# 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 |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | **Non**-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Rumex crispus* (curly dock) | H | FAC+ | 1 | | | |
| 2 | *Montia linearis (narrowleaf minerslettuce)* | H | NL | 2 | | | |
| 3 | *Lolium arundinaceum* (tall fescue) | H | FAC- | 3 | | | |
| 4 | *Myosotis discolor* (changing forget-me-not) | H | FACW | 4 | | | |
| 5 | | | | 5 | | | |
| 6 | | | | 6 | | | |
| 7 | | | | 7 | | | |

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

*Remarks:* Based on the non-dominant plant community and the strength of the other indicators for the other 2 parameters, we felt that more than 50% of the dominant species would normally 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: 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:* 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. |
|---|---|---|---|---|---|
| 0-14 | A | 10YR 3/2 | 7.5YR 4/6 | common/fine/prominent | Silt loam |
| 14-18 | B | 10YR 4/2 | 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:* The soil in the area appears to have been disturbed during earthwork activity, causing microtopography throughout the site.
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.

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

| | | | |
|---|---|---|---|
| Project Site: | SR 502 Widening | Date: | 05/2/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | PD, TSS | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Phalaris arundinacea* (reed canarygrass) | H | FACW | 1 | | | |
| 2 | *Rosa nutkana* (Nootka rose) | D | FAC | 2 | | | |
| 3 | *Spiraea douglasii* (hardhack) | S | FACW | 3 | | | |
| 4 | *Fraxinus latifolia* (Oregon ash) | T | FACW | 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: 10 (In.)
- Depth to Saturated Soil: 8 (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 varied from 2-12 inches 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. |
|---|---|---|---|---|---|
| 0-11 | A | 10YR 4/2 | 7.5YR 3/4 | Common/fine/distinct | Silt loam |
| 11-16 | B | 10YR 4/1 | 10YR 4/3 | 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 | | 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: | 05/2/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TSS, 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: NY |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | | Yes | X | No | Plot ID: NY-DW1 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Phalaris arundinacea* (reed canarygrass) | H | FACW | 1 | *Geum macrophyllum* (largeleaf avens) | H | FACW- |
| 2 | *Fraxinus latifolia* (Oregon ash) | T | FACW | 2 | *Carex* sp. (sedges) 1 | H | |
| 3 | *Populus balsamifera* (black cottonwood) | T | FAC | 3 | *Carex* sp. (sedges) 2 | H | |
| 4 | | | | 4 | *Carex obnupta* (slough sedge) | H | OBL |
| 5 | | | | 5 | *Polystichum munitum* (western swordfern) | H | FACU |
| 6 | | | | 6 | *Claytonia sibirica* (siberian springbeauty) | H | FAC |
| 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: N/a (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"
- [x] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (explain in remarks)

*Remarks:* *Areas of inundation up to 6 inches 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. |
|---|---|---|---|---|---|
| 0-10 | | 10YR 4/2 | 10YR 3/4 | Common/fine/distinct | Silt loam |
| 10-16 | | 10YR 4/2 | 10YR 3/4 | Many/medium/faint | Silt loam |
| | | | 7.5YR 4/6 | Few/fine/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: | 05/12/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | PD, TSS | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Leontodon taraxacoides* (lesser hawkbit) | H | NL | 1 | *Phalaris arundinacea* (reed canarygrass) | H | FACW |
| 2 | *Poa trivialis* (rough bluegrass) | H | FACW | 2 | *Holcus lanatus* (common velvetgrass) | H | FAC |
| 3 | *Ranuncuius repens* (creeping buttercup) | H | FACW | 3 | *Anthoxanthum odoratum* (sweet vernalgrass) | H | FACU |
| 4 | | | | 4 | *Lolium arundinaceum* (tall fescue), *(Festuca arundinacea)* | H | FAC- |
| 5 | | | | 5 | *Spiraea douglasii* (hardhack) | H | FACW |
| 6 | | | | 6 | *Fraxinus latifolia* (Oregon ash) | H | FACW |
| 7 | | | | 7 | *Dactylis glomerata (orchard grass)* | H | FACU |
| | | | | 8 | | | |

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

*Remarks:* Front yard with strong hydrologic & soil indicators. Across SR 502 from a wetland and across other side of driveway is 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
- ☒ Aerial Photographs
- ☐ Other

☐ No recorded data available

Field Observations:
- Depth of Surface Water: 1* (In.)
- Depth to Free Water in Pit: 4 (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:* * A couple small spots of surface water in lowest areas of wetland, but not where data point taken. Wetland is connected to a ditch that appears to be cut out of 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 – 16 | A | 10YR 3/2 | 5YR 4/4 | Common/fine/distinct | Silt loam |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Hydric Soil Indicators:
- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquatic 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:* See vegetation notes.
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: | 5/12/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TSS, PD | 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: NAA |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | ☐ | Yes | ☒ | No | Plot ID: NAA-DW1 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Fraxinus latifolia* (Oregon ash) | T | FACW | 1 | *Cornus sericea* (redosier dogwood), *(C. stolonifera)* | S | FACW |
| 2 | *Spiraea douglasii* (hardhack) | S | FACW | 2 | *Oenanthe sarmentosa* (water parsley) | H | OBL |
| 3 | *Lonicera involucrata* (twinberry) | S | FAC+ | 3 | *Rosa nutkana* (Nootka rose) | S | FAC |
| 4 | *Geum macrophyllum* (largeleaf avens) | H | FACW- | 4 | *Rubus armeniacus* (Himalayan blackberry), *R. discolor,* | V | FACU |
| 5 | *Juncus effusus* (soft rush) | H | FACW | 5 | *Carex* sp. (sedges) | H | |
| 6 | | | | 6 | *Veronica americana* (American speedwell) | H | OBL |
| 7 | | | | 7 | | | |

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

*Remarks:* * This site is connected on the north end to a complex, high quality, forested wetland with mature *Populus balsamifera* (black cottonwood), *Populus balsamifera* (black cottonwood), and *Carex* sp. (sedges).

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: 4* (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:* * Although not at the site of the soil pit, this forested wetland was saturated to the surface throughout the wetland with some areas of inundation to depth over 1 foot.

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 - 6 | | 2.5Y 4/1 | | | |
| 6+ | | 2.5Y 4/1 | 7.5YR 4/4 | Common/course/ prominent | Silty clay 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:* 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: | 5/16/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TSS, TK | 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: NAA |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | ☐ | Yes | ☒ | No | Plot ID: NAA-DW2 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Fraxinus latifolia* (Oregon ash) | T | FACW | 1 | | | |
| 2 | *Juncus effuses* (soft rush) | H | FACW | 2 | | | |
| 3 | *Geum macrophyllum* (largeleaf avens) | H | FACW- | 3 | | | |
| 4 | *Holcus lanatus* (common velvetgrass) | H | FAC | 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: 2 (In.)
- Depth to Free Water in Pit: 6 (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:* The depth of inundation varied 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
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 3/1 | | | Silt loam |
| 4-12 | B | 10YR 4/1 | 7.5YR 3/4 | Many/coarse/prominent | Silt loam |
| 12-18 | B | 10YR 5/1 | 7.5YR 5/8 | Many/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:* 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: | 5/12/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TSS, CAP | 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: | NAB |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | ☐ Yes | ☒ No | Plot ID: | NAB-DW1 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Fraxinus latifolia* (Oregon ash) | Tree | FACW | 1 | | | |
| 2 | *Holcus lanatus* (common velvetgrass) | Herb | 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:* Although the vegetative community was not dominated by hydrophytic species, the strength of the other wetland parameters indicated that wetland conditions were present.

