Wetland name or number 3.OR

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 3.0R

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

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

Project/Site: WSDOT Panther Creek wetlands	Date: 1/27/04
Applicant/owner: WSDOT	County: King
Investigator(s): I. Logan, A. Merrill, J. Collins	State: WA S/T/R: 30/23N/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 P/24.7R Transect ID: Plot ID: DP-1

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Cornus stolonifera *	S	45	FACW				
Salix sp. *	T	25	FAC+ to FACW				
Sambucus racemosa	S	5	FACU				
Rubus spectabilis	S	15	FAC+				
Populus balsamifera *	T	25	FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 100

Check all indicators that apply & explain below:

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

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:
No herbs found, heavy leaf litter. All dominants FAC or wetter

HYDROLOGY

Is it the growing season? yes (no) Based on: ____ soil temp (record temp ____) time of year other (explain)	Water Marks: yes (no) on ____ Drift Lines: yes (no)	Sediment Deposits: yes (no) Drainage Patterns: yes (no)
Dept. of inundation: — inches Deptb to free water in pit: 8 inches Depth to saturated soil: 3 inches	Oxidized Root (live roots) Channels <12 in. yes (no) FAC Neutral: yes no	Local Soil Survey: 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:
Soil saturated, and free water observed in pit.

SOILS

Map Unit Name (Series & Phase) Urban Land

Drainage Class Variable

Taxonomy (subgroup) —

Field observations confirm mapped type? Yes (No)

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)
0-3	A1	10YR2/2	—	—	silty clay loam	
3-16	A2	10YR 3/2	10YR 4/4	d, c, m	silty clay loam	
16+	B	2.5Y 4/2	10YR 4/6	d, c, m	sandy clay loam	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- X 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 matrix w/ mottles observed.

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:

All 3 wetland criteria met.

NOTES:

Data Plot 1 in wetland P is located at south end of wetland, near right-of-way fence. Hospital parking garage is located to the east.

Revised 4/97

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

Project/Site: WSDOT Panther Creek Wetlands Applicant/owner: WSDOT Investigator(s): A. Merrill, J. Collins	Date: 1/27/04 County: King State: WA S/T/R: 31/23N/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: wetland P-24.7R Plot ID: DP 2

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 discolor	S	70	FACU				
Pseudotsuga menziesii	T	25	FACU				
Acer macrophyllum	T	20	FACU				
Oemleria cerasiformis	S	15	FACU				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 0

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:
All plants are FACU.

HYDROLOGY

Is it the growing season? yes (no)

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

Dept. of inundation: ___ inches

Depth to free water in pit: ___ inches
Depth to saturated soil: 17 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)

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 moisture in 20 inches~~ water in pit is due to recent rain. Soil is not saturated.

SOILS

Map Unit Name (Series & Phase) Urban Land

Drainage Class Variable

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	A1	10YR 3/2	—	~~[illegible]~~	Sandy loam	
8-10	A2	10YR 3/2	10YR 4/6	f, c, fine	loam	
10-16+	B	5Y 5/2	7.5YR 4/6	p, m, coarse	Clay loam	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- X 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:

~~However~~ mottles very faint. Marginal hydric soil. In A-horizon

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:

Vegetation and hydrology criteria not met.

NOTES:

Data Plot 2 in wetland P is located near south-most portion of wetland, and adjacent to highway. Plot is on raised area, surround on 3 sides by wetland.

Revised 4/97

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

Project/Site: WSDOT Panther Creek Wetlands Applicant/owner: WSDOT Investigator(s): Jeff Collins, Adam Merrill	Date: 1/27/04 County: King State: WA S/T/R: 30 /23N/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: Wetland P-247R Plot ID: OP3

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Phalaris arundinacea	H	100	FACW				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 100

Check all indicators that apply & explain below:

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

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:
Dominant veg. is FACW

HYDROLOGY

Is it the growing season? yes (no) Based on: ____ soil temp (record temp ____) time of year other (explain)	Water Marks: yes (no) on ____ Drift Lines: yes (no)	Sediment Deposits: yes (no) Drainage Patterns: yes (no)
Dept. of inundation: — inches Depth to free water in pit: 0 inches Depth to saturated soil: 0 inches	Oxidized Root (live roots) Channels <12 in. yes (no) FAC Neutral: yes no	Local Soil Survey: 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:
Soil saturated to surface, areas of ponding nearby.

SOILS

Map Unit Name (Series & Phase) Urban land

Drainage Class Variable

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)
0-5	A1	10YR 2/1	—	—	silt loam	
5-16	A2	2.5Y 3/1	—	—	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 ≤ 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:

Black soil in A horizon

Wetland Determination (circle)

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

Rationale/Remarks:

All 3 wetland criteria met.

NOTES:

In southern portion of wetland. In emergent area just north of forested area. Casino directly on opposite side of freeway. Emergent area dominated by reed canary grass.

Revised 4/97

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

Project/Site: WSDOT Panther Creek wetland
Date: 1/27/04
Applicant/owner: WSDOT
County: King
State: WA
Investigator(s): I. Logan, A. Merrill, J. Collins
S/T/R: 30 / 23N / 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: Wetland P-24.7R
Plot ID: DP 4

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 discolor ☒	S	35	FACU				
Salix sp. ☒	S	40	FAC+ to FACW				
Polygonum sp.	H	3	OBL				
Alnus rubra ☒	T	40	FAC				
Phalaris arundinacea ☒	H	30	FACW				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 75

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) ____

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:
Willow growing in inundated conditions. 3/4 of dominant plants are FAC or wetter.

HYDROLOGY

Is it the growing season? yes (no)

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

Dept. of inundation: — inches
Depth to free water in pit: 10 inches
Depth to saturated soil: 5 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

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:
Plot directly adjacent to inundated area. free water and saturated soils observed in soil pit.

SOILS

Map Unit Name (Series & Phase) Urban Land

Drainage Class Variable

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)
0-20	A	10YR3/2	10YR4/6	d, c, f	loam	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- X 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:

Very deep A horizon; low chroma w/ mottles

Wetland Determination (circle)

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

Rationale/Remarks:

All 3 wetland criteria met.

NOTES:

DP 4 in Wetland P is located near toe of slope, at western-middle portion of wetland. Plot is near wetland boundary to west, and ponded area to east.

Revised 4/97

DRAFT WETLAND RATING FORM – WESTERN WASHINGTON

Name of wetland (if known): WETLAND 24.7R - PANTHER CREEK

Location: SEC: 30 TWNSHP: 23N RNGE: 5E (attach map with outline of wetland to rating form)

Person(s) Rating Wetland: J. LOGAN, B. BURKE Affiliation: WSDOT I-405 S RENTON NICKEL Date of site visit: 1/27/04

DRAFT 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	26
Score for Hydrologic Functions	16
Score for Habitat Functions	19
TOTAL score for functions	61

Category based on SPECIAL CHARACTERISTICS of wetland

I___ II___ Does not Apply X

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

Check the appropriate type and class of wetland being rated.

Wetland Type		Wetland Class	
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		

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

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

Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating	YES	NO
SP1. *Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal 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 been documented as habitat for any State listed Threatened or Endangered plant or animal species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database.		X
SP3. *Does the wetland contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.	X	

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

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

Classification of Vegetated Wetlands for Western Washington

Wetland Name: Wetland R 24.7R **Date:** 1-27-05

1. Are the water levels in the wetland 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. Is the topography within the wetland flat and precipitation is only source (>90%) of water to it.
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 wetland **meet both** of the following criteria?

___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) where at least 20 acres (8 ha) are permanently inundated (ponded or flooded);

___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 wetland **meet all** of the following criteria?

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

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

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

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

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

5. Is the wetland in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river? The flooding should occur at least once every two years, on the average, to answer "yes." *The wetland 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 wetland in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. *This means that any outlet, if present, is higher than the interior of the wetland.*
   NO – go to 7 **YES** – The wetland class is **Depressional**
7. Is the wetland located in a very flat area with no obvious depression and no stream or river running through it and providing water. The wetland 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 seems to be difficult to classify. 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. Sometimes we find characteristics of several different hydrogeomorphic classes within one wetland boundary. 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 being rated. If the area of the second class is less than 10% classify the wetland using the first class.

