Wetland name or number _____

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 X 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 X 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 X 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 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. II** **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	N/A

Routine Wetland Determination

DATA FORM 1 *(Revised)*

WA State Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

7.2L

Project/Site: 405 BRAIDS Applicant/owner: WSDOT Investigator(s): Douglas, Pursley	Date: 10/24/06 County: King State: WA S/T/R: 19 25N 5E
Do normal circumstances exist on the site? ☑ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☑ No Is the area a potential problem area? ☐ Yes ☑ No Explanation of atypical or problem area:	Community ID: — Transect ID: — Plot ID: SP II 1 (W)

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
ALNRUB	T	50	FAC	LYSAMI	H	20	OBL
POPA	T	40	FAC	RUBSPE	S	40	FACU
RUBARM	S	30	FACW	SPIDOU	S	30	FACW
SOLDUL	H	10	FACU	~~ARRA~~ AFEL	H	20	FACU
EQUARV	H	10	FAC	SCIRIC	H	10	OBL

HYDROPHYTIC VEGETATION INDICATORS: T = 90/90 = 100%, S = 70/100 = 70%, H = 40/40 = 100%

% of dominants OBL, FACW, & FAC: 200/230 = 87%

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☑ Wetland plant database
- ☑ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☑ Yes ☐ No

Rationale for decision/Remarks: 87% Dom. WET. VEG.

HYDROLOGY

Is it the growing season? ☑ Yes ☐ No	Water Marks: ☐ Yes ☑ No on	Sediment Deposits: ☐ Yes ☑ No
Based on: ☐ Soil temp (record temp) ☑ Other (explain) October	Drift Lines: ☐ Yes ☑ No	Drainage Patterns: ☑ Yes ☐ No
Depth of inundation: Ø inches	Oxidized Root (live roots) Channels <12 in.: ☐ Yes ☑ No	Local Soil Survey: ☐ Yes ☑ No
Depth to free water in pit: 6" Depth to saturated soil: @ Surface	FAC Neutral: ☑ Yes ☐ No	Water-stained Leaves: ☑ Yes ☐ No
Check all that apply & explain below: ☐ Stream, lake or gage data ☐ Aerial photographs ☐ Other	Other (explain):	

Wetland hydrology present? ☑ Yes ☐ No

Rationale for decision/remarks: Saturation, free water, drainage, stained leaves

SOILS

Map Unit Name (Series and Phase): EvC Everett Gravelly Sandy loam

Taxonomy (subgroup)

Drainage Class

Field observations confirm mapped type? ☐ Yes ☑ No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-18"	A	10YR 2/1	—	—	Loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☑ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☑ Yes ☐ No

Rationale for decision/Remarks: Low Chroma

Wetland Determination

Hydrophytic vegetation present?	☑ Yes	☐ No
Hydric soils present?	☑ Yes	☐ No
Wetland hydrology present?	☑ Yes	☐ No
Is the sampling point within a wetland?	☑ Yes	☐ No

Rationale/Remarks: 3 of 3 parameters

NOTES: Associated with drainage w/ flow during delineation

Revised 4/97

Routine Wetland Determination

DATA FORM 1 *(Revised)*

WA State Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual) 7.2L

Project/Site: 405 BRAIDS Applicant/owner: WSDOT Investigator(s): Douglas, Pursley	Date: 10/24/06 County: King State: WA S/T/R: 19/25N/5E
Do normal circumstances exist on the site? ☑ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☑ No Is the area a potential problem area? ☐ Yes ☑ No Explanation of atypical or problem area:	Community ID: — Transect ID: — Plot ID: Sp #2 (up)

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
RUBARM	S	95	FACU				
ACEMAC	T	10	FACU				
ALNRUB	T	70	FAC				
POBA	T	20	FAC				

HYDROPHYTIC VEGETATION INDICATORS: T = 90/90 = 100%, S = 0/95 = Ø

% of dominants OBL, FACW, & FAC: 90/185 = 49%

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☑ Wetland plant database
- ☑ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☐ Yes ☑ No

Rationale for decision/Remarks: 49% Dom. Wet. Veg.