## HYDROLOGY

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

☐ No recorded data available

Field Observations:
- Depth of Surface Water: 4 (In.)
- Depth to Free Water in Pit: surface (In.)
- Depth to Saturated Soil: 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 *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 | 10YR 4/1 | 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:* 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:* 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: | 05/18/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | CP, PD | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Tellima grandiflora* (bigflower tellima) | H | NL | 1 | *Veronica americana* (American speedwell) | H | OBL |
| 2 | *Maianthemum dilatatum* (false lily-of-the-valley) | H | FAC | 2 | *Rubus ursinus* (California blackberry) | V | FACU |
| 3 | *Ranunculus* sp. (buttercups) | H | | 3 | *Cirsium vulgare* (bull thistle) | H | FACU |
| 4 | Claytonia sibirica *(siberian springbeauty)* | H | FAC | 4 | *Trillium albidum* | H | NL |
| 5 | *Fraxinus latifolia* (Oregon ash) | T | FACW | 5 | *Hydrophyllum tenuipes* | H | NL |
| 6 | | | | 6 | *Dicentra formosa* | H | NL |
| 7 | | | | 7 | *Geum macrophyllum* (largeleaf avens) | H | FACW- |

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 3/5 = 60%

*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: 4 (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 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:* *Water was observed to 1 dm. deep in other parts of 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? Yes

Profile Description:

| Depth (inches) | Horizon | Matrix Color (Munsell Moist) | Mottle Colors (Munsell Moist) | Mottle Abundance/ Size/Contrast | Texture, Concretions, Structure, etc. |
|---|---|---|---|---|---|
| 0-8 | A | 10YR 2/2 | - | | Silt loam |
| 8-14 | | 10YR 3/2 | 7.5Y 4/4 | Many/medium/distinct | Silt loam |
| | | | | | |
| | | | | | |
| | | | | | |

Hydric Soil Indicators:
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Aquic Moisture Regime
- [ ] Reducing Conditions
- [x] 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

| | | | | | Is this Sampling Point Within a Wetland? | x | Yes | | No |
|---|---|---|---|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | 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: | 05/18/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | CP, PD | 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: | NAC |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | | Yes | x | No | Plot ID: | NAC-DU1 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Acer macrophyllum* (bigleaf maple) | T | FACU | 1 | *Dicentra formosa* | H | FACU |
| 2 | *Corylus cornuta* (beaked hazelnut) | S | FACU | 2 | *Trillium ovatum* | H | FACU |
| 3 | *Hydrophyllum tenuipes* | H | NL | 3 | *Oemleria cerasiformis* (Indian plum) | S | FACU |
| 4 | *Lonicera ciliosa* | V | NL | 4 | *Amelanchier alnifolia* (western service-berry) | S | FACU |
| 5 | *Rubus ursinus* (California blackberry) | V | FACU | 5 | Claytonia sibirica *(siberian springbeauty)* | H | FAC |
| 6 | *Tellima grandiflora* (bigflower tellima) | H | NL | 6 | *Rubus armeniacus* (Himalayan blackberry) | V | FACU |
| 7 | *Polystichum munitum* (western swordfern) | H | FACU | 7 | *Thuja plicata* (western red cedar) | T | FAC |

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: 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 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): Dollar loam
Taxonomy (Subgroup): Humic Fragixerept

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

Profile Description:

| Depth (inches) | Horizon | Matrix Color (Munsell Moist) | Mottle Colors (Munsell Moist) | Mottle Abundance/ Size/Contrast | Texture, Concretions, Structure, etc. |
|---|---|---|---|---|---|
| 0 - 16 | | 10 YR 3/3 | | | 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 | x | No | Is this Sampling Point Within a Wetland? | | Yes | x | 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 nonwetland.

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

| | | | |
|---|---|---|---|
| Project Site: | SR 502 Widening | Date: | 05/18/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | CP, 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: | NAD |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | | Yes | x | No | Plot ID: | NAD-DW1 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Populus balsamifera* (black cottonwood) | S/T | FAC | 1 | *Tellima grandiflora* (bigflower tellima) | H | NL |
| 2 | *Juncus* sp. (rushes) | H | FAC or wetter | 2 | *Rubus spectabilis* (salmonberry) | S | FAC+ |
| 3 | *Carex* sp. (sedges) | H | FAC or wetter | 3 | *Rumex crispus* (curly dock) | H | FAC+ |
| 4 | *Acer circinatum* (vine maple) | S | FAC- | 4 | *Hydrophyllum tenuipes* | H | NL |
| 5 | | | | 5 | *Malus fusca* (Pacific crabapple) | S | FACW |
| 6 | | | | 6 | | | |
| 7 | | | | 7 | | | |

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

*Remarks:* More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion. The Carex and Juncus species observed are most likely one of the more common hydrophytes known to occur in the area.

## 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 (In.)
- Depth to Free Water in Pit: 4 (In.)
- Depth to Saturated Soil: 0 (at surface) (In.)

Wetland Hydrology Indicators:

*Primary Indicators:*

| | |
|---|---|
| X | 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:* Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

## SOILS

| | | | |
|---|---|---|---|
| Map Unit Name (Series and Phase): | Dollar Loam | Drainage Class: MW | *Circle* |
| Taxonomy (Subgroup): | Humic Fragixerept | 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 | | 10YR 3/1 | | | Silt loam |
| 8-14 | | 10YR 3/1 | | | Silt loam |
| | | | | | |
| | | | | | |
| | | | | | |

Hydric Soil Indicators:

| | | | | | |
|---|---|---|---|---|---|
| | Histosol | | Reducing Conditions | | High Organic Content in Surface Layer in Sandy Soils |
| | Histic Epipedon | x | 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: | 05/18/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | PD, CP | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Ranunculus reperis* (creeping buttercup) | H | FACW | 1 | | | |
| 2 | *Fraxinus latifolia* (Oregon ash) | T | 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: None (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
- [ ] 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:* Water depth in ditch = 6". Water coming into hole at 11". South flowing ditch drains wetland north of the area of investigation. 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. |
|---|---|---|---|---|---|
| 0-18 | | 10YR 3/1 | | | Silt loam |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Hydric Soil Indicators:
- [ ] Histosol
- [ ] Histic Epipedon
- [ ] Sulfidic Odor
- [ ] Aquic Moisture Regime
- [ ] Reducing Conditions
- [x] 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: | 05/24/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | CAP, TSS | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Claytonia sibirica* (siberian springbeauty) | H | FAC | 1 | *Thuja plicata* (western red cedar) | sapling | FAC |
| 2 | *Cornus sericea* (redosier dogwood) *(C. stolonifera)* | S | FACW | 2 | *Malus fusca* (Pacific crabapple) | S | FACW |
| 3 | *Ranunculus repens* (creeping buttercup) | H | FACW | 3 | *Fraxinus latifolia* (Oregon ash) | T | FACW |
| 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: none (In.)
- Depth to Free Water in Pit: 4 (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:* Surface saturation throughout wetland, lower topographically than surrounding area.
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

## SOILS

| | | | |
|---|---|---|---|
| Map Unit Name (Series and Phase): | Dollar loam | Drainage Class: MW | *Circle* |
| Taxonomy (Subgroup): | Humic Fragixerept | 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 | | | | | Silt loam |
| 8-10 | | 10YR 3/2 | 7.5YR 3.3 | Few/ medium/faint | Silty clay 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:* Wetland extends north for unknown distance/size.
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: | 05/24/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TSS, CAP | State: | WA |

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

## VEGETATION

| Dominant Plant Species | Stratum | Indicator | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|
| 1 *Epilobium ciliatum* (fringed willowherb) | H | FACW- | 1 | | |
| 2 *Ranunculus repens* (creeping buttercup) | H | FACW | 2 | | |
| 3 *Alopecurus geniculatus* (water foxtail) | H | OBL | 3 | | |
| 4 | | | 4 | | |
| 5 | | | 5 | | |
| 6 | | | 6 | | |
| 7 | | | 7 | | |

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

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

## HYDROLOGY

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

☐ No recorded data available

Field Observations:
- Depth of Surface Water: 1* (In.)
- Depth to Free Water in Pit: 7 (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:* * Some surface inundation from recent rain.
** Saturated in upper 3" from recent rain, but water entered the hole at 16" & filled to 7".
Indicators of wetland hydrology were observed, thus meeting the wetland hydrology criterion.

## SOILS

| | | | |
|---|---|---|---|
| Map Unit Name (Series and Phase): | Dollar loam | Drainage Class: MW | *Circle* |
| Taxonomy (Subgroup): | Humic Fragixerept | 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 2/2 | 10 YR 4/3 | Few/ fine/faint | Silt loam |
| 5 - 14 | | 10YR 2/1 | 10 YR 4/3 | Few/ fine/distinct | Silt loam |
| 14+ | | 10YR 4/1 | 7.5YR 3/4 | Few/ fine/prominent | Silty clay 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:* 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: | 05/24/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | CAP, 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: | NAG |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | ☐ | Yes | X | No | Plot ID: | NAG-DW2 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Phalaris arundinacea* (reed canarygrass) | H | FACW | 1 | *Juncus effusus* (soft rush) | H | FACW |
| 2 | | | | 2 | *Holcus lanatus* (common velvetgrass) | H | FAC |
| 3 | | | | 3 | *Fraxinus latifolia* (Oregon ash) | S | FACW |
| 4 | | | | 4 | *Rosa nutkana* (Nootka rose) | S | FAC |
| 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: 0* (In.)
- Depth to Free Water in Pit: 4 (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:* * Inundated to 4 inches in areas north of datapoint. Landowner mentioned a "lake" somewhere to the north, but it was not observed. 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 - 7 | | 10YR 3/1 | 7.5YR 3/4 | Few/medium/prominent | Silt loam |
| 7 - 15 | | 10YR 3/1 | 7.5YR 3/4 | Common/medium/ prominent | 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? | ☒ | Yes | ☐ | No | Is this Sampling Point Within a Wetland? | ☒ | Yes ☐ No |
| Wetland Hydrology Present? | ☒ | Yes | ☐ | No | | | |
| Hydric Soils Present? | ☒ | 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: | 03/07/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TSS, BN, CP, TK | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non- Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Juncus effusus* (soft rush) | H | FACW | 1 | *Carex obnupta* (slough sedge) | H | OBL |
| 2 | *Phalaris arundinacea* (reed canarygrass) | H | FACW | 2 | Lupine species | H | |
| 3 | | | | 3 | *Ranunculus repens* (creeping buttercup) | H | FACW |
| 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: 3 (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
- [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:* Saturated to the surface in lower parts of 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: 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. |
|---|---|---|---|---|---|
| 0-7 | A | 2.5Y 4/1 | | | Silt loam |
| 7-14 | B | 2.5Y 4/1 | 7.5YR 3/4 and | Many/coarse/prominent | Silty clay loam |
| | | | 10YR 4/6 | prominent | |
| | | | | | |
| | | | | | |

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
- [X] Listed on National Hydric Soils List
- [X] 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

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

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Gaultheria shallon* (salal) | S | FACU | 1 | *Oemleria cerasiformis* (Indian plum) | S | FACU |
| 2 | *Polystichum munitum* (western swordfern) | H | FACU | 2 | *Prunus emarginata* (bitter cherry) | T | FACU |
| 3 | *Mahonia nervosa* (short Oregon grape) | S | NL | 3 | | | |
| 4 | *Acer circinatum* (vine maple) | S | FAC- | 4 | | | |
| 5 | *Alnus rubra* (red alder) | T | FAC | 5 | | | |
| 6 | | | | 6 | | | |
| 7 | | | | 7 | | | |

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 1/5 = 20%

*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: 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 | Drainage Class: MW | *Circle* |
| Taxonomy (Subgroup): | Typic Glossudalf | 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 3/2 | | | Silt loam |
| 6-14 | B | 10YR 3/2 | 10 YR 4/6 and | Common/coarse/distinct | Silt loam |
| | | | 7.5 YR4/6 | Prominent | |
| | | | | | |
| | | | | | |

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? | | 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: | 03/9/05 |
| 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: SB |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | ☐ | Yes | X | No | Plot ID: SB-DW1 |

## VEGETATION

| Dominant Plant Species | Stratum | Indicator | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|
| 1 *Phalaris arundinacea* (reed canarygrass) | H | FACW | 1 *Alisma triviale* (Northern water plantain) | H | OBL |
| 2 *Juncus effusus* (soft rush) | H | FACW | 2 *Geranium molle* (dovefoot geranium) | H | NL |
| 3 | | | 3 *Cardamine pensylvanica* (Pennsylvania bitter cress) | H | FACW |
| 4 | | | 4 | | |
| 5 | | | 5 | | |
| 6 | | | 6 | | |
| 7 | | | 7 | | |

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

*Remarks:* Emergent and forested wetland, although data plot is in emergent. Forested wetland includes *Spiraea douglasii* (hardhack) FACW, *Rosa nutkana* (Nootka rose) FAC, and *Fraxinus latifolia* (Oregon ash) FACW.

