	t
Wetland name or number	1

WETLAND RATING FORM – WESTERN WASHINGTON

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

or and a second	•	
Name of wetland (if known): Fishe	r S1. Site 1 Field Date of site vi	isit: <u>6/24/09</u>
Rated by M. Martz	Trained by Ecology? YesNo Z Date	e of training
SEC: <u>30</u> TWNSHP: <u>33N</u> RNGE: <u>4E</u>	Is S/T/R in Appendix D? Yes_X No	
Map of wetland unit:	Figure Estimated size	
SUM	IMARY OF RATING	PEMAh
Category based on FUNCTIONS I II IV	•	
Category I = Score >=70 Category II = Score 51-69 Category III = Score 30-50 Category IV = Score < 30	Score for Water Quality Functions Score for Hydrologic Functions Score for Habitat Functions TOTAL score for Functions	18 12 34
Category based on SPECIAL CI I II Does not App		

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

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Summary of basic inform 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	Х	Check if unit has multiple HGM classes present	

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

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

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?		V
For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		^
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?	Mayb	e
SP4. Does the wetland unit have a local significance in addition to its functions? 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.		Χ

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

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

Wetland name or number	

Classification of Wetland Units in Western Washington

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

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

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

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

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

NO - go to 3

YES – The wetland class is Flats

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

3. Does the entire wetland unit meet both of the following criteria?

The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

At least 30% of the open water area is deeper than 6.6 ft (2 m)?

NO - go to 4

YES - The wetland class is Lake-fringe (Lacustrine Fringe)

4. Does the entire wetland unit meet all of the following criteria?

____The wetland is on a slope (slope can be very gradual),

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

__The water leaves the wetland without being impounded?

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep).

NO - go to 5

YES - The wetland class is Slope

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

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

NO - go to 6 YES – The wetland class is Riverine

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.

NO - go to 7 YES – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8 **YES** – The wetland class is **Depressional**

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

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater 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 if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)	
$ \mathbf{D} $	D 1. Does the wetland unit have the potential to improve water quality?	(see p.38)	
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing	Figure	
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES NO points = 4 points = 0	Figure	
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation >= 95% of area points = 5 Wetland has persistent, ungrazed, vegetation >= 1/2 of area points = 3 Wetland has persistent, ungrazed vegetation >= 1/10 of area points = 1 Wetland has persistent, ungrazed vegetation <1/10 of area points = 0	rigure	
D	Map of Cowardin vegetation classes D1.4 Characteristics of seasonal ponding or inundation. This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4 Area seasonally ponded is $> \frac{1}{4}$ total area of wetland points = 0 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0		
D	Total for D 1 Map of Hydroperiods Add the points in the boxes above	 	
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 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 — Wetland is fed by groundwater high in phosphorus or nitrogen — Other YES multiplier is 2 NO multiplier is 1		
D	YES multiplier is 2 NO multiplier is 1 TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1		

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

R	Riverine and Freshwater Tidal Fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	Points (only 1 score per box)
R	R 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.52)
R	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: Depressions cover >3/4 area of wetland points = 8	Figure
	Depressions cover > 1/2 area of wetland points = 4 If depressions > ½ 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	R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): Trees or shrubs > 2/3 the area of the unit Trees or shrubs > 1/3 area of the unit Ungrazed, herbaceous plants > 2/3 area of unit Ungrazed herbaceous plants > 1/3 area of unit Trees, shrubs, and ungrazed herbaceous < 1/3 area of unit Aerial photo or map showing polygons of different vegetation types	Figure
R	Add the points in the boxes above	2
R	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft — Untreated stormwater discharges to wetland X Tilled fields or orchards within 150 feet of wetland A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland Y 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
R	TOTAL - Water Quality Functions Multiply the score from R 1 by R 2 Add score to table on p. 1	4

R	Riverine and Freshwater Tidal Fringe Wetlands HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion	Points (only 1 score per box)
	R 3. Does the wetland unit have the potential to reduce flooding and erosion?	(see p.54)
R	R 3.1 Characteristics of the overbank storage the unit provides: Estimate the average width of the wetland unit perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit)/(average width of stream between banks). 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 Aerial photo or map showing average widths	Figure
R	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): 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 Add the points in the boxes above	Figure
R	R 4. Does the wetland unit have the opportunity to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Note which of the following conditions apply. There are human structures and activities downstream (roads, buildings, bridges, farms) that can be damaged by flooding. There are natural resources downstream (e.g. salmon redds) that can be damaged by flooding Other	(see p.57)
	(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	2
R	TOTAL - Hydrologic Functions Multiply the score from R 3 by R 4 Add score to table on p. 1	18

L	Lake-fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
L	L 1. Does the wetland unit have the potential to improve water quality?	(see p.59)
L	L 1.1 Average width of vegetation along the lakeshore (use polygons of Cowardin classes): Vegetation is more than 33ft (10m) wide points = 6 Vegetation is more than 16 (5m) wide and <33ft points = 3 Vegetation is more than 6ft (2m) wide and <16 ft points = 1 Vegetation is less than 6 ft wide points = 0 Map of Cowardin classes with widths marked	Figure
L	L 1.2 Characteristics of the vegetation in the wetland: choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. These are not Cowardin classes. Area of Cover is total cover in the unit, but it can be in patches. NOTE: Herbaceous does not include aquatic bed. Cover of herbaceous plants is >90% of the vegetated area points = 6 Cover of herbaceous plants is >2/3 of the vegetated area points = 3 Other vegetation that is not aquatic bed or herbaceous covers > 2/3 unit points = 3 Other vegetation that is not aquatic bed in > 1/3 vegetated area points = 1 Aquatic bed vegetation and open water cover > 2/3 of the unit points = 0 Map with polygons of different vegetation types	Figure
$ \mathbf{L} $	Add the points in the boxes above	
L	L 2. Does the wetland have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in the lake water, or polluted surface water flowing through the unit to the lake. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Wetland is along the shores of a lake or reservoir that does not meet water quality standards — Grazing in the wetland or within 150ft — Polluted water discharges to wetland along upland edge — Tilled fields or orchards within 150 feet of wetland — Residential or urban areas are within 150 ft of wetland — Parks with grassy areas that are maintained, ballfields, golf courses (all within 150 ft. of lake shore) — Power boats with gasoline or diesel engines use the lake — Other YES multiplier is 2 NO multiplier is 1	multiplier
L	TOTAL - Water Quality Functions Multiply the score from L1 by L2 Add score to table on p. 1	

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

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only I score per box)
S	S 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.64)
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% points = 1 Slope is greater than 5% points = 0	
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES = 3 points NO = 0 points	
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 Dense, woody, vegetation > ½ 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 Total for S 1 Add the points in the boxes above	Figure
S	S 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft — Untreated stormwater discharges to wetland — Tilled fields, logging, or orchards within 150 feet of wetland — Residential, urban areas, or golf courses are within 150 ft upslope of wetland — Other YES multiplier is 2 NO multiplier is 1	(see p.67) multiplier
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2	
	Add score to table on p. 1	Social property on the parameter of the control of

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

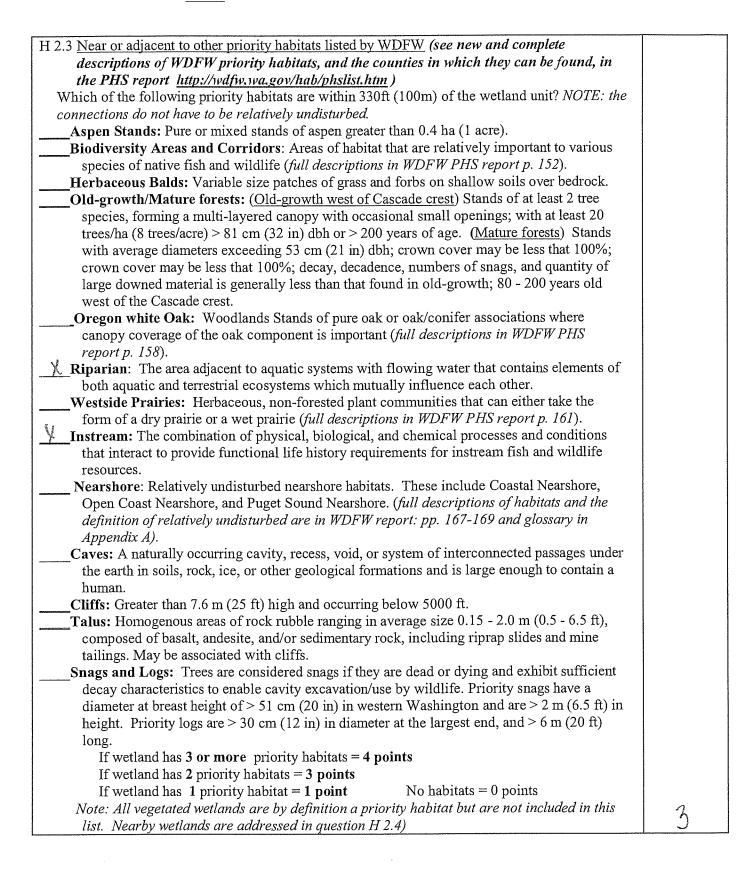
These questions apply to wetlands of all HG HABITAT FUNCTIONS - Indicators that unit funct		t habitat	Points (only 1 score per box)		
H 1. Does the wetland unit have the potential to provide habitat for many species?					
H 1.1 Vegetation structure (see p. 72)			Figure		
Check the types of vegetation classes present (as define		shold for each			
class is ¼ acre or more than 10% of the area if unit	is smaller than 2.5 acres.				
Aquatic bed					
Emergent plants Scrub/shrub (areas where shrubs have >30%	(nover)				
Forested (areas where trees have >30% covers the same of the same	•				
If the unit has a forested class check if:	,,				
The forested class has 3 out of 5 strata (can	opy, sub-canopy, shrubs, h	erbaceous,			
moss/ground-cover) that each cover 20%					
Add the number of vegetation structures that qualify. I	f you have:				
	4 structures or more	points = 4			
Map of Cowardin vegetation classes	3 structures	points $= 2$			
PEMIN	2 structures	points = 1			
	1 structure	points = 0	Figure		
H 1.2. <u>Hydroperiods</u> (see p. 73) Check the types of water regimes (hydroperiods) processes the second of the sec	resent within the wetland	The water	Figure		
regime has to cover more than 10% of the wetland o					
descriptions of hydroperiods)	17 74 acre to courti. (Bee tex	-			
Permanently flooded or inundated	4 or more types presen	nt points (3)			
Seasonally flooded or inundated	3 types presen	The second second			
X Occasionally flooded or inundated	2 types present	-			
X Saturated only	1 type present	points = 0			
X Permanently flowing stream or river in, or ad					
Seasonally flowing stream in, or adjacent to,	the wetland				
Lake-fringe wetland = 2 points		Taba Maray X	3		
Freshwater tidal wetland = 2 points	Map of hyd	roperioas	<u> </u>		
H 1.3. Richness of Plant Species (see p. 75)		1: CC			
Count the number of plant species in the wetland the		ifferent patches			
of the same species can be combined to meet the six You do not have to name the species.	ze inresnoia)				
Do not include Eurasian Milfoil, reed canarygr	eass nurnle loosestrife. Co	anadian Thistle			
If you counted:	> 19 species	points = 2			
List species below if you want to:	5 - 19 species	points $\neq 1$			
2.5. Specific serving your manner.	< 5 species	points $= 0$			
	•	•			
			Commission		

Total for page _____

H 1.4. Interspersion of habitats (see p. 76) Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	Figure
None = 0 points $Low = 1$ point Moderate = 2 points	
[riparian braided channels]	
High = 3 points	
NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	*
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. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	
Standing snags (diameter at the bottom > 4 inches) in the wetland	
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)	
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)At least ¼ 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)	
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 scores from H1.1, H1.2, H1.3, H1.4, H1.5	5

H 2. Does the wetland unit have the opportunity to provide habitat for many s	pecies?				
H 2.1 Buffers (see p. 80)	Figure _	100000			
Choose the description that best represents condition of buffer of wetland unit. The highest scoring					
criterion that applies to the wetland is to be used in the rating. See text for definition of					
"undisturbed."					
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water	r >95%				
of circumference. No structures are within the undisturbed part of buffer. (relative					
undisturbed also means no-grazing, no landscaping, no daily human use) Point					
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open wate					
	ts = 4				
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water	1				
circumference. Point					
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water					
circumference, . Point					
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water	1				
	ts = 3				
If buffer does not meet any of the criteria above					
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 1	95%				
	ats = 2				
— No paved areas or buildings within 50m of wetland for >50% circumference.					
	ats = 2				
— Heavy grazing in huffer Poin	nts = 1				
Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e	e.g. tilled				
fields, paving, basalt bedrock extend to edge of wetland Poin	ts = 0.				
,1 0,	nts = 1				
Aerial photo showing buffers	0				
H 2.2 Corridors and Connections (see p. 81)					
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corrid	lor				
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrub					
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbe					
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used	l gravel				
roads, paved roads, are considered breaks in the corridor).					
YES = 4 points $(go \ to \ H \ 2.3)$ NO = go to H 2.2.2					
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corrid					
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs	or or				
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at le					
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corrido	or as in				
the question above?					
YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$					
H 2.2.3 Is the wetland:					
within 5 mi (8km) of a brackish or salt water estuary OR					
within 3 mi of a large field or pasture (>40 acres) OR					
within 1-mi of a lake greater than 20 acres? (YES) = 1 point $NO = 0$ points					
(1ES 7 I point 140 - 0 points					

Total for page__



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ 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. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile There is at least 1 wetland within ½ mile.	
There are no wetlands within $\frac{1}{2}$ mile. points = 0	3
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	
TOTAL for H 1 from page 14	5
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	12

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.	Category
SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO X	
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?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp. are the only species that cover	Cat. II
more than 10% of the wetland, then the wetland should be given a dual	Dual
rating (I/II). The area of Spartina 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 Spartina in determining the size threshold of 1 acre.	rating I/II
 — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels, 	
depressions with open water, or contiguous freshwater wetlands.	

		l
Wetland name	or number	l

N P	rogram rate Th SC 2. S/T/R YE SC 2.	n/DNR as either high quality areatened, Endangered, or Ser I Is the wetland unit being ra Natural Heritage wetland? before you need to contact information from Appendix D	n identified by the Washington Natural Heritage undisturbed wetlands or wetlands that support insitive plant species. Ited in a Section/Township/Range that contains a (this question is used to screen out most sites WNHP/DNR) or accessed from WNHP/DNR web site IR (see p. 79) and go to SC 2.2 NO Stland as a high quality undisturbed wetland or as rendangered plant species?	Cat. I
		YES = Category I	NOnot a Heritage Wetland	
I v	oes the	ion in bogs? <i>Use the key belo</i>	of the unit) meet both the criteria for soils and ow to identify if the wetland is a bog. If you the wetland based on its functions.	
		peats or mucks, that compose	oil horizons (i.e. layers of organic soil), either e 16 inches or more of the first 32 inches of the B for a field key to identify organic soils)? Yes - No - go to Q. 2	
	3.	inches deep over bedrock, or volcanic ash, or that are float Yes - go to Q. 3 Does the unit have more that other plants, if present, consi	No - Is not a bog for purpose of rating n 70% cover of mosses at ground level, AND ist of the "bog" species listed in Table 3 as a	
The state of the s		and herbaceous cover consist Yes – Is a bog for pur NOTE: If you are uncertagou may substitute that conseeps into a hole dug at least		
	1.	red cedar, western hemlock, spruce, or western white pin- species) on the bog species p	lodgepole pine, quaking aspen, Englemann's e, WITH any of the species (or combination of plant list in Table 3 as a significant component coverage of the total shrub/herbaceous cover)?	
	2.	YES = Category I	No Is not a bog for purpose of rating	Cat. I

SC 4.0 Forested Wetlands (see p. 90)

Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.*

Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.

NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.

— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.

YES = Category I

NO ___not a forested wetland with special characteristics

Cat. I

SC 5.0 Wetlands in Coastal Lagoons (see p. 91)

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)

YES = Go to SC 5.1

NO___ not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets all of the following three conditions?

- The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).
- At least ¾ 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 feet)

YES = Category I NO = Category II

Cat. I

Cat. II

Wetland name or number _____

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

			ψ

WETLAND RATING FORM - WESTERN WASHINGTON

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

Spania Strawn		, /
Name of wetland (if known): Fish	er Sl. Site 2 Field Date of site vis	it: <u>6/24</u> /09
Rated by M. Martz	Trained by Ecology? YesNo_ 🕺 Date	of training
SEC: <u>30</u> TWNSHP: <u>33N</u> RNGE: <u>46</u>	Is S/T/R in Appendix D? Yes Y No	
Map of wetland unit	t: Figure Estimated size	
SUN	MMARY OF RATING	
Category based on FUNCTION	S provided by wetland	
I II III IV		
Cotogogo I — Coogo >=70	Score for Water Quality Functions	Service Control of the Control of th
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic Functions	22
Category III = Score 30-50	Score for Habitat Functions	15
Category IV = Score < 30	TOTAL score for Functions	53
Category based on SPECIAL C	CHARACTERISTICS of wetland	
I II Does not Ap		
-		
Final Category (cl	hoose the "highest" category from above)	I

Commons of basis information about the watland unit

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	人
Bog		Lake-fringe	
Mature Forest		Slope	
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above	Х	Check if unit has multiple HGM classes present	

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

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

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?		
For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		Χ
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species?		
For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		Χ
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?	X	
SP4. Does the wetland unit have a local significance in addition to its functions? 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 into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

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

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

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

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

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

NO - go to 3

YES - The wetland class is Flats

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

3. Does the entire wetland unit meet both of the following criteria?

_____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

_____ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

NO - go to 4 YES - The wetland class is Lake-fringe (Lacustrine Fringe)
4. Does the entire wetland unit meet all of the following criteria?

____ The wetland is on a slope (slope can be very gradual),

____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

____The water leaves the wetland **without being impounded**?

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually

<3ft diameter and less than 1 foot deep).</p>
NO - go to 5
YES – The wetland class is Slope

Wetland name or nu	mber
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5. Does the entire wetland unit meet all of the following criteria?

Big Ditch

- The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river
 - flooding from that stream of live.

 The overbank flooding occurs at least once every two years.

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

NO - go to 6 YES - The wetland class is Riverine

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.

NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO - go to 8 YES – The wetland class is **Depressional**

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

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater 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 if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
D	D 1. Does the wetland unit have the potential to improve water quality?	(see p.38)
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing	Figure
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES NO points = 4 points = 0	
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation > = 95% of area Wetland has persistent, ungrazed, vegetation > = 1/2 of area Wetland has persistent, ungrazed vegetation > = 1/10 of area Wetland has persistent, ungrazed vegetation < 1/10 of area points = 1 points = 0	Figure
D	Map of Cowardin vegetation classes D1.4 Characteristics of seasonal ponding or inundation. This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is $> \frac{1}{2}$ total area of wetland points = 4 Area seasonally ponded is $< \frac{1}{4}$ total area of wetland points = 0	Figure
D	Area seasonally ponded is < ¼ total area of wetland points = 0 Map of Hydroperiods Total for D 1 Add the points in the boxes above	
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 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 — Wetland is fed by groundwater high in phosphorus or nitrogen — Other YES multiplier is 2 NO multiplier is 1	(see p. 44) multiplier
D	YES multiplier is 2 NO multiplier is 1 TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	

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

R	Riverine and Freshwater Tidal Fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	Points (only 1 score per box)
R	R 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.52)
R	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: Depressions cover >3/4 area of wetland points = 8 Depressions cover > 1/2 area of wetland points = 4 If depressions > ½ of area of unit draw polygons on aerial photo or map Depressions present but cover < 1/2 area of wetland points = 2	Figure
R	No depressions present R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): Trees or shrubs > 2/3 the area of the unit Trees or shrubs > 1/3 area of the unit Ungrazed, herbaceous plants > 2/3 area of unit Ungrazed herbaceous plants > 1/3 area of unit Trees, shrubs, and ungrazed herbaceous < 1/3 area of unit Aerial photo or map showing polygons of different vegetation types	Figure
R	Add the points in the boxes above	
R	R 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft — Untreated stormwater discharges to wetland X Tilled fields or orchards within 150 feet of wetland A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland The river or stream linked to the wetland has a contributing basin where human activities have raised levels of sediment, toxic compounds or nutrients in the river water above standards for water quality	(see p.53)
	— Other VES multiplier is 2 NO multiplier is 1	
R	TOTAL - Water Quality Functions Multiply the score from R 1 by R 2 Add score to table on p. 1	16

R	Riverine and Freshwater Tidal Fringe Wetlands HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion	Points (only 1 score per box)
	R 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.54)
R	R 3.1 Characteristics of the overbank storage the unit provides: Estimate the average width of the wetland unit perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit)/(average width of stream between banks). 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 = 1 Aerial photo or map showing average widths	Figure
R	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): 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 Add the points in the boxes above	Figure
R	R 4. Does the wetland unit have the opportunity to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Note which of the following conditions apply. There are human structures and activities downstream (roads, buildings, bridges, farms) that can be damaged by flooding. There are natural resources downstream (e.g. salmon redds) that can be damaged by flooding	(see p.57)
	— 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
R	TOTAL - Hydrologic Functions Multiply the score from R 3 by R 4 Add score to table on p. 1	22

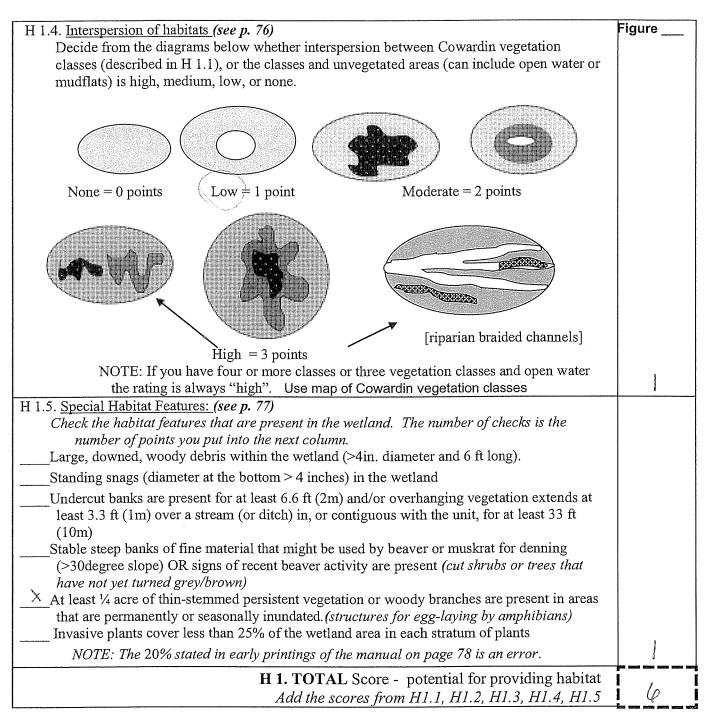
L	Lake-fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	Points (only I score
	improve water quality	per box)
L	L 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.59)
L	L 1.1 Average width of vegetation along the lakeshore (use polygons of Cowardin classes): Vegetation is more than 33ft (10m) wide Vegetation is more than 16 (5m) wide and <33ft Vegetation is more than 6ft (2m) wide and <16 ft Vegetation is less than 6 ft wide District points = 1 points = 0	Figure
L	Map of Cowardin classes with widths marked L 1.2 Characteristics of the vegetation in the wetland: choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. These are not Cowardin classes. Area of Cover is total cover in the unit, but it can be in patches. NOTE: Herbaceous does not include aquatic bed.	Figure
	Cover of herbaceous plants is >90% of the vegetated area points = 6 Cover of herbaceous plants is >2/3 of the vegetated area points = 4 Cover of herbaceous plants is >1/3 of the vegetated area points = 3 Other vegetation that is not aquatic bed or herbaceous covers > 2/3 unit points = 3 Other vegetation that is not aquatic bed in > 1/3 vegetated area points = 1 Aquatic bed vegetation and open water cover > 2/3 of the unit points = 0 Map with polygons of different vegetation types	
L	Add the points in the boxes above	
L	L 2. Does the wetland have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in the lake water, or polluted surface water flowing through the unit to the lake. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Wetland is along the shores of a lake or reservoir that does not meet water quality standards — Grazing in the wetland or within 150ft — Polluted water discharges to wetland along upland edge — Tilled fields or orchards within 150 feet of wetland — Residential or urban areas are within 150 ft of wetland — Parks with grassy areas that are maintained, ballfields, golf courses (all within 150 ft of lake shore)	(see p.61) multiplier
	150 ft. of lake shore) — Power boats with gasoline or diesel engines use the lake — Other YES multiplier is 2 NO multiplier is 1	
L	TOTAL - Water Quality Functions Multiply the score from L1 by L2 Add score to table on p. 1	

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

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)	
S	S 1. Does the wetland unit have the potential to improve water quality?	(see p.64)	
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% Slope is greater than 5% points = 1 points = 0		
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES = 3 points NO = 0 points		
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 Dense, woody, vegetation > ½ 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 Total for S 1 Add the points in the boxes above	Figure	
S	S 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft — Untreated stormwater discharges to wetland — Tilled fields, logging, or orchards within 150 feet of wetland		
	 Residential, urban areas, or golf courses are within 150 ft upslope of wetland Other YES multiplier is 2 NO multiplier is 1 	multiplier	
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 Add score to table on p. 1		

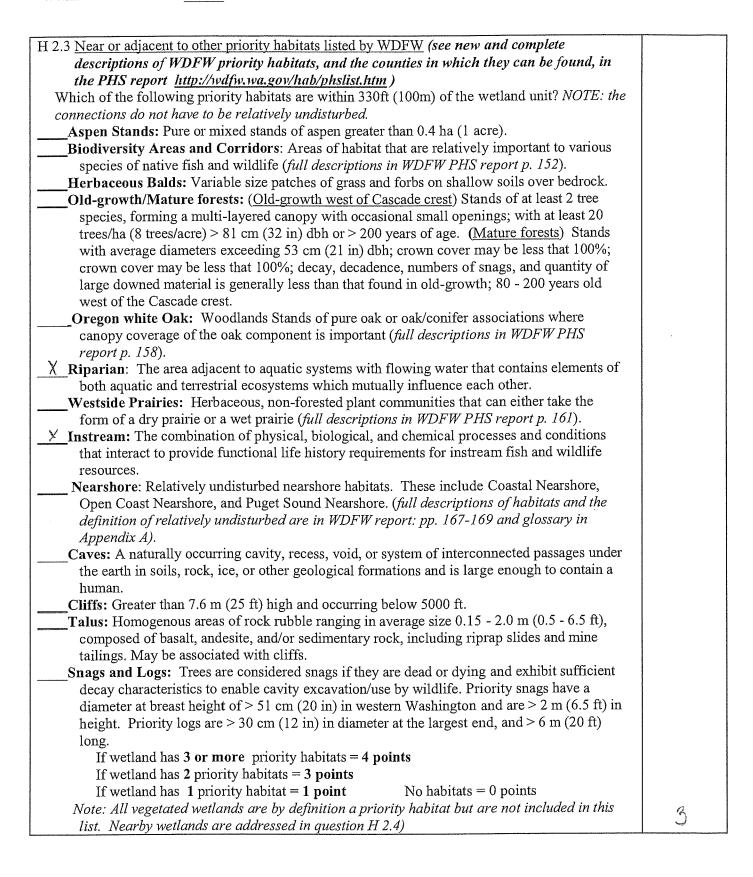
S	Slope Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to	Points (only I score per box)	
	reduce flooding and stream erosion S 3. Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?	(see p.68)	
S	S 3.1 Characteristics of vegetation that reduce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

These questions apply to wetlands of all H HABITAT FUNCTIONS - Indicators that unit fu		habitat	Points (only score per box)		
H 1. Does the wetland unit have the potential 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 ¼ acre or more than 10% of the area if unit is smaller than 2.5 acres. Aquatic bed Emergent plants Scrub/shrub (areas where shrubs have >30% cover)					
Forested (areas where trees have >30% cover)					
If the unit has a forested class check if:					
The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous,					
moss/ground-cover) that each cover 2		n			
Add the number of vegetation structures that qualify					
	4 structures or more	points $= 4$			
Map of Cowardin vegetation classes	3 structures	points = 2			
	2 structures	points = $\frac{1}{2}$			
H 1.2. Hydroperiods (see p. 73)	1 structure	points ₹ 0	Figure		
Check the types of water regimes (hydroperiods regime has to cover more than 10% of the wetland descriptions of hydroperiods) Permanently flooded or inundated Seasonally flooded or inundated Coccasionally flooded or inundated		for t points $= 3$ points $= 2$ point $= 1$			
X Saturated only 1 type present points = 0 X Permanently flowing stream or river in, or adjacent to, the wetland Seasonally flowing stream in, or adjacent to, the wetland Lake-fringe wetland = 2 points					
Freshwater tidal wetland = 2 points	Map of hyd	roperiods	3		
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: > 19 species points = 2					
List species below if you want to:	5 - 19 species < 5 species	points $= 1$ points $= 0$			
			1		



H 2. Does the wetland unit have the opportunity to	provide habitat for many species?	
H 2.1 Buffers (see p. 80)		Figure
Choose the description that best represents condition of but	fer of wetland unit. The highest scoring	
criterion that applies to the wetland is to be used in the rational	-	
"undisturbed."		
— 100 m (330ft) of relatively undisturbed vegetated as	reas, rocky areas, or open water >95%	
of circumference. No structures are within the und		
undisturbed also means no-grazing, no landscaping	, no daily human use) $Points = 5$	
— 100 m (330 ft) of relatively undisturbed vegetated a	reas, rocky areas, or open water >	
50% circumference.	Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated are	eas, rocky areas, or open water >95%	
circumference.	Points = 4	
— 100 m (330ft) of relatively undisturbed vegetated as	eas, rocky areas, or open water > 25%	
circumference,	Points = 3	
— 50 m (170ft) of relatively undisturbed vegetated are	eas, rocky areas, or open water for >	
50% circumference.	Points = 3	
If buffer does not meet any of the	he criteria above	
 No paved areas (except paved trails) or buildings w 	ithin 25 m (80ft) of wetland > 95%	
circumference. Light to moderate grazing, or lawns		
No paved areas or buildings within 50m of wetland	for >50% circumference.	
Light to moderate grazing, or lawns are OK.	Points = 2	
 Heavy grazing in buffer. 	Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more that	an 95% of the circumference (e.g. tilled	
fields, paving, basalt bedrock extend to edge of wet	land $Points = 0$.	
— Buffer does not meet any of the criteria above.	Points = 1	2
	photo showing buffers	4.50
H 2.2 Corridors and Connections (see p. 81)		
H 2.2.1 Is the wetland part of a relatively undisturbed	-	
(either riparian or upland) that is at least 150 ft wide, I		
or native undisturbed prairie, that connects to estuarie		
uplands that are at least 250 acres in size? (dams in range roads, paved roads, are considered breaks in the corr		
YES = 4 points (go to $H 2.3$)	NO = go to H 2.2.2	
H 2.2.2 Is the wetland part of a relatively undisturbed		
(either riparian or upland) that is at least 50ft wide, ha		
forest, and connects to estuaries, other wetlands or un		
acres in size? OR a Lake-fringe wetland, if it does n	-	
the question above?		
YES = 2 points (go to $H 2.3$)	NO = H 2.2.3	
H 2.2.3 Is the wetland:		
within 5 mi (8km) of a brackish or salt water e	stuary OR	
within 3 mi of a large field or pasture (>40 acre		
within 1 mi of a lake greater than 20 acres?	·	25
(YES) = 1 point	NO = 0 points	MACCINA
	······	

Total for page 3



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84)	
There are at least 3 other wetlands within ½ mile, and the connections between them are	
relatively undisturbed (light grazing between wetlands OK, as is lake shore with some	
boating, but connections should NOT be bisected by paved roads, fill, fields, or other	
development. points = 5	
The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe	
wetlands within $\frac{1}{2}$ mile points = 5	
There are at least 3 other wetlands within ½ mile, BUT the connections between them are	
disturbed points = 3	
The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe	
wetland within $\frac{1}{2}$ mile points = 3	
There is at least 1 wetland within $\frac{1}{2}$ mile. points = 2	
There are no wetlands within $\frac{1}{2}$ mile. points = 0	2
	U O
H 2. TOTAL Score - opportunity for providing habitat	·
Add the scores from H2.1,H2.2, H2.3, H2.4	1 9
TOTAL for H 1 from page 14	
101111 101 11 1 wom habe -	6
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on	git hand Mail Sand Sand Sand Sand
p. 1	15
p. 1	ij Povezana nasivi se kantinci sin ka

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type		Category
Check off any criteria that apply to the wetland. (appropriate criteria are met.	Circle the Category when the	
SC 1.0 Estuarine wetlands (see p. 86)		
Does the wetland unit meet the following criteria	for Estuarine wetlands?	
— The dominant water regime is tidal,		
— Vegetated, and		
With a salinity greater than 0.5 ppt.YES = Go to SC 1.1	NO	
SC 1.1 Is the wetland unit within a National V National Estuary Reserve, Natural Area Pr Environmental, or Scientific Reserve design	eserve, State Park or Educational,	Cat. I
YES = Category I	NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size following three conditions? YES = Cate		Cat. I
— The wetland is relatively undisturbed (cultivation, grazing, and has less than	has no diking, ditching, filling,	Cat. II
species. If the non-native Spartina spr	-	
more than 10% of the wetland, then the	ne wetland should be given a dual	Dual
rating (I/II). The area of Spartina wou	- ·	rating
relatively undisturbed upper marsh wit Category I. Do not, however, exclude		I/II
determining the size threshold of 1 acr]
— At least ¾ of the landward edge of the		
shrub, forest, or un-grazed or un-mowe	•	
— The wetland has at least 2 of the follow		
depressions with open water, or contig	uous freshwater wetlands.	

]	Natura Progra state T SC 2 S/T/F YZ	Natural Heritage Wetlands (see p. 87) I Heritage wetlands have been identified by the Washington Natural Heritage m/DNR as either high quality undisturbed wetlands or wetlands that support hreatened, Endangered, or Sensitive plant species. I Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? (this question is used to screen out most sites before you need to contact WNHP/DNR) Information from Appendix D or accessed from WNHP/DNR web site EScontact WNHP/DNR (see p. 79) and go to SC 2.2 NO 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 I NO not a Heritage Wetland	Cat. I
195			
\ \ \ \	Does ti vegetai unswei	he wetland unit (or any part of the unit) meet both the criteria for soils and tion in bogs? Use the key below to identify if the wetland is a bog. If you re yes you will still need to rate the wetland based on its functions. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes -	
		go to Q. 3 No - go to Q. 2	
		Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 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)?	
1		Yes – Is a bog for purpose of rating No - go to Q. 4	
		NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.	
	1.	Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)?	
	2.	YES = Category I No Is not a bog for purpose of rating	Cat. I
.			Cat. I

SC 4.0 Forested Wetlands (see p. 90)

Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.*

Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.

NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.

— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.

YES = Category I

NO not a forested wetland with special characteristics

Cat. I

SC 5.0 Wetlands in Coastal Lagoons (see p. 91)

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom)

YES = Go to SC 5.1

NO not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets all of the following three conditions?

- The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).
- At least ¾ 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 feet)

YES = Category I NO = Category II

Cat. I

Cat. II

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

WETLAND RATING FORM - WESTERN WASHINGTON

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

Name of wetland (if known): _ Fishe	r Sl. Site 3 Field Date of site visit: 6/	24/09
Rated by M. Martz	Trained by Ecology? YesNo_ Mo_X Date of train	ing
	Is S/T/R in Appendix D? Yes X No	
Map of wetland unit:	Figure Estimated size	
SUM	MARY OF RATING	
Category based on FUNCTIONS I II IV		
Category I = Score >=70 Category II = Score 51-69 Category III = Score 30-50 Category IV = Score < 30	Score for Water Quality Functions Score for Hydrologic Functions Score for Habitat Functions TOTAL score for Functions	
Category based on SPECIAL CH I II Does not App Final Category (cho		77 m.

Summary of basic information about the wetland unit

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

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

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

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?		1
For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.	-	X
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species?		
For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?	X	
SP4. Does the wetland unit have a local significance in addition to its functions? 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 into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

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

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

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

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

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

NO - go to 3

YES - The wetland class is Flats

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

- 3. Does the entire wetland unit meet both of the following criteria?
 - The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

At least 30% of the open water area is deeper than 6.6 ft (2 m)?

NO - go to 4 YES – The wetland class is Lake-fringe (Lacustrine Fringe)

4. Does the entire wetland unit meet all of the following criteria?

____The wetland is on a slope (slope can be very gradual),

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

The water leaves the wetland without being impounded?

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep).

NO - go to 5 YES - The wetland class is Slope

Wetland	name	or nu	mber	
YY CHanu	Hallie	OI IIII	111001	

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

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

NO go to 6 YES – The wetland class is Riverine

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.

NO – go to 7 (YES) The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO - go to 8 YES – The wetland class is **Depressional**

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

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

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

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
D	D 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.38)
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing	Figure
	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS	
D	definitions) $ \begin{array}{c} \text{YES} & \text{points} = 4 \\ \text{(NO)} & \text{points} = 0 \end{array} $	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation >= 95% of area Wetland has persistent, ungrazed, vegetation >= 1/2 of area Wetland has persistent, ungrazed vegetation >= 1/10 of area Wetland has persistent, ungrazed vegetation <1/10 of area points = 1 points = 0	Figure
D	Map of Cowardin vegetation classes D1.4 Characteristics of seasonal ponding or inundation. This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is < ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland Map of Hydroperiods	Figure
D	Total for D 1 Add the points in the boxes above	6
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — X 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 — Wetland is fed by groundwater high in phosphorus or nitrogen Other — Other — multiplier is 2 NO multiplier is 1	multiplier
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2	12
	Add score to table on p. 1	

D	Depressional and Flats Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	Points (only 1 score per box)
	D 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.46)
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 0	no.
D	D 3.2 Depth of storage during wet periods Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry). Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 The wetland is a "headwater" wetland" points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water	44
D	Marks of ponding less than 0.5 ft D 3.3 Contribution of wetland unit to storage in the watershed Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire unit is in the FLATS class Total for D 3 Add the points in the boxes above	25
D	D 4. Does the wetland unit have the opportunity to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. Note which of the following indicators of opportunity apply. — Wetland is in a headwater of a river or stream that has flooding problems — Wetland drains to a river or stream that has flooding problems — Wetland has no outlet and impounds surface runoff water that might otherwise	
	flow into a river or stream that has flooding problems Other YES multiplier is 2 NO multiplier is 1	multiplier 2
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 Add score to table on p. 1	Tracketter

R	Riverine and Freshwater Tidal Fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	Points (only 1 score per box)
R	R 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.52)
R	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event:	Figure
	Depressions cover >3/4 area of wetland points = 8 Depressions cover > 1/2 area of wetland points = 4 If depressions > ½ 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	
R	R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): Trees or shrubs > 2/3 the area of the unit Trees or shrubs > 1/3 area of the unit Ungrazed, herbaceous plants > 2/3 area of unit Ungrazed herbaceous plants > 1/3 area of unit Trees, shrubs, and ungrazed herbaceous < 1/3 area of unit Aerial photo or map showing polygons of different vegetation types	Figure
R	Add the points in the boxes above	
R	R 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 feet of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — The river or stream linked to the wetland has a contributing basin where human	(see p.53)
	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
R	TOTAL - Water Quality Functions Multiply the score from R 1 by R 2 Add score to table on p. 1	

R	Riverine and Freshwater Tidal Fringe Wetlands HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion	Points (only 1 score per box)
	R 3. Does the wetland unit have the <u>potential</u> to reduce flooding and erosion?	(see p.54)
R	R 3.1 Characteristics of the overbank storage the unit provides: Estimate the average width of the wetland unit perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit)/(average width of stream between banks). 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 Aerial photo or map showing average widths	Figure
R	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): 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 Add the points in the boxes above	Figure
R	R 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Note which of the following conditions apply. — There are human structures and activities downstream (roads, buildings, bridges, farms) that can be damaged by flooding. — There are natural resources downstream (e.g. salmon redds) that can be damaged by flooding	(see p.57)
	— 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
R	TOTAL - Hydrologic Functions Multiply the score from R 3 by R 4 Add score to table on p. 1	

Ĺ	Lake-fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
L	L 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.59)
L	L 1.1 Average width of vegetation along the lakeshore (use polygons of Cowardin classes): Vegetation is more than 33ft (10m) wide points = 6 Vegetation is more than 16 (5m) wide and <33ft points = 3 Vegetation is more than 6ft (2m) wide and <16 ft points = 1 Vegetation is less than 6 ft wide points = 0 Map of Cowardin classes with widths marked	Figure
L	L 1.2 Characteristics of the vegetation in the wetland: choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. These are not Cowardin classes. Area of Cover is total cover in the unit, but it can be in patches. NOTE: Herbaceous does not include aquatic bed. Cover of herbaceous plants is >90% of the vegetated area points = 6 Cover of herbaceous plants is >2/3 of the vegetated area points = 4 Cover of herbaceous plants is >1/3 of the vegetated area points = 3 Other vegetation that is not aquatic bed or herbaceous covers > 2/3 unit points = 3 Other vegetation that is not aquatic bed in > 1/3 vegetated area points = 1 Aquatic bed vegetation and open water cover > 2/3 of the unit points = 0 Map with polygons of different vegetation types Add the points in the boxes above	Figure
L		
L	Answer YES if you know or believe there are pollutants in the lake water, or polluted surface water flowing through the unit to the lake. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Wetland is along the shores of a lake or reservoir that does not meet water quality standards — Grazing in the wetland or within 150ft — Polluted water discharges to wetland along upland edge — Tilled fields or orchards within 150 feet of wetland — Residential or urban areas are within 150 ft of wetland — Parks with grassy areas that are maintained, ballfields, golf courses (all within 150 ft. of lake shore) — Power boats with gasoline or diesel engines use the lake — Other YES multiplier is 2 NO multiplier is 1	multiplier
$ _{\mathbf{L}}$	TOTAL - Water Quality Functions Multiply the score from L1 by L2	
	Add score to table on p. 1	

L	Lake-fringe Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce shoreline erosion	Points (only 1 score per box)
L	L 3. Does the wetland unit have the <u>potential</u> to reduce shoreline erosion?	(see p.62)
L	L 3 Distance along shore and average width of Cowardin classes along the lakeshore (do not include aquatic bed): (choose the highest scoring description that matches conditions in the wetland) > ¾ of distance is shrubs or forest at least 33 ft (10m) wide points = 6 > ¾ of distance is shrubs or forest at least 6 ft. (2 m) wide points = 4 > ¼ distance is shrubs or forest at least 33 ft (10m) wide points = 4 Vegetation is at least 6 ft (2m) wide (any type except aquatic bed) points = 2 Vegetation is less than 6 ft (2m) wide (any type except aquatic bed) points = 0 Aerial photo or map with Cowardin vegetation classes Record the points from the box above	Figure
L	L 4. Does the wetland unit have the opportunity to reduce erosion? Are there features along the shore that will be impacted if the shoreline erodes? Note which of the following conditions apply. — There are human structures and activities along the upland edge of the wetland (buildings, fields) that can be damaged by erosion. — There are undisturbed natural resources along the upland edge of the wetland (e.g. mature forests other wetlands) than can be damaged by shoreline erosion — Other	(see p.63)
L	YES multiplier is 2 NO multiplier is 1 TOTAL - Hydrologic Functions Multiply the score from L 3 by L 4 Add score to table on p. 1	

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	Points (only I score per box)
S	improve water quality S 1. Does the wetland unit have the potential to improve water quality?	(see p.64)
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% Slope is greater than 5% points = 1 points = 0	
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES = 3 points NO = 0 points	
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 Dense, woody, vegetation > ½ 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 Total for S 1 Add the points in the boxes above	Figure
S	S 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft — Untreated stormwater discharges to wetland — Tilled fields, logging, or orchards within 150 feet of wetland — Residential, urban areas, or golf courses are within 150 ft upslope of wetland — Other YES multiplier is 2 NO multiplier is 1	(see p.67) multiplier
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 Add score to table on p. 1	

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

			•
These questions apply to wetlands of all HG	M classes.		Points
HABITAT FUNCTIONS - Indicators that unit functi		habitat	(only 1 score per box)
H 1. Does the wetland unit have the potential to pr	rovide habitat for many	species?	r
H 1.1 Vegetation structure (see p. 72) Check the types of vegetation classes present (as defined class is ¼ acre or more than 10% of the area if unit is Aquatic bed Aquatic bed Emergent plants Y Scrub/shrub (areas where shrubs have >30% Forested (areas where trees have >30% cover If the unit has a forested class check if: The forested class has 3 out of 5 strata (candidate)	is smaller than 2.5 acres. cover) r) ppy, sub-canopy, shrubs, he	rbaceous,	Figure
moss/ground-cover) that each cover 20%		1	
Add the number of vegetation structures that qualify. If Map of Cowardin vegetation classes	fyou have: 4 structures or more 3 structures 2 structures	points = 4 $points = 2$ $points = 1$	1
	1 structure	points $= 0$	Figure
H 1.2. Hydroperiods (see p. 73) Check the types of water regimes (hydroperiods) presegime has to cover more than 10% of the wetland of descriptions of hydroperiods) Permanently flooded or inundated Seasonally flooded or inundated X Occasionally flooded or inundated k Saturated only Permanently flowing stream or river in, or adjugated seasonally flowing stream in, or adjacent to, to Lake-fringe wetland = 2 points	4 or more types present 3 types present 2 types present 1 type present acent to, the wetland	for	
Freshwater tidal wetland = 2 points	Map of hydr	operiods	2
H 1.3. Richness of Plant Species (see p. 75) Count the number of plant species in the wetland the of the same species can be combined to meet the size You do not have to name the species. Do not include Eurasian Milfoil, reed canarygr If you counted: List species below if you want to:	ze threshold)	ferent patches nadian Thistle points = 2 points = 1 points = 0	
			Н естивра

Total for page ____

H 1.4. Interspersion of habitats (see p. 76)	Figure
Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or	
mudflats) is high, medium, low, or none.	
None = 0 points (Low) = 1 point Moderate = 2 points	
[riparian braided channels]	
High = 3 points	
NOTE: If you have four or more classes or three vegetation classes and open water	
the rating is always "high". Use map of Cowardin vegetation classes	
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. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	
Standing snags (diameter at the bottom > 4 inches) in the wetland	
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)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)	
At least ¼ 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) 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.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	5

Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use) — 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. — 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference. — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference. — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. — 100 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. — 100 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. — 110 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. — 120 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. — 120 m (170ft) of relatively undisturbed areas, rocky areas, or open water > 50% circumference. — 121 m (170ft) of relatively undisturbed areas, rocky areas, or open water > 50% circumference. — 122 m (170ft) of relatively undisturbed areas, rocky areas, or open water > 25% circumference. — 123 m (170ft) of relatively undisturbed areas, rocky areas, or open water > 25% circumference. — 124 m (170ft) of relatively undisturbed and undisturbed areas. — 125 m (170ft) of relatively undisturbed and unbroken vegetated corridor (ofther riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed part of a relatively undisturbed and unbroken vegetated corridor (either rip		
Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed." — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5 — 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. — 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference. — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference. — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference. — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference. — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference. — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference. — 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference. — 100 m (330ft) of relatively undisturbed areas, rocky areas, or open water > 25% circumference. — 100 m (330ft) of relatively undisturbed of vegetated provides are suiting of the criteria above. Points = 3 If buffer does not meet any of the criteria above. — 100 m (30ft) of relatively undisturbed and unbroken vegetated corridor (of the riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wellands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to H 2.3) H 2.2.2 Is t	H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use) 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, Points = 4 100 m (370ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, Points = 3 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. Points = 3 If buffer does not meet any of the criteria above No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. Points = 2 No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing or lawns are OK. Points = 1 Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland Points = 0. Buffer does not neet any of the criteria above. Points = 1 H 2.2. Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to H 2.3) NO = go to H 2.2.2 H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acre		Figure
- 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. If buffer does not meet any of the criteria above No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. Points = 2 No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. Points = 1 Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland Points = 0. Buffer does not meet any of the criteria above. Points = 1 Aerial photo showing buffers H 2.2 Corridors and Connections (see p. 81) H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to H 2.3) NO = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above? YES = 2 points (go to H 2.3) NO = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres?	of circumference. No structures are within the undisturbed part of buffer. (relatively undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. Points = 4 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. Points = 4 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%	
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Heavy grazing in buffer. Wegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland Buffer does not meet any of the criteria above. Buffer does not meet any of the criteria above. Points = 1 Aerial photo showing buffers H 2.2 Corridors and Connections (see p. 81) H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to H 2.3) NO = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above? YES = 2 points (go to H 2.3) NO = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres?	 No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. No paved areas or buildings within 50m of wetland for >50% circumference. 	
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H 2.2 Corridors and Connections (see p. 81) H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor). YES = 4 points (go to H 2.3) NO = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above? YES = 2 points (go to H 2.3) NO = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres?	Buffer does not meet any of the criteria above. Points = 1	2
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in the question above? YES = 2 points (go to H 2.3) NO = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres?	H 2.2 Corridors and Connections (see p. 81) H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).	
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within 1 mi of a lake greater than 20 acres?	YES = 2 points (go to H 2.3) NO = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR	
(1170) I bowe		

Total for page 3

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? NOTE: the	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
report p. 158).	
X Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	,
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources. Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	3
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ 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. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile There is at least 1 wetland within ½ mile. There are no wetlands within ½ mile. There are no wetlands within ½ mile.	3
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	9
TOTAL for H 1 from page 14	
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	14

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.	Category
SC 1.0 Estuarine wetlands (see p. 86) Does the wetland unit meet the following criteria for Estuarine wetlands?	
 The dominant water regime is tidal, Vegetated, and With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO 	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp. are the only species that cover	Cat. II
more than 10% of the wetland, then the wetland should be given a dual	Dual
rating (I/II). The area of Spartina 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 Spartina in determining the size threshold of 1 acre.	rating I/II
— At least ³ / ₄ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.	
— The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	

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

SC 4.0 Forested Wetlands (see p. 90)	
Does the wetland unit have at least 1 acre of forest that meet one of these criteria for	
the Department of Fish and Wildlife's forests as priority habitats? If you answer yes	
you will still need to rate the wetland based on its functions.	
— Old-growth forests: (west of Cascade crest) Stands of at least two tree species,	
forming a multi-layered canopy with occasional small openings; with at least 8	
trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests.	
Two-hundred year old trees in wetlands will often have a smaller dbh	
because their growth rates are often slower. The DFW criterion is and "OR"	
so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are	
80 – 200 years old OR have average diameters (dbh) exceeding 21 inches	
(53cm); crown cover may be less that 100%; decay, decadence, numbers of	
snags, and quantity of large downed material is generally less than that found	
in old-growth.	Cat. I
YES = Category I NOnot a forested wetland with special characteristics	
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
— The wetland lies in a depression adjacent to marine waters that is wholly	,
or partially separated from marine waters by sandbanks, gravel banks,	
shingle, or, less frequently, rocks	
— The lagoon in which the wetland is located contains surface water that is	
saline or brackish (> 0.5 ppt) during most of the year in at least a portion	
of the lagoon (needs to be measured near the bottom)	
YES = Go to SC 5.1 NO not a wetland in a coastal lagoon	
GOS 1 Days the westland master all of the following three conditions?	
SC 5.1 Does the wetland meets all of the following three conditions?	
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant	
species (see list of invasive species on p. 74).	
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland.	Cat. I
— The wetland is larger than 1/10 acre (4350 square feet)	
YES = Category I NO = Category II	Cat. II

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

	•	

WETLAND RATING FORM – WESTERN WASHINGTON

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

<u> </u>	on the new WDI W definitions for priority maximus	1011/00
Name of wetland (if known): Frsher's	S1. Site 3 Forested Date of site visit: 6	<u> </u>
Rated by M. Martz	_ Trained by Ecology? YesNo_X Date of train	ning
SEC: 30 TWNSHP: $33N$ RNGE: $4E$	Is S/T/R in Appendix D? Yes 🐰 No	
Map of wetland unit: Fi	igure Estimated size	
SUMM	MARY OF RATING	
Category based on FUNCTIONS I	provided by wetland	
I II III IV		
	Score for Water Quality Functions	5
Category I = Score >=70 Category II = Score 51-69	Score for Hydrologic Functions	2
Category III = Score 30-50	Score for Habitat Functions	3
Category IV = Score < 30	TOTAL score for Functions 5	3
Category based on SPECIAL CHA	ARACTERISTICS of wetland	
I II Does not Apply	3. /	
Final Category (choo	se the "highest" category from above)	

Summary of basic inforn	nation		a I kola tendezoeko
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	X	Check if unit has multiple HGM classes present	

Wetland	name	Ωľ	number	
WELIANU	manic	OI	mumoci	

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

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

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

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

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

Classification of Wetland Units in Western Washington

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

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)? YES - the wetland class is Tidal Fringe NO - go to 2If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES - Freshwater Tidal Fringe NO - Saltwater Tidal Fringe (Estuarine) If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.). 2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit. YES – The wetland class is Flats NO - go to 3If your wetland can be classified as a "Flats" wetland, use the form for Depressional wetlands. 3. Does the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? YES - The wetland class is Lake-fringe (Lacustrine Fringe) NO - go to 44. Does the entire wetland unit meet all of the following criteria? The wetland is on a slope (slope can be very gradual), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks. The water leaves the wetland without being impounded? NOTE: Surface water does not pond in these type of wetlands except occasionally in

very small and shallow depressions or behind hummocks (depressions are usually

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NO - go to 5

< 3ft diameter and less than 1 foot deep).

YES – The wetland class is Slope

Wetland	name	٥r	number	
wenanu	Hame	UI.	Humber	

- 5. Does the entire wetland unit meet all of the following criteria?

 - ** The overbank flooding occurs at least once every two years.

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

NO - go to 6 **YES** – The wetland class is **Riverine**

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

NO - go to 8 **YES** – The wetland class is **Depressional**

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

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

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

D	Depressional and Flats Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to	Points (only 1 score per box)
	improve water quality	per oox)
\mathbf{D}	D 1. Does the wetland unit have the potential to improve water quality?	(see p.38)
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (permanently flowing) points = 1 Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet and/or outlet is a man-made ditch [If ditch is not permanently flowing treat unit as "intermittently flowing"] Provide photo or drawing	Figure
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES NO points = 4 points = 0	
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) Wetland has persistent, ungrazed, vegetation > = 95% of area Wetland has persistent, ungrazed, vegetation > = 1/2 of area Wetland has persistent, ungrazed vegetation > = 1/10 of area Wetland has persistent, ungrazed vegetation < 1/10 of area points = 1 points = 0	Figure
D	Map of Cowardin vegetation classes D1.4 Characteristics of seasonal ponding or inundation. This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs. Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	Figure
D	Total for D 1 Map of Hydroperiods Add the points in the boxes above	
D	D 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 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 Wetland is fed by groundwater high in phosphorus or nitrogen	(see p. 44)
	Wetland is fed by groundwater high in phosphorus or nitrogen Other YES multiplier is 2 NO multiplier is 1	
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	

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

R	Riverine and Freshwater Tidal Fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	
R	R 1. Does the wetland unit have the potential to improve water quality?	
R	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: Depressions cover > 3/4 area of wetland points = 8 Depressions cover > 1/2 area of wetland points = 4 If depressions > ½ of area of unit draw polygons on aerial photo or map	Figure
R	Depressions present but cover < 1/2 area of wetland No depressions present R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): Trees or shrubs > 2/3 the area of the unit Trees or shrubs > 2/3 the area of the unit	2 Figure
	Trees or shrubs > 1/3 area of the unit Ungrazed, herbaceous plants > 2/3 area of unit Ungrazed herbaceous plants > 1/3 area of unit Trees, shrubs, and ungrazed herbaceous < 1/3 area of unit Aerial photo or map showing polygons of different vegetation types	8
R	Add the points in the boxes above	10
R	R 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft — Untreated stormwater discharges to wetland X Tilled fields or orchards within 150 feet of wetland A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland X 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	(see p.53)
	— Other (YES) multiplier is 2 NO multiplier is 1	2
R	TOTAL - Water Quality Functions Multiply the score from R 1 by R 2 Add score to table on p. 1	20

R	Riverine and Freshwater Tidal Fringe Wetlands HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion	Points (only 1 score per box)
	R 3. Does the wetland unit have the potential to reduce flooding and erosion?	(see p.54)
R	R 3.1 Characteristics of the overbank storage the unit provides: Estimate the average width of the wetland unit perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit)/(average width of stream between banks). 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	Figure
R	Aerial photo or map showing average widths 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): 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	Figure
R	Add the points in the boxes above	C ₁
R	R 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Note which of the following conditions apply. X 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	(see p.57)
	— 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
R	TOTAL - Hydrologic Functions Multiply the score from R 3 by R 4 Add score to table on p. 1	18

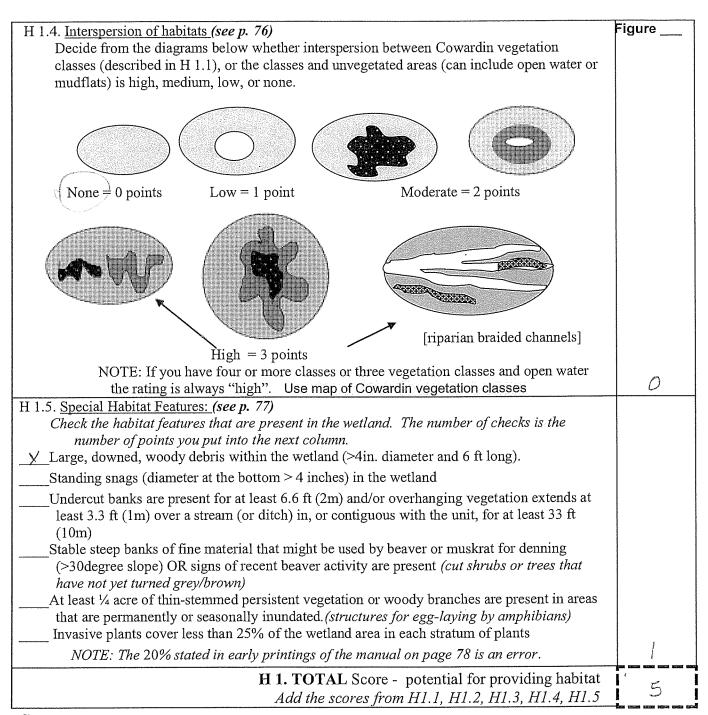
L	Lake-fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
L	L 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.59)
L	L 1.1 Average width of vegetation along the lakeshore (use polygons of Cowardin classes): Vegetation is more than 33ft (10m) wide points = 6 Vegetation is more than 16 (5m) wide and <33ft points = 3 Vegetation is more than 6ft (2m) wide and <16 ft points = 1 Vegetation is less than 6 ft wide points = 0 Map of Cowardin classes with widths marked	Figure
L	L 1.2 Characteristics of the vegetation in the wetland: choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. These are not Cowardin classes. Area of Cover is total cover in the unit, but it can be in patches. NOTE: Herbaceous does not include aquatic bed. Cover of herbaceous plants is >90% of the vegetated area points = 6 Cover of herbaceous plants is >2/3 of the vegetated area points = 3 Other vegetation that is not aquatic bed or herbaceous covers > 2/3 unit points = 3 Other vegetation that is not aquatic bed in > 1/3 vegetated area points = 1 Aquatic bed vegetation and open water cover > 2/3 of the unit points = 0 Map with polygons of different vegetation types	Figure
L	Add the points in the boxes above	
L	L 2. Does the wetland have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in the lake water, or polluted surface water flowing through the unit to the lake. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Wetland is along the shores of a lake or reservoir that does not meet water quality standards — Grazing in the wetland or within 150ft — Polluted water discharges to wetland along upland edge — Tilled fields or orchards within 150 feet of wetland	(see p.61)
	 Residential or urban areas are within 150 ft of wetland Parks with grassy areas that are maintained, ballfields, golf courses (all within 150 ft. of lake shore) Power boats with gasoline or diesel engines use the lake Other YES multiplier is 2 NO multiplier is 1 	
L	TOTAL - Water Quality Functions Multiply the score from L1 by L2 Add score to table on p. 1	

L	Lake-fringe Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce shoreline erosion	Points (only 1 score per box)		
(i)	L 3. Does the wetland unit have the <u>potential</u> to reduce shoreline erosion?			
L	L 3 Distance along shore and average width of Cowardin classes along the lakeshore (do not include aquatic bed): (choose the highest scoring description that matches conditions in the wetland) > 3/4 of distance is shrubs or forest at least 33 ft (10m) wide points = 6 > 3/4 of distance is shrubs or forest at least 6 ft. (2 m) wide points = 4 > 1/4 distance is shrubs or forest at least 33 ft (10m) wide points = 4 Vegetation is at least 6 ft (2m) wide (any type except aquatic bed) points = 2 Vegetation is less than 6 ft (2m) wide (any type except aquatic bed) points = 0 Aerial photo or map with Cowardin vegetation classes			
L				
	YES multiplier is 2 NO multiplier is 1			
L	TOTAL - Hydrologic Functions Multiply the score from L 3 by L 4 Add score to table on p. 1			

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
S	S 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.64)
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% Slope is 2% - 5% Slope is greater than 5% points = 1 points = 0	
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES = 3 points NO = 0 points	
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 Dense, woody, vegetation > ½ of area points = 2 Dense, uncut, herbaceous vegetation > 1/4 of area points = 1 Does not meet any of the criteria above for vegetation points = 0 Aerial photo or map with vegetation polygons	Figure
S	Total for S 1 Add the points in the boxes above	
S	S 2. Does the wetland unit have the <u>opportunity</u> to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft	(see p.67)
	 Untreated stormwater discharges to wetland Tilled fields, logging, or orchards within 150 feet of wetland Residential, urban areas, or golf courses are within 150 ft upslope of wetland Other YES multiplier is 2 NO multiplier is 1 	multiplier
s	TOTAL - Water Quality Functions Multiply the score from S1 by S2 Add score to table on p. 1	

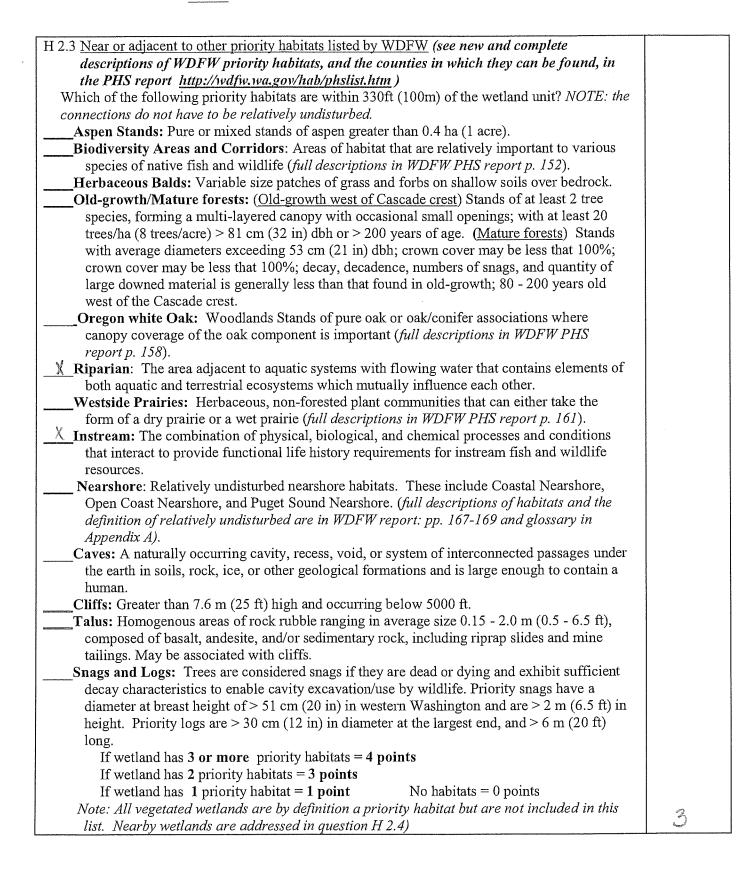
S	Slope Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream erosion	Points (only 1 score per box)
	S 3. Does the wetland unit have the <u>potential</u> to reduce flooding and stream erosion?	(see p.68)
S	S 3.1 Characteristics of vegetation that reduce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

These questions apply to wetlands of all HGN HABITAT FUNCTIONS - Indicators that unit function		t habitat	Points (only I score per box)
H 1. Does the wetland unit have the potential to pro	ovide habitat for man	y species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as defined	by Cowardin)- Size thres	hold for each	
class is $\frac{1}{4}$ acre or more than 10% of the area if unit is	smaller than 2.5 acres.		
Aquatic bed			
Emergent plants			
Scrub/shrub (areas where shrubs have >30% o			
Forested (areas where trees have >30% cover If the unit has a forested class check if:)		
The forested class has 3 out of 5 strata (cano)	ov. sub-canopy, shrubs, h	erbaceous,	
moss/ground-cover) that each cover 20% y	within the forested polygo	on	
Add the number of vegetation structures that qualify. If			
	4 structures or more	points = 4	
Map of Cowardin vegetation classes	3 structures	points $= 2$	
	2 structures	points = 1	
	1 structure	points = 0	Figure
H 1.2. <u>Hydroperiods</u> (see p. 73) Check the types of water regimes (hydroperiods) pre	agant within the wetland	The water	i iguic
regime has to cover more than 10% of the wetland or	isem wimin the wettana. Lacre to count (see tex	t for	
descriptions of hydroperiods)	74 dere to contin (see ten	.,,	
Permanently flooded or inundated	4 or more types preser	nt points $= 3$	
Seasonally flooded or inundated	3 types presen		
X Occasionally flooded or inundated	2 types present		
Saturated only	1 type present	points = 0	
Permanently flowing stream or river in, or adja			
Seasonally flowing stream in, or adjacent to, the	ie wetland		
Lake-fringe wetland = 2 points Freshwater tidal wetland = 2 points	Map of hyd	droperiods	2
	map or ny	i oponodo	
H 1.3. Richness of Plant Species (see p. 75) Count the number of plant species in the wetland that	ot cover at least 10 ft ² (d	ifforent natches	
of the same species can be combined to meet the size	e threshold)	ујегет распев	
You do not have to name the species.	c in conordy		
Do not include Eurasian Milfoil, reed canarygra	ass, purple loosestrife, C	anadian Thistle	
If you counted:	> 19 species	points $= 2$	
List species below if you want to:	5 - 19 species	points (1)	
	< 5 species	points $= 0$	
			· ·



H 2. Does the wetland unit have the opportunity to provide habitat for many species?		
H 2.1 <u>Buffers</u> (see p. 80)		
Choose the description that best represents condition of buffer of wetland unit. The highest scoring		
criterion that applies to the wetland is to be used in the rating. See text for definition of		
"undisturbed."		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
of circumference. No structures are within the undisturbed part of buffer. (relatively		
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5		
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >		
50% circumference. Points = 4		
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%		
circumference. $Points = 4$		
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%		
circumference, Points = 3		
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >		
50% circumference. Points = 3		
If buffer does not meet any of the criteria above		
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95%		
circumference. Light to moderate grazing, or lawns are OK. Points = 2		
$\stackrel{\checkmark}{\longrightarrow}$ No paved areas or buildings within 50m of wetland for >50% circumference.		
Light to moderate grazing, or lawns are OK . Points = 2		
— Heavy grazing in buffer. Points = 1		
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled		
fields, paving, basalt bedrock extend to edge of wetland $Points = 0$.		
— Buffer does not meet any of the criteria above. Points = 1	2	
Aerial photo showing buffers		
H 2.2 Corridors and Connections (see p. 81)		
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed		
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel		
roads, paved roads, are considered breaks in the corridor).		
YES = 4 points (go to $H 2.3$) NO = go to $H 2.2.2$		
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor		
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or		
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25		
acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in		
the question above?		
YES = 2 points (go to H 2.3) NO = H 2.2.3		
H 2.2.3 Is the wetland:		
within 5 mi (8km) of a brackish or salt water estuary OR		
within 3 mi of a large field or pasture (>40 acres) OR		
within 1 mi of a lake greater than 20 acres?	0	
YES = 1 point NO = 0 points		

Total for page_



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84)	
There are at least 3 other wetlands within ½ 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 ½ mile points = 5	
There are at least 3 other wetlands within ½ mile, BUT the connections between them are	i
disturbed points = 3	
The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3	
There is at least 1 wetland within ½ mile.	
There are no wetlands within ½ mile. There are no wetlands within ½ mile.	
There are no wetalide within 72 miles	3
H 2. TOTAL Score - opportunity for providing habitat	10
Add the scores from H2.1,H2.2, H2.3, H2.4	<i>10</i>
TOTAL for H 1 from page 14	سير
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on	
p. 1	15

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86) Does the wetland unit meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 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?	
SC 1.0 Estuarine wetlands (see p. 86) Does the wetland unit meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational,	
Does the wetland unit meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational,	
 The dominant water regime is tidal, Vegetated, and With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational,	
 Vegetated, and With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, 	
— With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational,	
YES = Go to SC 1.1 NO SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational,	
National Estuary Reserve, Natural Area Preserve, State Park or Educational,	
Environmental, or octonistic reserve designated under wife 332-30-131:	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the	O-4 I
following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual	Dual
rating (I/II). The area of Spartina would be rated a Category II while the	rating
relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre.	I/II
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland.	
— The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	

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

	20 ST 19 ST 19 20 ST 19 ST
SC 4.0 Forested Wetlands (see p. 90)	
Does the wetland unit have at least 1 acre of forest that meet one of these criteria for	
the Department of Fish and Wildlife's forests as priority habitats? If you answer yes	
you will still need to rate the wetland based on its functions.	
— Old-growth forests: (west of Cascade crest) Stands of at least two tree species,	
forming a multi-layered canopy with occasional small openings; with at least 8	
trees/acre (20 trees/hectare) that are at least 200 years of age OR have a	
diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests.	
Two-hundred year old trees in wetlands will often have a smaller dbh	
because their growth rates are often slower. The DFW criterion is and "OR"	
so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are	
80 – 200 years old OR have average diameters (dbh) exceeding 21 inches	
(53cm); crown cover may be less that 100%; decay, decadence, numbers of	
snags, and quantity of large downed material is generally less than that found	
in old-growth.	Cat. I
YES = Category I NOnot a forested wetland with special characteristics	Cat. 1
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)	
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?	
— The wetland lies in a depression adjacent to marine waters that is wholly	,
or partially separated from marine waters by sandbanks, gravel banks,	
shingle, or, less frequently, rocks	
— The lagoon in which the wetland is located contains surface water that is	
saline or brackish (> 0.5 ppt) during most of the year in at least a portion	
of the lagoon (needs to be measured near the bottom)	
YES = Go to SC 5.1 NO not a wetland in a coastal lagoon	
SC 5.1 Does the wetland meets all of the following three conditions?	
— The wetland is relatively undisturbed (has no diking, ditching, filling,	
cultivation, grazing), and has less than 20% cover of invasive plant	
species (see list of invasive species on p. 74).	
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of	
shrub, forest, or un-grazed or un-mowed grassland.	Cat. I
— The wetland is larger than 1/10 acre (4350 square feet)	
YES = Category I NO = Category II	Cat. II
	-

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

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Wetland	name	or	number	_	1	

WETLAND RATING FORM – WESTERN WASHINGTON

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

Name of wetland (if known): Fisher St. Site 4 P2EM Along Little Insher

Date of site visit: 6/25/09 Rated by M. Marke______ Trained by Ecology? Yes_No_X Date of training_____ SEC: 29 TWNSHP: ____ RNGE: ____ Is S/T/R in Appendix D? Yes___ No__/ Map of wetland unit: Figure ____ Estimated size ____ SUMMARY OF RATING Category based on FUNCTIONS provided by wetland I II III IV__ Score for Water Quality Functions Category I = Score >= 70Score for Hydrologic Functions Category II = Score 51-69Score for Habitat Functions Category III = Score 30-50 10 Category IV = Score < 30 **TOTAL** score for Functions 20

Category based on SPECIAL CHARACTERISTICS of wetland

I___ II___ Does not Apply X

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

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			Language Co.
None of the above	X	Check if unit has multiple HGM classes present	

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

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

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?		
For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		V
SP2. Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species? For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		X
SP3. Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?		
SP4. Does the wetland unit have a local significance in addition to its functions? 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 into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

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

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

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

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

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

NO - go to 3

YES - The wetland class is Flats

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

3. Does the entire wetland unit meet both of the following criteria?

The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)?

At least 30% of the open water area is deeper than 6.6 it (2 m)? NO – go to 4 YES – The wetland class is Lake-fringe (Lacustrine Fringe)

4. Does the entire wetland unit meet all of the following criteria?

The wetland is on a slope (slope can be very gradual),

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

____The water leaves the wetland without being impounded?

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than I foot deep).

NO - go to 5 YES - The wetland class is Slope

Wetland	name	or	number	

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

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

NO - go to 6 YES - The wetland class is Riverine

- 6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.
 - NO go to 7 YES The wetland class is **Depressional**
- 7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
 - NO go to 8 **YES** The wetland class is **Depressional**
- 8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater 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 if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

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

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

R	Riverine and Freshwater Tidal Fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	Points (only 1 score per box)
R	R 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.52)
R	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event: Depressions cover >3/4 area of wetland points = 8	Figure
	Depressions cover > 1/2 area of wetland points = 4 If depressions > ½ 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	Same .
R	R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): Trees or shrubs > 2/3 the area of the unit points = 8 Trees or shrubs > 1/3 area of the unit ungrazed, herbaceous plants > 2/3 area of unit points = 6	Figure
	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	0
R	Add the points in the boxes above	2
R	R 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. Ye Grazing in the wetland or within 150ft Untreated stormwater discharges to wetland Tilled fields or orchards within 150 feet of wetland A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging Residential, urban areas, golf courses are within 150 ft of wetland The river or stream linked to the wetland has a contributing basin where human activities have raised levels of sediment, toxic compounds or nutrients in the river	(see p.53)
	water above standards for water quality — Other WES multiplier is 2 NO multiplier is 1	multiplier
R	TOTAL - Water Quality Functions Multiply the score from R 1 by R 2 Add score to table on p. 1	ij

R	Riverine and Freshwater Tidal Fringe Wetlands HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion	Points (only 1 score per box)
	R 3. Does the wetland unit have the potential to reduce flooding and erosion?	(see p.54)
R	R 3.1 Characteristics of the overbank storage the unit provides: Estimate the average width of the wetland unit perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit)/(average width of stream between banks). 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 = 1 Aerial photo or map showing average widths	Figure
R	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): 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	Figure
R	Add the points in the boxes above	1 6
R	R 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Note which of the following conditions apply. There are human structures and activities downstream (roads, buildings, bridges, farms) that can be damaged by flooding. There are natural resources downstream (e.g. salmon redds) that can be damaged by flooding	(see p.57)
	— 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 2
R	TOTAL - Hydrologic Functions Multiply the score from R 3 by R 4 Add score to table on p. 1	12

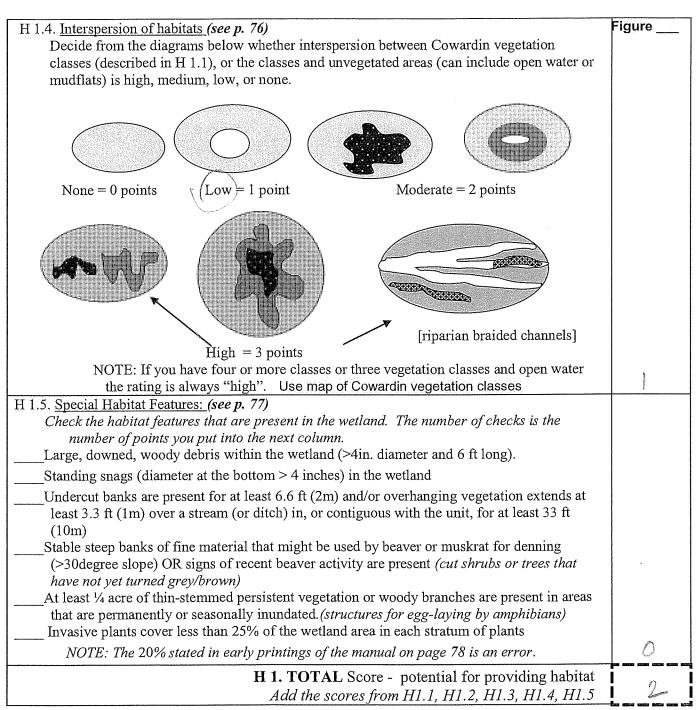
L	Lake-fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
L	L 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.59)
L	L 1.1 Average width of vegetation along the lakeshore (use polygons of Cowardin classes): Vegetation is more than 33ft (10m) wide points = 6 Vegetation is more than 16 (5m) wide and <33ft points = 3 Vegetation is more than 6ft (2m) wide and <16 ft points = 1 Vegetation is less than 6 ft wide Map of Cowardin classes with widths marked	Figure
L	L 1.2 Characteristics of the vegetation in the wetland: choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. These are not Cowardin classes. Area of Cover is total cover in the unit, but it can be in patches. NOTE: Herbaceous does not include aquatic bed. Cover of herbaceous plants is >90% of the vegetated area points = 6 Cover of herbaceous plants is >2/3 of the vegetated area points = 4 Cover of herbaceous plants is >1/3 of the vegetated area points = 3 Other vegetation that is not aquatic bed or herbaceous covers > 2/3 unit points = 3 Other vegetation that is not aquatic bed in > 1/3 vegetated area points = 1 Aquatic bed vegetation and open water cover > 2/3 of the unit points = 0 Map with polygons of different vegetation types	Figure
L	Add the points in the boxes above	
L	L 2. Does the wetland have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in the lake water, or polluted surface water flowing through the unit to the lake. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Wetland is along the shores of a lake or reservoir that does not meet water quality standards — Grazing in the wetland or within 150ft — Polluted water discharges to wetland along upland edge — Tilled fields or orchards within 150 feet of wetland — Residential or urban areas are within 150 ft of wetland — Parks with grassy areas that are maintained, ballfields, golf courses (all within 150 ft. of lake shore) — Power boats with gasoline or diesel engines use the lake — Other YES multiplier is 2 NO multiplier is 1	multiplier
L	TOTAL - Water Quality Functions Multiply the score from L1 by L2 Add score to table on p. 1	

L	Lake-fringe Wetlands HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce shoreline erosion	Points (only 1 score per box)
L	L 3. Does the wetland unit have the <u>potential</u> to reduce shoreline erosion?	(see p.62)
L	L 3 Distance along shore and average width of Cowardin classes along the lakeshore (do not include aquatic bed): (choose the highest scoring description that matches conditions in the wetland) > ¾ of distance is shrubs or forest at least 33 ft (10m) wide points = 6 > ¾ of distance is shrubs or forest at least 6 ft. (2 m) wide points = 4 > ¼ distance is shrubs or forest at least 33 ft (10m) wide points = 4 Vegetation is at least 6 ft (2m) wide (any type except aquatic bed) points = 2 Vegetation is less than 6 ft (2m) wide (any type except aquatic bed) points = 0 Aerial photo or map with Cowardin vegetation classes Record the points from the box above	Figure
L	L 4. Does the wetland unit have the opportunity to reduce erosion? Are there features along the shore that will be impacted if the shoreline erodes? Note which of the following conditions apply. — There are human structures and activities along the upland edge of the wetland (buildings, fields) that can be damaged by erosion. — There are undisturbed natural resources along the upland edge of the wetland (e.g. mature forests other wetlands) than can be damaged by shoreline erosion — Other YES multiplier is 2 NO multiplier is 1	(see p.63)
L	TOTAL - Hydrologic Functions Multiply the score from L 3 by L 4	
	Add score to table on p. 1	

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
S	S 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.64)
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% Slope is 2% - 5% Slope is greater than 5% points = 1 points = 0	
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES = 3 points NO = 0 points	
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 Dense, woody, vegetation > ½ 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 Total for S 1 Add the points in the boxes above	Figure
S	S 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft — Untreated stormwater discharges to wetland — Tilled fields, logging, or orchards within 150 feet of wetland	(see p.67)
	 Residential, urban areas, or golf courses are within 150 ft upslope of wetland Other YES multiplier is 2 NO multiplier is 1 	
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 Add score to table on p. 1	

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

These questions apply to wetlands of all HABITAT FUNCTIONS - Indicators that unit fun		habitat	Points (only 1 score per box)
H 1. Does the wetland unit have the potential to	provide habitat for many	species?	
H 1.1 Vegetation structure (see p. 72)			Figure
Check the types of vegetation classes present (as def	îned by Cowardin)- Size thres	hold for each	
class is ¼ acre or more than 10% of the area if u	nit is smaller than 2.5 acres.		
Aquatic bed			
Emergent plants			
Scrub/shrub (areas where shrubs have >3			
Forested (areas where trees have >30% co	over)		
If the unit has a forested class check if:		1	
The forested class has 3 out of 5 strata (c			
moss/ground-cover) that each cover 2		n	
Add the number of vegetation structures that qualify	4 structures or more	points = 4	
The state of the s	3 structures	points $= 2$	
Map of Cowardin vegetation classes	2 structures	points = 1	
	1 structure	points = 0	
H 1.2. Hydroperiods (see p. 73)			Figure
Check the types of water regimes (hydroperiods,	present within the wetland.	The water	
regime has to cover more than 10% of the wetlan	~		
descriptions of hydroperiods)	·	•	
Permanently flooded or inundated	4 or more types presen	t points $= 3$	
X Seasonally flooded or inundated	3 types present		
	2 types present	point (1)	
Saturated only	1 type present	points $= 0$	
Permanently flowing stream or river in, or			
Seasonally flowing stream in, or adjacent to	o, the wetland		
Lake-fringe wetland = 2 points	ni pristata salah pianga	. (1.0 trains and	7
Freshwater tidal wetland = 2 points	Map of hyd	roperioas	
H 1.3. Richness of Plant Species (see p. 75)			
Count the number of plant species in the wetland		tferent patches	
of the same species can be combined to meet the	size threshold)		
You do not have to name the species.		nadian Thistle	
Do not include Eurasian Milfoil, reed canar If you counted:	ygrass, purple loosesirije, Ca > 19 species	points = 2	
•	5 - 19 species	points $= 2$ points $= 1$	
List species below if you want to:	< 5 species	points $= 1$	
	< 3 species	points	
			0
		477474	