HYDROLOGY

Is it the growing season? ☑ Yes ☐ No	Water Marks: ☐ Yes ☑ No on	Sediment Deposits: ☐ Yes ☑ No
Based on: ☐ Soil temp (record temp) ☑ Other (explain) October	Drift Lines: ☐ Yes ☑ No	Drainage Patterns: ☐ Yes ☑ No
Depth of inundation: Ø inches	Oxidized Root (live roots) Channels <12 in: ☐ Yes ☑ No	Local Soil Survey: ☐ Yes ☑ No
Depth to free water in pit: Ø to 18"	FAC Neutral: ☐ Yes ☑ No	Water-stained Leaves: ☐ Yes ☑ No
Depth to saturated soil: Ø to 18"		
Check all that apply & explain below: ☐ Stream, lake or gage data ☐ Aerial photographs ☐ Other	Other (explain):	

Wetland hydrology present? ☐ Yes ☑ No

Rationale for decision/remarks: No hydric indicators

SOILS

Map Unit Name (Series and Phase): EVC: Everett Gravelly sandy loam

Drainage Class

Field observations confirm mapped type? ☒ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-3"		10YR 3/3			Sandy loam	w/ gravel
3-18"+		10YR 3/3			fill, gravel &	angular rock

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks: No hydric features on fill

Wetland Determination

Hydrophytic vegetation present?	☐ Yes	☒ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☐ Yes	☒ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks: 0 of 3 parameters

NOTES: Wetland at toe of fill prism.

Revised 4/97

Wetland name or number 7.3R

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): 7.3 R Date of site visit: 12/20/2006

Rated by CKD Trained by Ecology? Yes__ No X Date of training____

SEC: 28 TWNSHP: 25N RNGE: 5E Is S/T/R in Appendix D? Yes___ No X

Map of wetland unit: Figure ____ Estimated size 4.14

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I___ II X III___ IV___

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

Score for Water Quality Functions	20
Score for Hydrologic Functions	32
Score for Habitat Functions	15
TOTAL score for Functions	67

Category based on SPECIAL CHARACTERISTICS of wetland

I___ II___ Does not Apply X

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

Summary of basic information about the wetland unit

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

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.		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.

Wetland name or number 7,3R

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 number 7.3R

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

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

X The overbank flooding occurs at least once every two years.

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

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

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time 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.

Wetland name or number 7,3R

		Points (only 1 score per box)
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 <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 No depressions present points = 0	Figure ___ 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 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 ___ 8
R	*Add the points in the boxes above*	10
R	**R 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 — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 feet of wetland X A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging X Residential, urban areas, golf courses are within 150 ft of wetland — The river or stream linked to the wetland has a contributing basin where human activities have raised levels of sediment, toxic compounds or nutrients in the river water above standards for water quality — Other _____ **YES** multiplier is **2** **NO** multiplier is **1**	*(see p.53)* multiplier 2
R	**<u>TOTAL</u> - Water Quality Functions** Multiply the score from R 1 by R 2 ***Add score to table on p. 1***	20

Comments

Wetland name or number 7.3R

		Points (only 1 score per box)
R	**Riverine and Freshwater Tidal Fringe Wetlands** HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion	*(see p.54)*
	R 3. Does the wetland unit have the potential to reduce flooding and erosion?	Figure ___
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 points = 1 Aerial photo or map showing average widths	9
		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	7
	Add the points in the boxes above	16
R		*(see p.57)*
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. X There are natural resources downstream (e.g. salmon redds) that can be damaged by flooding — Other _____ *(Answer NO if the major source of water to the wetland is controlled by a reservoir or the wetland is tidal fringe along the sides of a dike)* **YES** multiplier is **2** **NO** multiplier is **1**	multiplier 2
R	**TOTAL - Hydrologic Functions** Multiply the score from R 3 by R 4 ***Add score to table on p. 1***	32

Comments

Wetland name or number 7.3R

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat	**Points** (only 1 score per box)
H 1. Does the wetland unit have the <u>potential</u> to provide habitat for many species?	
H 1.1 <u>Vegetation structure</u> ***(see p. 72)*** *Check the types of vegetation classes present (as defined by Cowardin)- Size threshold for each class is ¼ acre or more than 10% of the area if unit is smaller than 2.5 acres.* ____Aquatic bed X Emergent plants X 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 20% within the forested polygon *Add the number of vegetation structures that qualify. If you have:* 4 structures or more — points = 4 3 structures — points = 2 2 structures — points = 1 1 structure — points = 0 Map of Cowardin vegetation classes	Figure ___ 2
H 1.2. <u>Hydroperiods</u> ***(see p. 73)*** *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)* ____Permanently flooded or inundated X Seasonally flooded or inundated ____Occasionally flooded or inundated ____Saturated only 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*** 4 or more types present — points = 3 3 types present — points = 2 2 types present — point = 1 1 type present — points = 0 Map of hydroperiods	Figure ___ 1
H 1.3. <u>Richness of Plant Species</u> ***(see p. 75)*** Count the number of plant species in the wetland that cover at least 10 ft^2. *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle* *List species below if you want to:* If you counted: > 19 species — points = 2 5 - 19 species — points = 1 < 5 species — points = 0	2