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

## HYDROLOGY

- X 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: 10 (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
- 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
- X Other (explain in remarks)

*Remarks:* Area appears to drain from residential yard through emergent wetland toward forested wetland. Aerials show subtle distinction as well.

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 | | 2.5YR 4/1 | - | | Silt loam |
| 4-12 | | 2.5YR 5/1 | 7.5YR 4/4 | Many/ coarse/ mottles | 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:* May be a septic field.

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

## VEGETATION

| Dominant Plant Species | Stratum | Indicator | **Non**-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|
| 1 *Juncus effuses* (soft rush) | H | FACW | 1 | | |
| 2 *Carex obnupta* (slough sedge) | H | OBL | 2 | | |
| 3 *Taraxcum officinale* (common dandelion) | H | FACU | 3 | | |
| 4 | | | 4 | | |
| 5 | | | 5 | | |
| 6 | | | 6 | | |
| 7 | | | 7 | | |

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

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

## HYDROLOGY

☐ 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 (Surface) to 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:* The wetland is in the top of the WRIA and extends south beyond the project boundaries.
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. |
|---|---|---|---|---|---|
| 0-8 | A | 2.5Y 4/1 | 7.5 YR 4/6 | Common/fine/prominent | Silt loam |
| 8+ | B | 2.5Y 5/1 | 7.5 YR 4/6 | 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? | 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:* Emergent wetland. The wetland extends beyond the project limits to the south.
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? | ☒ | Yes | ☐ | No | Community ID: | Nonwetland |
| Is the site significantly disturbed (Atypical Situation)? | ☐ | Yes | ☒ | No | Transect ID: | SC |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | ☐ | Yes | ☒ | No | Plot ID: | SC-DU1 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Plantago lanceolata* (narrowleaf plantain) | H | FAC | 1 | | | |
| 2 | *Taraxcum officinale* (common dandelion) | H | FACU | 2 | | | |
| 3 | | | | 3 | | | |
| 4 | | | | 4 | | | |
| 5 | | | | 5 | | | |
| 6 | | | | 6 | | | |
| 7 | | | | 7 | | | |

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

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

## HYDROLOGY

☐ 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: >18 (In.)
- Depth to Saturated Soil: >18 (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
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 | 2.5Y 3/2 | | | Silt loam |
| 6-16 | B | 2.5Y 4/1 | 10YR 3/6 | 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:* 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 |
| Wetland Hydrology Present? | ☐ | Yes | ☒ | No | | ☒ | No |
| Hydric Soils Present? | ☒ | Yes | ☐ | No | | | |

*Remarks:* Hydric soil is present, but the area lacks hydrophytic vegetation and hydrology indicators, therefore the area is not a wetland.

Form Content Approved by HQUSACE 3/92

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

| | | | |
|---|---|---|---|
| Project Site: | SR 502 Widening | Date: | 03/10/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TK, TSS | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Phalaris arundinacea* (reed canarygrass) | H | FACW | 1 | Unknown pasture grass | H | |
| 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:* Area includes swale next to road with *Spiraea douglasii* (hardhack) and *Rosa nutkana* (Nootka rose).
More than 50% of the dominant species have an indicator status of OBL, FACW, and/or FAC, thus meeting the hydrophytic vegetation criterion.

## HYDROLOGY

- X 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: 8 (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
- X Other (explain in remarks)

*Remarks:* Area appears to be a drainage swale that drains the pasture north toward SR 502. Algal mat observed.
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. |
|---|---|---|---|---|---|
| 0-5 | | 10YR 3/2 | - | | Silt loam |
| 5-12 | | 10YR 5/2 | 7.5 YR 5/8 | Many/ medium/ prominent | Silt loam, few/ medium/ Mang. nodules |
| | | | | | |
| | | | | | |
| | | | | | |