2. Does the wetland unit have the opportunity to provide habitat for many species?	
2.1 Buffers (see p. 80)	Figure
thoose the description that best represents condition of buffer of wetland unit. The highest scoring	
riterion that applies to the wetland is to be used in the rating. See text for definition of	
undisturbed."	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
of circumference. No structures are within the undisturbed part of buffer. (relatively	
undisturbed also means no-grazing, no landscaping, no daily human use) Points = 5	
— 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water >	
50% circumference. Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95%	
circumference. Points = 4	
— 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25%	
circumference, . Points = 3	
— 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for >	
50% circumference. Points = 3	
If buffer does not meet any of the criteria above	
— No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95%	
circumference. Light to moderate grazing, or lawns are OK. Points = 2	
 No paved areas or buildings within 50m of wetland for >50% circumference. 	
Light to moderate grazing, or lawns are OK. Points = 2	
Heavy grazing in buffer. Points = 1	
— Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled	
fields, paving, basalt bedrock extend to edge of wetland $Points = 0$.	
 Buffer does not meet any of the criteria above. Points = 1 	Abstrance
Aerial photo showing buffers	
H 2.2 Corridors and Connections (see p. 81)	:
H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest	Ì
or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed	
uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel	
roads, paved roads, are considered breaks in the corridor).	
$YES = 4 \text{ points} (go \text{ to } H 2.3) \qquad NO = go \text{ to } H 2.2.2$	
H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor	
(either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or	
forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? OR a Lake-fringe wetland, if it does not have an undisturbed corridor as in	
the question above? YES = 2 points (go to $H 2.3$) NO = $H 2.2.3$	
125 2 Points (8* *** = ***)	
H 2.2.3 Is the wetland:	
within 5 mi (8km) of a brackish or salt water estuary OR	
	3

Total for page 2

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see new and complete	
descriptions of WDFW priority habitats, and the counties in which they can be found, in	
the PHS report http://wdfw.wa.gov/hab/phslist.htm)	
Which of the following priority habitats are within 330ft (100m) of the wetland unit? NOTE: the	
connections do not have to be relatively undisturbed.	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 ha (1 acre).	
Biodiversity Areas and Corridors: Areas of habitat that are relatively important to various	
species of native fish and wildlife (full descriptions in WDFW PHS report p. 152).	
Herbaceous Balds: Variable size patches of grass and forbs on shallow soils over bedrock.	
Old-growth/Mature forests: (Old-growth west of Cascade crest) Stands of at least 2 tree	
species, forming a multi-layered canopy with occasional small openings; with at least 20	
trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests) Stands	
with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%;	
crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of	
large downed material is generally less than that found in old-growth; 80 - 200 years old	
west of the Cascade crest.	
Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where	
canopy coverage of the oak component is important (full descriptions in WDFW PHS	
, report p. 158).	
Riparian: The area adjacent to aquatic systems with flowing water that contains elements of	
both aquatic and terrestrial ecosystems which mutually influence each other.	
Westside Prairies: Herbaceous, non-forested plant communities that can either take the	
form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161).	
Instream: The combination of physical, biological, and chemical processes and conditions	
that interact to provide functional life history requirements for instream fish and wildlife	
resources.	
Nearshore: Relatively undisturbed nearshore habitats. These include Coastal Nearshore,	
Open Coast Nearshore, and Puget Sound Nearshore. (full descriptions of habitats and the	
definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in	
Appendix A).	
Caves: A naturally occurring cavity, recess, void, or system of interconnected passages under	
the earth in soils, rock, ice, or other geological formations and is large enough to contain a	
human.	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.	
Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft),	
composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine	
tailings. May be associated with cliffs.	
Snags and Logs: Trees are considered snags if they are dead or dying and exhibit sufficient	
decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a	
diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in	
height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft)	
long.	
If wetland has 3 or more priority habitats = 4 points	
If wetland has 2 priority habitats = 3 points	
If wetland has 1 priority habitat = 1 point No habitats = 0 points	
Note: All vegetated wetlands are by definition a priority habitat but are not included in this	9
list. Nearby wetlands are addressed in question H 2.4)	

H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that best fits) (see p. 84) There are at least 3 other wetlands within ½ 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. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile There is at least 1 wetland within ½ mile. There is at least 1 wetland within ½ mile. There are no wetlands within ½ mile. There are no wetlands within ½ mile. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4 TOTAL for H 1 from page 14 TOTAL for H 1 from page 14		
There are at least 3 other wetlands within ½ 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. The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile There is at least 1 wetland within ½ mile. There are no wetlands within ½ mile. Points = 0 H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4 TOTAL for H 1 from page 14 Total Score for Habitat Functions - add the points for H 1, H 2 and record the result on		
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Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on		
	TOTAL for H I from page 14	2
p. 1	Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on	10
	p. 1	10

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type	Category
Check off any criteria that apply to the wetland. Circle the Category when the	
appropriate criteria are met. SC 1.0 Estuarine wetlands (see p. 86)	
Does the wetland unit meet the following criteria for Estuarine wetlands?	
— The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?	Cat. I
YES = Category I NO go to SC 1.2	
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II	Cat. I
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant	Cat. II
species. If the non-native <i>Spartina</i> spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina 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 Spartina in determining the size threshold of 1 acre. — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.	Dual rating I/II
— The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	

Program/DNR as either high quality state Threatened, Endangered, or Ser SC 2.1 Is the wetland unit being rank Natural Heritage wetland? before you need to contact	identified by the Washington Natural Heritage undisturbed wetlands or wetlands that support nsitive plant species. ted in a Section/Township/Range that contains a (this question is used to screen out most sites WNHP/DNR) or accessed from WNHP/DNR web site	Cat. I
	cland as a high quality undisturbed wetland or as	
SC 3.0 Bogs (see p. 87)		March States Co. Proposed St. Co.
Does the wetland unit (or any part of vegetation in bogs? Use the key below answer yes you will still need to rate of 1. Does the unit have organic sometimes or mucks, that composes	of the unit) meet both the criteria for soils and w to identify if the wetland is a bog. If you the wetland based on its functions. oil horizons (i.e. layers of organic soil), either 16 inches or more of the first 32 inches of the 3 for a field key to identify organic soils)? Yes -	
go to Q. 3	No - go to Q. 2	
 2. Does the unit have organic so inches deep over bedrock, or volcanic ash, or that are float Yes - go to Q. 3 3. Does the unit have more than other plants, if present, considerations. 	oils, either peats or mucks that are less than 16 an impermeable hardpan such as clay or ing on a lake or pond? No - Is not a bog for purpose of rating a 70% cover of mosses at ground level, AND st of the "bog" species listed in Table 3 as a vegetation (more than 30% of the total shrub	
Yes – Is a bog for pur		
NOTE: If you are uncertaged you may substitute that conseeps into a hole dug at least	in about the extent of mosses in the understory riterion by measuring the pH of the water that east 16" deep. If the pH is less than 5.0 and the ble 3 are present, the wetland is a bog.	
red cedar, western hemlock, spruce, or western white pine species) on the bog species p	lover) with sitka spruce, subalpine fir, western lodgepole pine, quaking aspen, Englemann's e, WITH any of the species (or combination of lant list in Table 3 as a significant component coverage of the total shrub/herbaceous cover)?	
2. YES = Category I	No Is not a bog for purpose of rating	Cat. I
1.		

SC 4.0 Forested Wetlands (see p. 90) Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? If you answer yes you will still need to rate the wetland based on its functions. — Old-growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.	
NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.	
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.	Cat. I
YES = Category I NOnot a forested wetland with special characteristics	Cat. 1
SC 5.0 Wetlands in Coastal Lagoons (see p. 91) Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO not a wetland in a coastal lagoon	
 SC 5.1 Does the wetland meets all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. 	Cat. I
— The wetland is larger than 1/10 acre (4350 square feet) YES = Category I NO = Category II	Cat. II

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

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WETLAND RATING FORM - WESTERN WASHINGTON

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

ı		-
Name of wetland (if known):	isher Stough	Date of site visit:
Rated by M. Martz		
SEC: 30 TWNSHP: 33N RNGE	45 Is S/T/R in Appendix D?	Yes 🚶 No
Map of wetland	unit: Figure Estimate	d size
S	SUMMARY OF RATIN	\mathbf{G}
Category based on FUNCTI	-	
Category I = Score >=70 Category II = Score 51-69 Category III = Score 30-50 Category IV = Score < 30		(C.E.
Category based on SPECIA I II Does not Final Category		

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	K
Bog		Lake-fringe	
Mature Forest		Slope	
Old Growth Forest		Flats	
Coastal Lagoon		Freshwater Tidal	
Interdunal			
None of the above	Х	Check if unit has multiple HGM classes present	

Wetland name or number

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

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

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

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

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

Classification of Wetland Units in Western Washington

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

1	
	ne water levels in the entire unit usually controlled by tides (i.e. except during floods)? - go to 2 YES – the wetland class is Tidal Fringe
	If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? YES—Freshwater Tidal Fringe NO—Saltwater Tidal Fringe (Estuarine)
	If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is rated as an Estuarine wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).
Grou	ntire wetland unit is flat and precipitation is the only source (>90%) of water to it. undwater and surface water runoff are NOT sources of water to the unit. — 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.
	the entire wetland unit meet both of the following criteria? The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size; At least 30% of the open water area is deeper than 6.6 ft (2 m)? To to 4 YES – The wetland class is Lake-fringe (Lacustrine Fringe)
4. Does	the entire wetland unit meet all of the following criteria? The wetland is on a slope (slope can be very gradual), The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks. The water leaves the wetland without being impounded?
NO	NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep). See to 5 VES — The wetland class is Slope

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

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

NO - go to 6 YES - The wetland class is Riverine

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. This means that any outlet, if present, is higher than the interior of the wetland.

NO – go to 7 YES – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8 YES – The wetland class is **Depressional**

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

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

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

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

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

R	Riverine and Freshwater Tidal Fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	Points (only 1 score per box)
R	R 1. Does the wetland unit have the potential to improve water quality?	(see p.52)
R	R 1.1 Area of surface depressions within the riverine wetland that can trap sediments during a flooding event:	Figure
	Depressions cover > 3/4 area of wetland points = 8 Depressions cover > 1/2 area of wetland points = 4 If depressions > ½ of area of unit draw polygons on aerial photo or map Depressions present but cover < 1/2 area of wetland points = 2	2
R	No depressions present points = 0 R 1.2 Characteristics of the vegetation in the unit (areas with >90% cover at person height): Trees or shrubs > 2/3 the area of the unit points = 8 Trees or shrubs > 1/3 area of the unit points = 6 Ungrazed, herbaceous plants > 2/3 area of unit points = 6 Ungrazed herbaceous plants > 1/3 area of unit points = 3 Trees, shrubs, and ungrazed herbaceous < 1/3 area of unit points = 0 Aerial photo or map showing polygons of different vegetation types	Figure
R	Add the points in the boxes above	8
R	R 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft — Untreated stormwater discharges to wetland X Tilled fields or orchards within 150 feet of wetland A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland The river or stream linked to the wetland has a contributing basin where human activities have raised levels of sediment, toxic compounds or nutrients in the river water above standards for water quality	multiplier
	— Other YES multiplier is 2 NO multiplier is 1	_2_
R	TOTAL - Water Quality Functions Multiply the score from R 1 by R 2 Add score to table on p. 1	16

R	Riverine and Freshwater Tidal Fringe Wetlands HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion	Points (only 1 score per box)
	R 3. Does the wetland unit have the potential to reduce flooding and erosion?	(see p.54)
R	R 3.1 Characteristics of the overbank storage the unit provides: Estimate the average width of the wetland unit perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of unit)/(average width of stream between banks). 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 Aerial photo or map showing average widths	Figure
R	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): 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 Add the points in the boxes above	Figure
R	R 4. Does the wetland unit have the opportunity to reduce flooding and erosion? Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Note which of the following conditions apply. X 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)	(see p.57)
	YES multiplier is 2 NO multiplier is 1	2-
R	TOTAL - Hydrologic Functions Multiply the score from R 3 by R 4 Add score to table on p. 1	18

L	Lake-fringe Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only score per box)
L	L 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.59)
L	L 1.1 Average width of vegetation along the lakeshore (use polygons of Cowardin classes): Vegetation is more than 33ft (10m) wide points = 6 Vegetation is more than 16 (5m) wide and <33ft points = 3 Vegetation is more than 6ft (2m) wide and <16 ft points = 1 Vegetation is less than 6 ft wide Map of Cowardin classes with widths marked	Figure
L	L 1.2 Characteristics of the vegetation in the wetland: choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. These are not Cowardin classes. Area of Cover is total cover in the unit, but it can be in patches. NOTE: Herbaceous does not include aquatic bed. Cover of herbaceous plants is >90% of the vegetated area points = 6 Cover of herbaceous plants is >2/3 of the vegetated area points = 3 Other vegetation that is not aquatic bed or herbaceous covers > 2/3 unit points = 3 Other vegetation that is not aquatic bed in > 1/3 vegetated area points = 1 Aquatic bed vegetation and open water cover > 2/3 of the unit points = 0 Map with polygons of different vegetation types	Figure
L	Add the points in the boxes above	
L	L 2. Does the wetland have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in the lake water, or polluted surface water flowing through the unit to the lake. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Wetland is along the shores of a lake or reservoir that does not meet water quality standards — Grazing in the wetland or within 150ft — Polluted water discharges to wetland along upland edge — Tilled fields or orchards within 150 feet of wetland — Residential or urban areas are within 150 ft of wetland — Parks with grassy areas that are maintained, ballfields, golf courses (all within 150 ft. of lake shore) — Power boats with gasoline or diesel engines use the lake — Other YES multiplier is 2 NO multiplier is 1	multiplier
L	TOTAL - Water Quality Functions Multiply the score from L1 by L2 Add score to table on p. 1	

