APPENDIX D (Wetland Determination Dataform)

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

Project Site:	SR 502 Widening	Date:	03/07/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TSS, CP, BN, TK	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Nonwetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NA
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NA-DU1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 *Trifolium repens* (white clover) FAC	H	FAC	1 *Taraxacum officinale* (common dandelion)	H	FACU
2			2 Composite	H	
3			3 *Agrostis capillaris* (colonial bentgrass), *(A. tenuis)*	H	FAC
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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
x	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	none	(In.)
Depth to Free Water in Pit:	none	(In.)
Depth to Saturated Soil:	none	(In.)

Wetland Hydrology Indicators:

Primary Indicators:
- [ ] Inundated
- [ ] Saturated in Upper 12 inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [ ] Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- [ ] Oxidized Root Channels in Upper 12"
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (explain in remarks)

Remarks: No Indicators of wetland hydrology were observed, thus failing to meet the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Gee silt loam
Taxonomy (Subgroup): Typic Glossudalf

Drainage Class: MW *Circle*
Field Observations Confirm Mapped Type? Yes

Profile Description:

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	7.5 YR 3/4	common 5% medium	Loam
8-12		2.5 Y 4/2	2.5 Y 4/4	few	Loam

Hydric Soil Indicators:
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Aquic Moisture Regime
- [ ] Reducing Conditions
- [x] ~~Gleyed or~~ Low-Chroma Colors
- [ ] Concretions
- [ ] Organic Streaking in Sandy Soils
- [ ] High Organic Content in Surface Layer in Sandy Soils
- [ ] Listed on National Hydric Soils List
- [ ] Listed on Local Hydric Soils List
- [ ] Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?		Yes	X	No
Wetland Hydrology Present?		Yes	X	No				
Hydric Soils Present?	X	Yes		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:	SR 502 Widening	Date:	03/07/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TSS, CP, BN, TK	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NA
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NA-DW1

VEGETATION

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	*Juncus effusus* (soft rush)	H	FACW	3	*Cardamine pensylvanica* (Pennsylvania bitter cress)	H	FACW
2	*Agrostis capillaris* (colonial bentgrass), *(A. tenuis)*	H	FAC	4	*Epilobium ciliatum* (fringed willowherb)	H	FACW
3				5	*Cirsium vulgare* (bull thistle),	H	FACU
4				6	*Rosa nutkana* (Nootka rose)	S	FAC
5	**Non-Dominant Plant Species**			7	*Fraxinus latifolia* (Oregon ash)	T	FACW
1	*Spiraea douglasii* (hardhack)	S	FACW	8	*Geranium molle* (dovefoot geranium)	H	NL
2	*Rumex crispus* (curly dock)	H	FAC+,	9	*Carex obnupta* (slough sedge)	H	OBL

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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
x	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	none	(In.)
Depth to Free Water in Pit:	13	(In.)
Depth to Saturated Soil:	0 (sat to surface)	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

X	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Areas of inundation were observed throughout the wetland. Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Odne silt loam
Taxonomy (Subgroup): Aquandic Epiaqualf

Drainage Class: *Circle*
Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-10	A	2.5Y 4/2	7.5 YR 4/4	Common/medium/distinct	Loam
10-15"	B	2.5Y 5/2	7.5 YR 5/6	Medium/medium/distinct	Loam, Fe concentrations

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	Gleyed or-Low-Chroma Colors	X	Listed on National Hydric Soils List
	Sulfidic Odor		Concretions	X	Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes
Wetland Hydrology Present?	X	Yes		No			No
Hydric Soils Present?	X	Yes		No			

Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502 Widening	Date:	03/09/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	CP, BN	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Nonwetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NB
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NB-DU1

VEGETATION

Dominant Plant Species		Stratum	Indicator	Non-Dominant Plant Species		Stratum	Indicator
1	viola (poss. adunca)	H	N/A	8	*Dipsacus fullonum* (Fuller's teasel)	H	FAC
2	*Poa annua* (annual bluegrass)	H	FAC	9	*Galium* sp. (bedstraws)	H	N/A
3	*Rubus ursinus* (California blackberry)	H	FACU	10	fern	H	N/A
4				11	Fragrana (vesca?)	H	N/A
5				12	*Carex* sp. (sedges)	H	
6				13	Lupine species	H	N/A
7				14			

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

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

HYDROLOGY

- [ ] Recorded Data (describe in Remarks)
- [ ] Stream, Lake, or Tide Gauge
- [x] Aerial Photographs
- [ ] Other
- [ ] No recorded data available

Field Observations: none observed

Depth of Surface Water: None (In.)
Depth to Free Water in Pit: None (In.)
Depth to Saturated Soil: none (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- [ ] Inundated
- [ ] Saturated in Upper 12 inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [ ] Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- [ ] Oxidized Root Channels in Upper 12"
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (explain in remarks)

Remarks: No Indicators of wetland hydrology were observed, thus failing to meet the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Gee silt loam

Taxonomy (Subgroup): Typic Glossudalf

Drainage Class: MW *Circle*

Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-12		10 YR 3/3	10 YR 4/6	Few/coarse/distinct	Loam

Hydric Soil Indicators:
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Aquic Moisture Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] Organic Streaking in Sandy Soils
- [ ] High Organic Content in Surface Layer in Sandy Soils
- [ ] Listed on National Hydric Soils List
- [ ] Listed on Local Hydric Soils List
- [ ] Other (explain in remarks)

Remarks: No Indicators of hydric soils were observed (soil color too high), thus failing to meet the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?		Yes	X	No	Is this Sampling Point Within a Wetland? ☐ Yes ☒ No
Wetland Hydrology Present?		Yes	X	No	
Hydric Soils Present?		Yes	X	No	

Remarks: Area lacks wetland indicators and fails to meet wetland criteria of at least one of the three parameters, and therefore is not a wetland.

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

Project Site:	SR 502 Widening	Date:	03/09/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TS, CP, BN	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NB
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NB-DW1

VEGETATION

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	*Populus balsamifera* (black cottonwood)	T	FAC	1	Lupine species	H	N/A
2	*Fraxinus latifolia* (Oregon ash)	T	FACW	2	chickweed	H	N/A
3	Viola spp.	H	N/A	3	*Rubus ursinus* (California blackberry)	V	FACU
4	*Geum macrophyllum* (largeleaf avens)	H	FACW-	4	*Galium* sp. (bedstraws)	H	N/A
5	*Carex* sp. (sedges)	H		5	*Dipsacus fullonum* (Fuller's teasel)	H	FAC
6	*Acer circinatum* (vine maple)	S	FAC-	6	*Polystichum munitum* (western swordfern)	H	FACU
7	Non-Dominant			7	*Symphoricarpos albus* (snowberry)	S	FACU
8	*Rubus armeniacus* (Himalayan blackberry)	S/V	FACU	8	*Rosa nutkana* (Nootka rose)	S	FAC

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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	none	(In.)
Depth to Free Water in Pit:	6"	(In.)
Depth to Saturated Soil:	0" (sat to surface)	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Gee silt loam

Taxonomy (Subgroup): Typic Glossudalf

Drainage Class: MW *Circle*

Field Observations Confirm Mapped Type? No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-6		10YR 3/1			
6-14		10YR 3/1	10YR 4/6	Many/ coarse.distinct	Silt loam

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	~~Gleyed or~~ Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor		Concretions		Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Soils with chroma 1 matrix were observed, thus meeting the hydric soils criterion.
Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes		No
Wetland Hydrology Present?	X	Yes		No					
Hydric Soils Present?	X	Yes		No					

Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502	Date:	3/30/05
Applicant/Owner:	Washington State Department of Transportation	County:	CLARK
Investigator:	PD, BN	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NC
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NC-DW1

VEGETATION

Dominant Plant Species		Stratum	Indicator	Non-Dominant Plant Species		Stratum	Indicator
1	*Spiraea douglasii* (hardhack)	S	FACW	1			
2	*Rosa nutkana* (Nootka rose)	S	FAC	2			
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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:
Depth of Surface Water: _____ (In.)
Depth to Free Water in Pit: _____ (In.)
Depth to Saturated Soil: Surface (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- [ ] Inundated
- [X] Saturated in Upper 12 inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [ ] Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- [ ] Oxidized Root Channels in Upper 12"
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (explain in remarks)

Remarks: Swale - No permission to dig pit, wetland hydrology assumed based on presence of hydrophytic vegetation.

SOILS

Map Unit Name (Series and Phase): Gee silt loam
Taxonomy (Subgroup): Typic Glossudalf

Drainage Class: *Circle*
Field Observations Confirm Mapped Type? N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.

Hydric Soil Indicators:
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Aquic Moisture Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] Organic Streaking in Sandy Soils
- [ ] High Organic Content in Surface Layer in Sandy Soils
- [ ] Listed on National Hydric Soils List
- [ ] Listed on Local Hydric Soils List
- [ ] Other (explain in remarks)

Remarks: No permission to dig pit, hydric soils assumed based on presence of hydrophytic vegetation.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes		No
Wetland Hydrology Present?	X	Yes		No				
Hydric Soils Present?	X	Yes		No				

Remarks: In the absence of permission to dig, wetland soils and hydrology criteria were assumed met due to strength of vegetation indicators and landscape position.
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:	SR 502 Widening	Date:	03/09/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	CP, BN	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Nonwetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	ND
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	ND-DU1

VEGETATION

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	*Lolium arundinaceum* (tall fescue)	H	FAC-	1	*Senecio jacobaea* (tansy ragwort)		FACU
2	*Agrostis capillaris* (colonial bentgrass), *(A. tenuis)*	H	FAC	2	*Cirsium vulgare* (bull thistle)		FACU
3	*Pseudotsuga menziesii* (Douglas-fir)	T	FACU	3	*Plantago major* (common plantain)		FACU+
4				4			
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

- [ ] Recorded Data (describe in Remarks)
  - [ ] Stream, Lake, or Tide Gauge
  - [X] Aerial Photographs
  - [ ] Other
- [ ] No recorded data available

Field Observations: none observed

Depth of Surface Water: None (In.)
Depth to Free Water in Pit: None (In.)
Depth to Saturated Soil: None (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- [ ] Inundated
- [ ] Saturated in Upper 12 inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [ ] Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- [ ] Oxidized Root Channels in Upper 12"
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (explain in remarks)

Remarks: No Indicators of wetland hydrology were observed, thus failing to meet the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Gee silt loam

Taxonomy (Subgroup): Typic Glossudalf

Drainage Class: MW *Circle*

Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4		10 YR 3/2			Silt loam
4-12		10 YR 3/2	7.5YR 3/4	few fine	Silt loam
12-14		10 YR 4/2	7.5YR 3/4	common fine	Silt loam

Hydric Soil Indicators:
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Aquic Moisture Regime
- [ ] Reducing Conditions
- [X] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] Organic Streaking in Sandy Soils
- [ ] High Organic Content in Surface Layer in Sandy Soils
- [ ] Listed on National Hydric Soils List
- [ ] Listed on Local Hydric Soils List
- [ ] 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?		Yes	X	No	Is this Sampling Point Within a Wetland?		Yes	X	No
Wetland Hydrology Present?		Yes	X	No					
Hydric Soils Present?	X	Yes		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:	SR 502 Widening	Date:	03/09/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	CP, BN, TSS, TK	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	ND
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	ND-DW1

VEGETATION Mowed field

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	*Fraxinus latifolia* (Oregon ash)	T	FACW	1	Unknown composite	H	
2	*Populus balsamifera* (black cottonwood)	T	FAC	2	*Ranunculus repens* (creeping buttercup)	H	FACW
3	*Juncus effusus* (soft rush)	H	FACW	3	*Cardamine pensylvanica* (Pennsylvania bitter cress)	H	FACW
4	*Phalaris arundinacea* (reed canarygrass)	H	FACW	4	*Trifolium repens* (white clover)	H	FAC
5				5	*Poa* sp. (bluegrasses)	H	
6				6	*Lotus corniculatus* (birdsfoot trefoil)	H	FAC
7				7	*Myosotis laxa* (bay forget-me-not),	H	OBL
8				8	*Galium aparine* (cleavers)	H	FACU

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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	0	(In.)
Depth to Free Water in Pit:	10	(In.)
Depth to Saturated Soil:	Surface	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
X	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

X	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.
Stream runs through center of wetland.

SOILS

Map Unit Name (Series and Phase): Odne silt loam
Taxonomy (Subgroup): Aquandic Epiaqualf

Drainage Class: PD
Field Observations Confirm Mapped Type? Yes *Circle*

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 3/1			Silt loam
5-14	B	10YR 3/1	5YR 3/4	Many/coarse/distinct	Silt loam

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	~~Gleyed or~~ Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor		Concretions		Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes
Wetland Hydrology Present?	X	Yes		No			No
Hydric Soils Present?	X	Yes		No			

Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502 Widening	Date:	03/08/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	CP, BN	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NE
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NE-DW1

VEGETATION

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	Yellow composite	H	N/A	1	*Phalaris arundinacea* (reed canarygrass)	H	FACW
2	*Alopecurus pratensis* (meadow foxtail)	H	FACW	2	*Taraxacum officinale* (common dandelion)	H	FACU
3	*Poa annua* (annual bluegrass)	H	FAC	3	*Geranium molle* (dovefoot geranium)	H	NL
4				4	*Daucus carota* (Queen Anne's lace)	H	NL
5				5	*Trifolium repens* (white clover)	H	FAC
6				6	*Cirsium vulgare* (bull thistle)	H	FACU
7				7	*Vicia* sp. (vetches)	H	
8				8	*Veronica sp. (speedwells)* assumed OBL	H	OBL

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): At least 67%

Remarks: All the identifiable dominant species are FAC or wetter, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	0	(In.)
Depth to Free Water in Pit:	14	(In.)
Depth to Saturated Soil:	Surface	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
X	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Primary indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Gee silt loam
Taxonomy (Subgroup): Typic Glossudalf

Drainage Class: MW
Field Observations Confirm Mapped Type? *Circle* No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-3	A_1	7.5YR 3/2			Loam
3-6	A_2	7.5YR 3/2			Loam
6-14	B	10YR 3/2	7.5YR 4/6	Common/medium/distinct	Sand
					Silt loam w/Mn concretions

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	~~Gleyed or~~ Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor	X	Concretions Mn		Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes		No
Wetland Hydrology Present?	X	Yes		No					
Hydric Soils Present?	X	Yes		No					

Remarks: Indicators of all three parameters were observed.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502	Date:	3/16/05
Applicant/Owner:	Washington State Department of Transportation	County:	CLARK
Investigator:	PD, BN	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Nonwetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NF
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NF-DU1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 *Lolium arundinaceum* (tall fescue), *(Festuca arundinacea)*	H	FAC-	1 *Holcus lanatus* (common velvetgrass)	H	FAC
2			2 *Agrostis capillaris* (colonial bentgrass), *(A. tenuis)*	H	FAC
3			3		
4			4		
5			5		
6			6		
7			7		

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

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

- [ ] Recorded Data (describe in Remarks)
- [ ] Stream, Lake, or Tide Gauge
- [x] Aerial Photographs
- [ ] Other
- [ ] No recorded data available

Field Observations:
Depth of Surface Water: 0 (In.)
Depth to Free Water in Pit: 0 (In.)
Depth to Saturated Soil: 0 (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- [ ] Inundated
- [ ] Saturated in Upper 12 inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [ ] Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- [ ] Oxidized Root Channels in Upper 12"
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (explain in remarks)

Remarks: No Indicators of wetland hydrology were observed, thus failing to meet the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Odne silt loam
Taxonomy (Subgroup): Aquandic Epiaqualf

Drainage Class: P
Field Observations Confirm Mapped Type? *Circle* No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-6"	A	10YR 3/2			
6-9"	A2/B1	10YR 3/2			Loam
9-16"	B2	10YR 4/2	10YR 3/6	Common/coarse/distinct	Silty clay loam

Hydric Soil Indicators:
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Aquic Moisture Regime
- [ ] Reducing Conditions
- [x] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] Organic Streaking in Sandy Soils
- [ ] High Organic Content in Surface Layer in Sandy Soils
- [ ] Listed on National Hydric Soils List
- [ ] Listed on Local Hydric Soils List
- [ ] Other (explain in remarks)

Remarks: The presence of a low chroma matrix and redoximorphic features were observed, therefore; the hydric soil criterion were met.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?		Yes	x	No	Is this Sampling Point Within a Wetland?		Yes	x	No
Wetland Hydrology Present?		Yes	x	No					
Hydric Soils Present?	x	Yes		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:	SR 502 Widening	Date:	3/16/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	PD, BN	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NF
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NF-DW1

VEGETATION

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	*Agrostis capillaris* (colonial bentgrass), *(A. tenuis)*	H	FAC	1	*Carex obnupta* (slough sedge)	H	OBL
2	*Lolium arundinaceum* (tall fescue) *(Festuca arundinacea)*	H	FAC-	2	*Phalaris arundinacea* (reed canarygrass)	H	FACW
3	*Juncus effusus* (soft rush)	H	FACW	3	*Populus tremuloides* (quaking aspen)	H	FAC+
4				4	*Spiraea douglasii* (hardhack)	S	FACW
5				5	*Myosotis laxa* (bay forget-me-not)	H	OBL
6				6	*Typha latifolia* (broadleaf cattail)	H	OBL
7				7	*Fraxinus latifolia* (Oregon ash)	T	FACW

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

- [ ] Recorded Data (describe in Remarks)
  - [ ] Stream, Lake, or Tide Gauge
  - [X] Aerial Photographs
  - [ ] Other
- [ ] No recorded data available

Field Observations:
- Depth of Surface Water: None (In.)
- Depth to Free Water in Pit: 13" (In.)
- Depth to Saturated Soil: 6" (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- [ ] Inundated
- [X] Saturated in Upper 12 inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [ ] Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- [ ] Oxidized Root Channels in Upper 12"
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (explain in remarks)

Remarks: Hydrology observations in pit were recorded after 15 min.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Gee silt loam
Taxonomy (Subgroup): Typic Glossudalf

Drainage Class: MW
Field Observations Confirm Mapped Type? *Circle* 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 4/2			Silty clay loam
5-14"	B	10YR 4/2	10YR 3/6	Common/coarse/distinct	Silty clay loam

Hydric Soil Indicators:
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Aquic Moisture Regime
- [ ] Reducing Conditions
- [x] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] Organic Streaking in Sandy Soils
- [ ] High Organic Content in Surface Layer in Sandy Soils
- [ ] Listed on National Hydric Soils List
- [ ] Listed on Local Hydric Soils List
- [ ] Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	x	Yes		No	Is this Sampling Point Within a Wetland? x Yes ☐ No
Wetland Hydrology Present?	x	Yes		No	
Hydric Soils Present?	x	Yes		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:	SR 502 Widening	Date:	3/31/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, TSS	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Nonwetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NG
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NG-DU1

VEGETATION

Dominant Plant Species		Stratum	Indicator	Non-Dominant Plant Species		Stratum	Indicator
1	Unknown pasture grass	H		1	*Cirsium vulgare* (bull thistle)	H	FACU
2	*Rumex sp. (docks)*	H		2			
3				3			
4				4			
5				5			
6				6			
7				7			

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

Remarks: Since both dominant species are unidentified, the percent of FAC and wetter species is also unknown.

HYDROLOGY

- [ ] Recorded Data (describe in Remarks)
- [ ] Stream, Lake, or Tide Gauge
- [X] Aerial Photographs
- [ ] Other
- [ ] No recorded data available

Field Observations:
Depth of Surface Water: None (In.)
Depth to Free Water in Pit: None (In.)
Depth to Saturated Soil: None (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- [ ] Inundated
- [ ] Saturated in Upper 12 inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [ ] Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- [ ] Oxidized Root Channels in Upper 12"
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (explain in remarks)

Remarks: No Indicators of wetland hydrology were observed, thus failing to meet the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Gee silt loam
Taxonomy (Subgroup): Typic Glossudalf

Drainage Class: MW *Circle*
Field Observations Confirm Mapped Type? No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-5		10YR 3/2			Silt loam
5+		10YR 4/4			Loam

Hydric Soil Indicators:
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Aquic Moisture Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] Organic Streaking in Sandy Soils
- [ ] High Organic Content in Surface Layer in Sandy Soils
- [ ] Listed on National Hydric Soils List
- [ ] Listed on Local Hydric Soils List
- [ ] 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?		Yes		No	Is this Sampling Point Within a Wetland?
Wetland Hydrology Present?		Yes	X	No	
Hydric Soils Present?		Yes	X	No	

Is this Sampling Point Within a Wetland? [ ] Yes [X] 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:	SR 502	Date:	03/31/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, TSS	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NG
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NG-DW1

VEGETATION

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	*Veratrum viride* (green false hellebore)	H	FACW	1	*Oenanthe sarmentosa* (water parsley)	H	OBL
2	*Carex obnupta* (slough sedge)	H	OBL	2	*Polystichum munitum* (western swordfern)	H	FACU
3	*Epilobium ciliatum* (fringed willowherb)	H	FACW-	3	*Tellima grandiflora* (fringecup)	H	NL
4	*Lonicera involucrata* (twinberry) FAC+	S	FAC+	4	*Rosa nutkana* (Nootka rose),	S	FAC
5	*Fraxinus latifolia* (Oregon ash) FACW	T	FACW	5	*Cornus sericea* (redosier dogwood) *(C. stolonifera)*	S	FACW
6				6	*Ranunculus repens* (creeping buttercup)	H	FACW
7				7	*Populus balsamifera* (black cottonwood)	T	FAC

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

Remarks: Other non-dominant species included : *Trillium grandiflorum* (snow trillium) H, NL; *Corylus cornuta* (beaked hazelnut), S, FACU; *Physocarpus capitatus* (Pacific ninebark) S, FACW-; *Oemleria cerasiformis* (Indian plum) S, FACU

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

HYDROLOGY

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
x	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	3	(In.)
Depth to Free Water in Pit:	2	(In.)
Depth to Saturated Soil:	0	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

x	Inundated
x	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
x	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Slow moving surface water observed.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Odne silt loam
Taxonomy (Subgroup): Aquandic Epiaqualf

Drainage Class: P *Circle*
Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0 -6		2.5Y 3/1	2.5Y 4/4	Few/fine/distinct	Silt loam
6+		2.5Y 5/2	7.5YR 4/4	Many/coarse/prominent	Silt loam, concretions

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	Gleyed or Low-Chroma Colors	X	Listed on National Hydric Soils List
	Sulfidic Odor		Concretions	X	Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	x	Yes		No	Is this Sampling Point Within a Wetland?	x	Yes
Wetland Hydrology Present?	x	Yes		No			No
Hydric Soils Present?	x	Yes		No			

Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502	Date:	05/15/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TSS, TK	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NH
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NH-DW1

VEGETATION

Dominant Plant Species		Stratum	Indicator	Non-Dominant Plant Species		Stratum	Indicator
1	*Poa trivialis* (rough bluegrass)	H	FACW	1			
2	*Holcus lanatus* (common velvetgrass)	H	FAC	2			
3	*Cornus sericea* (redosier dogwood), *(C. stolonifera)*	S	FACW	3			
4	*Fraxinus latifolia* (Oregon ash)	T	FACW	4			
5	*Rubus armeniacus* (Himalayan blackberry), *R. discolor*	V	FACU	5			
6				6			
7				7			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 80%

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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	none	(In.)
Depth to Free Water in Pit:	6	(In.)
Depth to Saturated Soil:	0	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
X	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Odne silt loam
Taxonomy (Subgroup): Aquandic Epiaqualf

Drainage Class: P *Circle*
Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	2.5Y 3/2	-		Silt loam
5-10	B	2.5Y 4/1	7.54YR 4/4	Common/medium/distinct	Silt loam

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	Gleyed or Low-Chroma Colors	X	Listed on National Hydric Soils List
	Sulfidic Odor		Concretions	X	Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes	No
Wetland Hydrology Present?	X	Yes		No				
Hydric Soils Present?	X	Yes		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:	SR 502	Date:	03/31/05
Applicant/Owner:	Washington State Department of Transportation	County:	CLARK
Investigator:	TK, TSS	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NGG
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NGG-DW1

VEGETATION

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	*Populus balsamifera* (black cottonwood)	S	FAC	1	*Cornus sericea* (redosier dogwood) *(C. stolonifera)*	S	FACW
2	*Phalaris arundinacea* (reed canarygrass)	H	FACW	2	*Rubus armeniacus* (Himalayan blackberry), *R. discolor, R. procerus*	V	FACU
3				3	*Juncus effusus* (soft rush)	H	FACW
4				4			
5				5			
6				6			
7				7			

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

Remarks: Pond fringe emergent 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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
x	Aerial Photographs
	Other
	No recorded data available

Field Observations:
Depth of Surface Water: 24 (In.)
Depth to Free Water in Pit: 0 (In.)
Depth to Saturated Soil: 6 (In.)

Wetland Hydrology Indicators:

Primary Indicators:

x	Inundated
x	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Wetland goes 1 1/2 feet in from upland edge then drops off to deep water habitat. Fish and bullfrogs present.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Odne silt loam
Taxonomy (Subgroup): Aquandic Epiaqualf

Drainage Class: P
Field Observations Confirm Mapped Type? Yes *Circle*

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0 -6		2.5Y 3/1	2.5 Y 4/4	Few/fine/distinct	Silt loam
6+		2.5Y 5/2	7.5 YR 4/4	Many/coarse/prominent	Silt loam, concretions

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	Gleyed or Low-Chroma Colors	X	Listed on National Hydric Soils List
	Sulfidic Odor		Concretions	X	Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes		No
Wetland Hydrology Present?	X	Yes		No					
Hydric Soils Present?	X	Yes		No					

Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502 Widening	Date:	03/21/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, TSS	State:	WA

Do Normal Circumstances exist on the site?	☒ Yes	☐ No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?	☐ Yes	☒ No	Transect ID:	NI
Is Area a Potential Problem Area? *(if needed, explain on reverse)*	☐ Yes	☒ No	Plot ID:	NI-DW 1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 *Populus balsamifera* (black cottonwood)	T	FAC	1 *Spirea douglasii* (hardhack)	H	FACW
2 *Juncus effusus* (soft rush)	H	FACW	2 *Phalaris arundinacea* (reed canarygrass)	H	FACW
3			3 *Cirsium vulgare* (bull thistle)	H	FACU
4			4 *Cirsium arvense* (Canada thistle)	H	FACU+
5			5 *Rubus armeniacus* (Himalayan blackberry)	V	FACU
6			6 *Chamerion angustifolium* (fireweed)	H	NI
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

☐ Recorded Data (describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No recorded data available

Field Observations:
- Depth of Surface Water: 12 (In.)
- Depth to Free Water in Pit: 8 (In.)
- Depth to Saturated Soil: 0 (sat. to surface) (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☒ Inundated
- ☒ Saturated in Upper 12 inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12"
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (explain in remarks)

Remarks: Various depths of inundation were observed throughout the wetland.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Gee silt loam
Taxonomy (Subgroup): Typic Glossudalf

Drainage Class: MW
Field Observations Confirm Mapped Type? No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-2	A1	2.5Y 4/2	-		Silt loam
2-11	A2	2.5Y 4/1	7.5YR 4/6	common/medium/ prominent	Silt loam
11+	B	2.5Y 5/1	7.5YR 4/6	common/medium/ prominent	Silt loam

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☒ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ Organic Streaking in Sandy Soils
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Listed on National Hydric Soils List
- ☐ Listed on Local Hydric Soils List
- ☐ Other (explain in remarks)

Remarks: The presence of a low chroma matrix and redoximorphic features is evidence of conditions sufficient to promote hydric soils.
Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present?	☒ Yes	☐ No	
Hydric Soils Present?	☒ Yes	☐ No	

Remarks: Emergent wetland
Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502	Date:	05/04/05
Applicant/Owner:	Washington State Department of Transportation	County:	
Investigator:	BN, TSS	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?	X	Yes		No	Transect ID:	NJ
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NJ-DW1

VEGETATION

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	*Fraxinus latifolia* (Oregon ash)	T	FACW	1	*Holodiscus discolor* (oceanspray)	S	NL
2	*Populus balsamifera* (black cottonwood)	T	FAC	2	*Corylus cornuta* (beaked hazelnut)	S	FACU
3	*Epilobium ciliatum* (fringed willowherb)	H	FACW-	3	*Anthoxanthum odoratum* (sweet vernalgrass)	H	FACU
4	*Claytonia sibirica* (siberian springbeauty)	H	FAC	4	*Holcus lanatus* (common velvetgrass)	H	FAC
5	*Cardamine pensylvanica* (Pennsylvania bitter cress)	H	FACW	5	*Oenanthe sarmentosa* (water parsley)	H	OBL
6				6	*Pteridium aquilinum* (brackenfern)	H	FACU
7				7	*Carex obnupta* (slough sedge)	H	OBL

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

Remarks: Additional non-dominant species include *Symphoricarpos albus* (snowberry) S, FACU and *Geranium robertianum* (stinky Bob) H, NL.
Area includes disturbed forested, emergent wetland. About 70% of the forested wetland area is disturbed by construction activities.
More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	4*	(In.)
Depth to Free Water in Pit:	11.5	(In.)
Depth to Saturated Soil:	10	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
X	Sediment Deposits
X	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
X	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: * South of pit, there are areas of inundation up to 4" in depth. The area is saturated to the surface throughout.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Hesson clay loam
Taxonomy (Subgroup): Xeric Palehumult

Drainage Class: W
Field Observations Confirm Mapped Type? *Circle* No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4	10YR 3/2	10YR 3/4	Few fine		Silty clay loam
4-11	10YR 3/2	10YR 4/6	Common course		Silty clay loam
11+	10YR 4/2	10YR 4/6	Common course		Clay loam

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	Gleyed or Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor		Concretions		Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: The area was highly disturbed, although indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes		No
Wetland Hydrology Present?	X	Yes		No				
Hydric Soils Present?	X	Yes		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:	SR 502	Date:	05/03/05
Applicant/Owner:	Washington State Department of Transportation	County:	
Investigator:	BN, TSS	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?	X	Yes		No	Transect ID:	NJ
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NJ-DW2

VEGETATION

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	*Juncus effusus* (soft rush)	H	FACW	1	*Vicia americana* (American vetch) FAC	H	FAC
2	*Epilobium ciliatum* (fringed willowherb)	H	FACW-	2	*Geum macrophyllum* (largeleaf avens) FACW-	H	FACW
3	*Anthoxanthum odoratum* (sweet vernalgrass)	H	FACU	3			
4				4			
5				5			
6				6			
7				7			

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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	2	(In.)
Depth to Free Water in Pit:	0	(In.)
Depth to Saturated Soil:	0	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

X	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Inundation and/or saturation throughout emergent wetland.
Surface saturation in pit.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Hesson clay loam

Taxonomy (Subgroup): Xeric Palehumult

Drainage Class: W *Circle*

Field Observations Confirm Mapped Type? No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 4/1	10YR 4/4	few, fine	Silty clay loam
6+	B	10YR 5/1	7.5YR 4/6	many course	Silty clay loam

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	Gleyed or Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor		Concretions		Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: The area was highly disturbed, although indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes
Wetland Hydrology Present?	X	Yes		No			No
Hydric Soils Present?	X	Yes		No			

Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502	Date:	03/21/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TSS, TK	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NK
Is Area a Potential Problem Area? *(if needed, explain on reverse)*	X	Yes		No	Plot ID:	NK-DW1

