkbox"/> Scrub/shrub (areas where shrubs have > 30% cover) <input type="checkbox"/> Forested (areas where trees have > 30% cover) If the unit has a forested class check if: <input type="checkbox"/> The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon. Add the number of vegetation types that qualify. If you have: <table style="float: right; margin-left: 20px;"> <tr> <td>Map of Cowardin vegetation classes</td> <td></td> </tr> <tr> <td>4 structures or more.....</td> <td>points = 4</td> </tr> <tr> <td>3 structures.....</td> <td>points = 2</td> </tr> <tr> <td>2 structures.....</td> <td>points = 1</td> </tr> <tr> <td>1 structure.....</td> <td>points = 0</td> </tr> </table>	Map of Cowardin vegetation classes		4 structures or more.....	points = 4	3 structures.....	points = 2	2 structures.....	points = 1	1 structure.....	points = 0	1
Map of Cowardin vegetation classes												
4 structures or more.....	points = 4											
3 structures.....	points = 2											
2 structures.....	points = 1											
1 structure.....	points = 0											
	H 1.2 <u>Hydroperiods</u> (see p.73): 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). <input type="checkbox"/> Permanently flooded or inundated <input checked="" type="checkbox"/> Seasonally flooded or inundated <input checked="" type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Saturated only <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input checked="" type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake-fringe wetland..... = 2 points <input type="checkbox"/> Freshwater tidal wetland..... = 2 points <table style="float: right; margin-left: 20px;"> <tr> <td>4 or more types present</td> <td>points = 3</td> </tr> <tr> <td>3 or more types present.....</td> <td>points = 2</td> </tr> <tr> <td>2 types present.....</td> <td>points = 1</td> </tr> <tr> <td>1 type present.....</td> <td>points = 0</td> </tr> </table> <p style="text-align: right;">Map of hydroperiods</p>	4 or more types present	points = 3	3 or more types present.....	points = 2	2 types present.....	points = 1	1 type present.....	points = 0	3		
4 or more types present	points = 3											
3 or more types present.....	points = 2											
2 types present.....	points = 1											
1 type present.....	points = 0											
	H 1.3 <u>Richness of Plant Species</u> (see p. 75): Count the number of plant species in the wetland that cover at least 10 ft ² (different patches of the same species can be combined to meet the size threshold) You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle. If you counted: <table style="float: right; margin-left: 20px;"> <tr> <td>> 19 species.....</td> <td>points = 2</td> </tr> <tr> <td>5 – 19 species.....</td> <td>points = 1</td> </tr> <tr> <td>< 5 species.....</td> <td>points = 0</td> </tr> </table> List species below if you want to: _____ _____ _____	> 19 species.....	points = 2	5 – 19 species.....	points = 1	< 5 species.....	points = 0	2				
> 19 species.....	points = 2											
5 – 19 species.....	points = 1											
< 5 species.....	points = 0											
	H 1.4 <u>Interspersion of Habitats</u> (see p. 76): Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none. <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 10px;"> <div style="text-align: center;">  None = 0 points </div> <div style="text-align: center;">  Low = 1 point </div> <div style="text-align: center;">  Moderate = 2 points </div> <div style="text-align: center;">  High = 3 points </div> </div> <div style="margin-top: 10px;">    <p style="text-align: center;">[riparian braided channels]</p> </div> <div style="margin-top: 10px; border-left: 1px solid black; padding-left: 10px;"> <p>Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always “high”.</p> <p>Use map of Cowardin classes.</p> </div>	2										
	H 1.5 <u>Special Habitat Features</u> (see p. 77): Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column. <ul style="list-style-type: none"> <input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long) <input type="checkbox"/> Standing snags (diameter at the bottom > 4 inches) in the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown) <input checked="" type="checkbox"/> At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants <p><i>NOTE: The 20% stated in early printings of the manual on page 78 is an error.</i></p>	1										
H 1 TOTAL Score – potential for providing habitat		Add the points in the column above 9										