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

S	Slope Wetlands WATER QUALITY FUNCTIONS - Indicators that the wetland unit functions to improve water quality	Points (only 1 score per box)
S	S 1. Does the wetland unit have the <u>potential</u> to improve water quality?	(see p.64)
S	S 1.1 Characteristics of average slope of unit: Slope is 1% or less (a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance) Slope is 1% - 2% Slope is 2% - 5% Slope is greater than 5% points = 1 points = 0	
S	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (use NRCS definitions) YES = 3 points NO = 0 points	
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 inches. Dense, uncut, herbaceous vegetation > 90% of the wetland area points = 6 Dense, uncut, herbaceous vegetation > 1/2 of area points = 3 Dense, woody, vegetation > ½ of area points = 2 Dense, uncut, herbaceous vegetation > 1/4 of area points = 1 Does not meet any of the criteria above for vegetation points = 0 Aerial photo or map with vegetation polygons	Figure
S	Total for S 1 Add the points in the boxes above	(see p.67)
S	S 2. Does the wetland unit have the opportunity to improve water quality? Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity. — Grazing in the wetland or within 150ft — Untreated stormwater discharges to wetland — Tilled fields, logging, or orchards within 150 feet of wetland — Residential, urban areas, or golf courses are within 150 ft upslope of wetland	
	— Other YES multiplier is 2 NO multiplier is 1	
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 Add score to table on p. 1	

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

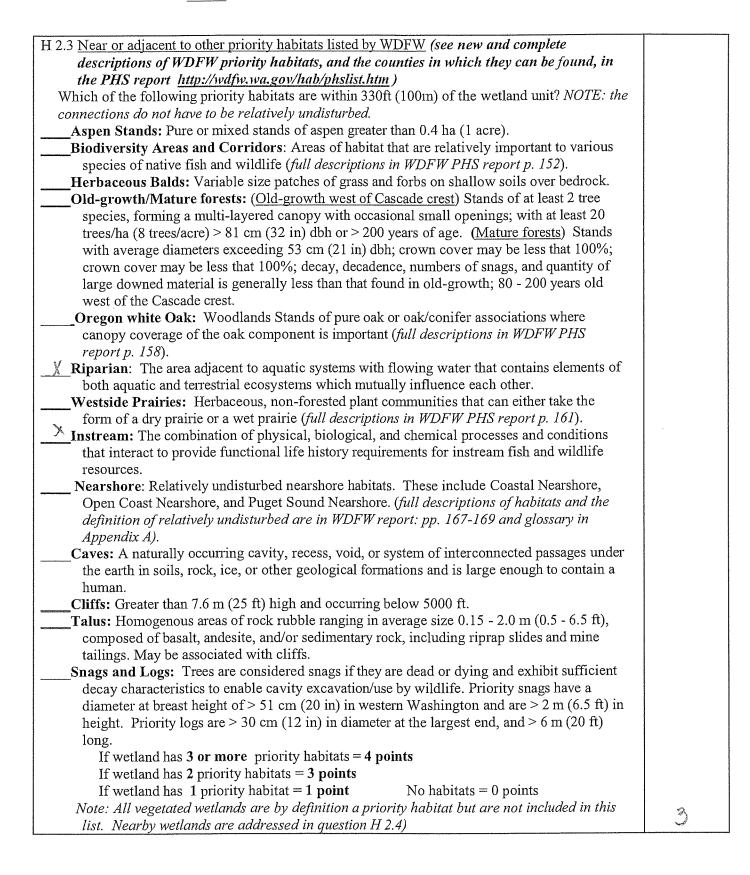
These questions apply to wetlands of all I		habitat	Points (only I score per box)
H 1. Does the wetland unit have the potential			
H 1.1 Vegetation structure (see p. 72) Check the types of vegetation classes present (as declass is ¼ acre or more than 10% of the area if a Aquatic bed X Emergent plants Corub/shrub (areas where shrubs have > 1/2 Forested (areas where trees have > 30% of 1/2 If the unit has a forested class check if: The forested class has 3 out of 5 strata (efined by Cowardin)- Size thres unit is smaller than 2.5 acres. 30% cover) cover) (canopy, sub-canopy, shrubs, he	hold for each	Figure
moss/ground-cover) that each cover Add the number of vegetation structures that quality		П	
Map of Cowardin vegetation classes	4 structures or more 3 structures 2 structures 1 structure	points = 4 points = 2 points = 1 points = 0	il de la constante de la const
H 1.2. Hydroperiods (see p. 73) Check the types of water regimes (hydroperiod regime has to cover more than 10% of the wetlad descriptions of hydroperiods) X Permanently flooded or inundated	and or ¼ acre to count. (see text 4 or more types presen	for t points = 3	Figure
 X Seasonally flooded or inundated Occasionally flooded or inundated Saturated only Y Permanently flowing stream or river in, of Seasonally flowing stream in, or adjacent 			
Lake-fringe wetland = 2 points X Freshwater tidal wetland = 2 points	Map of hyd	roperiods	
H 1.3. Richness of Plant Species (see p. 75) Count the number of plant species in the wetla of the same species can be combined to meet the You do not have to name the species. Do not include Eurasian Milfoil, reed cand If you counted: List species below if you want to:	nd that cover at least 10 ft ² . (dinhe size threshold) arygrass, purple loosestrife, Co		
			1

Total for page _____

	Fia
H 1.4. Interspersion of habitats (see p. 76) Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.	Figure
None = 0 points $Low = 1$ point $Moderate = 2$ points	
[riparian braided channels]	
High = 3 points	
NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes	3
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. Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).	
Standing snags (diameter at the bottom > 4 inches) in the wetland	
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)	
Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet turned grey/brown)	
At least ¼ 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) 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.	
H 1. TOTAL Score - potential for providing habitat Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5	1 (3

I 2. Does the wetland unit have the opportunity	to provide habitat for many species?	
H 2.1 Buffers (see p. 80)		Figure
Choose the description that best represents condition of	buffer of wetland unit. The highest scoring	
riterion that applies to the wetland is to be used in the	rating. See text for definition of	
undisturbed."		
— 100 m (330ft) of relatively undisturbed vegetate	ed areas, rocky areas, or open water >95%	
of circumference. No structures are within the	undisturbed part of buffer. (relatively	
undisturbed also means no-grazing, no landscap	oing, no daily human use) Points = 5	
— 100 m (330 ft) of relatively undisturbed vegetate	ed areas, rocky areas, or open water >	
50% circumference.	Points = 4	
— 50 m (170ft) of relatively undisturbed vegetated	d areas, rocky areas, or open water >95%	
circumference.	Points = 4	
— 100 m (330ft) of relatively undisturbed vegetate	ed areas, rocky areas, or open water > 25%	
circumference, .	Points = 3	
— 50 m (170ft) of relatively undisturbed vegetated	d areas, rocky areas, or open water for >	
50% circumference.	Points = 3	ļ
If buffer does not meet any	of the criteria above	
No paved areas (except paved trails) or building		
circumference. Light to moderate grazing, or la		
 No paved areas or buildings within 50m of wetl 		
Light to moderate grazing, or lawns are OK.	Points = 2	
— Heavy grazing in buffer.	Points = 1	
 Vegetated buffers are <2m wide (6.6ft) for more 	e than 95% of the circumference (e.g. tilled	
fields, paving, basalt bedrock extend to edge of	wetland $Points = 0$.	
 Buffer does not meet any of the criteria above. 	Points = 1	2
	rial photo showing buffers	L
H 2.2 Corridors and Connections (see p. 81)		
H 2.2.1 Is the wetland part of a relatively undistur		
(either riparian or upland) that is at least 150 ft wi	de, has at least 30% cover of shrubs, forest	
or native undisturbed prairie, that connects to estu		
uplands that are at least 250 acres in size? (dams		
roads, paved roads, are considered breaks in the		
YES = 4 points (go to H 2.3)	NO = go to H 2.2.2	
H 2.2.2 Is the wetland part of a relatively undistur		
(either riparian or upland) that is at least 50ft wide	e, has at least 30% cover of shrubs or	
forest, and connects to estuaries, other wetlands o		
acres in size? OR a Lake-fringe wetland, if it do	es not have an undisturbed corridor as in	
the question above?	NO HOO?	
YES = 2 points (go to H 2.3)	NO = H 2.2.3	
H 2.2.3 Is the wetland:		
within 5 mi (8km) of a brackish or salt wat		
within 3 mi of a large field or pasture (>40		
within 1 mi of a lake greater than 20 acres		2
YES = 1 point	NO = 0 points	<u> </u>

Total for page_____



H 2.4 Wetland Landscape (choose the one description of the landscape around the wetland that	
best fits) (see p. 84)	
There are at least 3 other wetlands within ½ 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 ½ mile points = 5	
There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3	
The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3	
There is at least 1 wetland within $\frac{1}{2}$ mile. points = 2	
There are no wetlands within ½ mile. points = 0	3
H 2. TOTAL Score - opportunity for providing habitat Add the scores from H2.1,H2.2, H2.3, H2.4	10
TOTAL for H 1 from page 14	13
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	23

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

to the wetland. Circle the Category when the
p. 86)
ollowing criteria for Estuarine wetlands?
egime is tidal,
r than 0.5 ppt. NO
ithin a National Wildlife Refuge, National Park, , Natural Area Preserve, State Park or Educational, ific Reserve designated under WAC 332-30-151?
NO go to SC 1.2
least 1 acre in size and meets at least two of the
s? YES = Category I NO = Category II ely undisturbed (has no diking, ditching, filling, Cat. II
nd has less than 10% cover of non-native plant
tive Spartina spp. are the only species that cover
wetland, then the wetland should be given a dual of Spartina would be rated a Category II while the rating
upper marsh with native species would be a I/II
owever, exclude the area of Spartina in
hreshold of 1 acre.
•
ast 2 of the following features: tidal channels, a water, or contiguous freshwater wetlands.
ward edge of the wetland has a 100 ft buffer of razed or un-mowed grassland. ast 2 of the following features: tidal channels,

Natura Progra state T SC 2	m/DNR as either high quality hreatened, Endangered, or Se .1 Is the wetland unit being ra Natural Heritage wetland? before you need to contact information from Appendix D	n identified by the Washington Natural Heritage with undisturbed wetlands or wetlands that support ensitive plant species. Attention is used to screen out most sites	Cat. I
	2 Has DNR identified the we a site with state threatened or YES = Category I	etland as a high quality undisturbed wetland or as rendangered plant species? NOnot a Heritage Wetland	
5578545453			
Does the vegetate answer	tion in bogs? Use the key below yes you will still need to rate. Does the unit have organic so peats or mucks, that compos	of the unit) meet both the criteria for soils and ow to identify if the wetland is a bog. If you te the wetland based on its functions. soil horizons (i.e. layers of organic soil), either the 16 inches or more of the first 32 inches of the B for a field key to identify organic soils)? Yes -	
2.	inches deep over bedrock, or	No - go to Q. 2 soils, either peats or mucks that are less than 16 r an impermeable hardpan such as clay or	
	volcanic ash, or that are floa		
3.	other plants, if present, cons	No - Is not a bog for purpose of rating in 70% cover of mosses at ground level, AND ist of the "bog" species listed in Table 3 as a evegetation (more than 30% of the total shrub its of species in Table 3)?	
	Yes – Is a bog for pur	rpose of rating No - go to Q. 4	
	NOTE: If you are uncert you may substitute that of seeps into a hole dug at l	cain about the extent of mosses in the understory criterion by measuring the pH of the water that least 16" deep. If the pH is less than 5.0 and the able 3 are present, the wetland is a bog.	
I.	red cedar, western hemlock, spruce, or western white pin species) on the bog species j	cover) with sitka spruce, subalpine fir, western lodgepole pine, quaking aspen, Englemann's ne, WITH any of the species (or combination of plant list in Table 3 as a significant component of coverage of the total shrub/herbaceous cover)?	
2.	YES = Category I	No Is not a bog for purpose of rating	Cat. I
1.4			1

SC 4.0 Forested Wetlands (see p. 90)		
Does the wetland unit have at least 1 acre of forest that meet one of these criteria for		
the Department of Fish and Wildlife's forests as priority habitats? If you answer yes		
you will still need to rate the wetland based on its functions.		
— Old-growth forests: (west of Cascade crest) Stands of at least two tree species,		
forming a multi-layered canopy with occasional small openings; with at least 8		
trees/acre (20 trees/hectare) that are at least 200 years of age OR have a		
diameter at breast height (dbh) of 32 inches (81 cm) or more.		
NOTE: The criterion for dbh is based on measurements for upland forests.		
Two-hundred year old trees in wetlands will often have a smaller dbh		
because their growth rates are often slower. The DFW criterion is and "OR"		
so old-growth forests do not necessarily have to have trees of this diameter.		
— Mature forests: (west of the Cascade Crest) Stands where the largest trees are		
80 – 200 years old OR have average diameters (dbh) exceeding 21 inches		
(53cm); crown cover may be less that 100%; decay, decadence, numbers of		
snags, and quantity of large downed material is generally less than that found	,	
in old-growth.		
YES = Category I NO not a forested wetland with special characteristics	Cat. I	
SC 5.0 Wetlands in Coastal Lagoons (see p. 91)		
Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?		
— The wetland lies in a depression adjacent to marine waters that is wholly		
or partially separated from marine waters by sandbanks, gravel banks,		
shingle, or, less frequently, rocks		
— The lagoon in which the wetland is located contains surface water that is		
saline or brackish (> 0.5 ppt) during most of the year in at least a portion		
of the lagoon (needs to be measured near the bottom) YES = Go to SC 5.1 NO not a wetland in a coastal lagoon		
I ES – Go to SC 3.1 NO not a wetland in a coastal lagoon		
SC 5.1 Does the wetland meets all of the following three conditions?		
— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant		
species (see list of invasive species on p. 74).		
— At least ¾ of the landward edge of the wetland has a 100 ft buffer of		
shrub, forest, or un-grazed or un-mowed grassland.	Cat. I	
— The wetland is larger than 1/10 acre (4350 square feet)		
YES = Category I NO = Category II	Cat. II	

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

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