VEGETATION

Dominant Plant Species		Stratum	Indicator	Non-Dominant Plant Species		Stratum	Indicator
1	*Carex obnupta* (slough sedge)	H	OBL	1	*Symphoricarpos albus (snowberry)*	S	*FACU*
2	*Lysichiton americanus (skunkcabbage)*	H	OBL	2	*Rubus ursinus* (California blackberry)	V	FACU
3	*Fraxinus latifolia* (Oregon ash)	T	FACW	3	*Galium aparine* (cleavers)	H	FACU
4	*Cornus sericea* (redosier dogwood)	S	FACW	4	*Rumex crispus* (curly dock)	H	FAC+
5	*Physocarpus capitatus* (Pacific ninebark)	S	FACW-	5	*Lonicera involucrata* (twinberry)	S	FAC+
6				6	*Juncus effusus* (soft rush)	H	FACW
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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	4	(In.)
Depth to Free Water in Pit:	12	(In.)
Depth to Saturated Soil:	10	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

X	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
X	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Hesson clay loam

Taxonomy (Subgroup): Xeric Palehumult

Drainage Class: WD *Circle*

Field Observations Confirm Mapped Type? No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-2		25Y 3/2	-		
2-12		2.5Y 3/1	7.5YR 3/4	Common/fine/distinct	Silt loam
12 +		2.5Y 4/1	7.5YR 3/4	Common/fine/distinct	Silt loam

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	Gleyed or Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor		Concretions		Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes		No
Wetland Hydrology Present?	X	Yes		No				
Hydric Soils Present?	X	Yes		No				

Remarks: Part of wetland is a potential problem area due to a heavily grazed horse pasture within it. However, adjacent strong wetland indicators of vegetation, hydrology, and soil, along with topography allowed us to make a determination.

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:	SR502	Date:	5/21/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TSS, TK	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NK
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NK-DW2

VEGETATION

Dominant Plant Species		Stratum	Indicator	Non-Dominant Plant Species		Stratum	Indicator
1	*Veronica americana* (American speedwell)	H	OBL	1	*Phalaris arundinacea* (reed canarygrass)	H	FACW
2	Unknown pasture grass	H		2	*Rosa pisocarpa* (cluster rose)	S	FAC
3	*Ranunculus repens* (creeping buttercup)	H	FACW	3	*Rumex crispus* (curly dock)	H	FAC+
4				4			
5				5			
6				6			
7				7			

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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	1-2	(In.)
Depth to Free Water in Pit:	0	(In.)
Depth to Saturated Soil:	0	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

X	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
X	Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Surface inundation throughout. Emergent portion of wetland drains to forested wetland to the north and west. Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Hesson clay loam

Taxonomy (Subgroup): Xeric Palehumult

Drainage Class: WD *Circle*

Field Observations Confirm Mapped Type? No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-8		2.5Y 3/1	7.5YR 3/4	Common/fine/distinct	Silt Loam
8+		2.5Y 4/1	7.5YR 5/6	Many/coarse/prominent	Silt Loam

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	x	Gleyed or Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor		Concretions		Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Very strong hydric indicators. Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes		No
Wetland Hydrology Present?	X	Yes		No				
Hydric Soils Present?	X	Yes		No				

Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502 Widening	Date:	03/9/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, TSS	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NL
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NL-DW1

VEGETATION

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	*Alopecurus geniculatus* (water foxtail)	H	OBL	1	*Juncus effusus* (soft rush)	H	FACW
2	*Vicia sativa* (garden vetch)	H	NL	2			
3	*Ranunculus repens* (creeping buttercup)	H	FACW	3			
4				4			
5				5			
6				6			
7				7			

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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
x	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	½	(In.)
Depth to Free Water in Pit:	8	(In.)
Depth to Saturated Soil:	0 (sat. to surface)	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

x	Inundated
x	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
x	Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Saturated to the surface throughout wetland.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Gee silt loam

Taxonomy (Subgroup): Typic Glossudalf

Drainage Class: MW *Circle*

Field Observations Confirm Mapped Type? No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4		2.5Y 3/2			Silt loam
4+		2.5Y 4/1	7.5YR 4/6	Common/Medium/	Silt loam

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	x	Gleyed or Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor		Concretions		Listed on Local Hydric Soils List
	Aquatic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	x	Yes		No	Is this Sampling Point Within a Wetland?	x	Yes		No
Wetland Hydrology Present?	x	Yes		No					
Hydric Soils Present?	x	Yes		No					

Remarks: This wetland is a wet pasture that extends into an adjacent property.
Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502 Widening	Date:	04/18/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, TSS	State:	WA

Do Normal Circumstances exist on the site?	x	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	x	No	Transect ID:	NN
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	x	No	Plot ID:	NN-DW1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 *Poa annua* (annual bluegrass)	H	FAC	1 *Phalaris arundinacea* (reed canarygrass)	H	FACW
2 *Ranunculus repens* (creeping buttercup)	H	FACW	2		
3 *Juncus effusus* (soft rush)	H	FACW	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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	2	(In.)
Depth to Free Water in Pit:	1	(In.)
Depth to Saturated Soil:	0 (sat. to surface)	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

X	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

X	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Tisch silt
Taxonomy (Subgroup): Typic Endoaquand

Drainage Class: VP
Field Observations Confirm Mapped Type? *Circle* No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-8		2.5Y 3/1			Silt Loam
8+		2.5Y 4/1	7.5YR 4/6	Common/medium/prominent	Silt Loam, Cobble (>15mm)

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	Gleyed or Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor		Concretions		Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes
Wetland Hydrology Present?	X	Yes		No			No
Hydric Soils Present?	X	Yes		No			

Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502 Widening	Date:	04/12/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	DB, TSS	State:	WA

Do Normal Circumstances exist on the site?	x	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?	x	Yes		No	Transect ID:	NO
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	x	No	Plot ID:	NO-DW1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 *Juncus effusus* (soft rush)	H	FACW	1		
2 *Populus balsamifera* (black cottonwood),	Sapling	FAC	2		
3 *Agrostis capillaris* (colonial bentgrass) *(A. tenuis)*	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: More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

- [ ] Recorded Data (describe in Remarks)
- [ ] Stream, Lake, or Tide Gauge
- [X] Aerial Photographs
- [ ] Other
- [ ] No recorded data available

Field Observations:
Depth of Surface Water: none (In.)
Depth to Free Water in Pit: (In.)
Depth to Saturated Soil: 0 (sat. to surface) (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- [X] Inundated
- [X] Saturated in Upper 12 inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [X] Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- [ ] Oxidized Root Channels in Upper 12"
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (explain in remarks)

Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Dollar loam
Taxonomy (Subgroup): Humic Fragixerept

Drainage Class: MW *Circle*
Field Observations Confirm Mapped Type? No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-6		Fill			Sandy loam

Hydric Soil Indicators:
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Aquic Moisture Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] Organic Streaking in Sandy Soils
- [ ] High Organic Content in Surface Layer in Sandy Soils
- [ ] Listed on National Hydric Soils List
- [ ] Listed on Local Hydric Soils List
- [ ] Other (explain in remarks)

Remarks: The presence of fill material limited the subsurface investigation. It was assumed that the soil was hydric due to the observation of prolonged periods of inundation and hydrophytic vegetation.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	x	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes
Wetland Hydrology Present?	x	Yes		No			No
Hydric Soils Present?	x	Yes		No			

Remarks: The site appears to have been filled with sandy, gravelly soil, adjacent to a gravel parking lot that may have filled wetlands. Aerial photos suggest that the area may have supported hydrophytic vegetation historically as well.
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:	SR 502 Widening	Date:	04/18/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, TSS	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NQ
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NQ-DW1

VEGETATION

Dominant Plant Species		Stratum	Indicator	Non-Dominant Plant Species		Stratum	Indicator
1	*Alopecurus pratensis* (meadow foxtail)	H	FACW	1	*Holcus lanatus* (common velvetgrass)	H	FAC
2	*Phalaris arundinacea* (reed canarygrass)	H	FACW	2			
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

- [ ] Recorded Data (describe in Remarks)
  - [ ] Stream, Lake, or Tide Gauge
  - [x] Aerial Photographs
  - [ ] Other
- [ ] No recorded data available

Field Observations:
- Depth of Surface Water: 2* (In.)
- Depth to Free Water in Pit: (In.)
- Depth to Saturated Soil: 0 (sat. to surface) (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- [X] Inundated
- [X] Saturated in Upper 12 inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [ ] Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- [X] Oxidized Root Channels in Upper 12"
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (explain in remarks)

Remarks: *Rained last few days, resulting in areas of inundation up to 2" throughout.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Dollar loam
Taxonomy (Subgroup): Humic Fragixerept

Drainage Class: MW
Field Observations Confirm Mapped Type? *Circle* No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4	A	2.5Y 4/1			Silt Loam w/ oxidized rhizospheres
4-12	B1	2.5Y 4/1	7.5YR 4/4	Common/fine/distinct	Silt Loam
12+	B2	2.5Y 5/1	7.5YR 4/4	Many/medium/distinct	Silt Loam

Hydric Soil Indicators:
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Aquic Moisture Regime
- [ ] Reducing Conditions
- [x] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] Organic Streaking in Sandy Soils
- [ ] High Organic Content in Surface Layer in Sandy Soils
- [ ] Listed on National Hydric Soils List
- [ ] Listed on Local Hydric Soils List
- [ ] Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	x	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes		No
Wetland Hydrology Present?	x	Yes		No					
Hydric Soils Present?	x	Yes		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:	SR 502 Widening	Date:	04/20/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, TSS	State:	WA

Do Normal Circumstances exist on the site?	☒ Yes	☐ No	Community ID:	Nonwetland
Is the site significantly disturbed (Atypical Situation)?	☐ Yes	☒ No	Transect ID:	NR
Is Area a Potential Problem Area? *(if needed, explain on reverse)*	☐ Yes	☒ No	Plot ID:	NR-DU1

VEGETATION

Dominant Plant Species		Stratum	Indicator	Non-Dominant Plant Species		Stratum	Indicator
1	Claytonia lanceolata (Western spring beauty)	H	FAC-	1			
2	*Physocarpus capitatus* (Pacific ninebark)	S	FACW-	2			
3	*Rubus armeniacus* (Himalayan blackberry)	S	FACU	3			
4	*Populus balsamifera* (black cottonwood)	T	FAC	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

☐ Recorded Data (describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No recorded data available

Field Observations:
- Depth of Surface Water: None (In.)
- Depth to Free Water in Pit: >16 (In.)
- Depth to Saturated Soil: None (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12"
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (explain in remarks)

Remarks: No Indicators of wetland hydrology were observed, thus failing to meet the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Hockinson loam
Taxonomy (Subgroup): Fluvaquentic Endoaquept

Drainage Class: P
Field Observations Confirm Mapped Type? *Circle* No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4	A	2.5Y 3/2			Silt loam
4-16	B	2.5Y 4/3			Silt loam

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ Organic Streaking in Sandy Soils
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Listed on National Hydric Soils List
- ☐ Listed on Local Hydric Soils List
- ☐ 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?	☐ Yes	☒ No	Is this Sampling Point Within a Wetland? ☐ Yes ☒ No
Wetland Hydrology Present?	☐ Yes	☒ No	
Hydric Soils Present?	☐ Yes	☒ 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:	SR 502 Widening	Date:	04/20/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, TSS	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Nonwetland
q		Yes	X	No	Transect ID:	NR
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NR-DU2

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 *Symphoricarpos albus* (snowberry)	S	FACU	1 *Tellima grandiflora* (bigflower tellima)	H	NL
2 *Robinia pseudoacacia* (black locust)	T	FACU	2 *Carex* sp. (sedges)	H	
3 *Urtica dioica* (stinging nettle)	H	FAC+	3 *Populus balsamifera* (black cottonwood)	T	FAC
4 Unknown grass	H		4 *Spiraea douglasii* (hardhack)	S	FACW
5			5 *Rubus armeniacus* (Himalayan blackberry), *R. discolor. procerus*	V	FACU
6			6 *Hydrophyllum tenuipes* (Pacific waterleaf)	H	NL
7			7		

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

- [ ] Recorded Data (describe in Remarks)
- [ ] Stream, Lake, or Tide Gauge
- [X] Aerial Photographs
- [ ] Other
- [ ] No recorded data available

Field Observations:
Depth of Surface Water: None (In.)
Depth to Free Water in Pit: None (In.)
Depth to Saturated Soil: 12 (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- [ ] Inundated
- [X] Saturated in Upper 12 inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [ ] Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- [ ] Oxidized Root Channels in Upper 12"
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (explain in remarks)

Remarks:

SOILS

Map Unit Name (Series and Phase): Dollar loam
Taxonomy (Subgroup): Humic Fragixerept

Drainage Class: MW *Circle*
Field Observations Confirm Mapped Type? No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A	2.5Y 3/2			Silt loam
12-24	B	2.5Y 4/2	10YR 4/4	Common/medium/distinct	Silt loam

Hydric Soil Indicators:
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Aquic Moisture Regime
- [ ] Reducing Conditions
- [ ] Gleyed or Low-Chroma Colors
- [ ] Concretions
- [ ] Organic Streaking in Sandy Soils
- [ ] High Organic Content in Surface Layer in Sandy Soils
- [ ] Listed on National Hydric Soils List
- [ ] Listed on Local Hydric Soils List
- [ ] Other (explain in remarks)

Remarks: No Indicators of hydric soils were observed, thus failing to meet the hydric soils criterion. Redoximorphic features do not occur at the proper depth.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?		Yes	x	No	Is this Sampling Point Within a Wetland?		Yes	x	No
Wetland Hydrology Present?	X	Yes		No					
Hydric Soils Present?		Yes	x	No					

Remarks: Area is a mosaic of upland and depressional areas dominated by upland vegetation, hydrology, soils.
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:	SR 502 Widening	Date:	04/20/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TSS, TK	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NR
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NR-DW1

VEGETATION

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	*Juncus effusus* (soft rush)	H	FACW	1	*Physocarpus capitatus* (Pacific ninebark)	S	FACW-
2	*Carex obnupta* (slough sedge)	H	OBL	2	*Oenanthe sarmentosa* (water parsley)	H	OBL
3	*Fraxinus latifolia* (Oregon ash)	T	FACW	3	*Cardamine pensylvanica* (Pennsylvania bitter cress)	H	FACW
4	*Spiraea douglasii* (hardhack)	S	FACW	4	*Sambucus racemosa* (red elderberry)	H	FACU
5				5	*Alnus rubra* (red alder)	T	FAC
6				6	*Populus balsamifera* (black cottonwood)	T	FAC
7				7	*Rosa nutkana* (Nootka rose)	S	FAC

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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
x	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	10	(In.)
Depth to Free Water in Pit:	none	(In.)
Depth to Saturated Soil:	0 (sat. to surface)	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

X	Inundated
X	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
X	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
X	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Hockinson loam
Taxonomy (Subgroup): Fluvaquentic Endoaquept

Drainage Class: SWP *Circle*
Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0 - 6	A	2.5Y 4/1	7.5YR 3/3	Few/fine/distinct	Silt loam
6+	B	2.5Y 5/1	7.5YR 5/8	Many/med./prominent	Silt loam

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	Gleyed or Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor		Concretions		Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes		No
Wetland Hydrology Present?	X	Yes		No				
Hydric Soils Present?	X	Yes		No				

Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502 Widening	Date:	04/20/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, TSS	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NS
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NS-DW1

VEGETATION

	Dominant Plant Species	Stratum	Indicator		Non-Dominant Plant Species	Stratum	Indicator
1	*Juncus effusus* (soft rush)	H	FACW	1	*Holodiscus discolor* (oceanspray)	S	NL
2	*Phalaris arundinacea* (reed canarygrass)	H	FACW	2	*Ribes sanguineum* (red flower currant)	S	NL
3	*Spiraea douglasii* (hardhack)	S	FACW	3	*Fraxinus latifolia* (Oregon ash)	T	FACW
4				4	*Rubus armeniacus* (Himalayan blackberry) *R. discolor, R. procerus*	V	FACU
5				5	*Populus balsamifera* (black cottonwood)	T	FAC
6				6	*Epilobium ciliatum* (fringed willowherb)	H	FACW
7				7	*Geum macrophyllum* (largeleaf avens)	H	FACW
				8	*Carex obnupta* (slough sedge)	H	OBL
				9	*Rosa nutkana* (Nootka rose)	S	FAC

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

Remarks: Wetland is largely emergent wetland with a scrub-shrub wetland component.
More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	4	(In.)
Depth to Free Water in Pit:	+3	(In.)
Depth to Saturated Soil:	0 (sat. to surface)	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

x	Inundated
x	Saturated in Upper 12 inches
	Water Marks
	Drift Lines
	Sediment Deposits
x	Drainage Patters in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
x	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Areas of inundation throughout wetland.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Dollar loam
Taxonomy (Subgroup): Humic Fragixerept

Drainage Class: MW *Circle*
Field Observations Confirm Mapped Type? No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A	10YR 4/2	7.5YR 4/6	Many/fine/distinct	Silt loam

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	Gleyed or Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor		Concretions		Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	x	Yes		No	Is this Sampling Point Within a Wetland?	x	Yes		No
Wetland Hydrology Present?	x	Yes		No				
Hydric Soils Present?	x	Yes		No	Many birds, passerines			

Remarks: There were many passerine birds present in this wetland.
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:	SR 502 Widening	Date:	04/25/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, MG	State:	WA

Do Normal Circumstances exist on the site?	☒ Yes	☐ No	Community ID:	Nonwetland
Is the site significantly disturbed (Atypical Situation)?	☐ Yes	☒ No	Transect ID:	NT
Is Area a Potential Problem Area? *(if needed, explain on reverse)*	☐ Yes	☒ No	Plot ID:	NT-DU1

VEGETATION

Dominant Plant Species		Stratum	Indicator	Non-Dominant Plant Species		Stratum	Indicator
1	*Polystichum munitum* (western swordfern)	H	FACU	1			
2	*Rubus ursinus* (California blackberry)	V	FACU	2			
3	*Corylus cornuta* (beaked hazelnut)	S	FACU	3			
4	*Amelanchier alnifolia* (western service-berry)	H	FACU	4			
5				5			
6				6			
7				7			

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

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

☐ Recorded Data (describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No recorded data available

Field Observations:
- Depth of Surface Water: None (In.)
- Depth to Free Water in Pit: 10 (In.)
- Depth to Saturated Soil: 0 (sat. to surface) (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☒ Saturated in Upper 12 inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12"
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (explain in remarks)

Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Hockinson loam
Taxonomy (Subgroup): Fluvaquentic Endoaquept

Drainage Class: SWP
Field Observations Confirm Mapped Type? *Circle* No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A	10YR 3/2			Silt loam
12-18	B	10YR 5/1	10YR 3/4	Common/fine/distinct	Silt loam

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ Organic Streaking in Sandy Soils
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Listed on National Hydric Soils List
- ☐ Listed on Local Hydric Soils List
- ☐ 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?	☐ Yes	☒ No	Is this Sampling Point Within a Wetland? ☐ Yes ☒ No
Wetland Hydrology Present?	☒ Yes	☐ No	
Hydric Soils Present?	☐ Yes	☒ No	

Remarks: Area lacks wetland indicators and fails to meet wetland criteria of at least one of the three parameters, and therefore is nonwetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502 Widening	Date:	04/25/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, MG	State:	WA

Do Normal Circumstances exist on the site?	☒	Yes	☐	No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?	☐	Yes	☒	No	Transect ID:	NT
Is Area a Potential Problem Area? *(if needed, explain on reverse)*	☐	Yes	☒	No	Plot ID:	NT-DW1

VEGETATION

Dominant Plant Species		Stratum	Indicator	Non-Dominant Plant Species		Stratum	Indicator
1	*Fraxinus latifolia* (Oregon ash)	T	FACW	1			
2	*Cardamine penduliflora* (Willamette Valley bittercress)	H	OBL	2			
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

☐ Recorded Data (describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No recorded data available

Field Observations:
- Depth of Surface Water: 6 (In.)
- Depth to Free Water in Pit: none (In.)
- Depth to Saturated Soil: 0 (sat. to surface) (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☒ Inundated
- ☒ Saturated in Upper 12 inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12"
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☒ FAC-Neutral Test
- ☐ Other (explain in remarks)

Remarks: Various depths of inundation and saturation were observed throughout the wetland.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Hockinson loam
Taxonomy (Subgroup): Fluvaquentic Endoaquept

Drainage Class: SWP
Field Observations Confirm Mapped Type? *Circle* No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4	A	10YR 4/1			Silt loam
6+	B	10YR 4/1	5YR 6/8	Common/coarse/prominent	Silt loam

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☒ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ Organic Streaking in Sandy Soils
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Listed on National Hydric Soils List
- ☐ Listed on Local Hydric Soils List
- ☐ Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒	Yes	☐	No	Is this Sampling Point Within a Wetland?	☒	Yes	☐ No
Wetland Hydrology Present?	☒	Yes	☐	No				
Hydric Soils Present?	☒	Yes	☐	No				

Remarks: Forested/Emergent wetland
Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502 Widening	Date:	04/25/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	Tom Kohl / Michelle Guay	State:	WA

Do Normal Circumstances exist on the site?	☒	Yes	☐	No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?	☐	Yes	☒	No	Transect ID:	NT
Is Area a Potential Problem Area? *(if needed, explain on reverse)*	☐	Yes	☒	No	Plot ID:	NT-DW2

VEGETATION

Dominant Plant Species		Stratum	Indicator	Non-Dominant Plant Species		Stratum	Indicator
1	*Phalaris arundinacea* (reed canarygrass)	H	FACW	1			
2	*Juncus effuses* (soft rush)	H	FACW	2			
3	*Lotus corniculatus* (bird's-foot trefoil)	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: More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

HYDROLOGY

☐ Recorded Data (describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No recorded data available

Field Observations:
- Depth of Surface Water: 12 (In.)
- Depth to Free Water in Pit: None (In.)
- Depth to Saturated Soil: 0 (sat. to surface) (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☒ Inundated
- ☒ Saturated in Upper 12 inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12"
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☒ FAC-Neutral Test
- ☐ Other (explain in remarks)

Remarks: Various depths of inundation and saturation were observed throughout the wetland.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Hockinson loam

Taxonomy (Subgroup): Fluvaquentic Endoaquept

Drainage Class: SWP *Circle*

Field Observations Confirm Mapped Type? 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	2.5Y 4/2	7.5YR 5/8	Common/fine/distinct	Silt loam
5+	B	2.5Y 4/1	7.5YR 5/8	Common/medium/prominent	Silt loam

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☒ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ Organic Streaking in Sandy Soils
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Listed on National Hydric Soils List
- ☐ Listed on Local Hydric Soils List
- ☐ Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒	Yes	☐	No	Is this Sampling Point Within a Wetland?	☒	Yes	☐ No
Wetland Hydrology Present?	☒	Yes	☐	No				
Hydric Soils Present?	☒	Yes	☐	No				

Remarks: Forested/Emergent wetland- 31 flags.
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:	SR 502 Widening	Date:	04/25/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, MG	State:	WA

Do Normal Circumstances exist on the site?	☒	Yes	☐	No	Community ID:	Nonwetland
Is the site significantly disturbed (Atypical Situation)?	☐	Yes	☒	No	Transect ID:	NU
Is Area a Potential Problem Area? *(if needed, explain on reverse)*	☐	Yes	☒	No	Plot ID:	NU-DU1

VEGETATION

	Dominant Plant Species	Stratum	Indicator		**Non**-Dominant Plant Species	Stratum	Indicator
1	*Anthoxanthum odoratum* (sweet vernalgrass)	H	FACU	1			
2	*Holcus lanatus* (common velvetgrass)	H	FAC	2			
3	*Vicia sativa* (common vetch)	H	NL	3			
4				4			
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

☐ Recorded Data (describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No recorded data available

Field Observations:
- Depth of Surface Water: None (In.)
- Depth to Free Water in Pit: 10 (In.)
- Depth to Saturated Soil: 9 (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☒ Saturated in Upper 12 inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12"
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (explain in remarks)

Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Dollar loam
Taxonomy (Subgroup): Humic Fragixerepts

Drainage Class: MW
Field Observations Confirm Mapped Type? *Circle* No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-11	A	10YR 4/2			Silt loam
11-18	B	10YR 6/2	7.5YR 4/6	many/coarse/distinct	Silt loam