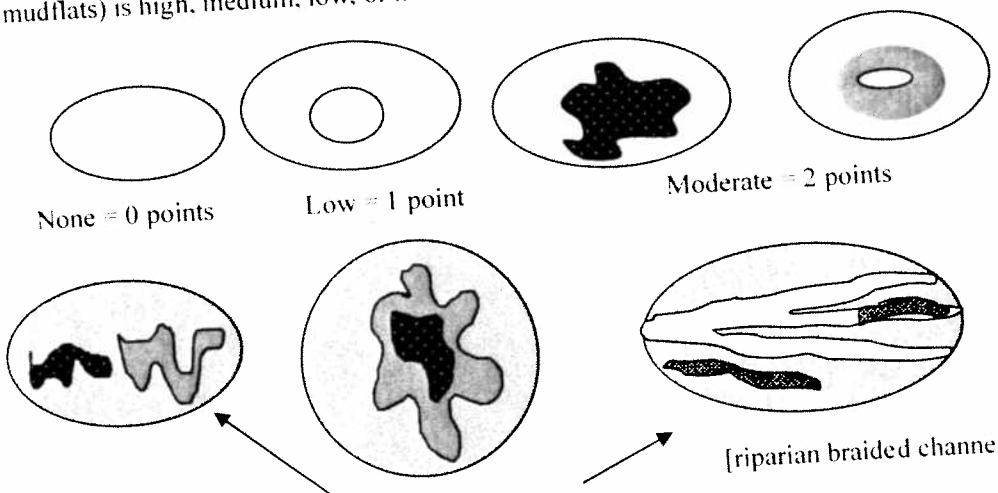
Total for page 5

Wetland name or number 7.3R

Figure ___

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.



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.

X Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).

X 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)*

X 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.

3

H 1. TOTAL Score - potential for providing habitat

Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5

11

Comments

Wetland name or number 7.3A

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 Buffers ***(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** — 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.** X Buffer does not meet any of the criteria above. **Points = 1** Aerial photo showing buffers	Figure ___ 1
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? YES = **1 point** NO = **0 points**	0

Total for page 1

Wetland name or number 7,3R

H 2.3 Near or adjacent to other priority habitats listed by WDFW *(see p. 82)*

Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.*

These are DFW definitions. Check with your local DFW biologist if there are any questions.

____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.8 ha (2 acres).

____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.

____**Old-growth forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 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.

____**Prairies:** Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.

____**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.

____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages

____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.

____**Urban Natural Open Space**: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other *priority habitats*, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.

____**Estuary/Estuary-like:** Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5ppt. during the period of average annual low flow. Includes both estuaries and lagoons.

____**Marine/Estuarine Shorelines**: Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).

If wetland has **3 or more** priority habitats = **4 points**

If wetland has **2** priority habitats = **3 points**

If wetland has **1** priority habitat = **1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

0

Wetland name or number _____

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 ½ 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*	4
TOTAL for H 1 from page 14	11
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	15

Wetland name or number 73R

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? YES = Category I NO go to SC 1.2	**Cat. I**
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 — 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 *Spartina* 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 ¼ 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.	**Cat. I** **Cat. II** **Dual rating I/II**

Wetland name or number _____

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 X or accessed from WNHP/DNR web site ___ YES____ – contact WNHP/DNR (see p. 79) and go to SC 2.2 NO X 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 X 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. *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 X Is not a bog for purpose of rating	**Cat. I**

Wetland name or number _____

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 X 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 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. II** **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	NA

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

7.3 R

Project/Site: Bellevue Braids
Applicant/owner: WSDOT
Investigator(s): CKD / JP / AMG

Date: 12/20/2006
County: KING
State: WA
S/T/R:

Do Normal Circumstances exist on the site? (yes) no
Is the site significantly disturbed (atypical situation)? yes (no)
Is the area a potential Problem Area? yes (no)
Explanation of atypical or problem area:

Community ID: –
Transect ID: —
Plot ID: 1-Up

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Ala rubra	T	80	Fac				
Rub. arm	S	80	FacU				
Salix lasiar	T	20	FacW+				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 55%

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation X
Morphological adaptations ____
Technical Literature ____
Physiological/reproductive adaptations
Wetland plant database ____
Personal knowledge of regional plant communities ____
Other (explain) X

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? yes (no)

Based on: ____ soil temp (record temp ____)
time of year other (explain)

Dept. of inundation: Ø inches
Depth to free water in pit: Ø inches
Depth to saturated soil: Ø inches

Check all that apply & explain below:
Stream, Lake or gage data: ____
Aerial photographs: ____
Other: ____

Water Marks: yes (no) on	Sediment Deposits: yes (no)
Drift Lines: yes (no)	Drainage Patterns: yes (no)
Oxidized Root (live roots) Channels <12 in. yes (no)	Local Soil Survey: yes (no)
FAC Neutral: yes (no)	Water-stained Leaves yes (no)
Other (explain): Upland fill	

Wetland hydrology present? yes (no)
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) Sk (Seattle Muck)

Drainage Class —

Field observations confirm mapped type? Yes (No)

Taxonomy (subgroup) —

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6	A	10 YR 4/3	—	—	Sandy loam	
6-18	A-B	10 YR 6/4	—	—	Sandy loam w/gravel fill prism	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma δ 2 with mottles
- ____ Mg or Fe Concretions
- ____ High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ____ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? yes (no)

Rationale for decision/Remarks:

Fill

Wetland Determination (circle)

Hydrophytic vegetation present?	(yes)	no	Is the sampling point within a wetland?	yes (no)
Hydric soils present?	yes	(no)		
Wetland hydrology present?	yes	(no)		

Rationale/Remarks:

No hydric soils were present due to chroma and fill.
Hydrophytic vegetation present.

NOTES:

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

7.3 R

Project/Site: Bellevue Braids
Date: 12/20/2006
Applicant/owner: WSDOT
County: KWC
State: WA
Investigator(s): CKD/JP/AMG
S/T/R:

Do Normal Circumstances exist on the site? (yes) no
Is the site significantly disturbed (atypical situation)? yes (no)
Is the area a potential Problem Area? yes (no)
Explanation of atypical or problem area:

Community ID: –
Transect ID: –
Plot ID: 2-WET

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Alnus rubra	T	30	FAC	Rub arm	S	10	FacW
Athyr fil-fem	H	20	Fac+	Rub spec	S	20	Fac+
Bet papy	T	20	fac	Sal las	T	40	FacW+
Corn seric	S	60	Fac W	Spir doug	S	20	FacW
Phal arund	H	30	FacW				
Pop trich	T	30	Fac				
				190 90 280			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 89% 250/280

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation X
Morphological adaptations ____
Technical Literature ____
Physiological/reproductive adaptations ____
Wetland plant database ____
Personal knowledge of regional plant communities ____
Other (explain) X

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? yes (no)
Based on: December soil temp (record temp ____) other (explain)

Dept. of inundation: 0 inches
Depth to free water in pit: 6 inches
Depth to saturated soil: 0 inches Surface

Check all that apply & explain below:
Stream, Lake or gage data: ____
Aerial photographs: ____
Other:

Water Marks: yes (no) on
Sediment Deposits: (yes) no
Drift Lines: (yes) no
Drainage Patterns: (yes) no
Oxidized Root (live roots) Channels <12 in. yes (no)
Local Soil Survey: yes (no)
FAC Neutral: yes (no)
Water-stained Leaves yes no
Other (explain):

Wetland hydrology present? (yes) no
Rationale for decision/Remarks:
Saturated at surface & Depth to free water at 8 in.

SOILS

Map Unit Name (Series & Phase) Sk Seattle muck

Drainage Class _____

Field observations confirm mapped type? Yes No

Taxonomy (subgroup) _____

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-8	A	10 YR 2/1			Loam	
8-18	A-B	10 YR 2/1	10YR 6/4	C, C, D	Sandy loam	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- X Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma δ 2 with mottles
- ____ Mg or Fe Concretions
- ____ High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ____ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? (yes) no

Rationale for decision/Remarks:

Wetland Determination (circle)

Hydrophytic vegetation present? (yes) no

Hydric soils present? (yes) no

Wetland hydrology present? (yes) no

Is the sampling point within a wetland? (yes) no

Rationale/Remarks: Met all 3 parameters

NOTES:

Revised 4/97

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

7.3 R

Project/Site: Bellevue Braids
Applicant/owner: WSDOT
Investigator(s): CKD, JP, AMG

Date: 12/20/2006
County: KING
State: WA
S/T/R:

Do Normal Circumstances exist on the site? (yes) no
Is the site significantly disturbed (atypical situation)? yes (no)
Is the area a potential Problem Area? yes (no)
Explanation of atypical or problem area:

Community ID: –
Transect ID: –
Plot ID: 3-WET

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Aln Rub	T	40	FAC	Rub lacin	S	5	FacU+
Corn ser	S	40	FacW	Rub urs	S	10	Fac U
Epilob watsi	H	10	FacU-	Sal hsi	T	20	FacW+
Lonicera invol	S	10	Fac +	Symb rac	S	10	Fac U
Phal arun	H	10	FacW	Thuja plic	T	30	Fac
Rub arm	S	10	Fac U	Urtica dioc	H	30	Fac +
		120				105	

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 80% 180/225

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation ✓
Morphological adaptations ____
Technical Literature ____
Physiological/reproductive adaptations ____
Wetland plant database ____
Personal knowledge of regional plant communities ____
Other (explain) ✗

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? yes (no)
Based on: _____ soil temp (record temp _____)
other (explain)

Dept. of inundation: 0 inches
Depth to free water in pit: 4 inches
Depth to saturated soil: 0 inches

Water Marks: yes (no) on
Drift Lines: (yes) no
Oxidized Root (live roots) Channels <12 in. yes (no)
FAC Neutral: yes (no)
Sediment Deposits: (yes) no
Drainage Patterns: (yes) no
Local Soil Survey: yes (no)
Water-stained Leaves: (yes) no
Other (explain):

Check all that apply & explain below:
Stream. Lake or gage data: ____
Aerial photographs: ____
Other:

Wetland hydrology present? (yes) no
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) Sk Seattle Muck

Drainage Class _____

Field observations confirm mapped type? (Yes) No

Taxonomy (subgroup) _____

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-18	A-B	10YR 2/1			Loam	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- X Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma δ 2 with mottles
- ____ Mg or Fe Concretions
- ____ High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ____ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? (yes) no

Rationale for decision/Remarks:

Wetland Determination (circle)

Hydrophytic vegetation present? (yes) no

Hydric soils present? (yes) no

Wetland hydrology present? (yes) no

Is the sampling point within a wetland? yes (no)

Rationale/Remarks:

NOTES:

Revised 4/97

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Z3 R

Project/Site: Bellevue Brands
Applicant/owner: WSDOT
Investigator(s): CKD / JP / AMG

Date: 12/20/2006
County: King
State: WA
S/T/R:

Do Normal Circumstances exist on the site? (yes) no
Is the site significantly disturbed (atypical situation)? yes (no)
Is the area a potential Problem Area? yes (no)
Explanation of atypical or problem area:

Community ID: —
Transect ID: —
Plot ID: 4-UP

VEGETATION

(For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Alnus rub	T	30	Fac				
Cystis scop	S	20	Fac UP				
Rub. arm	S	90	Fac U				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 21% Not hydrophytic Domi. < 50%

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation X
Morphological adaptations ___
Technical Literature ___
Physiological/reproductive adaptations
Wetland plant database ___
Personal knowledge of regional plant communities ___
Other (explain) X

Hydrophytic vegetation present? yes (no)
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? yes no

Based on: _____ soil temp (record temp _____)
other (explain)

Dept. of inundation: Ø inches
Depth to free water in pit: Ø inches
Depth to saturated soil: Ø inches

Check all that apply & explain below:
Stream, Lake or gage data: ___
Aerial photographs: ___
Other:

Water Marks: yes (no) on	Sediment Deposits: yes (no)
Drift Lines: yes (no)	Drainage Patterns: yes (no)
Oxidized Root (live roots) Channels <12 in. yes (no)	Local Soil Survey: yes (no)
FAC Neutral: yes (no)	Water-stained Leaves yes (no)
Other (explain):	

Wetland hydrology present? yes (no)
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) Sk Seattle Muck

Drainage Class _____

Field observations confirm mapped type? Yes No

Taxonomy (subgroup) _____

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-4	A	10 YR 5/4			Loamy Sand w/ GRAVEL	
4-18	A-B	Sand			SAND, GRAVEL, COBBLE FILL PRISM	

Hydric Soil Indicators: (check all that apply)

- _____ Histosol
- _____ Histic Epipedon
- _____ Sulfidic Odor
- _____ Aquic Moisture Regime
- _____ Reducing Conditions
- _____ Gleyed or Low-Chroma (=1) matrix
- _____ Matrix chroma δ 2 with mottles
- _____ Mg or Fe Concretions
- _____ High Organic Content in Surface Layer of Sandy Soils
- _____ Organic Streaking in Sandy Soils
- _____ Listed on National/Local Hydric Soils List
- _____ Other (explain in remarks)

Hydric soils present? yes no

Rationale for decision/Remarks:

Wetland Determination (circle)

Hydrophytic vegetation present? yes no

Hydric soils present? yes no

Wetland hydrology present? yes no

Is the sampling point within a wetland? yes no

Rationale/Remarks:

NOTES:

Wetland name or number 8.1 L

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): 8.1 L Date of site visit: 1/4/2007

Rated by Joe P, Adam G Trained by Ecology? Yes__ No X Date of training____

SEC: 28 TWNSHP: 25N RNGE: 5E Is S/T/R in Appendix D? Yes___ No X

Map of wetland unit: Figure ____ Estimated size 0.04 acre

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I___ II___ III X IV___

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

Score for Water Quality Functions	20
Score for Hydrologic Functions	2
Score for Habitat Functions	11
TOTAL score for Functions	33

Category based on SPECIAL CHARACTERISTICS of wetland

I___ II___ Does not Apply X

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

Summary of basic information about the wetland unit

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

Wetland name or number 8.1L

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.		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.

Wetland name or number 8.1 L

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 number 8.1L

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.

Wetland name or number 8.1L

		Points (only 1 score per box)
D	**Depressional and Flats Wetlands** **WATER QUALITY FUNCTIONS** - Indicators that the wetland unit functions to improve water quality	
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) points = 3 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 ___ 1
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*) ~~YES~~ points = 4 NO points = 0	4
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 ___ 3
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 > 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 Map of Hydroperiods	Figure ___ 2
D	**Total for D 1** *Add the points in the boxes above*	10
D	**D 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 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 X 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 2
D	**<u>TOTAL</u> - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	20

Wetland name or number 8.1L

		Points (only 1 score per box)
D	**Depressional and Flats Wetlands** HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	*(see p.46)*
	D 3. Does the wetland unit have the potential to reduce flooding and erosion?	
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) points = 4 Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 Unit is a "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	1
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	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	0
D	**Total for D 3** *Add the points in the boxes above*	1
		(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**	multiplier 2
D	**TOTAL - Hydrologic Functions** Multiply the score from D 3 by D 4 ***Add score to table on p. 1***	2

Wetland name or number 8.1 L

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that unit functions to provide important 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)***

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
X Emergent plants
X Scrub/shrub (areas where shrubs have >30% cover)
X 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 20% within the forested polygon

Add the number of vegetation structures that qualify. If you have:

Map of Cowardin vegetation classes

4 structures or more	points = 4
3 structures	points = 2
2 structures	points = 1
1 structure	points = 0

Figure ___ 2

H 1.2. Hydroperiods ***(see p. 73)***

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)

____Permanently flooded or inundated
X Seasonally flooded or inundated
____Occasionally flooded or inundated
____Saturated only
____Permanently flowing stream or river in, or adjacent to, the wetland
X Seasonally flowing stream in, or adjacent to, the wetland
____***Lake-fringe wetland*** **= 2 points**
____***Freshwater tidal wetland*** **= 2 points**

4 or more types present	points = 3
3 types present	points = 2
2 types present	point = 1
1 type present	points = 0

Map of hydroperiods

Figure ___ 1

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

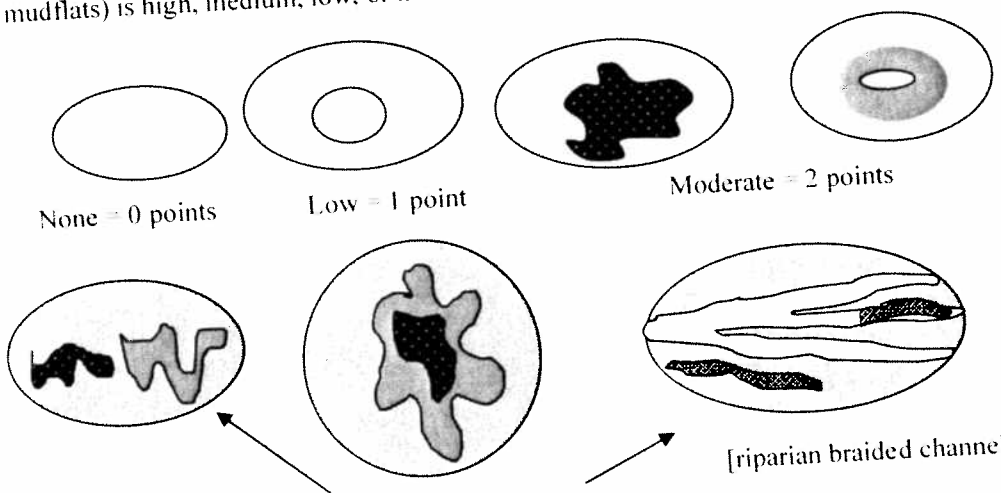
List species below if you want to:

If you counted:	
> 19 species	points = 2
5 - 19 species	points = 1
< 5 species	points 0

1

Total for page 4

Wetland name or number 8c1L

	Figure ___
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.  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	2
H 1.5. Special Habitat Features: *(see p. 77)* *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* X 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.*	1
H 1. TOTAL Score - potential for providing habitat *Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5*	7

Comments

Wetland name or number 8.1L

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 Buffers *(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** — 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.** X Buffer does not meet any of the criteria above. **Points = 1** Aerial photo showing buffers	Figure ___ 1
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? YES = **1 point** NO = **0 points**	0

Total for page 1

Wetland name or number 8.1L

H 2.3 Near or adjacent to other priority habitats listed by WDFW *(see p. 82)*

Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.*

These are DFW definitions. Check with your local DFW biologist if there are any questions.

____**Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

____**Aspen Stands:** Pure or mixed stands of aspen greater than 0.8 ha (2 acres).

____**Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.

____**Old-growth forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 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.

____**Prairies:** Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.

____**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.

____**Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages

____**Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.

____**Urban Natural Open Space**: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other *priority habitats*, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.

____**Estuary/Estuary-like:** Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5ppt. during the period of average annual low flow. Includes both estuaries and lagoons.

____**Marine/Estuarine Shorelines**: Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).

If wetland has **3 or more** priority habitats = **4 points**

If wetland has **2** priority habitats **3 points**

If wetland has **1** priority habitat = **1 point** No habitats = 0 points

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)

0

Wetland name or number _____

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 ½ 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*	4
TOTAL for H 1 from page 14	7
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	11

Wetland name or number 8.1L

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? YES = Category I NO go to SC 1.2	**Cat. I**
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 — 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 *Spartina* 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. — The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual rating I/II**

Wetland name or number 8.1L

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 X 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 X 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. *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 X Is not a bog for purpose of rating	**Cat. I**

Wetland name or number 8.1L

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 X 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 X 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 8.1 L

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 X 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 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. II** **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	N/A

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project/Site: I-405 Bellevue Braids
Date: 1-4-2007
Applicant/owner: WSDOT
County: King
State: WA
Investigator(s): Pursley / Gale
S/T/R: 28 25N 5E
Do Normal Circumstances exist on the site? (yes) no
Is the site significantly disturbed (atypical situation)? yes (no)
Is the area a potential Problem Area? yes (no)
Explanation of atypical or problem area:
Community ID: — Wetland
Transect ID: —
Plot ID: 8.1L SP-1

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Rubus armeniacus	S	20	Fac U				
Salix lasiandra	T	20	Fac W				
Equisetum sp.	H	5	Fac				
Rubus spectabalis	S	5	Fac				
Alnus rubra	T	20	Fac				
Rorripa palustris	H	10	OBL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC ~~100%~~ TRP 75 %

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation ✓
Morphological adaptations ___
Technical Literature ___
Physiological/reproductive adaptations ___
Wetland plant database ___
Personal knowledge of regional plant communities ___
Other (explain) ✓

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? yes (no)
Based on: ___ soil temp (record temp ___)
Time of year other (explain)
Dept. of inundation: surface inches
Depth to free water in pit: 3 inches
Depth to saturated soil: surface inches

Water Marks: yes (no) on
Sediment Deposits: (yes) no
Drift Lines: yes (no)
Drainage Patterns: (yes) no
Oxidized Root (live roots) Channels <12 in. yes (no)
Local Soil Survey: yes (no)
FAC Neutral: (yes) no
Water-stained Leaves (yes) no
Other (explain):

Check all that apply & explain below:
Stream, Lake or gage data: ___
Aerial photographs: ___
Other:

Wetland hydrology present? (yes) no
Rationale for decision/Remarks:

SOILS

Map Unit Name (Series & Phase) EvC (Everett gravelly sandy loam)

Drainage Class —

Field observations confirm mapped type? Yes (No)

Taxonomy (subgroup)

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-1	O	10yr 2/1	—	—	Muck/Organic	
2-6	A	10yr 2/2	—	—	Silty loam	
6→	B	gley 5/5	10yr 5/8	10%	Sandy clay	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- X Sulfidic Odor
- X Aquic Moisture Regime
- ____ Reducing Conditions
- X Gleyed or Low-Chroma (=1) matrix
- ____ Matrix chroma δ 2 with mottles
- ____ Mg or Fe Concretions
- X High Organic Content in Surface Layer of Sandy Soils
- ____ Organic Streaking in Sandy Soils
- ____ Listed on National/Local Hydric Soils List
- ____ Other (explain in remarks)

Hydric soils present? (yes) no

Rationale for decision/Remarks:

Low chroma and organic soils.