HGM Classes Within a Delineated Wetland Boundary	*Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

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

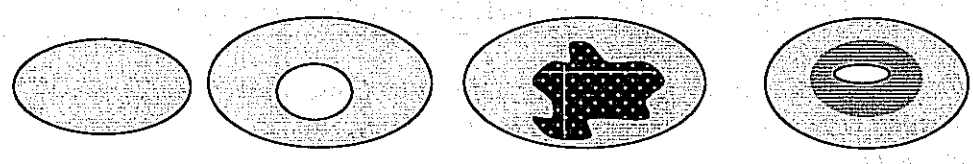
D	Depressional and Flats Wetlands	Points
	WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	
D	**D 1. Does the wetland have the potential to improve water quality?** *(see p. 38)*	
D	D 1.1 Characteristics of surface water flows out of the wetland: Wetland is a depression with no surface water outlet — points = 3 Wetland has an intermittently flowing, or highly constricted, outlet — points = 2 Wetland has an unconstricted surface outlet — points = 1 Wetland is flat and has no obvious outlet and/or outlet is a ditch — points = 1	2
D	D 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs). YES — points = 4 NO — points = 0	4
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest 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	5
D	D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland 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 NOTE: *See text for indicators of seasonal and permanent inundation..*	2
D	**Total for D 1** *Add the points in the boxes above*	13
D	**D 2. Does the wetland have the opportunity to improve water quality?** *(see p. 44)* Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants.* — Grazing in the wetland or within 150 ft ✓ Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland ✓ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other _____ YES multiplier is 2 NO multiplier is 1	multiplier 2
D	**TOTAL - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	26

D	Depressional and Flats Wetlands	Points
	HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation	
	D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion? *(see p. 46)*	
D	D 3.1 Characteristics of surface water flows out of the wetland Wetland has no surface water outlet — points = 4 Wetland has an intermittently flowing, or highly constricted, outlet — points = 2 Wetland is flat and has no obvious outlet and/or outlet is a small ditch — points = 1 Wetland has an unconstricted surface outlet — points = 0	2
D	D 3.2 Depth of storage during wet periods *Estimate the height of ponding above the bottom of the outlet* Marks of ponding are 3 ft or more above the surface — points = 7 The wetland is a "headwater" wetland" — points = 5 Marks of ponding between 2 ft to < 3 ft from surface — points = 5 Marks are at least 0.5 ft to < 2 ft from surface — points = 3 Wetland is flat but has small depressions on the surface that trap water — points = 1 Marks of ponding less than 0.5 ft — points = 0	3
D	D 3.3 Contribution of wetland 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 itself.* The area of the basin is less than 10 times the area of wetland — points = 5 The area of the basin is 10 to 100 times the area of the wetland — points = 3 The area of the basin is more than 100 times the area of the wetland — points = 0 Wetland is in the FLATS class (basin = the wetland, by definition) — points = 5	3
D	**Total for D 3** *Add the points in the boxes above*	8
D	**D 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** *(see p. 49)* Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. 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. *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***	16

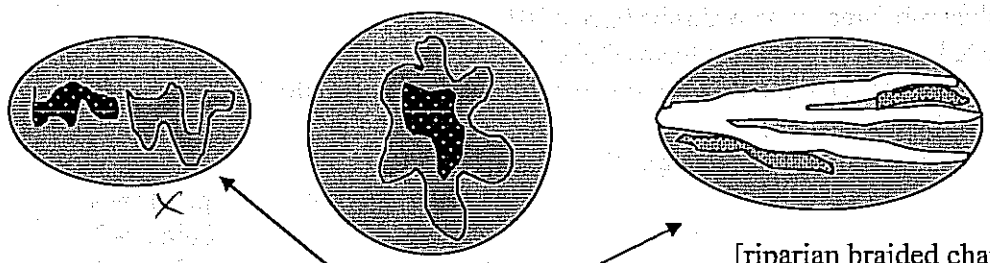
These questions apply to wetlands of all HGM classes.	Points
HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat	
H 1. Does the wetland have the potential to provide habitat for many species?	
H 1.1 Vegetation structure *(see p. 72)* *Check the types of vegetation classes present (as defined by Cowardin) if the class covers more than 10% of the area of the wetland or ¼ acre.* ____Aquatic bed X Emergent plants X Scrub/shrub (areas where shrubs have >30% cover) X Forested (areas where trees have >30% cover) X Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) *Add the number of vegetation types that qualify. If you have:* 4 types or more — points = 4 3 types — points = 2 2 types — points = 1 1 type — points = 0	4
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)* X Permanently flooded or inundated — 4 or more types present — points = 3 X Seasonally flooded or inundated — 3 types present — points = 2 X Occasionally flooded or inundated — 2 types present — point = 1 X Saturated only X 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**	3
H 1.3. Richness of Plant Species *(see p. 75)* Count the number of plant species in the wetland that cover at least 10 ft^2. (*different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle* If you counted: > 19 species — points = 2 *List species below if you want to:* 5 - 19 species — points = 1 < 5 species — points = 0	1

H 1.4. Interspersion of habitats *(see p. 76)*

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types 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 vegetation types or three vegetation types and open water the rating is always "high".

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 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

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

3

H 1. TOTAL Score - potential for providing habitat
Add the scores in the column above

14

Comments

H 2. Does the wetland 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. 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 developed areas within undisturbed part of buffer. **(relatively undisturbed also means no-grazing)** **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 three 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**	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

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?
(see text for a more detailed description of these priority habitats)

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

____ **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 0.5% 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

1

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 in the column above*	5
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	19

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

Project/Site: WSDOT 405 Project S. Renton	Date: 12/29/04
Applicant/owner: WSDOT	County: King
	State: WA
Investigator(s): A. Merrill	S/T/R: 30/23 N/5E
Do Normal Circumstances exist on the site? (yes) no	Community ID: Upland
Is the site significantly disturbed (atypical situation)? yes (no)	Transect ID:
Is the area a potential Problem Area? yes (no)	Plot ID: SR 167 DSL#A
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
Phalaris arundinacea	H	100	FACW				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC X

Check all indicators that apply & explain below:

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

Hydrophytic vegetation present? (yes) no

Rationale for decision/Remarks:

Dominant plant is FACW

HYDROLOGY

Is it the growing season? yes (no)

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

Dept. of inundation: — inches

Depth to free water in pit: — inches
Depth to saturated soil: 0-2 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:

Soil saturation in upper layer due to recent heavy rain.
No saturation below 2"

SOILS

Map Unit Name (Series & Phase) Urband land

Drainage Class Variable

Taxonomy (subgroup) NA

Field observations confirm mapped type? Yes (No)

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)
0-5	A	10YR 3/0	—	—	Sandy loam	
5-16	B	2.5Y 4/0	—	—	"	

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 soil indicators.

Wetland Determination (circle)

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

Rationale/Remarks:

No wetland criteria met.

NOTES:

DP A is located east of wetland 25L, just adjacent SR 167, near S end of wetland.

Revised 4/97

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

Project/Site: WSDOT 405 Project – S. Renton	Date: 12/29/04
Applicant/owner: WSDOT ("The key" property).	County: King State: WA S/T/R: 30/23N/5E
Investigator(s): A. Merrill	
Do Normal Circumstances exist on the site? yes (circled) no Is the site significantly disturbed (atypical situation)? yes no (circled) Is the area a potential Problem Area? yes no (circled) Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: SR 167 9.25L-B

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Phalaris arundinacea	H	90	FACW				
Cirsium vulgare	H	5	FACU				
Rubus discolor	S	20	FACU				
Thuja plicata (planted)	T	15	FAC				
Cornus stolonifera	S	25	FACW				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 67

Check all indicators that apply & explain below:

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

Hydrophytic vegetation present? (yes) no

Rationale for decision/Remarks:
2 of 3 dominants are FACW

HYDROLOGY

Is it the growing season? yes no (circled)	Water Marks: yes no (circled) on _____	Sediment Deposits: yes no (circled)
Based on: _____ soil temp (record temp _____) time of year other (explain)	Drift Lines: yes no (circled)	Drainage Patterns: yes (circled) no
Dept. of inundation: — inches Depth to free water in pit: 16 inches Depth to saturated soil: surface inches	Oxidized Root (live roots) Channels <12 in. yes no (circled) FAC Neutral: yes no	Local Soil Survey: yes no (circled) Water-stained Leaves yes (circled) 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:
Soil saturated to surface.

SOILS

Map Unit Name (Series & Phase) Urbanland

Drainage Class Variable

Taxonomy (subgroup) NA

Field observations confirm mapped type? Yes (No)

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	10YR 3/2			Sandy clay loam w/ cobbles	
9-16	B	10YR 4/2	10YR 5/8		" "	

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:

Chroma of 2 w/ mottles present

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:

All 3 wetland criteria met.

NOTES:

DP B is located in wetland 25R, adjacent to WSDOT ROW fence, on Keg Restaurant property. Plot is located near western boundary; wetland is associated with a ditch (recently dredged). Part of Panther wetland complex.

Revised 4/97

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

Project/Site: WSDOT 405 Project S. Renton	Date: 12/30/04
Applicant/owner: WSDOT	County: King State: WA S/T/R: 30/23/5E
Investigator(s): SK, AM	
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: SR 167 - 05L-C

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Salix lucida	S	70	FACW				
Rubus discolor	S	10	FACU				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 100

Check all indicators that apply & explain below:

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

Hydrophytic vegetation present? (yes) no

Rationale for decision/Remarks:

Dominant plant is FACW

HYDROLOGY

Is it the growing season? yes (no)

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

Dept. of inundation: _____ inches

Depth to free water in pit: 12 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:

Several hydrology indicators are present. Areas of standing water are present nearby.

SOILS

Map Unit Name (Series & Phase): Tukwila muck

Drainage Class: very poorly drained

Taxonomy (subgroup): Limnic Medisaprists

Field observations confirm mapped type? Yes (No)

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)
0-7	A	10YR 2/2	—	—	Gravelly sandy loam	
7-16+	B	10YR 3/2	—	—	Gravelly sandy loam	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- X 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 mottles or low-chroma matrix observed; however, aquic moisture regime is present. Soil may be still that has yet to develop hydric features.

Wetland Determination (circle)

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

Rationale/Remarks:

All 3 wetland criteria are present.

NOTES:

Data plot C is located in wetland 25L, in a stand of young pacific willow. Petroleum pipeline is located just N, and SR 167 culvert is located to the south.

Revised 4/97

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

Project/Site: WSDOT 405 Project S, Renton	Date: 3/1/05
Applicant/owner: WSDOT	County: King
Investigator(s): AM, IL	State: WA
	S/T/R: 30/23N/5E
Do Normal Circumstances exist on the site? (yes) no	Community ID: upland
Is the site significantly disturbed (atypical situation)? yes (no)	Transect ID:
Is the area a potential Problem Area? yes (no)	Plot ID: 25L-Y-A
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
Phalaris arundinacea	H	100	FACW				
Daucus carota	H	5	NL				
Rubus discolor	S	5	FACU				
Cytisus scoparius	S	5	NL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 100

Check all indicators that apply & explain below:

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

Hydrophytic vegetation present? (yes) no

Rationale for decision/Remarks:
Dominant plant is FACW

HYDROLOGY

Is it the growing season? (yes) no

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

Dept. of inundation:	— inches	Water Marks: yes (no) on ____	Sediment Deposits: yes (no)
Depth to free water in pit:	— inches	Drift Lines: yes (no)	Drainage Patterns: yes (no)
Depth to saturated soil:	— inches	Oxidized Root (live roots) Channels <12 in. yes (no)	Local Soil Survey: (yes) no
		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:
Soils are moist; however, this is probably due to recent rains. No evidence of wetland hydrology observed

SOILS

Map Unit Name (Series & Phase) Tukwila muck

Drainage Class very poorly drained

Taxonomy (subgroup) Limnic Medisaprists

Field observations confirm mapped type? Yes (No)

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)
0-7		10YR 3/2			sandy loam w/gravels & fill material	
7+	repeated refusal (suspected concrete fill)					

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 soil indicators

Wetland Determination (circle)

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

Rationale/Remarks:

2 wetland criteria not met.

NOTES:

DP- A is located west of wetland 25L-1, on Younker property. Area has been disturbed/filled. Soils ~~consist~~ consist of fill material/concrete rubble. Area may pond during heavy rains due to soil compaction. However, hydric soil indicators not observed. Vegetation community is typical of disturbed area.

Revised 4/97

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

Project/Site: WSDOT 405 Project S, Renton Applicant/owner: WSDOT Investigator(s): IL, AM	Date: 3/1/05 County: King State: WA S/T/R: 30/23N/5E
Do Normal Circumstances exist on the site? yes (yes) no Is the site significantly disturbed (atypical situation)? yes no (no) Is the area a potential Problem Area? yes no (no) Explanation of atypical or problem area:	Community ID: Upland Transect ID: Plot ID: 25L-Y-B

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Phalaris arundinacea	H	30	FACW				
Daucus carota	H	60	NL				
Dipsacus fullonum	H	5	NF				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 50

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:
FAC or wetter plants are not dominant

HYDROLOGY

Is it the growing season? (yes) no Based on: ____ soil temp (record temp ____) time of year ____ other (explain)	Water Marks: yes (no) on ____ Drift Lines: yes (no)	Sediment Deposits: yes (no) Drainage Patterns: yes (no)
Dept. of inundation: ___ inches Depth to free water in pit: ___ inches Depth to saturated soil: ___ inches	Oxidized Root (live roots) Channels <12 in. yes (no) FAC Neutral: yes no	Local Soil Survey: (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:
No saturated soils observed. Area is topographically higher than wetland.

SOILS

Map Unit Name (Series & Phase) Tukwila muck

Drainage Class very poorly drained

Taxonomy (subgroup) Limnic Medisaprists

Field observations confirm mapped type? Yes (No)

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)
0-10	A	10YR 3/2			sandy loam w/ gravels (fill)	
10+	repeated	refusal				

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 soil indicators observed

Wetland Determination (circle)

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

Rationale/Remarks:

No wetland criteria met.

NOTES:

DP B is located west of wetland 25L-Y, on Vander property. Plot is located approximately 60' east of DP A, on plateau-like area. DP B is approximately 12' higher in elevation than DP A. Plateau area appears to have been created by dumping fill materials; perhaps old building pad?

Revised 4/97

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

Project/Site: I-405 S. RENTON NICKEL	Date: 3/1/05
Applicant/owner: WSDOT	County: KING State: WA
Investigator(s): DM, TL	S/T/R: 30/23N/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: OP 25L-Y -C

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Phalaris arundinacea	H	40	FACW	Salix sp	S	10	
Cirsium arvense vulgare	H	2	FAC-				
Populus balsamifera	S	60	FAC				
Dipsacus fullonum	H	10	NI				
Daucus carota	H	10	NL				
Salix sitchensis	S	30	FACW				

Fossil carrot

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 100%

Check all indicators that apply & explain below:

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

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:
More than 50% of dominants are OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? (yes) no	Water Marks: yes (no) on _____	Sediment Deposits: yes (no)
Based on: _____ soil temp (record temp _____) DATE other (explain)	Drift Lines: yes (no)	Drainage Patterns: yes (no)
Dept. of inundation: — inches	Oxidized Root (live roots) Channels <12 in. yes (no)	Local Soil Survey: (yes) no
Depth to free water in pit: 11 inches Depth to saturated soil: 0 inches	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:
Soils saturated and free water in pit; standing water nearby.

SOILS

Map Unit Name (Series & Phase): Tukwila muck

Drainage Class: very poorly drained

Taxonomy (subgroup): Limnic Medisaprists

Field observations confirm mapped type? Yes (No)

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	2.5YR 3/2	—	—	gravelly sandy loam	
6-16+	B	2.5YR 3/2	7.5Y 4/6	distinct few	gravelly 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
- x 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:
Soils contain low chroma & mottles.

Wetland Determination (circle)

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

Rationale/Remarks:
All three criteria are met.

NOTES: DP-C TS located in POBA / Salix sp. sapling dominated area - west of westernmost berm. Area ~~at~~ TS approx 10' lower in elev. than plateau (DP-B). Area disturbed, but appears to be gradually exhibiting wetland characteristics (emerging hydro vegetation, high ground water levels & hydric indicators). Soils very different from DP-A & B. Emerging PSS wetland connected by ditch along northern property boundary to long narrow PFO along SR 167 - WL

Revised 4/97

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

Project/Site: I-405 S. RENTON NICKEL	Date: 3/1/05
Applicant/owner: WSDOT	County: KING State: WA
Investigator(s): DM, IL	S/T/R: 30/23N/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: UPLAND Transect ID: Plot ID: DP-25L-V-D

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Festuca arundinacea	H	30	FACU				
Poa sp.	H	30	FAC				
Populus balsamifera	S	30	FAC				
Salix lucida	S	15	FACW				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 67%

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:
More than 50% of dominants are OBL, FACW, or FAC

HYDROLOGY

Is it the growing season? (yes) no Based on: ____ soil temp (record temp ____) DATE other (explain)	Water Marks: yes (no) on ____ Drift Lines: yes (no)	Sediment Deposits: yes (no) Drainage Patterns: yes (no)
Dept. of inundation: — inches Depth to free water in pit: 7 inches Depth to saturated soil: 0 inches	Oxidized Root (live roots) Channels <12 in. yes (no) FAC Neutral: yes (no) *	Local Soil Survey: (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:
Soils saturated and free water within 12" during early growing season.

SOILS

Map Unit Name (Series & Phase) Tukwila muck

Drainage Class very poorly drained

Taxonomy (subgroup) Limnic Medisaprists

Field observations confirm mapped type? Yes (No)

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)
0-5	A	10YR 3/2	-	-	Sandy loam	
5-10	B	10YR 3/2	-	-	sand + gravel	
	Sub dominant matrix	2.5Y 5/2	-	-	"	
10+	repeated refusal	-filled area	-piles of concrete nearby.			

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:
Soil does not contain hydric indicators.

Wetland Determination (circle)

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

Rationale/Remarks:
Only 2 of 3 criteria are met. Area has not developed hydric soils.

NOTES: DP-D located between the two berms in northern third of site. Area is upland island in wetland, consisting of the easternmost berm and this area of remaining gravel fill. Pile of concrete rubble w/ monitor well present (10' diam). Area possibly excavated between berms, some of the area already exhibits wetland characteristics (all criteria met) and other areas developing.

Revised 4/97

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

Project/Site: I-405 S. RENTON NICKEL	Date: 3/1/05
Applicant/owner: WSDOT	County: KING
Investigator(s): AM, IL	State: WA S/T/R: 30/23N/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: H Transect ID: Plot ID: DP - 25L-Y-E

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Dipsacus fullonum	H	50	NI				
Phalaris arundinacea	H	30	FACW				
Agrostis sp	H	30	FAC				
Populus balsamifera	S	10	FAC				
Salix sp.	S	5	FACW				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 67%

Check all indicators that apply & explain below:

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

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:
More than 50% of dominants are OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? (yes) no Based on: ____ soil temp (record temp ____) DATE other (explain)	Water Marks: yes (no) on ____ Drift Lines: yes (no)	Sediment Deposits: yes (no) Drainage Patterns: yes (no)
Dept. of inundation: — inches Depth to free water in pit: 7 inches Depth to saturated soil: 0 inches	Oxidized Root (live roots) Channels <12 in. yes (no) FAC Neutral: yes no	Local Soil Survey: (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:
Soils saturated and free water present during early portion of growing season.

SOILS

Map Unit Name (Series & Phase) Tukwila muck

Drainage Class very poorly drained

Taxonomy (subgroup) Limnic Medisaprists

Field observations confirm mapped type? Yes (No)

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	2.5Y 3/2	–	–	gravelly sandy loam	
4-10	B	2.5Y 3/2	7.5YR 4/4	distinct medium common	gravelly sandy loam	
10+	repeated refusal				too compact	

Hydric Soil Indicators: (check all that apply)

- ____ Histosol
- ____ Histic Epipedon
- ____ Sulfidic Odor
- ____ Aquic Moisture Regime
- ____ Reducing Conditions
- ____ Gleyed or Low-Chroma (=1) matrix
- X 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:

Soil contains low chroma and mottles in root zone.

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:

All three criteria are met.

NOTES: DP-E is located near ~~each~~ an indistinct upland / wetland transition ~~at~~ between areas that ~~were~~ are disturbed fill and areas w/ fill removed possibly. Vegetation is also marginal, ranging from 50 to 67% dominants being hydrophytic.

Revised 4/97

DRAFT WETLAND RATING FORM – WESTERN WASHINGTON

Name of wetland (if known): WETLAND 25L

Location: SEC: 30 TWNSHP: 23N RNGE: 5E (attach map with outline of wetland to rating form)

WSDOT 405 Project

Person(s) Rating Wetland: A. Merrill Affiliation: S. Renton Date of site visit: 12/29/04

DRAFT 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	22
Score for Hydrologic Functions	10
Score for Habitat Functions	15
TOTAL score for functions	47

Category based on SPECIAL CHARACTERISTICS of wetland

I___ II___ Does not Apply X

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

Check the appropriate type and class of wetland being rated.

Wetland Type		Wetland Class	
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		

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

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

Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating	YES	NO
SP1. *Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal 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 been documented as habitat for any State listed Threatened or Endangered plant or animal species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database.		X
SP3. *Does the wetland contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

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

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

Classification of Vegetated Wetlands for Western Washington

Wetland Name: WL 25L **Date:** 12/29/04

1. Are the water levels in the wetland 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. Is the topography within the wetland flat and precipitation is only source (>90%) of water to it.
   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 wetland **meet both** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) where at least 20 acres (8 ha) are permanently inundated (ponded or flooded);
   ___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 wetland **meet all** of the following criteria?
   ____The wetland is on a slope (*slope can be very gradual*),
   ____The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   ____The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks(depressions are usually <3ft diameter and less than 1 foot deep).*
   NO - go to 5 **YES** – The wetland class is **Slope**

5. Is the wetland in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river? The flooding should occur at least once every two years, on the average, to answer "yes." *The wetland 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 wetland in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

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

7. Is the wetland located in a very flat area with no obvious depression and no stream or river running through it and providing water. The wetland 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 seems to be difficult to classify. 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. Sometimes we find characteristics of several different hydrogeomorphic classes within one wetland boundary. 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 being rated. If the area of the second class is less than 10% classify the wetland using the first class.

HGM Classes Within a Delineated Wetland Boundary	*Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

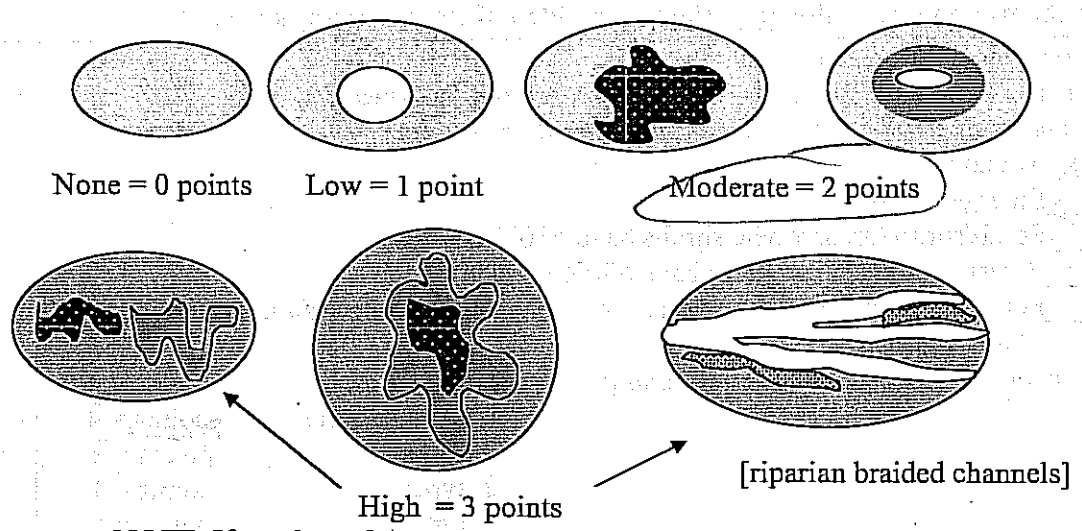
If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points
	WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	
D	**D 1. Does the wetland have the potential to improve water quality?** *(see p. 38)*	
D	D 1.1 Characteristics of surface water flows out of the wetland: Wetland is a depression with no surface water outlet — points = 3 Wetland has an intermittently flowing, or highly constricted, outlet — points = 2 Wetland has an unconstricted surface outlet — points = 1 Wetland is flat and has no obvious outlet and/or outlet is a ditch — points = 1	2
D	D 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs). YES — points = 4 NO — points = 0	4
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest 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	3
D	D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland 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 NOTE: *See text for indicators of seasonal and permanent inundation..*	2
D	**Total for D 1** *Add the points in the boxes above*	11
D	**D 2. Does the wetland have the opportunity to improve water quality?** *(see p. 44)* Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants.* — Grazing in the wetland or within 150 ft X Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland X A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other_____ YES multiplier is 2 NO multiplier is 1	multiplier 2
D	**TOTAL - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	22

not observed in soil plots; however, soil is mapped as Tukwila muck. Soils under ponded water were not sampled.

D	Depressional and Flats Wetlands	Points
	HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation	
	D 3. Does the wetland have the potential to reduce flooding and erosion? *(see p. 46)*	
D	D 3.1 Characteristics of surface water flows out of the wetland Wetland has no surface water outlet — points = 4 Wetland has an intermittently flowing, or highly constricted, outlet — points = 2 Wetland is flat and has no obvious outlet and/or outlet is a small ditch — points = 1 Wetland has an unconstricted surface outlet — points = 0	2
D	D 3.2 Depth of storage during wet periods *Estimate the height of ponding above the bottom of the outlet* Marks of ponding are 3 ft or more above the surface — points = 7 The wetland is a "headwater" wetland" — points = 5 Marks of ponding between 2 ft to < 3 ft from surface — points = 5 Marks are at least 0.5 ft to < 2 ft from surface — points = 3 Wetland is flat but has small depressions on the surface that trap water — points = 1 Marks of ponding less than 0.5 ft — points = 0	3
D	D 3.3 Contribution of wetland 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 itself.* The area of the basin is less than 10 times the area of wetland — points = 5 The area of the basin is 10 to 100 times the area of the wetland — points = 3 The area of the basin is more than 100 times the area of the wetland — points = 0 Wetland is in the FLATS class (basin = the wetland, by definition) — points = 5	8
D	**Total for D 3** *Add the points in the boxes above*	15
D	**D 4. Does the wetland have the opportunity to reduce flooding and erosion?** *(see p. 49)* Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. 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. *Note which of the following indicators of opportunity apply.* ___ Wetland is in a headwater of a river or stream that has flooding problems X Wetland drains to a river or stream that has flooding problems or X 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***	10

These questions apply to wetlands of all HGM classes.	Points
HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat	
H 1. Does the wetland 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) if the class covers more than 10% of the area of the wetland or ¼ acre.* ___ Aquatic bed _X_ Emergent plants _X_ Scrub/shrub (areas where shrubs have >30% cover) _X_ Forested (areas where trees have >30% cover) ___ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) *Add the number of vegetation types that qualify. If you have:* 4 types or more — points = 4 3 types — points = 2 2 types — points = 1 1 type — points = 0	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)* _X_ Permanently flooded or inundated — 4 or more types present — points = 3 _X_ Seasonally flooded or inundated — 3 types present — points = 2 ___ Occasionally flooded or inundated — 2 types present — point = 1 _X_ Saturated only ___ 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**	2
H 1.3. Richness of Plant Species *(see p. 75)* Count the number of plant species in the wetland that cover at least 10 ft^2. *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle* If you counted: > 19 species — points = 2 5 - 19 species — points = 1 < 5 species — points = 0 *List species below if you want to:*	1

H 1.4. Interspersion of habitats *(see p. 76)* Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  None = 0 points Low = 1 point Moderate = 2 points High = 3 points [riparian braided channels] NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".	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). 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 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 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	3
H 1. TOTAL Score - potential for providing habitat *Add the scores in the column above*	10

Comments

H 2. Does the wetland 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. 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 developed areas within undisturbed part of buffer. **(relatively undisturbed also means no-grazing)** **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 three 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**	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

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?
(see text for a more detailed description of these priority habitats)

__1__ **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 0.5% 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

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 in the column above*	5
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	15

Routine Wetland Determination

DATA FORM 1 *(Revised)*

WA State Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual) 25.5L

Project/Site: ~~[illegible]~~	Date: 9/28/06
Applicant/owner: WSDOT	County: King
Investigator(s): Pursley, Douglas	State: WA
	S/T/R: 31/23N/5E
Do normal circumstances exist on the site? ☑ Yes ☐ No	Community ID:
Is the site significantly disturbed (atypical situation)? ☑ Yes ☐ No	Transect ID:
Is the area a potential problem area? ☐ Yes ☑ No	Plot ID: 25.5L #2 up
Explanation of atypical or problem area: Upland on fill	

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

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
RUPR	S	90	FACU				
PHAR	H	40	FACW				

HYDROPHYTIC VEGETATION INDICATORS: S = 0/90 = 0

% of dominants OBL, FACW, & FAC: = 40/90 = 31% H = 40/40 = 100%

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: 31% Does not 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) September	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	FAC Neutral: ☐ Yes ☑ No	Water-stained Leaves: ☐ Yes ☑ No
Depth to saturated soil: Ø		
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): Snohomish silt loam,

Drainage Class

Field observations confirm mapped type? ☑ Yes ☐ No

Taxonomy (subgroup) Tukwila muck, Puget silty clay loam

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+		Fill/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: Fill material w/ Angular rock & gravel

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: Ø of 3 parameters

NOTES:

Revised 4/97

14 flags

Routine Wetland Determination

DATA FORM 1 *(Revised)*

25.5L

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

Project/Site: TRIP Applicant/owner: WSDOT Investigator(s): Pursley, Douglas	Date: 9/28/06 County: King State: WA S/T/R: 31/23N/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

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

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
SALAS	T	100	FACW+				
SPDO	S	40	FACW				
CORSER	S	40	FACW				
Herb EPIWAT	H	20	FACW-				
PHAR	H	10	FACW				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 180/200 = 90%

T = 100/100 = 100%
S = 80/80 = 100%
H = 0/20 = 0%

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: 90% Dom wet veg

HYDROLOGY

Is it the growing season? ☑ Yes ☐ No Based on: ☐ Soil temp (record temp) ☑ Other (explain) September	Water Marks: ☐ Yes ☑ No on	Sediment Deposits: ☐ Yes ☑ No
	Drift Lines: ☐ Yes ☑ No	Drainage Patterns: ☐ Yes ☑ No
Depth of inundation: Ø inches Depth to free water in pit: 0 - 18" Depth to saturated soil: @ surface	Oxidized Root (live roots) Channels <12 in.: ☐ Yes ☑ No	Local Soil Survey: ☐ Yes ☑ No
	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: Saturated @ surface

SOILS

Map Unit Name (Series and Phase): Snohomish silt loam,

Drainage Class

Field observations confirm mapped type? ☑ Yes ☑ No

Taxonomy (subgroup) Tukwila muck, Puget silt clay loam

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)
0-19"		10YR 3/1	–	–	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:

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:

Revised 4/97

Wetland name or number 25,5L

WETLAND RATING FORM – WESTERN WASHINGTON

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

Name of wetland (if known): 25,5L Date of site visit: 9/28/06

Rated by: Douglas Pursley Trained by Ecology? Yes____ No ✓ Date of training: —

SEC: 31 TWNSHP: 23N RNGE: 5E Is S/T/R in Appendix D? Yes____ No ✓

Map of wetland unit: Figure____ Estimated size 6

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	18
Score for Hydrologic Functions	10
Score for Habitat Functions	16
TOTAL Score for Functions	44

Category based on SPECIAL CHARACTERISTCS of Wetland I____ II____ Does not apply ✓

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

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	

Wetland HGM Class used for Rating	
Depressional	✓
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	✓

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		✓
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

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

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

Wetland name or number 25,5L

Classification of Vegetated Wetlands for Western Washington

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

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

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

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

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

Wetland name or number 25.52

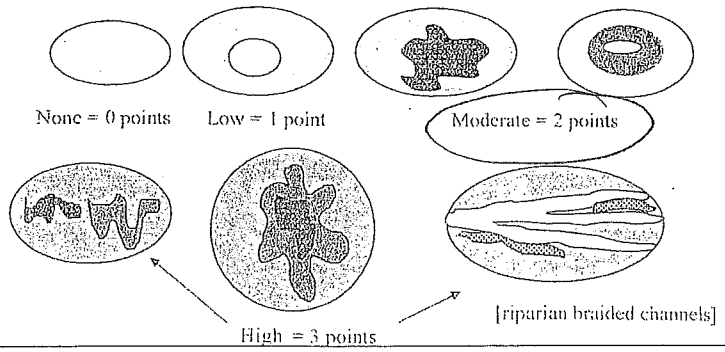
D	Depressional and Flat Wetlands	Points (only 1 score per box)
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	
D 1	**Does the wetland have the potential to improve water quality?**	*(see p.38)*
	D 1.1 Characteristics of surface water flows out of the wetland: • 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 ___ 2
	D 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	
	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 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland 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 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	Figure ___ 4
	Total for D 1 *Add the points in the boxes above*	9
D 2	**Does the wetland have the opportunity to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft X Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. 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 ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other _____ **YES** multiplier is 2 **NO** multiplier is 1	*(see p. 44)* Multiplier 2
◆	**TOTAL – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	18
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the potential to reduce flooding and erosion?**	*(see p.46)*
	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	2
	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 the 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 • Wetland 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	3
	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	Ø
	Total for D 3 *Add the points in the boxes above*	5
D 4	**Does the wetland 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	*(see p. 49)* Multiplier

Wetland name or number 25,5L

	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. _X_ 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	2
◆	**TOTAL – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	10

Comments:

Wetland name or number 25,5L

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.	Points (only 1 score per box)
H 1 Does the wetland 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 1/4 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 types that qualify. If you have:* 4 structures or more.....points = 4 2 structures.....points = 1 **Map of Cowardin vegetation classes** 3 structures.....points = 2 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 1/4 acre to count (see text for descriptions of hydroperiods).* ___ Permanently flooded or inundated X Seasonally flooded or inundated X Occasionally flooded or inundated X 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 or more types present.....points = 2 2 types present.....points = 1 1 type present.....points = 0 **Map of hydroperiods**	**Figure ___** 3
H 1.3 Richness of Plant Species *(see p. 75)*: Count the number of plant species in the wetland that cover at least 10 ft^2 *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species. Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle.* If you counted: > 19 species.....points = 2 5 – 19 species .....points = 1 < 5 species.....points = 0 List species below if you want to:	1
H 1.4 Interspersion of Habitats *(see p. 76)*: Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high". **Use map of Cowardin classes.**	**Figure ___** 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 (> 4 in. 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) X Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)* ___ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* X 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.*	4
H 1 TOTAL Score – potential for providing habitat *Add the points in the column above*	12

Wetland name or number 25,5L

H 2	Does the wetland have the opportunity to provide habitat for many species?	(only 1 score per box)
	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".* ____ 100m (330 ft) 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** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference.....**points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference.....**points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference.....**points = 3** ____ 50m (170 ft) 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 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK.....**points = 2** ____ No paved areas of 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 (6.6 ft) for more than 95% 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** **Arial 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 a 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 50 ft. 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** = go to 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 miles of a large field or pasture (> 40 acres) OR • Within 1 mile of a lake greater than 20 acres? **YES** = 1 point **NO** = 0 points	Ø

Comments:

Wetland name or number 25,5L

	H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82): Which of the following priority habitats are within 330 ft. (100m) of the wetland? *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 7.6m (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) > 81cm (32 in) dbh or > 200 years of age. ____ **Mature forests**: Stands with average diameters exceeding 53cm (21 in) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 – 200 years old west of the Cascade Crest. ____ **Prairies**: Relatively undisturbed areas (as indicated by dominance of native plants) where greases and/or forbs form the natural climax plant community. ____ **Talus**: Homogenous areas of rock rubble ranging in average size 0.15 – 2.0m (0.5 – 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ____ **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 0.5 ppt. 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 1 priority habit ...= 1 point If wetland has 2 priority habitats .....= 3 points No habitats.....= 0 points Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. (Nearby wetlands are addressed in question H 2.4).	Ø
	H 2.4 Wetland Landscape: *Choose the one description of the landscape around the wetland that best fits (see p. 84)* • There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5 • The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5 • There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed.....points = 3 • The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile.....points = 3 • There is at least 1 wetland within 1/2 mile.....points = 2 • There are no wetlands within 1/2 mile .....points = 0	3
	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	4
	TOTAL for H 1 from page 8	12
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then *record the result on p. 1*	16

Comments:

Wetland name or number 355L

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. **YES** = Go to SC 1.1 **NO** ____	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? **YES** = Category I **NO** = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? **YES** = Category I **NO** = Category II ____ 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 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 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**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 being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ **YES** _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 **NO** _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? **YES** = Category 1 **NO** _____ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland (**or any part of the unit**) meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? **YES** = go to question 3 **NO** = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? **YES** = go to question 3 **NO** = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? **YES** = Is a bog for purpose of rating **NO** = go to question 4 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. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)*? **YES** = Category I **NO** = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number 25.5L

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. **YES** = Category I **NO** = ____ not a forested wetland with special characteristics	**Cat. I**
SC5	**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 meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) **YES** = Category I **NO** = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? **YES** = Go to SC 6.1 **NO** ____ 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 one acre or larger? **YES** = Category II **NO** = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? **YES** = Category III	**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

Comments:

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

Project/Site: WSDOT 405 Project S. Renton
Applicant/owner: WSDOT
Investigator(s): AM, SK

Date: 12/30/04
County: King
State: WA
S/T/R: 03/23N/4E

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: upland
Transect ID:
Plot ID: SR 167, DP 257L-A

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Agrostis sp.	H	30	FAC				
Phalaris arundinacea	H	30	FACW				
Cirsium vulgare	H	10	FACU				
Rubus discolor	S	40	FACU				
Senecio jacobaea (tansy ragwort)	H	5	NI				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 67

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 X
Wetland plant database ____
Personal knowledge of regional plant communities ____
Other (explain) ____

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:
Majority of dominant plants are FAC or wetter.

HYDROLOGY

Is it the growing season? yes (no)

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

Dept. of inundation: — inches
Depth to free water in pit: — inches
Depth to saturated soil: — 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:
No saturation in soil pit; no evidence of wetland hydrology.

SOILS

Map Unit Name _____ Drainage Class _____
(Series & Phase)

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)
0-11	A	10YR3/2	—	—	Sand + gravel fill	

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 soil indicators observed

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:

2 wetland criteria not met.

NOTES:

DP A is located S of wetland 23.7L, under electric transmission lines. Area was historically part of a larger wetland complex, but was filled.

Revised 4/97

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

Project/Site: WSDOT 405 Project S. Renton
Applicant/owner: WSDOT
Investigator(s): SK/AN

Date: 12/30/04
County: King
State: WA
S/T/R: 23/23N/4E

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: SR 167 - DP 25.7B

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
Phalaris arundinacea	H	10	FACW				
Rubus discolor	S	10	FACW				
Salix lasiandra	S	60	FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 100

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 X
Personal knowledge of regional plant communities ___
Other (explain) ___

Hydrophytic vegetation present? (yes) no
Rationale for decision/Remarks:
Dominant plant is FAC

HYDROLOGY

Is it the growing season? yes (no)

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

Dept. of inundation: — inches
Depth to free water in pit: 3 inches
Depth to saturated soil: surface 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

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:
Free water observed at 3" depth. Large ponded area in center of wetland.

SOILS

Map Unit Name _____ Drainage Class _____
(Series & Phase)

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	10YR 2/1			Sandy silty loam	
4-16	B	10YR 2/1			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 ≤ 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:

Chroma of 1 observed in B layer

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:

All 3 wetland criteria present.

NOTES:

DP B located near western boundary of Wetland 25.7L. Wetland is PSS, and is located between SR 167 and ___ road. Wetland was historically part of wetland 25.L, before power-line area was filled. Wetland is PFO.

Revised 4/97

DRAFT WETLAND RATING FORM – WESTERN WASHINGTON

Name of wetland (if known): 25.76

Location: SEC: 23 TWNSHP: 23N RNGE: 4E (attach map with outline of wetland to rating form)

Person(s) Rating Wetland: A. Merrill Affiliation: S. Renton Date of site visit: 12/30/04

DRAFT 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	14
Score for Hydrologic Functions	10
Score for Habitat Functions	12
TOTAL score for functions	36

Category based on SPECIAL CHARACTERISTICS of wetland

I___ II___ **Does not Apply** X

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

Check the appropriate type and class of wetland being rated.

Wetland Type		Wetland Class	
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		

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

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

Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating	YES	NO
SP1. *Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal 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 been documented as habitat for any State listed Threatened or Endangered plant or animal species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database.		X
SP3. *Does the wetland contain individuals of Priority species listed by the WDFW for the state?*		X
SP4. *Does the wetland have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

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

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

Classification of Vegetated Wetlands for Western Washington

Wetland Name: _____ **Date:** _____

1. Are the water levels in the wetland 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. Is the topography within the wetland flat and precipitation is only source (>90%) of water to it.
   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 wetland **meet both** of the following criteria?
   ___The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) where at least 20 acres (8 ha) are permanently inundated (ponded or flooded);
   ___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 wetland **meet all** of the following criteria?
   ____The wetland is on a slope (*slope can be very gradual*),
   ____The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   ____The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks(depressions are usually <3ft diameter and less than 1 foot deep).*
   NO - go to 5 **YES** – The wetland class is **Slope**

5. Is the wetland in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river? The flooding should occur at least once every two years, on the average, to answer "yes." *The wetland 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 wetland in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

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

7. Is the wetland located in a very flat area with no obvious depression and no stream or river running through it and providing water. The wetland 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 seems to be difficult to classify. 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. Sometimes we find characteristics of several different hydrogeomorphic classes within one wetland boundary. 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 being rated. If the area of the second class is less than 10% classify the wetland using the first class.

HGM Classes Within a Delineated Wetland Boundary	*Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

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

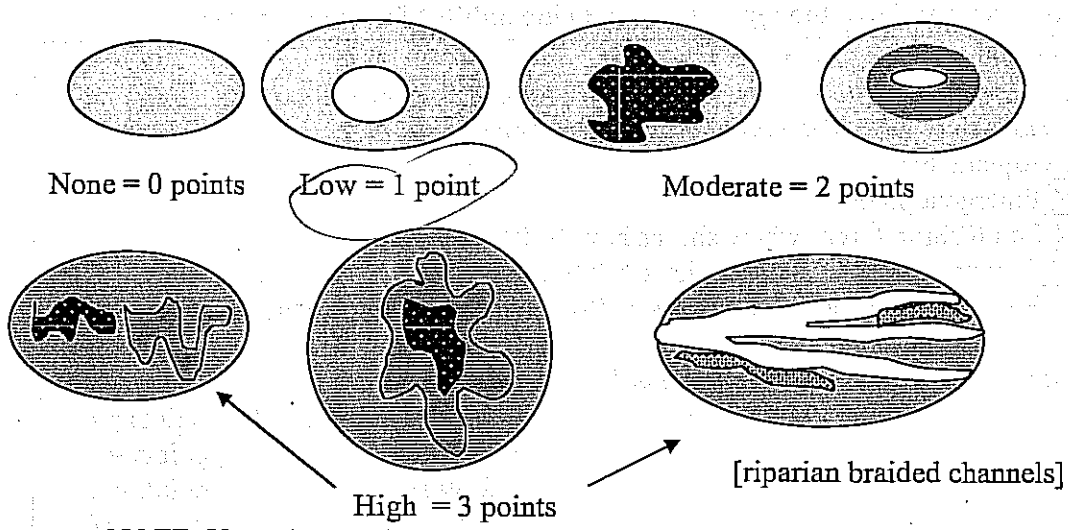
D	Depressional and Flats Wetlands	Points
	WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	
D	**D 1. Does the wetland have the <u>potential</u> to improve water quality?** *(see p. 38)*	
D	D 1.1 Characteristics of surface water flows out of the wetland: Wetland is a depression with no surface water outlet — points = 3 Wetland has an intermittently flowing, or highly constricted, outlet — points = 2 Wetland has an unconstricted surface outlet — points = 1 Wetland is flat and has no obvious outlet and/or outlet is a ditch — points = 1	2
D	D 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs). YES — points = 4 NO — points = 0	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or ~~forest 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	3
D	D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland 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 NOTE: *See text for indicators of seasonal and permanent inundation..*	2
D	**Total for D 1** *Add the points in the boxes above*	7
D	**D 2. Does the wetland have the <u>opportunity</u> to improve water quality?** *(see p. 44)* Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants.* — Grazing in the wetland or within 150 ft ✓ Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other_____ YES multiplier is 2 NO multiplier is 1	multiplier 2
D	**<u>TOTAL</u> - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	14

D	Depressional and Flats Wetlands	Points
	HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation	
	D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion? *(see p. 46)*	
D	D 3.1 Characteristics of surface water flows out of the wetland Wetland has no surface water outlet — points = 4 Wetland has an intermittently flowing, or highly constricted, outlet — points = 2 Wetland is flat and has no obvious outlet and/or outlet is a small ditch — points = 1 Wetland has an unconstricted surface outlet — points = 0	2
D	D 3.2 Depth of storage during wet periods *Estimate the height of ponding above the bottom of the outlet* Marks of ponding are 3 ft or more above the surface — points = 7 The wetland is a "headwater" wetland" — points = 5 Marks of ponding between 2 ft to < 3 ft from surface — points = 5 Marks are at least 0.5 ft to < 2 ft from surface — points = 3 Wetland is flat but has small depressions on the surface that trap water — points = 1 Marks of ponding less than 0.5 ft — points = 0	3
D	D 3.3 Contribution of wetland 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 itself.* The area of the basin is less than 10 times the area of wetland — points = 5 The area of the basin is 10 to 100 times the area of the wetland — points = 3 estimate → The area of the basin is more than 100 times the area of the wetland — points = 0 Wetland is in the FLATS class (basin = the wetland, by definition) — points = 5	0
D	**Total for D 3** *Add the points in the boxes above*	5
D	**D 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion?** *(see p. 49)* Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. 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. *Note which of the following indicators of opportunity apply.* — Wetland is in a headwater of a river or stream that has flooding problems X 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***	10

These questions apply to wetlands of all HGM classes.	Points
HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat	
H 1. Does the wetland 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) if the class covers more than 10% of the area of the wetland or ¼ acre.* ___ Aquatic bed X Emergent plants X Scrub/shrub (areas where shrubs have >30% cover) X Forested (areas where trees have >30% cover) ___ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) *Add the number of vegetation types that qualify. If you have:* 4 types or more — points = 4 3 types — points = 2 2 types — points = 1 1 type — points = 0	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 — 4 or more types present — points = 3 X Seasonally flooded or inundated — 3 types present — points = 2 X Occasionally flooded or inundated — 2 types present — point = 1 X Saturated only ___ 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**	2
H 1.3. Richness of Plant Species *(see p. 75)* Count the number of plant species in the wetland that cover at least 10 ft^2. *(different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle* If you counted: > 19 species — points = 2 *List species below if you want to:* 5 - 19 species — points = 1 < 5 species — points = 0	1

H 1.4. Interspersion of habitats *(see p. 76)*

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.



NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".

1

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 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

____ 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

2

H 1. TOTAL Score - potential for providing habitat
Add the scores in the column above

3

Comments

H 2. Does the wetland 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. 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 developed areas within undisturbed part of buffer. **(relatively undisturbed also means no-grazing)** **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 three criteria above** — No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2** — No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2** — Heavy grazing in buffer. **Points = 1** — Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland **Points = 0** — Buffer does not meet any of the criteria above. **Points = 1**	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

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?
(see text for a more detailed description of these priority habitats)

____**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 0.5% 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

0

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 in the column above*	4
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	12

Identify mp
≈20' E of channel

Routine Wetland Determination

DATA FORM 1 *(Revised)*

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

Project/Site: 405 TRIP Applicant/owner: WSDOT Investigator(s): Douglas, Bunting	Date: 8/3/06 County: King State: WA S/T/R: 31/23N/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 1 (WET) EV 25.8L

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

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
SALLAS	T	40	FACW+				
TYPLAT	H	95	OBL				
SOLDUL	H	5	FACW+				

HYDROPHYTIC VEGETATION INDICATORS: T = 40/40 = 100% S = Ø H = 95/95 = 100%

% of dominants OBL, FACW, & FAC: 135/135 = 100%

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: 100% FAC Veg Dominant

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) August	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: 10"	FAC Neutral: ☑ Yes ☐ No	Water-stained Leaves: ☑ Yes ☐ No
Depth to saturated soil: 2"		
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:

Hydrology depths in soil, below ≈12" duff (TYLA)

SOILS

Map Unit Name (Series and Phase): Puget silty clay 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)
0-12"	Dotf (TYLAT)					
12-30"		10YR 4/1	7.5YR 5/6	—	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 & mottles.

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:

Revised 4/97

Routine Wetland Determination

DATA FORM 1 *(Revised)*

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

Project/Site: 405 TRIP Applicant/owner: WSDOT Investigator(s): Douglas, Rowley	Date: 8/8/06 County: King State: WA S/T/R: 31/23N/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 (wet) EV 25.8L

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

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
SALLAS	T	40	FACW+	FOLIBSH	H	30	OBL
SALHOO	T	30	FACW-	PHAR	H	20	FACW
POPA	T	30	FAC				
SPDO	S	10	FACW				

HYDROPHYTIC VEGETATION INDICATORS: T = 100/100 = 100% H = 50/50 = 100%

% of dominants OBL, FACW, & FAC: 150/150 = 100%

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: 100% Dom. 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) Date Aug	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: 12"	FAC Neutral: ☐ Yes ☐ No	Water-stained Leaves: ☑ Yes ☐ No
Depth to saturated soil: 3"		
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

SOILS

Map Unit Name (Series and Phase): Puget silty clay 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)
0-2	Duff	~~10YR 4/1~~				
2-18"+		10YR 4/1	10YR 4/6	—	—	

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:

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:

Revised 4/97

Routine Wetland Determination

near flag #76

DATA FORM 1 *(Revised)*

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

Project/Site: I-405 TRIP Applicant/owner: WSDOT Investigator(s): C. Douglas, J.	Date: 8/8/06 County: King State: WA S/T/R: 31/23N/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 #3 (up) RV 20.82

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

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
RUPO	S	60	FACW				
POBA TRI	T	100	FAC				
SALLAS	T	20	FACW+				
PHAR	H	30	FACW				

HYDROPHYTIC VEGETATION INDICATORS: T = 120/120 = 100%, S = 0/60 = 0%, H = 30/30 = 0%

% of dominants OBL, FACW, & FAC: 150/210 = 71%

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: 71% Wet Dom 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) ANSWT	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 Depth to saturated soil: Ø	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: Fill material

SOILS

Map Unit Name (Series and Phase): Puget silty clay 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)
0-18"	Fill	10YR 4/4	—	—	With gravel, Angular rock, Sandy 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: Fill material

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: 1 of 3 parameters

NOTES:

Revised 4/97

Wetland name or number 25.3L

WETLAND RATING FORM – WESTERN WASHINGTON

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

Name of wetland (if known): 25.3L Date of site visit: 8/8/06

Rated by: Douglas, Purdey Trained by Ecology? Yes____ No ✓ Date of training: —

SEC: 31 TWNSHP: 23N RNGE: 5E Is S/T/R in Appendix D? Yes____ No ✓

Map of wetland unit: Figure_____ **Estimated size** 7 acre

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland: I_____ **II**_____ **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	18
Score for Hydrologic Functions	10
Score for Habitat Functions	11
TOTAL Score for Functions	39

Category based on SPECIAL CHARACTERISTCS of Wetland I_____ **II**_____ **Does not apply** ✓

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

Summary of basic information about the wetland unit.

Wetland Unit has Special Characteristics	
Estuarine	
Natural Heritage Wetland	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	

Wetland HGM Class used for Rating	
Depressional	✓
Riverine	
Lake-fringe	
Slope	
Flats	
Freshwater Tidal	
Check if unit has multiple HGM classes present	

Does the wetland being rated meet any of the criteria below? If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands that Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered* ***animal or plant*** *species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered* ***animal*** *species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category 1 Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		✓
SP4. *Does the wetland unit have a local significance in addition to its functions?* For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

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

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

Wetland name or number 25.3L

Classification of Vegetated Wetlands for Western Washington

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

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
   NO – go to 2 **YES** – the wetland class is **Tidal Fringe**
   If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
   YES – Freshwater Tidal Fringe **NO – Saltwater Tidal Fringe (Estuarine)**
   *If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is a Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were call estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. _____).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
   NO – go to 3 **YES** – The wetland class is **Flats**
   If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland meet both of the following criteria?
   _____ The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) where at least 20 acres (8ha) in size;
   _____ At least 30% of the open water area is deeper than 6.6 (2 m)?
   NO – go to 4 **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland meet all of the following criteria?
   _____ The wetland is on a slope *(slope can be very gradual)*.
   _____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
   _____ The water leaves the wetland **without being impounded**?
   NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).*
   NO – go to 5 **YES** – The wetland class is **Slope**

5. Does the entire wetland meet all of the following criteria?
   _____ The unit is in a valley or stream channel where it gets inundated by overbank flooding from that stream or river.
   _____ The overbank flooding occurs at least once every two years.
   NOTE: *The riverine unit can contain depressions that are filled with water when the river is not flooding..*
   NO – go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. This means that any outlet, if present is higher than the interior of the wetland.
   NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.
   No – go to 8 YES – The wetland class is Depressional

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

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

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

Wetland name or number 2.58L

D	Depressional and Flat Wetlands	Points (only 1 score per box)
	WATER QUALITY FUNCTIONS – Indicators that wetland functions to improve water quality.	
D 1	**Does the wetland have the potential to improve water quality?**	*(see p.38)*
	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 ___ 2
	D 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	Ø
	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 1.4 Characteristics of seasonal ponding or inundation: *This is the area of the wetland 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 years.* • Area seasonally ponded is > 1/2 total area of wetland ..... points = 4 • Area seasonally ponded is > 1/4 total area of wetland ..... points = 2 • Area seasonally ponded is < 1/4 total area of wetland ..... points = 0 **Map of Hydroperiods**	Figure ___ 4
	Total for D 1 *Add the points in the boxes above*	9
D 2	**Does the wetland have the opportunity to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ___ Grazing in the wetland or within 150 ft ✓ Untreated stormwater discharges to wetland ___ Tilled fields or orchards within 150 ft. of wetland ✓ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ✓ Residential, urban areas, golf courses are within 150 ft. of wetland ___ Wetland is fed by groundwater high in phosphorus or nitrogen ___ Other ___ **YES** multiplier is 2 **NO** multiplier is 1	*(see p. 44)* Multiplier 2
◆	**TOTAL – Water Quality Functions** Multiply the score from D1 by D2; then ***add score to table on p. 1***	18
	HYDROLOGIC FUNCTIONS – Indicators that wetland unit functions to reduce flooding and stream degradation.	
D 3	**Does the wetland have the potential to reduce flooding and erosion?**	*(see p.46)*
	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	2
	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 the 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 • Wetland 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	3
	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	Ø
	Total for D 3 *Add the points in the boxes above*	5
D 4	**Does the wetland 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	*(see p. 49)* Multiplier 2

Wetland name or number 2.58L

	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	2
◆	**TOTAL – Hydrologic Functions** Multiply the score from D3 by D4; then ***add score to table on p. 1***	10

Comments:

Wetland name or number 25.82

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS – Indicators that wetland functions to provide important habitat.

Points (only 1 score per box)

H 1 Does the wetland 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 1/4 acre or more than 10% of the area if unit is smaller than 2.5 acres.

✓ Aquatic Bed
✓ Emergent plants
___ Scrub/shrub (areas where shrubs have > 30% 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 types that qualify. If you have:
4 structures or more.....points = 4
2 structures.....points = 1

Map of Cowardin vegetation classes
3 structures..... points = 2
1 structure ..... points = 0

Figure ___ 1

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

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count (see text for descriptions of hydroperiods).

✓ Permanently flooded or inundated
___ Seasonally flooded or inundated
✓ Occasionally flooded or inundated
___ Saturated only
___ 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 or more types present..... points = 2
2 types present..... points = 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.

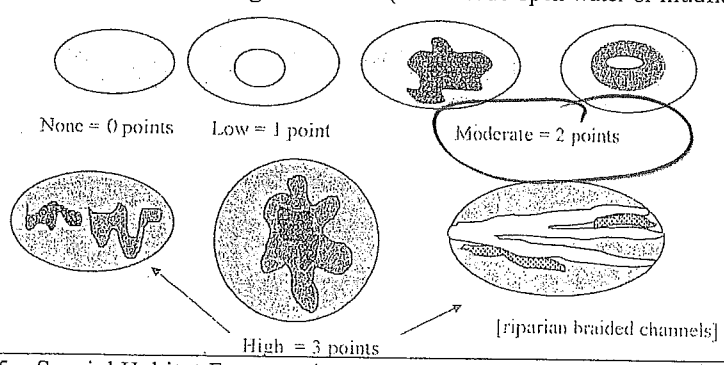
If you counted:
> 19 species..... points = 2
5 – 19 species ..... points = 1
< 5 species..... points = 0

List species below if you want to:

1

H 1.4 Interspersion of Habitats *(see p. 76)*:

Decided from the diagrams below whether interspersion between Cowardin vegetation (described in H1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.



Note: If you have 4 or more classes or 3 vegetation classes and open water, the rating is always "high".

Use map of Cowardin classes.

Figure ___ 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.

___ Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft. long)
___ Standing snags (diameter at the bottom > 4 inches) in the wetland
___ Undercut banks are present for at least 6.6 ft. (2m) and/or overhanging vegetation extends at least 3.3 ft. (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft. (10m)
___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)*
✓ At least 1/4 acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)*
___ 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.

2

H 1 TOTAL Score – potential for providing habitat *Add the points in the column above* 7

Wetland name or number 25.3L

H 2	Does the wetland have the opportunity to provide habitat for many species?	(only 1 score per box)
	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".* ____ 100m (330 ft) 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** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference.....**points = 4** ____ 50m (170 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 95% circumference.....**points = 4** ____ 100m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference.....**points = 3** ____ 50m (170 ft) 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 25m (80 ft) of wetland > 95% circumference. Light to moderate grazing or lawns are OK .....**points = 2** ____ No paved areas of 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 (6.6 ft) for more than 95% circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland).....**points = 0** ____ Buffer does not meet any of the criteria above .....**points = 1** **Arial 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 a 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 50 ft. 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** = go to 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 miles of a large field or pasture (> 40 acres) OR • Within 1 mile of a lake greater than 20 acres? **YES** = ~~1 point~~ **NO** = 0 points	Ø

Comments:

Wetland name or number 25.9L

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82):
Which of the following priority habitats are within 330 ft. (100m) of the wetland? *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 7.6m (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) > 81cm (32 in) dbh or > 200 years of age.

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

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

____ **Talus**: Homogenous areas of rock rubble ranging in average size 0.15 – 2.0m (0.5 – 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.

____ **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 0.5 ppt. 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 habit ...= 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).

Ø

H 2.4 Wetland Landscape: *Choose the **one** description of the landscape around the wetland that best fits (see p. 84)*

- There are at least 3 other wetlands within 1/2 mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development.....points = 5
- The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within 1/2 mile .....points = 5
- There are at least 3 other wetlands within 1/2 mile, BUT the connections between them are disturbed. .....points = 3
- The wetland fringe on a lake **with** disturbance and there are 3 other lake-fringe wetlands within 1/2 mile.....points = 3
- There is at least 1 wetland within 1/2 mile .....points = 2
- There are no wetlands within 1/2 mile .....points = 0

3

	H 2 TOTAL Score – opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	7
	TOTAL for H 1 from page 8	4
◆	**Total Score for Habitat Functions** Add the points for H 1 and H 2; then *record the result on p. 1*	11

Comments:

Wetland name or number 25.8L

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

	Wetland Type – *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	
SC1	**Estuarine wetlands?** *(see p.86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ____ The dominant water regime is tidal, ____ Vegetated, and ____ With a salinity greater than 0.5 ppt. **YES** = Go to SC 1.1 **NO** _____	
	SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? **YES** = Category I **NO** = go to SC 1.2	**Cat. 1**
	SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following conditions? **YES** = Category I **NO** = Category II ____ 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 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 1. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland ____ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual Rating I/II**
SC2	**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 being rated in a Section/Township/Range that contains a natural heritage wetland? *(This question is used to screen out most sites before you need to contact WNHP/DNR.)* S/T/R information from Appendix D _____ or accessed from WNHP/DNR web site _____ **YES** _____ Contact WNHP/DNR (see p. 79) and go to SC 2.2 **NO** _____ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as a site with state threatened or endangered plant species? **YES** = Category 1 **NO** _____ not a Heritage Wetland	**Cat I**
SC3	**Bogs** *(see p. 87)* Does the wetland **(or any part of the unit)** meet both the criteria for soils and vegetation in bogs? Use the key below to identify if the wetland is a bog. ***If you answer yes you will still need to rate the wetland based on its function.*** 1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of soil profile? (See Appendix B for a field key to identify organic soils)? **YES** = go to question 3 **NO** = go to question 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? **YES** = go to question 3 **NO** = is not a bog for purpose of rating 3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? **YES** = Is a bog for purpose of rating **NO** = go to question 4 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. 4. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine. WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)*? **YES** = Category I **NO** = Is not a bog for purpose of rating	**Cat. I**

Wetland name or number 25.5L

SC4	**Forested Wetlands** *(see p. 90)* Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its function.* ____ **Old-growth forests**: (west of Cascade Crest) Stands of at least two three species forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm or more). NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter. ____ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have an average diameters (dbh) exceeding 21 inches (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth. **YES** = Category I **NO** = ____ not a forested wetland with special characteristics	**Cat. I**
SC5	**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 meet all of the following three conditions? ____ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing) and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ____ At least 3/4 of the landward edge of the wetland has a 100 ft. buffer of shrub, forest, or un-grazed or un-mowed grassland. ____ The wetland is larger than 1/10 acre (4350 square ft.) **YES** = Category I **NO** = Category II	**Cat. I** **Cat. II**
SC6	**Interdunal Wetlands** *(see p. 93)* Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? **YES** = Go to SC 6.1 **NO** _____ 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 one acre or larger? **YES** = Category II **NO** = go to SC 6.2 SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? **YES** = Category III	**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

Comments:

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