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ Organic Streaking in Sandy Soils
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Listed on National Hydric Soils List
- ☐ Listed on Local Hydric Soils List
- ☐ Other (explain in remarks)

Remarks: The soil did not exhibit redoximorphic features in the upper 10 inches of the profile, therefore; the soil is not hydric.
No Indicators of hydric soils were observed, thus failing to meet the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☐	Yes	☒	No	Is this Sampling Point Within a Wetland?	☐ Yes	☒ No
Wetland Hydrology Present?	☒	Yes	☐	No			
Hydric Soils Present?	☐	Yes	☒	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:	SR 502 Widening	Date:	04/25/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, MG	State:	WA

Do Normal Circumstances exist on the site?	☒ Yes	☐ No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?	☐ Yes	☒ No	Transect ID:	NU
Is Area a Potential Problem Area? *(if needed, explain on reverse)*	☐ Yes	☒ No	Plot ID:	NU-DW1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 *Anthoxanthum odoratum* (sweet vernalgrass)	H	FACU	1		
2 *Holcus lanatus* (common velvetgrass)	H	FAC	2		
3 *Juncus effuses* (soft rush)	H	FACW	3		
4 *Lotus corniculatus* (bird's-foot trefoil)	H	FAC	4		
5 *Ranunculus acris* (Tall buttercup)	H	FACW-	5		
6			6		
7			7		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 4/5=80%

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

☐ Recorded Data (describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No recorded data available

Field Observations:
- Depth of Surface Water: 3 (In.)
- Depth to Free Water in Pit: (In.)
- Depth to Saturated Soil: 0 (sat. to surface) (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☒ Inundated
- ☒ Saturated in Upper 12 inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12"
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☒ FAC-Neutral Test
- ☐ Other (explain in remarks)

Remarks: Various depths of inundation and saturation were observed throughout the wetland.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Dollar loam

Taxonomy (Subgroup): Humic Fragixerept

Drainage Class: MW *Circle*

Field Observations Confirm Mapped Type? No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-13	A	10YR 4/2	10YR 4/4	Many/fine/faint	Silt loam

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☒ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ Organic Streaking in Sandy Soils
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Listed on National Hydric Soils List
- ☐ Listed on Local Hydric Soils List
- ☐ Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes	☐ No	Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
Wetland Hydrology Present?	☒ Yes	☐ No	
Hydric Soils Present?	☒ Yes	☐ No	

Remarks: Emergent wetland.
Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502 Widening	Date:	05/28/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	PD	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NV
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NV-DW1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 *Phalaris arundinacea* (reed canarygrass)	H	FACW	1 *Urtica dioica* (stinging nettle)	H	FAC+
2			2 *Rubus armeniacus* (Himalayan blackberry) *R. discolor*	S	FACU
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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:	None	(In.)
Depth to Free Water in Pit:	7	(In.)
Depth to Saturated Soil:	5	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

	Inundated
X	Saturated in Upper 12 inches
	Water Marks
X	Drift Lines
	Sediment Deposits
	Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Hydrology observations were made in the soil pit after 10 minutes. Drift lines were observed at 2 feet above the present stream level. Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Dollar loam

Taxonomy (Subgroup): Humic Fragixerept

Drainage Class: MW *Circle*

Field Observations Confirm Mapped Type? 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	10YR 3/1	10YR 3/4	Common/medium/distinct	Silty clay loam

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	Gleyed or Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor		Concretions		Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes		No
Wetland Hydrology Present?	X	Yes		No				
Hydric Soils Present?	X	Yes		No				

Remarks: Area has wetland indicators and meets wetland criteria of all three parameters, and therefore is wetland.

Form Content Approved by HQUSACE 3/92

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

Project Site:	SR 502 Widening	Date:	05/28/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK	State:	WA

Do Normal Circumstances exist on the site?	X	Yes		No	Community ID:	Wetland
Is the site significantly disturbed (Atypical Situation)?		Yes	X	No	Transect ID:	NW
Is Area a Potential Problem Area? *(if needed, explain on reverse)*		Yes	X	No	Plot ID:	NW-DW1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Non-Dominant Plant Species	Stratum	Indicator
1 *Phalaris arundinacea* (reed canarygrass)	H	FACW	1 *Urtica dioica* (stinging nettle)	H	FAC+
2			2		
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

	Recorded Data (describe in Remarks)
	Stream, Lake, or Tide Gauge
X	Aerial Photographs
	Other
	No recorded data available

Field Observations:

Depth of Surface Water:		(In.)
Depth to Free Water in Pit:	4	(In.)
Depth to Saturated Soil:	surface	(In.)

Wetland Hydrology Indicators:

Primary Indicators:

	Inundated
X	Saturated in Upper 12 inches
	Water Marks
X	Drift Lines
	Sediment Deposits
X	Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

	Oxidized Root Channels in Upper 12"
	Water-Stained Leaves
	Local Soil Survey Data
	FAC-Neutral Test
	Other (explain in remarks)

Remarks: Mill Creek ran through the middle of the wetland and depths of inundation up to 3 feet were observed, as were drift lines 2 feet above the present stream level. Hydrology observations were made in the soil pit after 15 minutes. These findings demonstrate the area has sufficient saturation and/or ponding during the growing season to satisfy the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Dollar loam

Taxonomy (Subgroup): Humic Fragixerept

Drainage Class: MW *Circle*

Field Observations Confirm Mapped Type? No

Profile Description:

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 4/6	Common/medium/distinct	Silty clay loam

Hydric Soil Indicators:

	Histosol		Reducing Conditions		High Organic Content in Surface Layer in Sandy Soils
	Histic Epipedon	X	Gleyed or Low-Chroma Colors		Listed on National Hydric Soils List
	Sulfidic Odor		Concretions		Listed on Local Hydric Soils List
	Aquic Moisture Regime		Organic Streaking in Sandy Soils		Other (explain in remarks)

Remarks: Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	X	Yes		No	Is this Sampling Point Within a Wetland?	X	Yes
Wetland Hydrology Present?	X	Yes		No			No
Hydric Soils Present?	X	Yes		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:	SR 502 Widening	Date:	04/26/05
Applicant/Owner:	Washington State Department of Transportation	County:	Clark
Investigator:	TK, TSS	State:	WA

Do Normal Circumstances exist on the site?	☒ Yes	☐ No	Community ID:	Nonwetland
Is the site significantly disturbed (Atypical Situation)?	☐ Yes	☒ No	Transect ID:	NX
Is Area a Potential Problem Area? *(if needed, explain on reverse)*	☐ Yes	☒ No	Plot ID:	NX-DU1

VEGETATION

Dominant Plant Species		Stratum	Indicator	Non-Dominant Plant Species		Stratum	Indicator
1	*Rumex acetosella* (sheep sorrel)	H	FACU+	1			
2	*Montia linearis*	H	NL	2			
3	*Lolium arundinaceum* (tall fescue)	H	FAC-	3			
4				4			
5				5			
6				6			
7				7			

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

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

☐ Recorded Data (describe in Remarks)
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No recorded data available

Field Observations:
- Depth of Surface Water: None (In.)
- Depth to Free Water in Pit: 10 (In.)
- Depth to Saturated Soil: 4 (In.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☒ Saturated in Upper 12 inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patters in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12"
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (explain in remarks)

Remarks: Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

SOILS

Map Unit Name (Series and Phase): Dollar loam
Taxonomy (Subgroup): Humic Fragixerept

Drainage Class: MW *Circle*
Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-13	A	10YR 3/3			Silt loam
13-18	B	10YR 4/4			Silt loam

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ Organic Streaking in Sandy Soils
- ☐ High Organic Content in Surface Layer in Sandy Soils
- ☐ Listed on National Hydric Soils List
- ☐ Listed on Local Hydric Soils List
- ☐ 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?	☐ Yes	☒ No	Is this Sampling Point Within a Wetland? ☐ Yes ☒ No
Wetland Hydrology Present?	☒ Yes	☐ No	
Hydric Soils Present?	☐ Yes	☒ No	

Remarks: Area lacks wetland indicators and fails to meet wetland criteria of at least one of the three parameters, and therefore is nonwetland.