

APPENDIX C WETLAND FIELD DATA FORMS

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The following describes the abbreviation used to describe the mottle abundance, mottle size, and mottle contrast when examining soils. The abbreviations were used on the routine wetland delineation forms which were completed in the field:

Mottle Abundance:

f - Few (<20%)

c - Common (2%-20%)

m - Many (> 20%)

Mottle Size:

f - Fine (0-5mm)

m - Medium (5-15mm)

c - Coarse (>15mm)

Mottle Contrast:

f - Faint

d - Distinct

p - Prominent

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

Project/Site: <u>I-405 S. RENTON NICKEL PROJECT</u>	Date: <u>3/18/05</u>
Applicant/owner: <u>WSDOT</u>	County: <u>KING</u>
Investigator(s): <u>AM, JL</u>	State: <u>WA</u>
	S/T/R: <u>03/03N 4S</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> yes <input type="radio"/> no	Community ID: <u>U</u>
Is the site significantly disturbed (atypical situation)? <input type="radio"/> yes <input checked="" type="radio"/> no	Transect ID:
Is the area a potential Problem Area? <input type="radio"/> yes <input checked="" type="radio"/> no	Plot ID: <u>DP-A O.I.R</u>
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
<u>Rubus discolor</u>	<u>S</u>	<u>60</u>	<u>FACU</u>				
<u>Holcus lanatus</u>	<u>H</u>	<u>30</u>	<u>FAC</u>				
<u>Juncus effusus</u>	<u>H</u>	<u>10</u>	<u>FACW</u>				
<u>Ranunculus repens</u>	<u>H</u>	<u>10</u>	<u>FACW</u>				
<u>Cyrtus scoparius</u>	<u>S</u>	<u>10</u>	<u>NL</u>				

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	_____	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: Vegetation maintained/mowed regularly.
Not more than 50% of dominants are OBL, FACW, or FAC

HYDROLOGY

Is it the growing season? <input checked="" type="radio"/> yes <input type="radio"/> no	Water Marks: yes <input type="radio"/> no <input checked="" type="radio"/>	Sediment Deposits: yes <input type="radio"/> no <input checked="" type="radio"/>
Based on: _____ soil temp (record temp _____) <u>DATE</u> other (explain)	Drift Lines: yes <input type="radio"/> no <input checked="" type="radio"/>	Drainage Patterns: yes <input type="radio"/> no <input checked="" type="radio"/>
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. yes <input type="radio"/> no <input checked="" type="radio"/>	Local Soil Survey: yes <input type="radio"/> no <input checked="" type="radio"/>
Depth to free water in pit: <u>>16</u> inches	FAC Neutral: yes <input type="radio"/> no <input checked="" type="radio"/>	Water-stained Leaves yes <input type="radio"/> no <input checked="" type="radio"/>
Depth to saturated soil: <u>>16</u> inches	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: No indicators present. Area drains downslope to WL O.I.R

SOILS

Map Unit Name Urban land
(Series & Phase)

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)
0-6	A	10YR 3/2	-	-	sandy loam	
6-16+	B	10YR 4/3	7.5YR 7/4	few fine distinct	loam loam	
	sub-clom matrix	2.5Y 5/4				

Hydric Soil Indicators: (check all that apply)

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

Hydric soils present? yes no
 Rationale for decision/Remarks:
Soil does not contain sufficient hydric indicators.

Wetland Determination (circle)

Hydrophytic vegetation present?	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>	Is the sampling point within a wetland?	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Hydric soils present?	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>		
Wetland hydrology present?	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>		

Rationale/Remarks:
~~Not a wetland~~ None of the three criteria are met.

NOTES: DP-A is located east of WL 0.1R on a north facing slope. Area receives road runoff from adjacent freeway off ramps, but drainage continues downslope to base of gully and road impoundment.

DATA FORM 1 (Revised)
Routine Wetland Determination
(WA State Wetland Delineation Manual or
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Project/Site: <u>I-405 S. RENTON NICKEL</u>	Date: <u>3/18/05</u>
Applicant/owner: <u>WSDOT</u>	County: <u>WING</u>
Investigator(s): <u>AM, JL</u>	State: <u>WA</u>
	S/T/R: <u>03/03/4E</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Community ID: <u>✓</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Transect ID:
Is the area a potential Problem Area? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Plot ID: <u>DP-B O.1R</u>
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
<u>Phalaris arundinacea</u>	<u>H</u>	<u>40</u>	<u>FACW</u>				
<u>Juncus effusus</u>	<u>H</u>	<u>30</u>	<u>FACW</u>				
<u>Carex obnupta</u>	<u>H</u>	<u>10</u>	<u>FACW</u>				
<u>Rubus discolor</u>	<u>S</u>	<u>30</u>	<u>FACU</u>				
<u>Dryopteris sp</u>	<u>H</u>	<u>20</u>	<u>FAC</u>				
<u>Holcus lanatus</u>	<u>H</u>	<u>10</u>	<u>FAC</u>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC 80%

Check all indicators that apply & explain below:

Visual observation of plant species growing in areas of prolonged inundation/saturation <input checked="" type="checkbox"/>	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:
More than 50% of dominants are OBL, FACW or FAC

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Water Marks: yes <input type="checkbox"/> no <input checked="" type="checkbox"/>	Sediment Deposits: yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Based on: _____ soil temp (record temp _____) <u>DATE</u> other (explain)	Drift Lines: yes <input type="checkbox"/> no <input checked="" type="checkbox"/>	Drainage Patterns: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. yes <input type="checkbox"/> no <input checked="" type="checkbox"/>	Local Soil Survey: yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Depth to free water in pit: <u>15</u> inches	FAC Neutral: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Water-stained Leaves yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Depth to saturated soil: <u>0</u> inches	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:
Standing water present, in approx 50% of wetland. Soils saturated to surface in data pit.

SOILSMap Unit Name Urban Land
(Series & Phase)Drainage Class VariableTaxonomy (subgroup) NAField 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)
0-8	A	10YR 2/2	-	-	sandy loam	
8-16+	B	2.5Y 4/1	7.5YR 4/4	distinct common fine	clay loam	

Hydric Soil Indicators: (check all that apply)

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

Hydric soils present? yes no

Rationale for decision/Remarks:

Soil contains low chroma & mottles**Wetland Determination** (circle)

- | | | | |
|---------------------------------|---|---|---|
| Hydrophytic vegetation present? | <input checked="" type="checkbox"/> yes <input type="checkbox"/> no | Is the sampling point within a wetland? | <input checked="" type="checkbox"/> yes <input type="checkbox"/> no |
| Hydric soils present? | <input checked="" type="checkbox"/> yes <input type="checkbox"/> no | | |
| Wetland hydrology present? | <input checked="" type="checkbox"/> yes <input type="checkbox"/> no | | |

Rationale/Remarks:

All three criteria are met - indicators present during early portion of growing season.

NOTES: DP-B is located in WL OLR, PEM wetland immediately next I-5 - Between I-5 NB lanes and ~~EB~~ NB Exit lane that goes to 518 Burien, South of I-405.

Wetland receives road runoff that flows down slopes/road shoulders - topography forms a gully that slopes to north - wetland located where gully meets 405 and drainage is impounded.

Revised 4/97

DRAFT WETLAND RATING FORM – WESTERN WASHINGTON

Name of wetland (if known): 0.1R

Location: SEC: 23 TOWNSHIP: 23N RANGE: 4E (attach map with outline of wetland to rating form)
WSDOT 405 Project

Person(s) Rating Wetland: A. Merrill Affiliation: S. Renton Nickel Date of site visit: 3/18/05

DRAFT SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I ___ II ___ III ___ IV X

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

Score for Water Quality Functions	10
Score for Hydrologic Functions	4
Score for Habitat Functions	8
TOTAL score for functions	22

Category based on SPECIAL CHARACTERISTICS of wetland

I ___ II ___ Does not Apply X

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

IV

Check the appropriate type and class of wetland being rated.

Wetland Type	Wetland Class
Estuarine	Depressional <u>X</u>
Natural Heritage Wetland	Riverine
Bog	Lake-fringe
Mature Forest	Slope
Old Growth Forest	Flats
Coastal Lagoon	Freshwater Tidal
Interdunal	
None of the above	<u>X</u>

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
<p>SP1. <i>Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species (T/E species)?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.</p>		X
<p>SP2. <i>Has the wetland been documented as habitat for any State listed Threatened or Endangered plant or animal species?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state database.</p>		X
<p>SP3. <i>Does the wetland contain individuals of Priority species listed by the WDFW for the state?</i></p>		X
<p>SP4. <i>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.</i></p>		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 <u>points = 2</u> 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 <u>points = 0</u>	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 <u>points = 3</u> 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. <i>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.</i> Area seasonally ponded is > 1/2 total area of wetland points = 4 Area seasonally ponded is > 1/4 total area of wetland <u>points = 2</u> Area seasonally ponded is < 1/4 total area of wetland <u>points = 0</u> NOTE: See text for indicators of seasonal and permanent inundation..	0
D	Total for D 1 <i>Add the points in the boxes above</i>	5
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. <input type="checkbox"/> Grazing in the wetland or within 150 ft <input checked="" type="checkbox"/> Untreated stormwater discharges to wetland <input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland <input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging <input type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland <input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen <input type="checkbox"/> Other _____ <input checked="" type="radio"/> YES multiplier is 2 <input type="radio"/> NO multiplier is 1	multiplier 2
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 <i>Add score to table on p. 1</i>	10

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 <u>points = 2</u> 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 <i>Estimate the height of ponding above the bottom of the outlet</i> 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 <u>points = 0</u>	0
D	D 3.3 Contribution of wetland to storage in the watershed <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland itself.</i> 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 <i>estimate</i> → The area of the basin is more than 100 times the area of the wetland <u>points = 0</u> Wetland is in the FLATS class (basin = the wetland, by definition) points = 5	0
D	Total for D 3 <i>Add the points in the boxes above</i>	2
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. <i>Note which of the following indicators of opportunity apply.</i> — Wetland is in a headwater of a river or stream that has flooding problems — <input checked="" type="checkbox"/> 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 <u>6</u> <input checked="" type="radio"/> YES multiplier is 2 NO multiplier is 1	multiplier 2
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	4

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 1/4 acre.

- Aquatic bed
- Emergent plants
- Scrub/shrub (areas where shrubs have >30% cover)
- 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

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 4 or more types present points = 3
- Seasonally flooded or inundated 3 types present points = 2
- Occasionally flooded or inundated 2 types present point = 1
- 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 ft². (different patches of the same species can be combined to meet the size threshold)

You do not have to name the species.

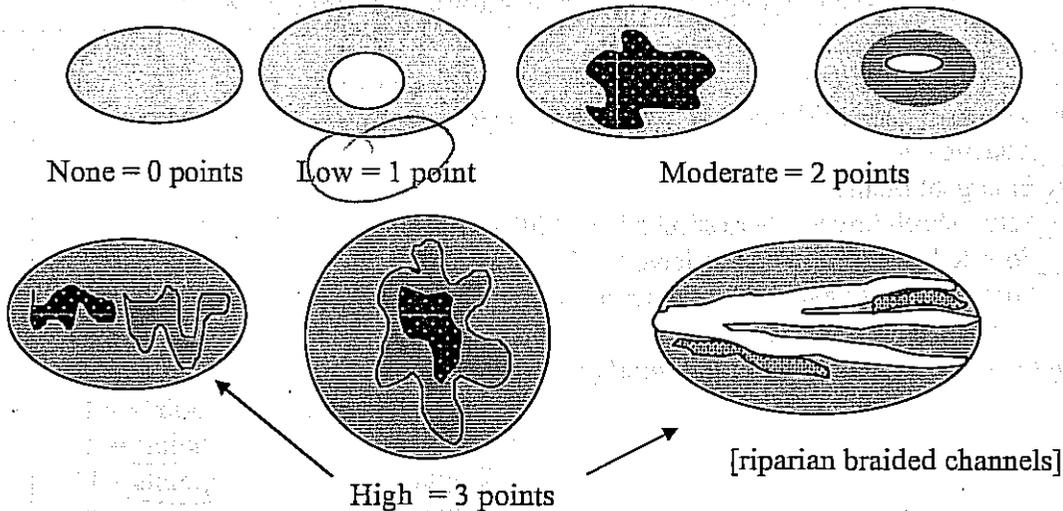
Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle

- List species below if you want to:
- If you counted: > 19 species points = 2
 - 5 - 19 species points = 1
 - < 5 species points = 0

1

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.

- Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).
- Standing snags (diameter at the bottom > 4 inches) in the wetland
- Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream 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

0

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

4

Comments

<p>H 2. Does the wetland have the opportunity to provide habitat for many species?</p>	
<p>H 2.1 Buffers (see p. 80) <i>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."</i></p> <ul style="list-style-type: none"> — 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 <p style="text-align: center;">If buffer does not meet any of the three criteria above</p> <ul style="list-style-type: none"> — 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 	<p>1</p>
<p>H 2.2 Corridors and Connections (see p. 81)</p> <p>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? (<i>dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor</i>).</p> <p style="text-align: center;">YES = 4 points (go to H 2.3) NO = go to H 2.2.2</p> <p>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?</p> <p style="text-align: center;">YES = 2 points (go to H 2.3) NO = H 2.2.3</p> <p>H 2.2.3 Is the wetland:</p> <ul style="list-style-type: none"> 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? <p style="text-align: center;">YES = 1 point NO = 0 points</p>	<p>0</p>

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 than 100%; 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 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

<p>H 2.4 Wetland Landscape (<i>choose the one description of the landscape around the wetland that best fits</i>) (<i>see p. 84</i>)</p> <p>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</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5.</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3</p> <p>The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3</p> <p>There is at least 1 wetland within ½ mile. points = 2</p> <p>There are no wetlands within ½ mile. points = 0</p>	<p>W</p>
<p>H 2. TOTAL Score - opportunity for providing habitat <i>Add the scores in the column above</i></p>	<p>4</p>
<p>Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1</p>	<p>8</p>

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

Project/Site: <u>I-405 South Renton Nickel</u>	Date: <u>2/2/05</u>
Applicant/owner: <u>NSDOT</u>	County: <u>King</u>
Investigator(s): <u>AM, IL</u>	State: <u>WA</u>
	S/T/R: <u>23/23N/4E</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> yes <input type="radio"/> no	Community ID: <u>5</u>
Is the site significantly disturbed (atypical situation)? <input type="radio"/> yes <input checked="" type="radio"/> no	Transect ID:
Is the area a potential Problem Area? <input type="radio"/> yes <input checked="" type="radio"/> no	Plot ID: <u>DP-A 0.15R</u>
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
<u>Rubus discolor</u>	<u>S</u>	<u>100</u>	<u>FACU</u>				

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 _____	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:
Only one dominant present: - FACU

HYDROLOGY

Is it the growing season? yes <input type="radio"/> no <input checked="" type="radio"/>	Water Marks: yes <input type="radio"/> no <input checked="" type="radio"/>	Sediment Deposits: yes <input type="radio"/> no <input checked="" type="radio"/>
Based on: _____ soil temp (record temp _____) <u>DATE</u> other (explain)	Drift Lines: yes <input type="radio"/> no <input checked="" type="radio"/>	Drainage Patterns: yes <input type="radio"/> no <input checked="" type="radio"/>
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. yes <input type="radio"/> no <input checked="" type="radio"/>	Local Soil Survey: yes <input type="radio"/> no <input checked="" type="radio"/>
Depth to free water in pit: <u>>16</u> inches	FAC Neutral: yes <input type="radio"/> no <input checked="" type="radio"/>	Water-stained Leaves yes <input type="radio"/> no <input checked="" type="radio"/>
Depth to saturated soil: <u>0</u> inches	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:
Area not likely saturated due to very sandy soils.

SOILS

Map Unit Name Urban Land
(Series & Phase)

Drainage Class Variable

Taxonomy (subgroup) NA

Field observations confirm Yes No mapped type?

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	10YR 3/1	-	-	sandy loam	
6-16	B	2.5Y 3/2	-	-	sandy loam	

Hydric Soil Indicators: (check all that apply)

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

Hydric soils present? yes no

Rationale for decision/Remarks:
~~Marginal indicators present.~~ No redox features or chroma 1 in root zone.
 Marginal indicators.

Wetland Determination (circle)

Hydrophytic vegetation present?	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>	Is the sampling point within a wetland?	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Hydric soils present?	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>		
Wetland hydrology present?	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>		

Rationale/Remarks:
 No criteria present. Plot very near upland/wetland border.

NOTES:

DP-A. just outside 0.15R wetland border. RUD1 dominated area adjacent to Gilliam Creek. Soils have marginal indicators, but area is likely not saturated in growing season due to sandy soils. Area disturbed creek banks.

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

Project/Site: 1405 Smith Renton Nickel	Date: 2/2/05
Applicant/owner: WSDOT	County: KING
Investigator(s): IL, AM	State: WA
	S/TR: 23/23N/4E
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> yes <input type="radio"/> no	Community ID: 2K
Is the site significantly disturbed (atypical situation)? <input type="radio"/> yes <input checked="" type="radio"/> no	Transect ID:
Is the area a potential Problem Area? <input type="radio"/> yes <input checked="" type="radio"/> no	Plot ID: DP-B. WL 0.15R
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
<i>Phalaris arundinacea</i>	H	100	FACW				
<i>Rubus discolor</i>	S	5	FACU				
<i>Thuja plicata</i> ^{planted} - sapling	T	2	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	___	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:
All dominants are FAC or wetter.

HYDROLOGY

Is it the growing season? <input type="radio"/> yes <input checked="" type="radio"/> no	Water Marks: <input checked="" type="radio"/> yes <input type="radio"/> no	Sediment Deposits: <input checked="" type="radio"/> yes <input type="radio"/> no
Based on: _____ soil temp (record temp _____) <u>DATE</u> other (explain)	Drift Lines: <input type="radio"/> yes <input checked="" type="radio"/> no	Drainage Patterns: <input checked="" type="radio"/> yes <input type="radio"/> no
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. <input type="radio"/> yes <input type="radio"/> no	Local Soil Survey: <input type="radio"/> yes <input checked="" type="radio"/> no
Depth to free water in pit: <u>6</u> inches	FAC Neutral: <input checked="" type="radio"/> yes <input type="radio"/> no	Water-stained Leaves: <input checked="" type="radio"/> yes <input type="radio"/> no
Depth to saturated soil: <u>0</u> inches	Other (explain):	
Check all that apply & explain below: Stream, Lake or gage data: _____ Aerial photographs: _____ Other: _____		

Wetland hydrology present? yes no

Rationale for decision/Remarks:
Soils are saturated to surface and areas of ponding are present. This area is likely saturated early in the growing season.

SOILS

Map Unit Name Urban Land
(Series & Phase)

Drainage Class Variable

Taxonomy (subgroup) NA

Field observations confirm Yes No mapped type?

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	2.5y 3/1	-	-	clay loam	
7-16	B	2.5y 3/1	7.5yR 3/3	faint common medium	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
- 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 hydric indicators.

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-B is located in the eastern portion of WL 0.1SR. This PEM wetland is associated with Gilliam Creek and contains large area of PHAR with some planted trees and shrubs. [Area is previous WSDOT mitigation site (info from Terry Drochak),] Revised 4/97
Forested area assoc w/ creek channel in western portion - planted oak sp. and ALRU.



DRAFT WETLAND RATING FORM - WESTERN WASHINGTON

Name of wetland (if known): Wetland 0.15R

Location: SEC: 23 TOWNSHIP: 23^N RANGE: 4E (attach map with outline of wetland to rating form)

Person(s) Rating Wetland: A. Merrill Affiliation: WSPOT 405 Project S. Renton Date of site visit: 2/2/05

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	16
Score for Hydrologic Functions	8
Score for Habitat Functions	16
TOTAL score for functions	40

Category based on SPECIAL CHARACTERISTICS of wetland

I ___ II ___ Does not Apply ___

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	<u>X</u>
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	
Coastal Lagoon	Freshwater Tidal	
Interdunal		
None of the above		<u>X</u>

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.

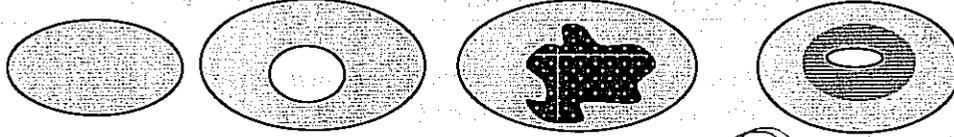
D Depressional and Flats Wetlands		Points
WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality		
D	D 1. Does the wetland have the <u>potential</u> to improve water quality? (see p. 38)	
D	D 1.1 Characteristics of surface water flows out of the wetland: Wetland is a depression with no surface water outlet points = 3 Wetland has an intermittently flowing, or highly constricted, outlet points = 2 Wetland has an unconstricted surface outlet <u>points = 1</u> Wetland is flat and has no obvious outlet and/or outlet is a ditch points = 1	7
D	D 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs). YES <u>points = 4</u> 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 <u>points = 3</u> 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. <i>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.</i> Area seasonally ponded is > 1/2 total area of wetland points = 4 Area seasonally ponded is > 1/4 total area of wetland <u>points = 2</u> Area seasonally ponded is < 1/4 total area of wetland <u>points = 0</u> NOTE: See text for indicators of seasonal and permanent inundation..	0
D	Total for D 1 Add the points in the boxes above	8
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. <input checked="" type="checkbox"/> Grazing in the wetland or within 150 ft <input checked="" type="checkbox"/> Untreated stormwater discharges to wetland <input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland <input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging <input type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland <input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen <input type="checkbox"/> Other _____ <u>YES</u> 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	16

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	0
D	D 3.2 Depth of storage during wet periods <i>Estimate the height of ponding above the bottom of the outlet</i> 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	7
D	D 3.3 Contribution of wetland to storage in the watershed <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland itself.</i> 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 <i>Add the points in the boxes above</i>	4
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. <i>Note which of the following indicators of opportunity apply.</i> — Wetland is in a headwater of a river or stream that has flooding problems <input checked="" type="checkbox"/> 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 _____ <input checked="" type="radio"/> YES multiplier is 2 NO multiplier is 1	multiplier 0
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	0

estimate

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

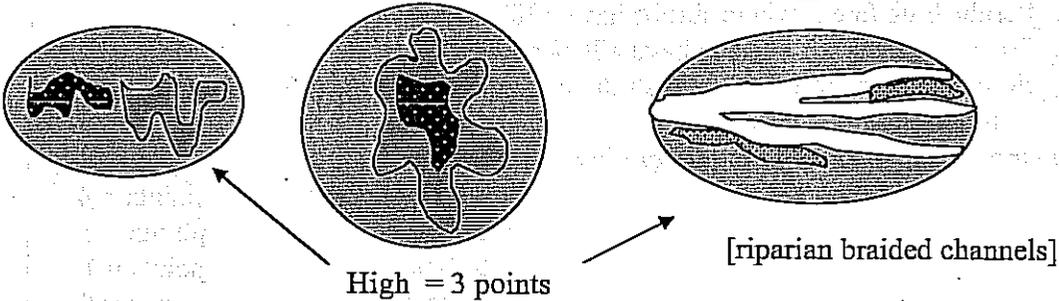
Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.



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".

H 1.5. Special Habitat Features: (see p. 77)

Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.

- Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).
- Standing snags (diameter at the bottom > 4 inches) in the wetland
- Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream 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

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

2

1

11

Comments

<p>H 2. Does the wetland have the opportunity to provide habitat for many species?</p> <p>H 2.1 Buffers (see p. 80) <i>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."</i></p> <ul style="list-style-type: none"> — 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 <p style="text-align: center;">If buffer does not meet any of the three criteria above</p> <ul style="list-style-type: none"> — 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. <input checked="" type="checkbox"/> Buffer does not meet any of the criteria above. Points = 1 	<p>1</p>
<p>H 2.2 Corridors and Connections (see p. 81)</p> <p>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? (<i>dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor</i>).</p> <p>YES = 4 points (go to H 2.3) NO = go to H 2.2.2</p> <p>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?</p> <p>YES = 2 points (go to H 2.3) NO = H 2.2.3</p> <p>H 2.2.3 Is the wetland:</p> <ul style="list-style-type: none"> 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? <p style="text-align: center;">YES = 1 point NO = 0 points</p>	<p>0</p>

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 than 100%; 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 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

<p>H 2:4 <u>Wetland Landscape</u> (choose the one description of the landscape around the wetland that best fits) (see p. 84)</p> <p>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</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed <u>points = 3</u></p> <p>The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3</p> <p>There is at least 1 wetland within ½ mile. points = 2</p> <p>There are no wetlands within ½ mile. points = 0</p>	3
<p>H 2. TOTAL Score - opportunity for providing habitat Add the scores in the column above</p>	5
<p>Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1</p>	16

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

Project/Site: I 405 South Renton Nickel	Date: 2/2/05
Applicant/owner: WSDOT	County: KING
Investigator(s): AM, IL	State: WA
	S/TR: 23/23N/4E
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> yes <input type="radio"/> no	Community ID: 5
Is the site significantly disturbed (atypical situation)? <input type="radio"/> yes <input checked="" type="radio"/> no	Transect ID:
Is the area a potential Problem Area? <input type="radio"/> yes <input checked="" type="radio"/> no	Plot ID: PP-A WLO.25M
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
<i>Phalaris arundinacea</i>	H	90	FACW				
<i>Festuca arundinacea</i>	H	10	FACU				
<i>Rubus discolor</i>	S	2	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	_____	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:
 More than 50% of dominants are OBL, FACW, FAC
 Vegetation is mowed & maintained.

HYDROLOGY

Is it the growing season? yes <input checked="" type="radio"/> no	Water Marks: yes <input checked="" type="radio"/> no	Sediment Deposits: yes <input checked="" type="radio"/> no
Based on: _____ soil temp (record temp _____) DATE other (explain)	Drift Lines: yes <input checked="" type="radio"/> no	Drainage Patterns: yes <input checked="" type="radio"/> no
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. yes <input checked="" type="radio"/> no	Local Soil Survey: yes <input checked="" type="radio"/> no
Depth to free water in pit: >16 inches	FAC Neutral: yes <input checked="" type="radio"/> no	Water-stained Leaves yes <input checked="" type="radio"/> no
Depth to saturated soil: >16 inches	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:
 No saturation or moisture - soils are dry. Area drains east toward PGM wetland.

SOILS

Map Unit Name Urban Land
(Series & Phase)

Drainage Class variable

Taxonomy (subgroup) NA

Field observations confirm Yes No
mapped type?

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 loam	
9-11	B	2.5Y 5/4			loamy sand	
	sub-dominant matrix	2.5Y 6/4				
11+					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 indicators present. Soils have high chroma.

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:

Not all three criteria are met. Vegetation is dominated by PHAR, but area is dry and likely remains dry - draining to the east into WL 0.25M.

NOTES:

DP-A is located ~~on~~ west of 0.25M and west of a concrete culvert that receives from surrounding uplands and WL 0.25M.

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

Project/Site: I-405 SOUTH RENTON NICKEL	Date: 4/2/05
Applicant/owner: WSDOT	County: King
Investigator(s): AM, JL	State: WA
	S/T/R: 23/03N/4E
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> yes <input type="radio"/> no	Community ID: 2C
Is the site significantly disturbed (atypical situation)? <input checked="" type="radio"/> yes <input type="radio"/> no	Transect ID:
Is the area a potential Problem Area? <input checked="" type="radio"/> yes <input type="radio"/> no	Plot ID: DP-B WL 0.25M
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
<i>Phalaris arundinacea</i>	H	100	FACU				
<i>Alnus rubra</i>	T	30	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	___	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~~ All dominants are FAC or water

HYDROLOGY

Is it the growing season? yes <input checked="" type="radio"/> no <input type="radio"/>	Water Marks: yes <input type="radio"/> no <input checked="" type="radio"/>	Sediment Deposits: yes <input type="radio"/> no <input checked="" type="radio"/>
Based on: _____ soil temp (record temp _____) <u>DATE</u> other (explain)	Drift Lines: yes <input type="radio"/> no <input checked="" type="radio"/>	Drainage Patterns: <input checked="" type="radio"/> yes <input type="radio"/> no
Dept. of inundation: <u> </u> inches	Oxidized Root (live roots) Channels <12 in. yes <input type="radio"/> no <input checked="" type="radio"/>	Local Soil Survey: yes <input type="radio"/> no <input checked="" type="radio"/>
Depth to free water in pit: <u> 9 </u> inches	FAC Neutral: <input checked="" type="radio"/> yes <input type="radio"/> no	Water-stained Leaves yes <input checked="" type="radio"/> no <input type="radio"/>
Depth to saturated soil: <u> 0 </u> inches	Other (explain):	
Check all that apply & explain below: Stream, Lake or gage data: ___ Aerial photographs: ___ Other: ___		

Wetland hydrology present? yes no

Rationale for decision/Remarks:
Soils are saturated to surface and area is likely saturated or inundated during the early portion of the growing season

SOILS

Map Unit Name Urban Land
(Series & Phase)

Drainage Class variable

Taxonomy (subgroup) NA

Field observations confirm Yes No
mapped type?

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	A1	10YR 3/1	-	-	sandy loam	
4-8	A2	10YR 2/1	10YR 4/4	few fine distinct	Sandy loam	
8-13	B	2.5Y 3/1	10YR 4/4	common med distinct	Sandy loam	
13+					repeated refusal - compact	

Hydric Soil Indicators: (check all that apply)

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

Hydric soils present? yes no
Rationale for decision/Remarks:
Soils contain low chroma and mottles in root zone.

Wetland Determination (circle)

Hydrophytic vegetation present?	<input checked="" type="radio"/> yes <input type="radio"/> no	Is the sampling point within a wetland?	<input checked="" type="radio"/> yes <input type="radio"/> no
Hydric soils present?	<input checked="" type="radio"/> yes <input type="radio"/> no		
Wetland hydrology present?	<input checked="" type="radio"/> yes <input type="radio"/> no		

Rationale/Remarks:
All three criteria are met.

NOTES: DP-B is located in WL 0.25 M. It is a narrow broad swale PEM wetland between NB 405 and the HOV on ramp to I-5 NB. Vegetation is mowed & maintained. Wetland swale slopes west, discharging into an 18" concrete culvert.

DRAFT WETLAND RATING FORM – WESTERN WASHINGTON

Name of wetland (if known): Wetland 0.25M

Location: SEC: 23 TOWNSHIP: 3N RANGE: 4E (attach map with outline of wetland to rating form)

Person(s) Rating Wetland: A. Merrill Affiliation: WSDOT 405 Project, C. Renken Date of site visit: 2/2/05

DRAFT SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I ___ II ___ III ___ IV X

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

Score for Water Quality Functions	2
Score for Hydrologic Functions	2
Score for Habitat Functions	5
TOTAL score for functions	9

Category based on SPECIAL CHARACTERISTICS of wetland

I ___ II ___ Does not Apply X

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

IV

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
<p>SP1. <i>Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species (T/E species)?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.</p>		X
<p>SP2. <i>Has the wetland been documented as habitat for any State listed Threatened or Endangered plant or animal species?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state database.</p>		X
<p>SP3. <i>Does the wetland contain individuals of Priority species listed by the WDFW for the state?</i></p>		X
<p>SP4. <i>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.</i></p>		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.

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

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

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	7
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	0
D	D1.4 Characteristics of seasonal ponding or inundation. <i>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.</i> 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 NOTE: See text for indicators of seasonal and permanent inundation..	0
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. <input checked="" type="checkbox"/> Grazing in the wetland or within 150 ft <input checked="" type="checkbox"/> Untreated stormwater discharges to wetland <input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland <input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging <input type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland <input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen <input checked="" type="checkbox"/> Other _____ YES multiplier is 2 NO multiplier is 1	multiplier 0
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	0

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 <u>points = 0</u>	0
D	D 3.2 Depth of storage during wet periods <i>Estimate the height of ponding above the bottom of the outlet</i> 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 <u>points = 1</u> Marks of ponding less than 0.5 ft points = 0	7
D	D 3.3 Contribution of wetland to storage in the watershed <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland itself.</i> 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 <u>points = 0</u> Wetland is in the FLATS class (basin = the wetland, by definition) points = 5	0
D	Total for D 3 <i>Add the points in the boxes above</i>	7
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. <i>Note which of the following indicators of opportunity apply.</i> <input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems <input checked="" type="checkbox"/> Wetland drains to a river or stream that has flooding problems <input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems Other _____ <input checked="" type="radio"/> YES multiplier is 2 NO multiplier is 1	multiplier 2
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	2

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 1/4 acre.

- Aquatic bed
- Emergent plants
- Scrub/shrub (areas where shrubs have >30% cover)
- 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



0

H 1.2. Hydroperiods (see p. 73)

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

- Permanently flooded or inundated 4 or more types present points = 3
- Seasonally flooded or inundated 3 types present points = 2
- Occasionally flooded or inundated 2 types present point = 1
- 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**

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 ft². (different patches of the same species can be combined to meet the size threshold)

You do not have to name the species.

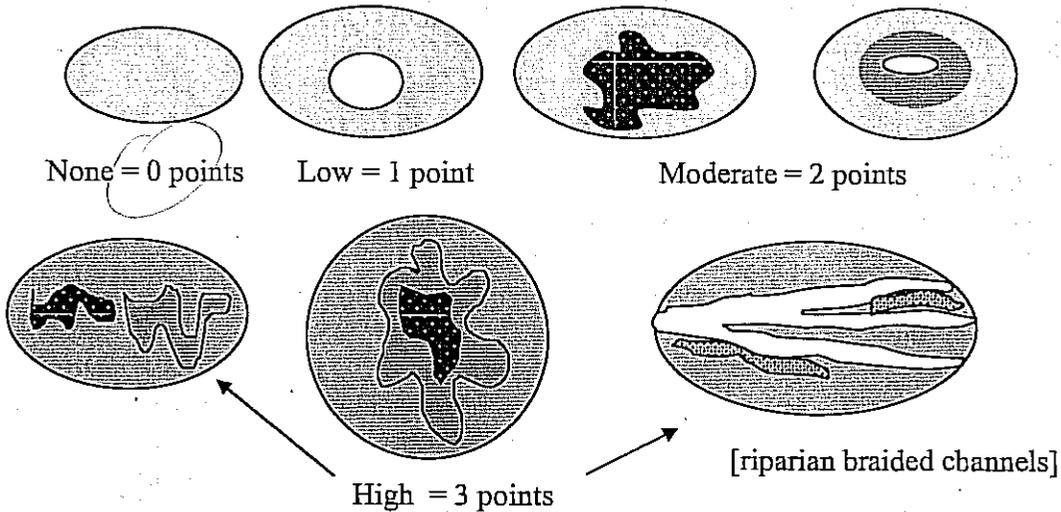
Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle

- List species below if you want to:
- If you counted: > 19 species points = 2
 - 5 - 19 species points = 1
 - < 5 species points = 0

0

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".

H 1.5. Special Habitat Features: (see p. 77)

Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.

- Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).
- Standing snags (diameter at the bottom > 4 inches) in the wetland
- Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream 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

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

Comments

0

0

1

<p>H 2. Does the wetland have the opportunity to provide habitat for many species?</p>	
<p>H 2.1 Buffers (see p. 80) <i>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."</i></p> <ul style="list-style-type: none"> — 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 <p style="text-align: center;">If buffer does not meet any of the three criteria above</p> <ul style="list-style-type: none"> — 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 	<p>2</p>
<p>H 2.2 Corridors and Connections (see p. 81)</p> <p>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? (<i>dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor</i>).</p> <p style="text-align: center;">YES = 4 points (go to H 2.3) NO = go to H 2.2.2</p> <p>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?</p> <p style="text-align: center;">YES = 2 points (go to H 2.3) NO = H 2.2.3</p> <p>H 2.2.3 Is the wetland:</p> <ul style="list-style-type: none"> 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? <p style="text-align: center;">YES = 1 point NO = 0 points</p>	<p>0</p>

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 than 100%; 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 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

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

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

Project/Site: <u>W 6007 405</u> <u>S, Renton Project</u>	Date: <u>2/2/05</u>
Applicant/owner: <u>W 6007</u>	County: <u>King</u>
Investigator(s): <u>AM, DL</u>	State: <u>WA</u>
	S/T/R: <u>23/03N/4E</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> yes <input type="radio"/> no	Community ID: <u>Upland</u> Transect ID: Plot ID: <u>DP 03P-A</u>
Is the site significantly disturbed (atypical situation)? <input type="radio"/> yes <input checked="" type="radio"/> no	
Is the area a potential Problem Area? <input type="radio"/> yes <input checked="" type="radio"/> no	
Explanation of atypical or problem area:	

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
<u>Rubus discolor</u>	<u>S</u>	<u>65</u>	<u>PACU</u>				

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	_____	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 plant is FACU

HYDROLOGY

Is it the growing season? yes <input type="radio"/> no <input checked="" type="radio"/>	Water Marks: yes <input type="radio"/> no <input checked="" type="radio"/>	Sediment Deposits: yes <input type="radio"/> no <input checked="" type="radio"/>
Based on: _____ soil temp (record temp _____) <u>time of year</u> other (explain)	Drift Lines: yes <input type="radio"/> no <input checked="" type="radio"/>	Drainage Patterns: yes <input type="radio"/> no <input checked="" type="radio"/>
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. yes <input type="radio"/> no <input checked="" type="radio"/>	Local Soil Survey: yes <input type="radio"/> no <input checked="" type="radio"/>
Depth to free water in pit: _____ inches	FAC Neutral: yes <input type="radio"/> no <input checked="" type="radio"/>	Water-stained Leaves yes <input type="radio"/> no <input checked="" type="radio"/>
Depth to saturated soil: _____ inches	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:
No indication of wetland hydrology

SOILSMap Unit Name Urban land
(Series & Phase)Drainage Class variableTaxonomy (subgroup) NAField observations confirm Yes No

mapped type?

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 2/2			loamy sand	
9-16	B	2.5Y 3/2			sand	

Hydric Soil Indicators: (check all that apply)

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

Hydric soils present? yes no

Rationale for decision/Remarks:

No hydric features present.**Wetland Determination** (circle)

Hydrophytic vegetation present?	yes <input type="radio"/> no <input checked="" type="radio"/>	Is the sampling point within a wetland?	yes <input type="radio"/> no <input checked="" type="radio"/>
Hydric soils present?	yes <input type="radio"/> no <input checked="" type="radio"/>		
Wetland hydrology present?	yes <input type="radio"/> no <input checked="" type="radio"/>		

Rationale/Remarks:

No wetland criteria met.**NOTES:**

Plot A is located outside of wetland 0.3L, next to stream, and south of I-5 to 405 ramp.

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

Project/Site: <u>WSOBT 405 Project</u> <u>S, Renton</u> Applicant/owner: <u>WSOBT</u> Investigator(s): <u>DLAM</u>	Date: <u>1/20/05</u> County: <u>King</u> State: <u>WA</u> S/TR: <u>23/23N/4E</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> yes <input type="radio"/> no Is the site significantly disturbed (atypical situation)? <input type="radio"/> yes <input checked="" type="radio"/> no Is the area a potential Problem Area? <input type="radio"/> yes <input checked="" type="radio"/> no Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: <u>DP 0.3R-B</u>

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
<u>Rubus discolor</u>	<u>S</u>	<u>30</u>	<u>FACU</u>				
<u>Thuja plicata</u>	<u>T</u>	<u>20</u>	<u>FAC</u>				
<u>Alnus rubra</u>	<u>T</u>	<u>60</u>	<u>FAC</u>				
<u>Salix lucida</u>	<u>S</u>	<u>10</u>	<u>PACW</u>				
<u>Pseudotsuga menziesii</u>	<u>T</u>	<u>5</u>	<u>FACU</u>				

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	_____
Technical Literature	_____	Personal knowledge of regional plant communities	_____
		Other (explain)	_____

Hydrophytic vegetation present? yes no

Rationale for decision/Remarks:

>50% of dominant plants are PAC or wetter.

HYDROLOGY

Is it the growing season? yes <input type="radio"/> <input checked="" type="radio"/> no	Water Marks: <input checked="" type="radio"/> yes <input type="radio"/> no on _____	Sediment Deposits: yes <input type="radio"/> no <input checked="" type="radio"/>
Based on: _____ soil temp (record temp _____) <u>time of year</u> other (explain)	Drift Lines: yes <input type="radio"/> <input checked="" type="radio"/> no	Drainage Patterns: <input checked="" type="radio"/> yes <input type="radio"/> no
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. yes <input type="radio"/> no <input checked="" type="radio"/>	Local Soil Survey: yes <input type="radio"/> no <input checked="" type="radio"/>
Depth to free water in pit: _____ inches Depth to saturated soil: <u>Surface</u> inches	FAC Neutral: yes <input type="radio"/> no <input type="radio"/>	Water-stained Leaves <input checked="" type="radio"/> yes <input type="radio"/> no
Check all that apply & explain below: Stream, Lake or gage data: _____ Aerial photographs: _____ Other: _____		

Wetland hydrology present? yes no

Rationale for decision/Remarks:

Soils are saturated. Standing water present elsewhere in wetland.

SOILSMap Unit Name Urban land
(Series & Phase)Drainage Class variableTaxonomy (subgroup) NAField observations confirm Yes No mapped type?**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 4/2			Sandy loam	
10-16t	B	5Y 5/2	10YR 4/4	Common, coarse, distinct	loam	

Hydric Soil Indicators: (check all that apply)

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

Hydric soils present? yes no

Rationale for decision/Remarks:

Low chroma matrix mottles present in B horizon**Wetland Determination** (circle)

Hydrophytic vegetation present?	<input checked="" type="radio"/> yes <input type="radio"/> no	Is the sampling point within a wetland?	<input checked="" type="radio"/> yes <input type="radio"/> no
Hydric soils present?	<input checked="" type="radio"/> yes <input type="radio"/> no		
Wetland hydrology present?	<input checked="" type="radio"/> yes <input type="radio"/> no		

Rationale/Remarks:

All 3 wetland criteria met.

NOTES:

DP-B is located on a slope in wetland OBR. Wetland is a depression-area, associated with a fish-bearing stream. Wetland is adjacent to I-405 NB lanes, and Southcenter way. Plot is in PFO section of wetland.

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

Project/Site: <u>I-405 South Renton</u>	Date: <u>1/20/05</u>
Applicant/owner: <u>WSDOT</u>	County: <u>KING</u>
Investigator(s): <u>JL, AM</u>	State: <u>WA</u>
	S/T/R: <u>23/23N/4E</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Community ID: <u> </u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Transect ID: <u> </u>
Is the area a potential Problem Area? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Plot ID: <u>UP 03RDP-C</u>
Explanation of atypical or problem area: <u> </u>	

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
<u>Phalaris arundinacea</u>	<u>H</u>	<u>100</u>	<u>FACW</u>				
<u>Acer canadense</u>	<u>S</u>	<u>5</u>					

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	_____
Technical Literature	_____	Personal knowledge of regional plant communities	<u>X</u>
		Other (explain)	_____

Hydrophytic vegetation present? yes no

Rationale for decision/Remarks:
Area dominated by hydrophytic species (FACW)

HYDROLOGY

Is it the growing season? <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Water Marks: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Sediment Deposits: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Based on: _____ soil temp (record temp _____) <u>DATE</u> other (explain)	Drift Lines: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Drainage Patterns: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. <input type="checkbox"/> yes <input type="checkbox"/> no	Local Soil Survey: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Depth to free water in pit: <u>12</u> inches	FAC Neutral: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Water-stained Leaves <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Depth to saturated soil: <u>0</u> inches	Other (explain): _____	
Check all that apply & explain below:		
Stream, Lake or gage data: _____		
Aerial photographs: _____	Other: _____	

Wetland hydrology present? yes no (Inferred)

Rationale for decision/Remarks:
standing H₂O present in wetland area that is likely also present (or saturation within 12") in early portion of the growing season. Heavy rain two days prior to delineation.

SOILS

Map Unit Name Urban land Drainage Class Variable
 (Series & Phase)

Taxonomy (subgroup) NA Field observations confirm Yes No
 mapped type?

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	10yR 3/2			silty clay loam	
6-16+	B	2.5Y 3/1	10yR 4/4	few fine distinct	clay loam	

Hydric Soil Indicators: (check all that apply)

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

Hydric soils present? yes no

Rationale for decision/Remarks:
Soils are clay and contain hydric indicators.

Wetland Determination (circle)

Hydrophytic vegetation present?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Is the sampling point within a wetland?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Hydric soils present?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no		
Wetland hydrology present?	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no		

Rationale/Remarks:
All three criteria are met.

NOTES: DP-C is located in PEM portion of WL 0.3R. This area is ~~at~~ west of main bowl depression PFO wetland - is broad area completely dominated by PHAR. Appears regularly mowed by WSDOT. ~~Very~~ PHAR area borders RADI dominated channel of Gilliam Creek.

Revised 4/97

DRAFT WETLAND RATING FORM – WESTERN WASHINGTON

Name of wetland (if known): ^{WS00T 409 Project} Wetland Q.3R

Location: SEC: 23 TOWNSHIP: 83N RANGE: 4E (attach map with outline of wetland to rating form)

Person(s) Rating Wetland: A. Merrill Affiliation: S. Reardon Date of site visit: 2/2/05

DRAFT 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	16
Score for Hydrologic Functions	12
Score for Habitat Functions	17
TOTAL score for functions	45

Category based on SPECIAL CHARACTERISTICS of wetland

I II Does not Apply

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 <input checked="" type="checkbox"/>
Natural Heritage Wetland	Riverine <input type="checkbox"/>
Bog	Lake-fringe <input type="checkbox"/>
Mature Forest	Slope <input type="checkbox"/>
Old Growth Forest	Flats <input type="checkbox"/>
Coastal Lagoon	Freshwater Tidal <input type="checkbox"/>
Interdunal	<input type="checkbox"/>
None of the above	<input checked="" type="checkbox"/>

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

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



Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating	YES	NO
<p>SP1. <i>Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species (T/E species)?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.</p>		X
<p>SP2. <i>Has the wetland been documented as habitat for any State listed Threatened or Endangered plant or animal species?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state database.</p>		
<p>SP3. <i>Does the wetland contain individuals of Priority species listed by the WDFW for the state?</i></p>		
<p>SP4. <i>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.</i></p>		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.

(This section contains a key for determining the Hydrogeomorphic Class, which is mostly illegible due to fading and bleed-through from the reverse side of the page.)

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	<u>Depressional</u>
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	1
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. <i>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.</i> 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 NOTE: See text for indicators of seasonal and permanent inundation..	0
D	Total for D 1 Add the points in the boxes above	8
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. <input type="checkbox"/> Grazing in the wetland or within 150 ft <input checked="" type="checkbox"/> Untreated stormwater discharges to wetland <input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland <input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging <input type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland <input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen <input type="checkbox"/> 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	16

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? <i>(see p. 46)</i>	
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	0
D	D 3.2 Depth of storage during wet periods <i>Estimate the height of ponding above the bottom of the outlet</i> 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 <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland itself.</i> 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 <i>Add the points in the boxes above</i>	6
D	D 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion? <i>(see p. 49)</i> 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. <i>Note which of the following indicators of opportunity apply.</i> <input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems <input checked="" type="checkbox"/> Wetland drains to a river or stream that has flooding problems <input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems <input type="checkbox"/> Other _____ YES multiplier is 2 NO multiplier is 1	multiplier 2
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	12

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 1/4 acre.

- Aquatic bed
- Emergent plants
- Scrub/shrub (areas where shrubs have >30% cover)
- 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**

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 1/4 acre to count. (see text for descriptions of hydroperiods)

- Permanently flooded or inundated 4 or more types present **points = 3**
- Seasonally flooded or inundated 3 types present **points = 2**
- Occasionally flooded or inundated 2 types present **point = 1**
- 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**

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 ft². (different patches of the same species can be combined to meet the size threshold)

You do not have to name the species.

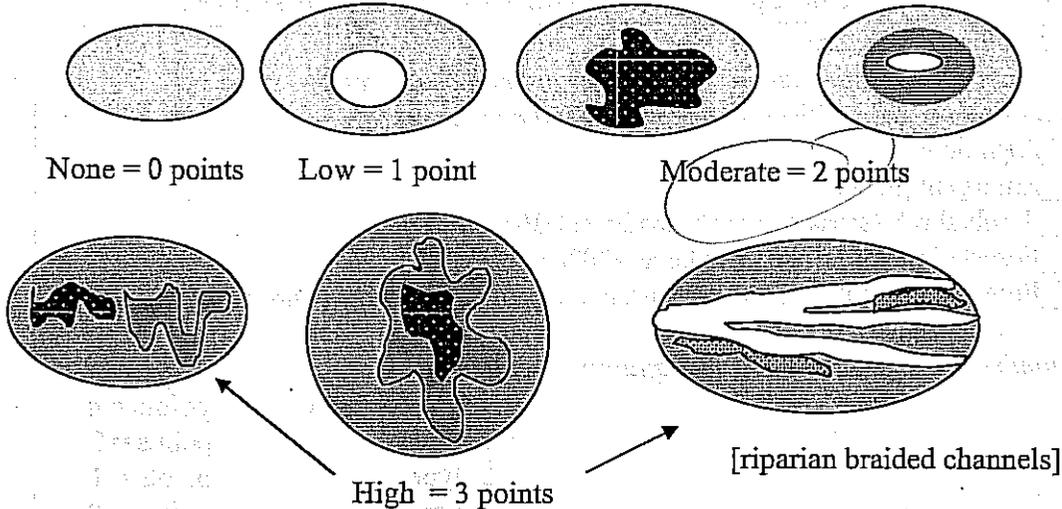
Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle

- List species below if you want to:
- If you counted: > 19 species **points = 2**
 - 5 - 19 species **points = 1**
 - < 5 species **points = 0**

2

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".

H 1.5. Special Habitat Features: (see p. 77)

Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.

- Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).
- Standing snags (diameter at the bottom > 4 inches) in the wetland
- Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream 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

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

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

WMA

Q

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 than 100%; 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 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

<p>H 2.4 Wetland Landscape (<i>choose the one description of the landscape around the wetland that best fits</i>) (see p. 84)</p> <p>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</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3</p> <p>The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3</p> <p>There is at least 1 wetland within ½ mile. points = 2</p> <p>There are no wetlands within ½ mile. points = 0</p>	<p>3</p>
<p>H 2. TOTAL Score - opportunity for providing habitat <i>Add the scores in the column above</i></p>	<p>5</p>
<p>Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1</p>	<p>17</p>

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

Project/Site: <u>WSPOT 405 Project</u> <u>OB</u> <u>Si. Rentz</u>	Date: <u>1/1/05</u>
Applicant/owner: <u>WSPOT</u>	County: <u>Ki</u>
Investigator(s): <u>AM, JC</u>	State: <u>LA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	S/T/R: <u>23/23N/4E</u>
Is the site significantly disturbed (atypical situation)? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Community ID: <u>upland</u>
Is the area a potential Problem Area? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Transect ID:
Explanation of atypical or problem area:	Plot ID: <u>DP 0.4L-A</u>

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
<u>Plantago lanceolata</u>	<u>A</u>	<u>15</u>	<u>FAC</u>				
<u>Hypochaeris radicata</u>	<u>H</u>	<u>30</u>	<u>FACU</u>				
<u>Agrostis sp.</u>	<u>A</u>	<u>40</u>	<u>FAC</u>				

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 _____	Physiological/reproductive adaptations _____
Morphological adaptations _____	Wetland plant database <u>X</u>
Technical Literature _____	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 _____) <u>time of year</u> other (explain)	Water Marks: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Sediment Deposits: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
	Drift Lines: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Drainage Patterns: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Local Soil Survey: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Depth to free water in pit: _____ inches	FAC Neutral: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Water-stained Leaves <input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Depth to saturated soil: _____ inches	Other (explain):	

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

Wetland hydrology present? yes no

Rationale for decision/Remarks:
Soils are not saturated.

SOILS

Map Unit Name Urban land
(Series & Phase)

Drainage Class Variable

Taxonomy (subgroup) AVA

Field observations confirm Yes No mapped type?

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	10YR3/2	10YR4/6	distinct, common, medium	gravelly loamy sand.	
7-9	B	2.5Y6/2	—	—	Sand	
9+	too compact to sample					

Hydric Soil Indicators: (check all that apply)

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

Hydric soils present? yes no

Rationale for decision/Remarks:
 No hydric soil indicators observed below 10", or in B horizon

Wetland Determination (circle)

Hydrophytic vegetation present?	yes <input type="radio"/> no <input checked="" type="radio"/>	Is the sampling point within a wetland?	yes <input type="radio"/> no <input checked="" type="radio"/>
Hydric soils present?	yes <input type="radio"/> no <input checked="" type="radio"/>		
Wetland hydrology present?	yes <input type="radio"/> no <input checked="" type="radio"/>		

Rationale/Remarks:
 No the wetland criteria met.

NOTES:
 DP A is located directly above upslope & S. of wetland 0.4 L. Plot is adjacent to road shoulder.

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

Project/Site: <u>W 500+ 405 Project, S. Renton</u>	Date: <u>1/1/05</u>
Applicant/owner: <u>WLOOT</u>	County: <u>Clallam</u>
Investigator(s): <u>AM, JC</u>	State: <u>WA</u>
	S/T/R: <u>23/23N/4E</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> yes <input type="radio"/> no	Community ID: <u>wetland</u>
Is the site significantly disturbed (atypical situation)? <input checked="" type="radio"/> yes <input type="radio"/> no	Transect ID:
Is the area a potential Problem Area? <input checked="" type="radio"/> yes <input type="radio"/> no	Plot ID: <u>DP 0.4L-B</u>
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
<u>Phalaris arundinacea</u>	<u>H</u>	<u>70</u>	<u>PACW</u>				
<u>Agrostis sp.</u>	<u>H</u>	<u>20</u>	<u>PAC</u>				

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 <input checked="" type="checkbox"/>	Physiological/reproductive adaptations <input type="checkbox"/>
Morphological adaptations <input type="checkbox"/>	Wetland plant database <input checked="" type="checkbox"/>
Technical Literature <input type="checkbox"/>	Personal knowledge of regional plant communities <input type="checkbox"/>
	Other (explain) <input type="checkbox"/>

Hydrophytic vegetation present? yes no

Rationale for decision/Remarks: Both dominant plants are PAC or better.

HYDROLOGY

Is it the growing season? yes <input type="radio"/> no <input checked="" type="radio"/>	Water Marks: yes <input type="radio"/> no <input checked="" type="radio"/>	Sediment Deposits: yes <input type="radio"/> no <input checked="" type="radio"/>
Based on: _____ soil temp (record temp _____) time of year _____ other (explain)	Drift Lines: yes <input type="radio"/> no <input checked="" type="radio"/>	Drainage Patterns: <input checked="" type="radio"/> yes <input type="radio"/> no
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. yes <input checked="" type="radio"/> no <input type="radio"/>	Local Soil Survey: yes <input type="radio"/> no <input checked="" type="radio"/>
Depth to free water in pit: <u>3</u> inches	FAC Neutral: yes <input type="radio"/> no <input checked="" type="radio"/>	Water-stained Leaves <input checked="" type="radio"/> yes <input type="radio"/> no
Depth to saturated soil: <u>surface</u> inches	Other (explain):	
Check all that apply & explain below: Stream, Lake or gage data: _____ Aerial photographs: _____ Other: _____		

Wetland hydrology present? yes no

Rationale for decision/Remarks: Soils saturated in wetland, free water observed at 3" depth.

SOILS

Map Unit Name Urban land
(Series & Phase)

Drainage Class variable

Taxonomy (subgroup) N/A

Field observations confirm Yes No
mapped type?

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	5Y2.5/2			loamy sand		
4-8	B	5Y6/2	10YR 5/6	distinct, common, medium	sand		
8+	too compact to sample						

Hydric Soil Indicators: (check all that apply)

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

Hydric soils present? yes no

Rationale for decision/Remarks:

Low chroma matrix w/ mottles observed in B horizon

Wetland Determination (circle)

Hydrophytic vegetation present?	<input checked="" type="radio"/> yes	<input type="radio"/> no		
Hydric soils present?	<input checked="" type="radio"/> yes	<input type="radio"/> no	Is the sampling point within a wetland?	<input checked="" type="radio"/> yes <input type="radio"/> no
Wetland hydrology present?	<input checked="" type="radio"/> yes	<input type="radio"/> no		

Rationale/Remarks:

All 3 wetland criteria met.

NOTES:

DP-B is located in wetland 0.4L, a narrow-ditch associated wetland. Wetland is adjacent to 405 S-bound, and a steep slope in the ROW. PHAR & TMA are dominant in ditch. Wetland is PEAM. Revised 4/97

DRAFT WETLAND RATING FORM – WESTERN WASHINGTON

Name of wetland (if known): 0.4L

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

Person(s) Rating Wetland: A. Merrill Affiliation: S. Renton Date of site visit: 1/11/05

DRAFT SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I ___ II ___ III ___ IV X

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

Score for Water Quality Functions	4
Score for Hydrologic Functions	2
Score for Habitat Functions	9
TOTAL score for functions	15

Category based on SPECIAL CHARACTERISTICS of wetland

I ___ II ___ Does not Apply X

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

IV

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
<p>SP1. <i>Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species (T/E species)?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.</p>		X
<p>SP2. <i>Has the wetland been documented as habitat for any State listed Threatened or Endangered plant or animal species?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state database.</p>		X
<p>SP3. <i>Does the wetland contain individuals of Priority species listed by the WDFW for the state?</i></p>		X
<p>SP4. <i>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.</i></p>		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	1
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	1
D	D1.4 Characteristics of seasonal ponding or inundation. <i>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.</i> 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 NOTE: See text for indicators of seasonal and permanent inundation..	0
D	Total for D 1 <i>Add the points in the boxes above</i>	2
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. <input checked="" type="checkbox"/> Grazing in the wetland or within 150 ft <input checked="" type="checkbox"/> Untreated stormwater discharges to wetland <input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland <input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging <input type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland <input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen Other _____ <input checked="" type="radio"/> YES multiplier is 2 <input type="radio"/> NO multiplier is 1	multiplier 2
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 <i>Add score to table on p. 1</i>	4

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	0
D	D 3.2 Depth of storage during wet periods <i>Estimate the height of ponding above the bottom of the outlet</i> 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	1
D	D 3.3 Contribution of wetland to storage in the watershed <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland itself.</i> 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	0
D	Total for D 3 <i>Add the points in the boxes above</i>	1
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. <i>Note which of the following indicators of opportunity apply.</i> <input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems <input checked="" type="checkbox"/> Wetland drains to a river or stream that has flooding problems <input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems <input type="checkbox"/> Other _____ <input checked="" type="radio"/> YES multiplier is 2 NO multiplier is 1	multiplier 2
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	2

estimate

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 1/4 acre.

- Aquatic bed
- Emergent plants
- Scrub/shrub (areas where shrubs have >30% cover)
- 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

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 4 or more types present points = 3
- Seasonally flooded or inundated 3 types present points = 2
- Occasionally flooded or inundated 2 types present point = 1
- 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 ft². (different patches of the same species can be combined to meet the size threshold)

You do not have to name the species.

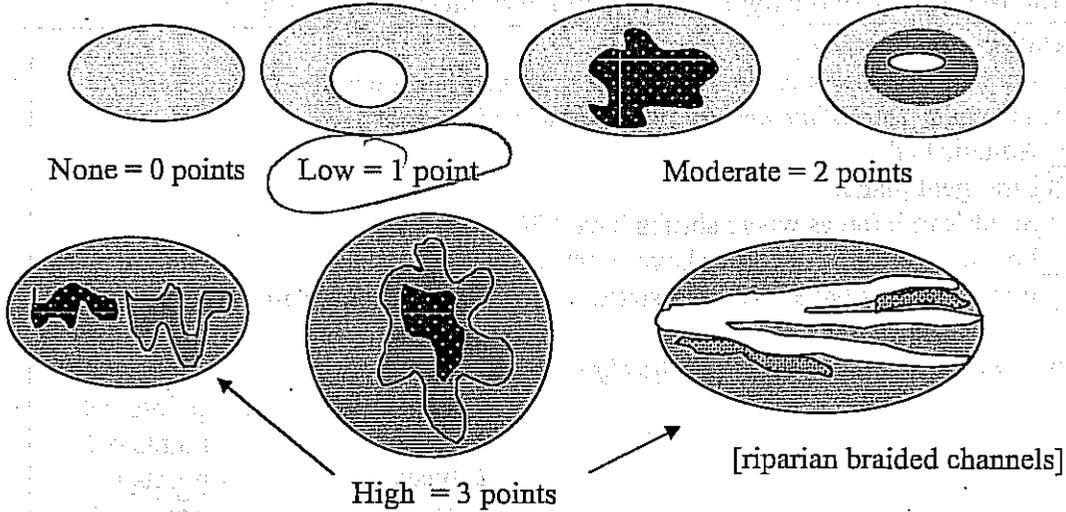
Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle

- List species below if you want to:
- If you counted: > 19 species points = 2
 - 5 - 19 species points = 1
 - < 5 species points = 0

1

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.

- Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).
- Standing snags (diameter at the bottom > 4 inches) in the wetland
- Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream 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

0

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

5

Comments

<p>H 2. Does the wetland have the opportunity to provide habitat for many species?</p>	
<p>H 2.1 Buffers (see p. 80) <i>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."</i></p> <ul style="list-style-type: none"> — 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 <p style="text-align: center;">If buffer does not meet any of the three criteria above</p> <ul style="list-style-type: none"> — 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. <input checked="" type="checkbox"/> Buffer does not meet any of the criteria above. Points = 1 	<p>7</p>
<p>H 2.2 Corridors and Connections (see p. 81)</p> <p>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? (<i>dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor</i>).</p> <p style="text-align: center;">YES = 4 points (go to H 2.3) NO = go to H 2.2.2</p> <p>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?</p> <p style="text-align: center;">YES = 2 points (go to H 2.3) NO = H 2.2.3</p> <p>H 2.2.3 Is the wetland:</p> <ul style="list-style-type: none"> 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? <p style="text-align: center;">YES = 1 point NO = 0 points</p>	<p>0</p>

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 than 100%; 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 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

<p>H 2.4 Wetland Landscape (<i>choose the one description of the landscape around the wetland that best fits</i>) (<i>see p. 84</i>)</p> <p>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</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3</p> <p>The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3</p> <p>There is at least 1 wetland within ½ mile. points = 2</p> <p>There are no wetlands within ½ mile. points = 0</p>	
<p>H 2. TOTAL Score - opportunity for providing habitat <i>Add the scores in the column above</i></p>	<p>4</p>
<p>Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1</p>	<p>9</p>

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

Project/Site: <u>WSDOT I-405 S. Renton Nickel</u>	Date: <u>1/6/04</u>
Applicant/owner: <u>WSDOT</u>	County: <u>King</u>
Investigator(s): <u>Jeff Collins, Steve Kremaer</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> yes <input type="radio"/> no	S/T/R: <u>03/03N/SE</u>
Is the site significantly disturbed (atypical situation)? <input type="radio"/> yes <input checked="" type="radio"/> no	Community ID: <u>v</u>
Is the area a potential Problem Area? <input type="radio"/> yes <input checked="" type="radio"/> no	Transect ID:
Explanation of atypical or problem area:	Plot ID: <u>DP 0.6L-A</u>