	<p>H 2.3 <u>Near or adjacent to other priority habitats listed by WDFW</u> (see p. 82): Which of the following priority habitats are within 330 ft. (100m) of the wetland? <i>NOTE: the connections do not have to be relatively undisturbed. These are DFW definitions. Check with your local DFW biologist if there are any questions.</i></p> <p><input type="checkbox"/> Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p><input type="checkbox"/> Aspen Stands: Pure or mixed stands of aspen greater than 0.8 ha (2 acres)</p> <p><input type="checkbox"/> Cliffs: Greater than 7.6m (25 ft) high and occurring below 5000 ft.</p> <p><input type="checkbox"/> Old-growth 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) > 81cm (32 in) dbh or > 200 years of age.</p> <p><input type="checkbox"/> Mature forests: Stands with average diameters exceeding 53cm (21 in) dbh; crown cover may be less than 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.</p> <p><input type="checkbox"/> Prairies: Relatively undisturbed areas (as indicated by dominance of native plants) where greases and/or forbs form the natural climax plant community.</p> <p><input type="checkbox"/> Talus: Homogenous areas of rock rubble ranging in average size 0.15 – 2.0m (0.5 – 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p><input type="checkbox"/> Caves: A naturally occurring cavity, recess, void, or system of interconnected passages.</p> <p><input type="checkbox"/> Oregon white Oak: Woodlands stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p><input type="checkbox"/> Urban Natural Open Space: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p><input type="checkbox"/> Estuary/Estuary-like: Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5 ppt. during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p><input type="checkbox"/> Marine/Estuarine Shorelines: Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has 3 or more priority habitats..= 4 points If wetland has 1 priority habit .. = 1 point If wetland has 2 priority habitats.....= 3 points 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).</p>	0
	<p>H 2.4 <u>Wetland Landscape:</u> <i>Choose the one description of the landscape around the wetland that best fits (see p. 84)</i></p> <ul style="list-style-type: none"> • 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 1/2 milepoints = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed.points = 3 • The wetland fringe on a lake with disturbance and there are 3 other lake-fringe wetlands within 1/2 milepoints = 3 • There is at least 1 wetland within 1/2 milepoints = 2 • There are no wetlands within 1/2 mile.....points = 0 	3
	<p>H 2 TOTAL Score – opportunity for providing habitat <i>Add the scores from H2.1, H2.2, H2.3, H2.4</i></p>	7
	<p style="text-align: right;"><i>TOTAL for H 1 from page 8</i></p>	9
◆	<p>Total Score for Habitat Functions Add the points for H 1 and H 2; then <i>record the result on p. 1</i></p>	16

Comments:

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type – Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	
SC1	<p>Estuarine wetlands? (see p.86)</p> <p>Does the wetland unit meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal,</p> <p><input type="checkbox"/> Vegetated, and</p> <p><input type="checkbox"/> With a salinity greater than 0.5 ppt.</p> <p>YES = Go to SC 1.1 NO <u>X</u></p>
	<p>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 332-30-151? YES = Category I NO = go to SC 1.2</p>
	<p>SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions?</p> <p>YES = Category I NO = Category II</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp., are only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of <i>Spartina</i> would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of <i>Spartina</i> in determining the size threshold of 1 acre.</p> <p><input type="checkbox"/> 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</p> <p><input type="checkbox"/> The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p>
	<p>Cat. I</p> <p>Cat. II</p> <p>Dual Rating I/II</p>
SC2	<p>Natural Heritage Wetlands (see p. 87)</p> <p>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.</p> <p>SC 2.1 Is the wetland 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.)</p> <p>S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____</p> <p>YES _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 NO <u>X</u></p> <p>SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species?</p> <p>YES = Category 1 NO <u>X</u> not a Heritage Wetland</p>
	<p>Cat I</p>
SC3	<p>Bogs (see p. 87)</p> <p>Does the wetland (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. <i>If you answer yes you will still need to rate the wetland based on its function.</i></p> <p>1. 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 soil profile? (See Appendix B for a field key to identify organic soils)? YES = go to question 3 NO = go to question 2</p> <p>2. Does the wetland 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? YES = go to question 3 NO = is not a bog for purpose of rating</p> <p>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)?</p> <p>YES = Is a bog for purpose of rating NO = go to question 4</p> <p>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.</p> <p>4. 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)?</p> <p>YES = Category I NO = Is not a bog for purpose of rating</p>
	<p>Cat. I</p>

SC4	<p>Forested Wetlands (see p. 90)</p> <p>Does the wetland 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 function.</i></p> <p>___ Old-growth forests: (west of Cascade Crest) Stands of at least two three 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).</p> <p>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.</p> <p>___ Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.</p> <p>YES = Category I NO = <u>X</u> not a forested wetland with special characteristics</p>	Cat. I
SC5	<p>Wetlands in Coastal Lagoons (see p. 91)</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <p>___ 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.</p> <p>___ 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>)</p> <p>YES = Go to SC 5.1 NO <u>X</u> not a wetland in a coastal lagoon</p> <p>SC 5.1 Does the wetland meet all of the following three conditions?</p> <p>___ 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).</p> <p>___ 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.</p> <p>___ The wetland is larger than 1/10 acre (4350 square ft.)</p> <p>YES = Category I NO = Category II</p>	Cat. I Cat. II
SC6	<p>Interdunal Wetlands (see p. 93)</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)?</p> <p>YES = Go to SC 6.1 NO <u>X</u> not an interdunal wetland for rating</p> <p><i>If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> • 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 <p>SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is one acre or larger?</p> <p>YES = Category II NO = go to SC 6.2</p> <p>SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?</p> <p>YES = Category III</p>	Cat. II Cat. III
◆	<p>Category of wetland based on Special Characteristics</p> <p><i>Choose the "highest" rating if wetland falls into several categories, and record on p. 1.</i></p> <p>If you answered NO for all types enter "Not Applicable" on p. 1</p>	

Comments: