

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502 Widening</u> Applicant/Owner: <u>WSDOT</u> Investigator: <u>TK, TSS</u>	Date: <u>03/17/2005</u> County: <u>Clark</u> State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Community ID: <u>Nonwetland</u> Transect ID: <u>ST</u> Plot ID: <u>ST-DU2</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Lolium arundinaceum</i> (tall fescue), (<i>Festuca arundinacea</i>)	H	FAC-	1		
2 <i>Dactylis glomerata</i> (orchard grass)	Herb	FACU	2		
3			3		
4			4		
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0%

Remarks: Emergent portion of wetland drains to forested wetland to the north and west.
 50% or less of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus failing to meet the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input checked="" type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks) algal mats
Field Observations: Depth of Surface Water: <u>None</u> (in.) Depth to Free Water in Pit: <u>None</u> (in.) Depth to Saturated Soil: <u>None</u> (in.)		
Remarks: No Indicators of wetland hydrology were observed, thus failing to meet the wetland hydrology criterion.		

SOILS

Map Unit Name (Series and Phase): <u>Hesson clay loam</u> Taxonomy (Subgroup): <u>Xeric Palehumult</u>	Drainage Class: <u>W</u> Circle Field Observations Confirm Mapped Type? <input checked="" type="checkbox"/> Yes				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-10		10YR 3/2	-		Silt loam
10+		10YR 4/3	-		Silty clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Concretions	<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Other (explain in remarks)			
Remarks: No Indicators of hydric soils were observed, thus failing to meet the hydric soils criterion.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Area lacks wetland indicators and fails to meet wetland criteria of at least one of the three parameters, and therefore is nonwetland.	

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Investigator: <u>TK, TSS</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Nonwetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>ST</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>ST-DW1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Festuca rubra</i> (redfescue)	H	FAC+	1		
2 <i>Phalaris arundinacea</i> (reed canarygrass)	H	FACW	2		
3 <i>Hoicus lanatus</i> (common velvetgrass)	H	FAC	3		
4			4		
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100 %

Remarks: 50% or more of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting to meet the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input checked="" type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: <i>Primary Indicators:</i> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <i>Secondary Indicators (2 or more required):</i> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>13</u> (In.) Depth to Saturated Soil: <u>9</u> (In.)	
Remarks: <u>Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Hesson clay loam</u>	Drainage Class: <u>W</u> <i>Circle</i>																		
Taxonomy (Subgroup): <u>Xeric Palehumult</u>	Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																		
Profile Description: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (inches)</th> <th>Horizon</th> <th>Matrix Color (Munsell Moist)</th> <th>Mottle Colors (Munsell Moist)</th> <th>Mottle Abundance/ Size/Contrast</th> <th>Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr> <td>0-10</td> <td>A</td> <td>10YR 3/2</td> <td>7.5YR 3/3</td> <td>Common/fine/distinct</td> <td>Silt loam</td> </tr> <tr> <td>10+</td> <td>B</td> <td>10YR 4/2</td> <td>7.5YR 4/4</td> <td>Common/coarse/distinct</td> <td>Silty clay loam</td> </tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.	0-10	A	10YR 3/2	7.5YR 3/3	Common/fine/distinct	Silt loam	10+	B	10YR 4/2	7.5YR 4/4	Common/coarse/distinct	Silty clay loam
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.														
0-10	A	10YR 3/2	7.5YR 3/3	Common/fine/distinct	Silt loam														
10+	B	10YR 4/2	7.5YR 4/4	Common/coarse/distinct	Silty clay loam														
Hydric Soil Indicators: <input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Concretions <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)																			
Remarks: <u>Indicators of hydric soils were observed, thus meeting the hydric soils criterion.</u>																			

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <u>Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.</u>	

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Investigator: <u>TK, TSS</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>ST</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>ST-DW2</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Festuca rubra</i> (red fescue)	H	FAC+	1		
2 <i>Phalaris arundinacea</i> (reed canarygrass)	H	FACW	2		
3 <i>Holcus lanatus</i> (common velvetgrass)	H	FAC	3		
4 <i>Alopecurus pratensis</i> (meadow foxtail)	H	FACW	4		
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100 %

Remarks: 50% or more of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting to meet the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input checked="" type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: <i>Primary Indicators:</i> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	<i>Secondary Indicators (2 or more required):</i> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>11</u> (In.) Depth to Saturated Soil: <u>8</u> (In.)		
Remarks: <u>Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.</u>		

SOILS

Map Unit Name (Series and Phase): <u>Hesson clay loam</u>	Drainage Class: <u>W</u> <i>Circle</i>				
Taxonomy (Subgroup): <u>Xeric Palehumult</u>	Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-19	A	10YR 4/2	7.5YR 4/3	many/fine/distinct	Silt loam
9+	B	10YR 5/2	7.5YR 4/4	Common/med/distinct	Silty clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Histic Epipedon	<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Concretions	<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Other (explain in remarks)			
Remarks: <u>Indicators of hydric soils were observed, thus meeting the hydric soils criterion.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <u>Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.</u>	

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Applicant/Owner: <u>Washington State Department of Transportation</u>	County: <u>Clark</u>
Investigator: <u>CP, TK</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Nonwetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>SU</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>SU-DU1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Pseudotsuga menziesii</i> (Douglas-fir)	T	FACU	1 <i>Taraxacum officinale</i> (common dandelion)	H	FACU
2 <i>Geranium molle</i> (dovefoot geranium)	H	NL	2 <i>Cardamine pensylvanica</i> (Pennsylvania bitter cress)	H	FACW
3 Unidentifiable mowed grass species	H		3 <i>Montia linearis</i> (narrowleaf miners lettuce)	H	NL
4			4 <i>Vicia</i> sp. (vetches)	H	
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): ≤33%

Remarks: 50% or less of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus failing to meet the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>none</u> (In.) Depth to Free Water in Pit: <u>none</u> (In.) Depth to Saturated Soil: <u>none</u> (In.)	
Remarks: <u>No Indicators of wetland hydrology were observed, thus failing to meet the wetland hydrology criterion.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Washougal loam</u>	Drainage Class: <u>SWE</u>																														
Taxonomy (Subgroup): <u>Pacific Melanoxerand</u>	Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																														
Profile Description: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (inches)</th> <th>Horizon</th> <th>Matrix Color (Munsell Moist)</th> <th>Mottle Colors (Munsell Moist)</th> <th>Mottle Abundance/ Size/Contrast</th> <th>Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr> <td>0-5</td> <td>A</td> <td>2.5Y 2.5/1</td> <td></td> <td></td> <td>Silt loam (cobbles >40%)</td> </tr> <tr> <td>5-8</td> <td>B</td> <td>2.5Y 4/3</td> <td></td> <td></td> <td>Silt loam (cobbles >40%)</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.	0-5	A	2.5Y 2.5/1			Silt loam (cobbles >40%)	5-8	B	2.5Y 4/3			Silt loam (cobbles >40%)												
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.																										
0-5	A	2.5Y 2.5/1			Silt loam (cobbles >40%)																										
5-8	B	2.5Y 4/3			Silt loam (cobbles >40%)																										
Hydric Soil Indicators: <input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Concretions <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)																															
Remarks: <u>Soil was too cobbly to dig deeper than 8".</u> <u>No Indicators of hydric soils were observed, thus failing to meet the hydric soils criterion.</u>																															

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Sampling Point Within a Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			
Remarks: <u>Area lacks wetland indicators and fails to meet wetland criteria of at least one of the three parameters, and therefore is nonwetland.</u>					

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Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Community ID: <u>Wet</u> Transect ID: <u>SU</u> Plot ID: <u>SU-DW1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Juncus effusus</i> (soft rush)	H	FACW	1 <i>Taraxacum officinale</i> (common dandelion)	H	FACU
2 <i>Ranunculus repens</i> (creeping buttercup)	H	FACW	2 <i>Lotus corniculatus</i> (birdsfoot trefoil)	H	FAC
3 Unidentifiable grass- cropped to 2"	H	?	3 <i>Cirsium arvense</i> (Canada thistle)	H	FACU+
4			4 <i>Cirsium vulgare</i> (bull thistle)	H	FACU
5			5 <i>Senecio jacobaea</i> (tansy ragwort)	H	FACU
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): $\geq 2/3 = 67\%$

Remarks: More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available Field Observations: Depth of Surface Water: <u><1</u> (In.) Depth to Free Water in Pit: <u>0</u> (inun. to surface) (In.) Depth to Saturated Soil: <u>0</u> (sat. to surface) (In.)	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.		

SOILS

Map Unit Name (Series and Phase): <u>Tisch silt</u> Taxonomy (Subgroup): <u>Typic Endoaquand</u>	Drainage Class: <u>VP</u> Circle Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																		
Profile Description: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Depth (inches)</th> <th style="width: 15%;">Horizon</th> <th style="width: 20%;">Matrix Color (Munsell Moist)</th> <th style="width: 20%;">Mottle Colors (Munsell Moist)</th> <th style="width: 15%;">Mottle Abundance/ Size/Contrast</th> <th style="width: 15%;">Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr> <td>0-9</td> <td></td> <td>2.5Y 2/1</td> <td></td> <td></td> <td>Silt loam, (cobbles>20%)</td> </tr> <tr> <td>9-14</td> <td></td> <td>2.5Y 4/2</td> <td>7.5YR 5/8</td> <td>Common/fine/prominent</td> <td>Silt loam, (cobbles>20%)</td> </tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.	0-9		2.5Y 2/1			Silt loam, (cobbles>20%)	9-14		2.5Y 4/2	7.5YR 5/8	Common/fine/prominent	Silt loam, (cobbles>20%)
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.														
0-9		2.5Y 2/1			Silt loam, (cobbles>20%)														
9-14		2.5Y 4/2	7.5YR 5/8	Common/fine/prominent	Silt loam, (cobbles>20%)														
Hydric Soil Indicators: <input type="checkbox"/> Histosol <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Histic Epipedon <input checked="" type="checkbox"/> Low-Chroma Colors <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Concretions <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Other (explain in remarks)																			
Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.																			

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502</u>	Date: <u>04/18/05</u>
Applicant/Owner: <u>Washington State Department of Transportation</u>	County: <u>Clark</u>
Investigator: <u>TK, TSS</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>SV</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>SV-DW1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Spiraea douglasii</i> (hardhack)	S	FACW	1 <i>Malus fusca</i> (Pacific crabapple)	T	FACW
2 <i>Fraxinus latifolia</i> (Oregon ash)	T	FACW	2 <i>Rosa nutkana</i> (Nootka rose)	S	FAC
3 <i>Symphoricarpos albus</i> (snowberry)	H	FACJ	3 <i>Physocarpus capitatus</i> (Pacific ninebark)	S	FACW-
4 <i>Carex obnupta</i> (slough sedge)	S	OBL	4		
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): $3/4 = 75\%$

Remarks: More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input checked="" type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>12</u> (In.) Depth to Free Water in Pit: <u>N/A</u> (In.) Depth to Saturated Soil: <u>0 (sat. to surface)</u> (In.)		
Remarks: No permission to dig, however, hydrology indicators observed without the need for pit.		

SOILS

Map Unit Name (Series and Phase): <u>Lauren gravelly loam</u>	Drainage Class: <u>W</u> Circle				
Taxonomy (Subgroup): <u>Pachic Melanoxerand</u>	Field Observations Confirm Mapped Type? <u>N/A</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
Hydric Soil Indicators: <input type="checkbox"/> Histosol <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Concretions <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Other (explain in remarks)					
Remarks: In the absence of permission to dig, wetland soils and hydrology criteria were assumed met due to presence and strength of vegetation and hydrology indicators and landscape position.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Sampling Point Within a Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			
Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.					

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502</u>	Date: <u>04/11/05</u>
Applicant/Owner: <u>Washington State Department of Transportation</u>	County: <u>Clark</u>
Investigator: <u>TSS, TB</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>SVV</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>SVV-DW1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Phalaris arundinacea</i> (reed canarygrass)	H	FACW	1 <i>Populus balsamifera</i> (black cottonwood)	T	FAC
2			2 <i>Salix sitchensis</i> (Sitka willow)	S	FACW
3			3 <i>Rubus armeniacus</i> (Himalayan blackberry)	V	FACU
4			4 <i>Juncus effusus</i> (soft rush)	H	FACW
5			5 <i>Convolvulus arvensis</i> (field bindweed)	H	NL
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks: More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available Field Observations: Depth of Surface Water: _____ (In.) Depth to Free Water in Pit: _____ (In.) Depth to Saturated Soil: <u>0 (sat. to surface)</u> (In.)	Wetland Hydrology Indicators: <i>Primary Indicators:</i> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands <i>Secondary Indicators (2 or more required):</i> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Remarks: <u>No permission to dig pit, but wetland hydrology observed (areas saturated soil to the surface).</u>	

SOILS

Map Unit Name (Series and Phase): <u>Dollar loam</u>	Drainage Class: <u>MW</u> <i>Circle</i>				
Taxonomy (Subgroup): <u>Humic Fragixerept</u>	Field Observations Confirm Mapped Type? <u>N/A</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Concretions	<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Aquatic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Other (explain in remarks)			
Remarks: <u>No permission to dig pit, hydric soils assumed based on presence of hydrophytic vegetation and wetland hydrology.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <u>In the absence of permission to dig, wetland soils and hydrology criteria were assumed met due to the presence and strength of vegetation indicators and landscape position. Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502</u>	Date: <u>04/11/05</u>
Applicant/Owner: <u>Washington State Department of Transportation</u>	County: <u>Clark</u>
Investigator: <u>TSS, TB</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>SVW</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>SVW-DW1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Alopecurus pratensis</i> (meadow foxtail)	H	FACW	8 <i>Physocarpus capitatus</i> (Pacific ninebark)	S	FACW-
2 <i>Populus balsamifera</i> (black cottonwood)	T	FAC	9 <i>Rubus armeniacus</i> (Himalayan blackberry), <i>R. discolor</i> , <i>R. procerus</i>	V	FACU
3 <i>Phalaris arundinacea</i> (reed canarygrass)	H	FACW	10 <i>Convolvulus arvensis</i> (field bindweed)	H	NON-NATIVE
4			11 <i>Galium aparine</i> (cleavers)	H	FACU
5			12 <i>Symphoricarpos albus</i> (snowberry)	S	FACU
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks: More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input checked="" type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands
<p>Field Observations:</p> Depth of Surface Water: <u>N/A</u> (In.) Depth to Free Water in Pit: <u>N/A</u> (In.) Depth to Saturated Soil: <u>0 (sat. to surface)</u> (In.)	<p>Secondary Indicators (2 or more required):</p> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input checked="" type="checkbox"/> Other (explain in remarks) <u>Topographic swale</u>
<p>Remarks: <u>Not permitted to dig a hole. Areas of saturated soil to the surface. Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.</u></p>	

SOILS

Map Unit Name (Series and Phase): <u>Dollar loam</u>	Drainage Class: <u>MW</u> Circle																														
Taxonomy (Subgroup): <u>Humic Fragixerept</u>	Field Observations Confirm Mapped Type? <u>N/A</u>																														
<p>Profile Description:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (inches)</th> <th>Horizon</th> <th>Matrix Color (Munsell Moist)</th> <th>Mottle Colors (Munsell Moist)</th> <th>Mottle Abundance/ Size/Contrast</th> <th>Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.																								
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<p>Hydric Soil Indicators:</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Histosol</td> <td><input type="checkbox"/> Reducing Conditions</td> <td><input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils</td> </tr> <tr> <td><input type="checkbox"/> Histic Epipedon</td> <td><input type="checkbox"/> Gleyed or Low-Chroma Colors</td> <td><input type="checkbox"/> Listed on National Hydric Soils List</td> </tr> <tr> <td><input type="checkbox"/> Sulfidic Odor</td> <td><input type="checkbox"/> Concretions</td> <td><input type="checkbox"/> Listed on Local Hydric Soils List</td> </tr> <tr> <td><input type="checkbox"/> Aquic Moisture Regime</td> <td><input type="checkbox"/> Organic Streaking in Sandy Soils</td> <td><input type="checkbox"/> Other (explain in remarks)</td> </tr> </table>		<input type="checkbox"/> Histosol	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils	<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Listed on National Hydric Soils List	<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Concretions	<input type="checkbox"/> Listed on Local Hydric Soils List	<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Other (explain in remarks)																		
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<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Other (explain in remarks)																													
<p>Remarks: <u>No permission to dig pit, hydric soils assumed based on presence of hydrophytic vegetation and wetland hydrology.</u></p>																															

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<p>Remarks: <u>In the absence of permission to dig, wetland soils and were assumed met due to presence and strength of vegetation and hydrology indicators and landscape position. Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.</u></p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502 Widening</u> Applicant/Owner: <u>Washington State Department of Transportation</u> Investigator: <u>TK, TSS</u>	Date: <u>04/11/05</u> County: <u>Clark</u> State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Community ID: <u>Wetland</u> Transect ID: <u>SX</u> Plot ID: <u>SX-DW1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Cornus sericea</i> (redosier dogwood), (<i>C. stolonifera</i>)	S	FACW	1 <i>Salix</i> sp. (willows)		
2 <i>Phalaris arundinacea</i> (reed canarygrass)	H	FACW	2 <i>Rubus laciniatus</i> (cutleaf blackberry)		FACU+
3			3 <i>Carex obnupta</i> (slough sedge)		OBL
4			4 <i>Acer circinatum</i> (vine maple)		FAC-
5			5 <i>Rosa nutkana</i> (Nootka rose)		FAC
6			6 <i>Salix sitchensis</i> (Sitka willow)		FACW
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks: Shrub-scrub wetland
 More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input checked="" type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patters in Wetlands	Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>none</u> (In.) Depth to Free Water in Pit: <u>12</u> (In.) Depth to Saturated Soil: <u>10</u> (In.)		
Remarks: Adjacent to open water. Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.		

SOILS

Map Unit Name (Series and Phase): <u>Hockinson loam</u> Taxonomy (Subgroup): <u>Fluvaquentic Endoaquept</u>	Drainage Class: <u>SWP</u> Circle Field Observations Confirm Mapped Type? <input checked="" type="checkbox"/> Yes																								
Profile Description: <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (inches)</th> <th>Horizon</th> <th>Matrix Color (Munsell Moist)</th> <th>Mottle Colors (Munsell Moist)</th> <th>Mottle Abundance/ Size/Contrast</th> <th>Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr> <td>0-7</td> <td>A</td> <td>10YR 2/1</td> <td></td> <td></td> <td>Loam</td> </tr> <tr> <td>7+</td> <td></td> <td>10YR 2/1</td> <td>10YR 5/6</td> <td>Common/medium/distinct</td> <td>Silt loam</td> </tr> <tr> <td></td> <td></td> <td></td> <td>10YR 4/1</td> <td>Common/medium/faint</td> <td>depletion</td> </tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.	0-7	A	10YR 2/1			Loam	7+		10YR 2/1	10YR 5/6	Common/medium/distinct	Silt loam				10YR 4/1	Common/medium/faint	depletion
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.																				
0-7	A	10YR 2/1			Loam																				
7+		10YR 2/1	10YR 5/6	Common/medium/distinct	Silt loam																				
			10YR 4/1	Common/medium/faint	depletion																				
Hydric Soil Indicators: <input type="checkbox"/> Histosol <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Histic Epipedon <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors <input checked="" type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Concretions <input checked="" type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Other (explain in remarks)																									
Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.																									

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502 Widening</u>	Date: <u>4/11/05</u>
Applicant/Owner: <u>Washington State Department of Transportation</u>	County: <u>Clark</u>
Investigator: <u>TSS, TB</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>SX</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>SX-DW2</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Phalaris arundinacea</i> (reed canarygrass)	H	FACW	1 <i>Salix</i> sp. (willows)	S	
2			2 <i>Rosa nutkana</i> (Nootka rose)	S	FAC
3			3		
4			4		
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks: More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input checked="" type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>0*</u> (In.) Depth to Free Water in Pit: <u>10</u> (In.) Depth to Saturated Soil: <u>0 (sat. to surface)</u> (In.)		
Remarks: <u>*There are some pockets in the Phalaris arundinacea (reed canarygrass) of inundation with depth of 2 in. of surface water. Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.</u>		

SOILS

Map Unit Name (Series and Phase): <u>Hockinson loam</u>	Drainage Class: <u>SWP</u>				
Taxonomy (Subgroup): <u>Fluvaquentic Endoaquept</u>	Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 5/2	10YR 4/6	Few / medium/prominent	Silt loam
5-16	B	10YR 4/2	10YR 6/2	Common / medium/faint	Silt loam
Hydric Soil Indicators: <input type="checkbox"/> Histosol <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Histic Epipedon <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Concretions <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Other (explain in remarks)					
Remarks: <u>Indicators of hydric soils were observed, thus meeting the hydric soils criterion.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <u>Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502 Widening</u>	Date: <u>04/13/05</u>
Applicant/Owner: <u>Washington State Department of Transportation</u>	County: <u>Clark</u>
Investigator: <u>TK, TSS</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>SY</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>SY-DW1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Urtica dioica</i> (stinging nettle)	H	FAC+	1 <i>Oemleria cerasiformis</i> (Indian plum)	S	FACU
2 <i>Alnus rubra</i> (red alder)	T	FAC	2 <i>Sambucus racemosa</i> (red elderberry)	S	FACU
3			3 <i>Tellima grandiflora</i> (fringecup)	H	NL
4			4 <i>Rubus ursinus</i> (California blackberry)	V	FACU
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks: More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: <i>Primary Indicators:</i> <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input checked="" type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patters in Wetlands <i>Secondary Indicators (2 or more required):</i> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>3</u> (In.) Depth to Free Water in Pit: <u>N/A</u> (In.) Depth to Saturated Soil: <u>0 (sat. to surface)</u> (In.)	Remarks: <u>No pit dug due to the dense coverage of stinging nettle and obvious wetland hydrology indicators (inundation). Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.</u>

SOILS

Map Unit Name (Series and Phase): <u>Dollar loam</u>	Drainage Class: <u>MW</u> <i>Circle</i>				
Taxonomy (Subgroup): <u>Humic Fragixerept</u>	Field Observations Confirm Mapped Type? <u>N/A</u>				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Concretions	<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Aquatic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Other (explain in remarks)			
Remarks: <u>No pit dug due to the dense coverage of stinging nettle and obvious wetland hydrology indicators (inundation). Hydric soils criteria were assumed met due to presence and strength of vegetation and hydrology indicators and landscape position.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Sampling Point Within a Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			
Remarks: <u>Riverine wetland on south bank of creek just east of 72nd intersection. Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.</u>					

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 205</u>	Date: <u>04/18/05</u>
Applicant/Owner: <u>Washington State Department of Transportation</u>	County: <u>Clark</u>
Investigator: <u>TK, TSS</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>SZ</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>SZ-DW1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Ranunculus repens</i> (creeping buttercup)	H	FACW	1 <i>Rumex crispus</i> (curly dock)	H	FAC+
2 Unidentifiable mowed pasture grass (<i>Agrostis</i> sp.?)	H		2		
3			3		
4			4		
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): ≥50%

Remarks: In the presence of an unidentifiable grass, there is uncertainty of having more than 50% of the dominant species with an indicator status of OBL, FACW, and/or FAC. However, hydrophytic vegetation was assumed met due to presence and strength of hydrology and soil indicators and landscape position.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input checked="" type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>none</u> (In.) Depth to Free Water in Pit: <u>12</u> (In.) Depth to Saturated Soil: <u>10</u> (In.)	
Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): <u>Dollar loam</u>	Drainage Class: <u>MW</u> <i>Circle</i>																		
Taxonomy (Subgroup): <u>Humic Fragixerept</u>	Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																		
Profile Description: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Depth (inches)</th> <th style="width: 15%;">Horizon</th> <th style="width: 20%;">Matrix Color (Munsell Moist)</th> <th style="width: 20%;">Mottle Colors (Munsell Moist)</th> <th style="width: 15%;">Mottle Abundance/Size/Contrast</th> <th style="width: 15%;">Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr> <td>0-9</td> <td>A</td> <td>10YR 3/2</td> <td></td> <td></td> <td>Loam</td> </tr> <tr> <td>9+</td> <td>B</td> <td>10YR 4/2</td> <td>7.5YR 4/4</td> <td>Many/medium/distinct</td> <td>Loam</td> </tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.	0-9	A	10YR 3/2			Loam	9+	B	10YR 4/2	7.5YR 4/4	Many/medium/distinct	Loam
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.														
0-9	A	10YR 3/2			Loam														
9+	B	10YR 4/2	7.5YR 4/4	Many/medium/distinct	Loam														
Hydric Soil Indicators: <input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors <input checked="" type="checkbox"/> Concretions <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)																			
Remarks: Nodules were observed in the soil profile. Indicators of hydric soils were observed, thus meeting the hydric soils criterion.																			

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.		