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

Dominant Plant Species	Stratum	% cover	Indicator	Dominant Plant Species	Stratum	% cover	Indicator
<u>Agrostis sp.</u>	<u>H</u>	<u>30</u>	<u>FAC</u>	<u>Poa sp.</u>	<u>H</u>	<u>50</u>	<u>FAC</u>
<u>Vicia sativa</u>	<u>H</u>	<u>5</u>	<u>UPL</u>	<u>"Tanicetum" sp.</u>	<u>H</u>	<u>10</u>	<u>?</u>
<u>Taraxacum officinale</u>	<u>H</u>	<u>5</u>	<u>FACW</u>				
<u>Cirsium arvense</u>	<u>H</u>	<u>2</u>	<u>FAC-</u>				
<u>Phalaris arundinacea</u>	<u>H</u>	<u>10</u>	<u>FACW</u>				
<u>"Beranium robertianum"</u>	<u>H</u>	<u>5</u>	<u>UPL</u>				

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	_____
Technical Literature	_____	Personal knowledge of regional plant communities	_____
		Other (explain)	_____

Hydrophytic vegetation present? yes no

Rationale for decision/Remarks:
100% of dominant plant species are FAC, FACW, or OBL

HYDROLOGY

Is it the growing season? yes <input checked="" type="radio"/> no <input type="radio"/>	Water Marks: yes <input checked="" type="radio"/> no <input type="radio"/>	Sediment Deposits: yes <input checked="" type="radio"/> no <input type="radio"/>
Based on: <u>date</u> soil temp (record temp _____) other (explain) _____	Drift Lines: yes <input checked="" type="radio"/> no <input type="radio"/>	Drainage Patterns: yes <input checked="" type="radio"/> no <input type="radio"/>
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. yes <input checked="" type="radio"/> no <input type="radio"/>	Local Soil Survey: yes <input checked="" type="radio"/> no <input type="radio"/>
Depth to free water in pit: _____ inches	FAC Neutral: yes <input type="radio"/> no <input checked="" type="radio"/>	Water-stained Leaves yes <input checked="" type="radio"/> no <input type="radio"/>
Depth to saturated soil: _____ inches	Other (explain):	
Check all that apply & explain below:		
Stream, Lake or gage data: _____		
Aerial photographs: _____	Other: _____	

Wetland hydrology present? yes no

Rationale for decision/Remarks:
Soils not saturated and no other indicators of wetland hydrology are present

SOILS

Map Unit Name Urban Loam
(Series & Phase)

Drainage Class _____

Taxonomy (subgroup) nd

Field observations confirm 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	10YR 3/2	—	—	sandy loam	
6-12	B	10YR 5/6	7.5YR 5/8	common, distinct medium	loamy sand	
12-16+	C	10YR 7/3	—	—	loamy	

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:
redoximorphic features ~~are~~ present, but soil chroma is too light in color.

Wetland Determination (circle)

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

Rationale/Remarks:

Does not meet all 3 wetland determination criteria

NOTES: fill soils in upland with redox. features.

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

Project/Site: <u>WSDOT S. Renton Nickel</u>	Date: <u>1/6/05</u>
Applicant/owner: <u>WSDOT</u>	County: <u>King</u>
Investigator(s): <u>Jeff Collins, Steve Kremer</u>	State: <u>WA</u> S/T/R: <u>23/23N/SE</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> yes <input type="radio"/> no	Community ID: <u>JK</u>
Is the site significantly disturbed (atypical situation)? <input type="radio"/> yes <input checked="" type="radio"/> no	Transect ID:
Is the area a potential Problem Area? <input type="radio"/> yes <input checked="" type="radio"/> no	Plot ID: <u>DP 0.6L-B</u>
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
<u>Phalaris arundinacea</u>	<u>H</u>	<u>80</u>	<u>FACW</u>				
<u>Juncus effusus</u>	<u>H</u>	<u>20</u>	<u>FACW</u>				
<u>Rubus discolor</u>	<u>S</u>	<u>15</u>	<u>FACU</u>				
<u>Salix sitchecis</u>	<u>S</u>	<u>5</u>	<u>FACW</u>				
<u>Alnus rubra</u>	<u>T</u>	<u>2</u>	<u>FAC</u>				
<u>Populus balsamifera</u>	<u>T</u>	<u>20</u>	<u>FAC</u>				

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	_____
Technical Literature	_____	Personal knowledge of regional plant communities	_____
	_____	Other (explain)	_____

Hydrophytic vegetation present? yes no

Rationale for decision/Remarks:

100% of dominant plant species are FAC, FACW, or OBL

HYDROLOGY

Is it the growing season? <input checked="" type="radio"/> yes <input type="radio"/> no	Water Marks: yes <input checked="" type="radio"/> no	Sediment Deposits: <input checked="" type="radio"/> yes <input type="radio"/> no
Based on: <u>date</u> soil temp (record temp _____) other (explain)	Drift Lines: yes <input checked="" type="radio"/> no	Drainage Patterns: <input checked="" type="radio"/> yes <input type="radio"/> no
Dept. of inundation: _____ inches	Oxidized Root (live roots) Channels <12 in. yes <input checked="" type="radio"/> no	Local Soil Survey: yes <input checked="" type="radio"/> no
Depth to free water in pit: <u>4</u> inches	FAC Neutral: yes <input type="radio"/> no	Water-stained Leaves <input checked="" type="radio"/> yes <input type="radio"/> no
Depth to saturated soil: <u>0</u> inches	Other (explain):	
Check all that apply & explain below:		
Stream, Lake or gage data: _____		
Aerial photographs: _____ Other: _____		

Wetland hydrology present? yes no

Rationale for decision/Remarks:

Soils saturated to the surface and free water present at 4 inches

SOILS

Map Unit Name Urban Land
(Series & Phase)

Drainage Class _____

Taxonomy (subgroup) nt

Field observations confirm Yes No mapped type?

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 4/1	10YR 3/6	medium, distinct common	loamy sand	
10-16+	B	Dominant 10YR 4/3	10YR 3/6	medium, distinct common	loamy sand	
		Syngonimant with Gley	10YR 4/5GY			

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 chroma of 1 with redoximorphic features.

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:
 Meets all 3 wetland determination criteria

NOTES: culvert inlets from the ~~south~~^{east} end. Making the wetland
 Wetland connects with a stream ~100 feet from the ~~south~~^{east} end.
 Water exporting to the south ~100 feet from the east end, via a culvert

Revised 4/97

PSS wetland east section is dominated by emergents with some shrubs
 western section (~75% of wetland) dominated by shrubs (willow, cottonwood, ^{seplings})
 culvert inlet at west end of wetland culvert inlet across wetland to the north of

DRAFT WETLAND RATING FORM – WESTERN WASHINGTON

Name of wetland (if known): WL 0.6L

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

Person(s) Rating Wetland: Jeff Collins Affiliation: WSDOT 1405 S. Renton Nickel (Date of site visit: 1/6/05)

DRAFT 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	16
Score for Hydrologic Functions	2
Score for Habitat Functions	9
TOTAL score for functions	27

Category based on SPECIAL CHARACTERISTICS of wetland

I II Does not Apply

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

IV

Check the appropriate type and class of wetland being rated.

Wetland Type	Wetland Class
Estuarine	Depressional <input checked="" type="checkbox"/>
Natural Heritage Wetland	Riverine <input type="checkbox"/>
Bog	Lake-fringe <input type="checkbox"/>
Mature Forest	Slope <input type="checkbox"/>
Old Growth Forest	Flats <input type="checkbox"/>
Coastal Lagoon	Freshwater Tidal <input type="checkbox"/>
Interdunal	<input type="checkbox"/>
None of the above	<input checked="" type="checkbox"/>

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

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

Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating	YES	NO
<p>SP1. <i>Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species (T/E species)?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.</p>		X
<p>SP2. <i>Has the wetland been documented as habitat for any State listed Threatened or Endangered plant or animal species?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state database.</p>		X
<p>SP3. <i>Does the wetland contain individuals of Priority species listed by the WDFW for the state?</i></p>		X
<p>SP4. <i>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.</i></p>		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: 0.6 L

Date: 1/6/05

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 <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	1
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 > 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 NOTE: See text for indicators of seasonal and permanent inundation..	4
D	Total for D 1 Add the points in the boxes above	8
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. X Grazing in the wetland or within 150 ft X Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging X Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen Other _____ YES multiplier is 2 NO multiplier is 1	multiplier 2
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 Add score to table on p. 1	16

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	0
D	D 3.2 Depth of storage during wet periods <i>Estimate the height of ponding above the bottom of the outlet</i> 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	1
D	D 3.3 Contribution of wetland to storage in the watershed <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland itself.</i> 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	0
D	Total for D 3 <i>Add the points in the boxes above</i>	1
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. <i>Note which of the following indicators of opportunity apply.</i> <input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems <input checked="" type="checkbox"/> Wetland drains to a river or stream that has flooding problems <input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems <input type="checkbox"/> Other _____ YES multiplier is 2 NO multiplier is 1	multiplier 2
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	0