Wetland Determination (circle)

Hydrophytic vegetation present? (yes) no

Hydric soils present? (yes) no

Wetland hydrology present? (yes) no

Is the sampling point within a wetland? (yes) no

Rationale/Remarks: Wetland between two areas of thick roadway fill.

NOTES:

DATA FORM 1 *(Revised)*
Routine Wetland Determination
(WA State Wetland Delineation Manual or
1987 Corps Wetland Delineation Manual)

Project/Site: Bellevue Braids
Applicant/owner: WSDOT
Investigator(s): AMG/JP

Date: 1/4/2007
County: KING
State: WA
S/T/R: 28 25N 5E
Community ID: 8.1 L
Transect ID:
Plot ID: Upland Soil pit 2

Do Normal Circumstances exist on the site? yes no
Is the site significantly disturbed (atypical situation)? yes no
Is the area a potential Problem Area? yes no
Explanation of atypical or problem area:

VEGETATION (For strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Acer macrophyllum	T	20	FacU				
Alnus rubra	T	15	Fac				
Rubus armeniacus	S	50	FacU				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 15

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation X
Morphological adaptations
Technical Literature
Physiological/reproductive adaptations
Wetland plant database
Personal knowledge of regional plant communities
Other (explain) X

Hydrophytic vegetation present? yes no
Rationale for decision/Remarks: < 50% Fac

HYDROLOGY

Is it the growing season? yes no
Based on: January soil temp (record temp) other (explain)

Dept. of inundation: 0 inches
Depth to free water in pit: 0 inches
Depth to saturated soil: Surface inches

Check all that apply & explain below:
Stream, Lake or gage data:
Aerial photographs:
Other:

Water Marks: yes no on
Drift Lines: yes no
Oxidized Root (live roots) Channels <12 in. yes no
FAC Neutral: yes no
Sediment Deposits: yes no
Drainage Patterns: yes no
Local Soil Survey: yes no
Water-stained Leaves yes no
Other (explain):

Wetland hydrology present? yes no
Rationale for decision/Remarks: Upland Fill from SR-520

SOILS

Map Unit Name (Series & Phase) EVC EVERETT GRAVELLY Sandy loam

Drainage Class Ø

Field observations confirm mapped type? Yes but Roadway fill No

Taxonomy (subgroup) _____

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size & contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-9	A	2.5Y 4/4	2.5Y 5/4	<10%	sand fine gravel	
9-18	A		10 YR 5/2	<10%		

Hydric Soil Indicators: (check all that apply)

- _____ Histosol
- _____ Histic Epipedon
- _____ Sulfidic Odor
- _____ Aquic Moisture Regime
- _____ Reducing Conditions
- _____ Gleyed or Low-Chroma (=1) matrix
- _____ Matrix chroma δ 2 with mottles
- _____ Mg or Fe Concretions
- _____ High Organic Content in Surface Layer of Sandy Soils
- _____ Organic Streaking in Sandy Soils
- _____ Listed on National/Local Hydric Soils List
- _____ Other (explain in remarks)

Hydric soils present? yes no

Rationale for decision/Remarks:

Wetland Determination (circle)

Hydrophytic vegetation present? yes no

Hydric soils present? yes no

Wetland hydrology present? yes no

Is the sampling point within a wetland? yes no

Rationale/Remarks:

Does Not Meet all three critria

NOTES:

Revised 4/97

Wetland name or number 8.5L

WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 - Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): 8.5L Date of site visit: 10/24/2006

Rated by CKD Trained by Ecology? Yes__ No X Date of training____

SEC: 20 TWNSHP: 25N RNGE: 5E Is S/T/R in Appendix D? Yes__ No X

Map of wetland unit: Figure ____ Estimated size 0.74 acre

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I___ II___ III___ IV X

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

Score for Water Quality Functions	6
Score for Hydrologic Functions	4
Score for Habitat Functions	13
TOTAL score for Functions	23

Category based on SPECIAL CHARACTERISTICS of wetland

I___ II___ Does not Apply X

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

Summary of basic information about the wetland unit

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

Wetland name or number 8.5 L

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.		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.

Wetland name or number 8.5L

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 number 8.5 L

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.