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502 Widening</u>	Date: <u>4/21/05</u>
Applicant/Owner: <u>Washington State Department of Transportation</u>	County: <u>Clark</u>
Investigator: <u>Tom Kohl, Tuesday Shean</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Nonwetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>SAA</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>SAA-DUI</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Lolium arundinaceum</i> (tall fescue) (<i>Festuca arundinacea</i>)	H	FAC	8 <i>Holcus lanatus</i> (common velvetgrass), NonNative	H	FAC
2 <i>Anthoxanthum odoratum</i> (sweet vernalgrass)	H	FACU	9 <i>Cirsium arvense</i> (Canada thistle) NonNative	H	FACU+
3			10		
4			11		
5			12		
6			13		
7			14		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 50%

Remarks: 50% or less of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus failing to meet the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>None</u> (In.) Depth to Saturated Soil: <u>None</u> (In.)		
Remarks: <u>No Indicators of wetland hydrology were observed, thus failing to meet the wetland hydrology criterion.</u>		

SOILS

Map Unit Name (Series and Phase): <u>Dollar loam</u>	Drainage Class: <u>MW</u> Circle																								
Taxonomy (Subgroup): <u>Humic Fragixerept</u>	Field Observations Confirm Mapped Type? <u>No</u>																								
Profile Description: <table border="1"> <thead> <tr> <th>Depth (inches)</th> <th>Horizon</th> <th>Matrix Color (Munsell Moist)</th> <th>Mottle Colors (Munsell Moist)</th> <th>Mottle Abundance/ Size/Contrast</th> <th>Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr> <td>0-10</td> <td>A</td> <td>10 YR 3/2</td> <td></td> <td></td> <td>Silt loam</td> </tr> <tr> <td>10+</td> <td>B</td> <td>10 YR 4/3</td> <td>10 YR 4/8</td> <td>Common/medium/distinct</td> <td>Sil.</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.	0-10	A	10 YR 3/2			Silt loam	10+	B	10 YR 4/3	10 YR 4/8	Common/medium/distinct	Sil.						
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.																				
0-10	A	10 YR 3/2			Silt loam																				
10+	B	10 YR 4/3	10 YR 4/8	Common/medium/distinct	Sil.																				
Hydric Soil Indicators: <input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquatic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Concretions <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)																									
Remarks: <u>Indicators of hydric soils were observed, thus meeting the hydric soils criterion.</u>																									

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks: <u>Area lacks wetland indicators and fails to meet wetland criteria of at least one of the three parameters, and therefore is nonwetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502 Widening</u> Applicant/Owner: <u>Washington State Department of Transportation</u> Investigator: <u>TKK, TSS</u>	Date: <u>04/21/05</u> County: <u>Clark</u> State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Community ID: <u>Wetland</u> Transect ID: <u>SAA</u> Plot ID: <u>SAA-DWI</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Alopecurus geniculatus</i> (water foxtail)	H	OBL	1 <i>Juncus effusus</i> (soft rush)	H	FACW
2 <i>Holcus lanatus</i> (common velvetgrass)	H	FAC	2 <i>Lolium arundinaceum</i> (tall fescue), (<i>Festuca arundinacea</i>)	H	FAC
3			3 Starwort -Unknown species	H	
4			4		
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks: More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input checked="" type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: <i>Primary Indicators:</i> <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patters in Wetlands <i>Secondary Indicators (2 or more required):</i> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>2</u> (In.) Depth to Free Water in Pit: <u>0</u> (In.) Depth to Saturated Soil: <u>0 (sat. to surface)</u> (In.)	Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): <u>Dollar loam</u> Taxonomy (Subgroup): <u>Humic Fragixerept</u>	Drainage Class: <u>MW</u> <i>Circle</i> Field Observations Confirm Mapped Type? <input type="checkbox"/> No																								
Profile Description: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (inches)</th> <th>Horizon</th> <th>Matrix Color (Munsell Moist)</th> <th>Mottle Colors (Munsell Moist)</th> <th>Mottle Abundance/ Size/Contrast</th> <th>Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr> <td>0-10</td> <td>A</td> <td>2.5Y 4/1</td> <td>7.5YR 4/4</td> <td>Many/medium/distinct</td> <td>Silty clay loam</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.	0-10	A	2.5Y 4/1	7.5YR 4/4	Many/medium/distinct	Silty clay loam												
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.																				
0-10	A	2.5Y 4/1	7.5YR 4/4	Many/medium/distinct	Silty clay loam																				
Hydric Soil Indicators: <input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Concretions <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)																									
Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.																									

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502</u>	Date: <u>05/26/05</u>
Applicant/Owner: <u>Washington State Department of Transportation</u>	County: <u>Clark</u>
Investigator: <u>PD</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>SAB</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>SAB-DW1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Phalaris arundinacea</i> (reed canarygrass)	H	FACW	1 <i>Urtica dioica</i> (stinging nettle)	H	FAC+
2			2 <i>Physocarpus capitatus</i> (Pacific ninebark)	S	FACW-
3			3 <i>Salix</i> sp. (willows)	S	-
4			4		
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks: More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input checked="" type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: <i>Primary Indicators:</i> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input checked="" type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands <i>Secondary Indicators (2 or more required):</i> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>2</u> (In.) Depth to Saturated Soil: <u>0 (sat. to surface)</u> (In.)	
Remarks: <u>Hydrology observations were made in the soil pit immediately. Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Dollar loam</u>	Drainage Class: <u>MW</u> Circle				
Taxonomy (Subgroup): <u>Humic Fragixerept</u>	Field Observations Confirm Mapped Type? <input type="checkbox"/> No				
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-16+	A	2.5Y 4/1	7.5Y 4/6	Few/medium/prominent	Silty clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Histic Epipedon	<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Concretions	<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Other (explain in remarks)			
Remarks: <u>Indicators of hydric soils were observed, thus meeting the hydric soils criterion.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <u>Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502 Widening</u> Applicant/Owner: <u>Washington State Department of Transportation</u> Investigator: <u>TSS, TK</u>	Date: <u>04/21/05</u> County: <u>Clark</u> State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Community ID: <u>Nonwetland</u> Transect ID: <u>SAD</u> Plot ID: <u>SAD-DU1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <u>Anthoxanthum odoratum (sweet vernalgrass)</u>	H	FACU	1 <u>Holcus lanatus (common velvetgrass)</u>	H	FAC
2 <u>Unidentifiable grass</u>	H		2		
3			3		
4			4		
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): ≤ 50%

Remarks: 50% or less of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus failing to meet the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: <table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands </td> <td style="width: 50%; vertical-align: top;"> Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks) </td> </tr> </table>	Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)		
Field Observations: Depth of Surface Water: <u>none</u> (In.) Depth to Free Water in Pit: <u>13</u> (In.) Depth to Saturated Soil: <u>11</u> (In.)	Remarks: <u>Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.</u>		

SOILS

Map Unit Name (Series and Phase): <u>Hockinson loam</u> Taxonomy (Subgroup): <u>Fluvaquentic Endoaquept</u>	Drainage Class: <u>SWP</u> Circle Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																														
Profile Description: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Depth (inches)</th> <th style="width: 10%;">Horizon</th> <th style="width: 20%;">Matrix Color (Munsell Moist)</th> <th style="width: 20%;">Mottle Colors (Munsell Moist)</th> <th style="width: 15%;">Mottle Abundance/Size/Contrast</th> <th style="width: 25%;">Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr> <td>0-8</td> <td></td> <td>10 YR 3/2</td> <td></td> <td></td> <td>Silt loam</td> </tr> <tr> <td>8+</td> <td></td> <td>10 YR 4/4</td> <td>10 YR 4/2</td> <td>Few/fine/distinct</td> <td>SIL (depletions)</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.	0-8		10 YR 3/2			Silt loam	8+		10 YR 4/4	10 YR 4/2	Few/fine/distinct	SIL (depletions)												
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8+		10 YR 4/4	10 YR 4/2	Few/fine/distinct	SIL (depletions)																										
Hydric Soil Indicators: <table style="width: 100%;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Concretions <input type="checkbox"/> Organic Streaking in Sandy Soils </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks) </td> </tr> </table>		<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Concretions <input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)																											
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Remarks: <u>No indicators of hydric soils were observed, thus failing to meet the hydric soils criterion.</u>																															

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: <u>Area lacks wetland indicators and fails to meet wetland criteria of at least one of the three parameters, and therefore is nonwetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502 Widening</u> Applicant/Owner: <u>Washington State Department of Transportation</u> Investigator: <u>TK, TSS</u>	Date: <u>04/21/05</u> County: <u>Clark</u> State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Community ID: <u>Nonwetland</u> Transect ID: <u>SAD</u> Plot ID: <u>SAD-DU2</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Anthoxanthum odoratum</i> (sweet vernalgrass)	H	FACU	1 <i>Montia linearis</i>	H	NL
2 <i>Holcus lanatus</i> (common velvetgrass)	H	FAC	2 <i>Rumex acetosella</i> (common sheep sorrel)	H	FACU+
3 <i>Lolium arundinaceum</i> (tall fescue) (<i>Festuca arundinacea</i>)	H	FAC-	3		
4			4		
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 1/3 = 33%

Remarks: 50% or less of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus failing to meet the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input checked="" type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>None</u> (In.) Depth to Free Water in Pit: <u>9</u> (In.) Depth to Saturated Soil: <u>7</u> (In.)		
Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.		

SOILS

Map Unit Name (Series and Phase): <u>Hockinson loam</u> Taxonomy (Subgroup): <u>Fluvaquentic Endoaquept</u>	Drainage Class: <u>SWP</u> Circle Field Observations Confirm Mapped Type? <input checked="" type="checkbox"/> Yes																														
Profile Description: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (inches)</th> <th>Horizon</th> <th>Matrix Color (Munsell Moist)</th> <th>Mottle Colors (Munsell Moist)</th> <th>Mottle Abundance/Size/Contrast</th> <th>Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr> <td>0-3</td> <td></td> <td>10YR 4/2</td> <td></td> <td></td> <td>Silt loam</td> </tr> <tr> <td>3-14</td> <td></td> <td>10YR 4/1</td> <td>7.5YR 3/4</td> <td>Many/medium/distinct</td> <td>Silt loam</td> </tr> <tr> <td>14+</td> <td></td> <td>10YR 5/2</td> <td>7.5YR 5/6</td> <td>Many/coarse/distinct</td> <td>Silt loam</td> </tr> <tr> <td>20</td> <td></td> <td>10YR 5/2</td> <td>7.5YR 5/6</td> <td>Many/coarse/distinct</td> <td>Silty clay loam</td> </tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.	0-3		10YR 4/2			Silt loam	3-14		10YR 4/1	7.5YR 3/4	Many/medium/distinct	Silt loam	14+		10YR 5/2	7.5YR 5/6	Many/coarse/distinct	Silt loam	20		10YR 5/2	7.5YR 5/6	Many/coarse/distinct	Silty clay loam
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.																										
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Hydric Soil Indicators: <input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Concretions <input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)																												
Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.																															

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Area lacks wetland indicators and fails to meet wetland criteria of at least one of the three parameters, and therefore is nonwetland.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502 Widening</u>	Date: <u>04/21/05</u>
Applicant/Owner: <u>Washington State Department of Transportation</u>	County: <u>Clark</u>
Investigator: <u>TK, TSS</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>SAD</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>SAD-DW1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Holcus lanatus</i> (common velvetgrass)	H	FAC	1 <i>Juncus effusus</i> (soft rush)	H	FACW
2 <i>Phalaris arundinacea</i> (reed canarygrass)	H	FACW	2 <i>Carex obnupta</i> (slough sedge)	H	OBL
3 <i>Alopecurus geniculatus</i> (water foxtail)	H	OBL	3		
4			4		
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks: More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input checked="" type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: <i>Primary Indicators:</i> <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <i>Secondary Indicators (2 or more required):</i> <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>.5</u> (In.) Depth to Free Water in Pit: <u>6.5</u> (In.) Depth to Saturated Soil: <u>5</u> (In.)	
Remarks: <u>Areas of inundation in wetland.</u> <u>Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Hockinson loam</u>	Drainage Class: <u>SWP</u> <i>Circle</i>																								
Taxonomy (Subgroup): <u>Fluvaquentic Endoaquept</u>	Field Observations Confirm Mapped Type? <u>Undetermined</u>																								
Profile Description: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (inches)</th> <th>Horizon</th> <th>Matrix Color (Munsell Moist)</th> <th>Mottle Colors (Munsell Moist)</th> <th>Mottle Abundance/Size/Contrast</th> <th>Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr> <td>0-16</td> <td>A</td> <td>10YR 4/2</td> <td>7.5YR 3/4</td> <td>Common/medium/distinct</td> <td>SiL</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.	0-16	A	10YR 4/2	7.5YR 3/4	Common/medium/distinct	SiL												
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Hydric Soil Indicators: <input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Concretions <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Listed on Local Hydric Soils List <input checked="" type="checkbox"/> Other (explain in remarks)																									
Remarks: <u>Oxidized rhizospheres were observed.</u> <u>Indicators of hydric soils were observed, thus meeting the hydric soils criterion.</u>																									

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <u>Wetland extends from yard behind house to adjacent pasture and encompassing ditch.</u> <u>Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project Site: <u>SR 502 Widening</u>	Date: <u>04/21/05</u>
Applicant/Owner: <u>Washington State Department of Transportation</u>	County: <u>Clark</u>
Investigator: <u>TK, TSS</u>	State: <u>WA</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Wetland</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>SAD</u>
Is Area a Potential Problem Area? (if needed, explain on reverse) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>SAD-DW2</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 <i>Holcus lanatus</i> (common velvetgrass)	H	FAC	1 <i>Carex obnupta</i> (slough sedge)	H	OBL
2 <i>Alopecurus geniculatus</i> (water foxtail)	H	OBL	2 <i>Phalaris arundinacea</i> (reed canarygrass)	H	FACW
3 <i>Anthoxanthum odoratum</i> (sweet vernalgrass)	H	FACU	3 <i>Ranunculus repens</i> (creeping buttercup)	H	FACW
4			4 <i>Lolium arundinaceum</i> (tall fescue) (<i>Festuca arundinacea</i>)	H	FAC-
5			5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): $2/3 = 67\%$

Remarks: More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

<input type="checkbox"/> Recorded Data (describe in Remarks) <input checked="" type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No recorded data available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (explain in remarks)
Field Observations: Depth of Surface Water: <u>1</u> (In.) Depth to Free Water in Pit: <u>0</u> (In.) Depth to Saturated Soil: <u>0 (sat. to surface)</u> (In.)	
Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.	

SOILS

Map Unit Name (Series and Phase): <u>Hockinson loam</u>	Drainage Class: <u>SWP</u> Circle																														
Taxonomy (Subgroup): <u>Fluvaquentic Endoaquept</u>	Field Observations Confirm Mapped Type? <input checked="" type="checkbox"/> Yes																														
Profile Description: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (inches)</th> <th>Horizon</th> <th>Matrix Color (Munsell Moist)</th> <th>Mottle Colors (Munsell Moist)</th> <th>Mottle Abundance/Size/Contrast</th> <th>Texture, Concretions, Structure, etc.</th> </tr> </thead> <tbody> <tr> <td>0-13</td> <td>A</td> <td>10YR 4/1</td> <td>7.5YR 3/4</td> <td>Many/medium/distinct</td> <td>SiL</td> </tr> <tr> <td>13-20</td> <td>B</td> <td>10YR 5/2</td> <td>7.5YR 5/6</td> <td>Many/coarse/prominent</td> <td>SiCL</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.	0-13	A	10YR 4/1	7.5YR 3/4	Many/medium/distinct	SiL	13-20	B	10YR 5/2	7.5YR 5/6	Many/coarse/prominent	SiCL												
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Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.																															

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.	