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:* This wetland has emergent and scrub-shrub elements.
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 | ☒ | No | Transect ID: | SE |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | ☐ | Yes | ☒ | No | Plot ID: | SE-DW1 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Phalaris arundinacea* (reed canarygrass) | H | FACW | 1 | | | |
| 2 | *Cornus sericea* (red-osier dogwood) | S | FACW | 2 | | | |
| 3 | *Fraxinus latifolia* (Oregon ash) | T | FACW | 3 | | | |
| 4 | | | | 4 | | | |
| 5 | | | | 5 | | | |
| 6 | | | | 6 | | | |
| 7 | | | | 7 | | | |

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

*Remarks:* The wetland is a complex of emergent and forested wetland. The datapoint was taken in the forested 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
- ☒ Aerial Photographs
- ☐ Other

☐ No recorded data available

Field Observations:
- Depth of Surface Water: 2 (In.)
- Depth to Free Water in Pit: 2 (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): Odne silt loam
Taxonomy (Subgroup): Aquandic Epiaqualfs

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 | | 10YR 3/2 | - | | Silt loam |
| 6+ | | 10YR 3/2 | 7.5YR 3/4 | common/ fine/ 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? | 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:* Emergent / forested 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: | 03/15/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TSS, TKK | State: | WA |

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

## VEGETATION

| Dominant Plant Species | Stratum | Indicator | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|
| 1 *Phalaris arundinacea* (reed canarygrass) | H | FACW | 8 | | |
| 2 | | | 9 | | |
| 3 | | | 10 | | |
| 4 | | | 11 | | |
| 5 | | | 12 | | |
| 6 | | | 13 | | |
| 7 | | | 14 | | |

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

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

## HYDROLOGY

| | |
|---|---|
| | 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: 12 (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 |
| 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 |
| x | Other (explain in remarks) |

*Remarks:* Culvert connecting this wetland to Wetland SE. Algal mats were observed.
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 | | 2.5Y 3/1 | | | Silt loam |
| 6-12 | | 2.5Y 3/1 | 7.5YR 3/4 | Common/course/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:* 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: | 03/16/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | 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: | SI |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | | Yes | x | No | Plot ID: | SI-DW1 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Fraxinus latifolia* (Oregon ash) | T | FACW | 1 | *Epilobium ciliatum* (fringed willowherb) | H | FACW- |
| 2 | *Betula papyrifera* (paper birch) | T | FAC | 2 | *Lysichiton americanus* (skunkcabbage) | H | OBL |
| 3 | *Cornus sericea* (redosier dogwood), *(C. stolonifera)* | S | FACW | 3 | *Rubus ursinus* (California blackberry) | V | FACU |
| 4 | *Lonicera involucrata* (twinberry) | S | FAC+ | 4 | *Geum macrophyllum* (largeleaf avens) | H | FACW- |
| 5 | *Carex obnupta* (slough sedge) | H | OBL | 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: <1 (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 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
- [X] Other (explain in remarks) algalmats

*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. |
|---|---|---|---|---|---|
| 0-6 | | 2.5Y 3/1 | | | Silt loam |
| 6-12 | | 2.5Y 4/1 | 7.5YR 5/8 | Many/coarse/prominent | 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

| | | | | | Is this Sampling Point Within a Wetland? | | |
|---|---|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | X | Yes | | No | | 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: | 03/17/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TSS, TK | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Gaultheria shallon* (salal) | H | FACU | 1 | *Pteridium aquilinum* (brackenfern) | H | FACU |
| 2 | *Rubus ursinus* (California blackberry) | H | FACU | 2 | | | |
| 3 | *Fraxinus latifolia* (Oregon ash) | T | FACW | 3 | | | |
| 4 | *Lonicera involucrata* (twinberry) | S | 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: None (In.)
- Depth to Saturated Soil: >12 (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. |
|---|---|---|---|---|---|
| 0-6 | | 10YR 3/2 | | | |
| 6-10 | | 10YR 4/2 | | | Silt loam |
| 10+ | | 10YR 5/2 | 7.5YR 4/4 | 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:* Indicators of hydric soils were observed, thus meeting the hydric soils criterion.

## WETLAND DETERMINATION

| | | | | | Is this Sampling Point Within a Wetland? | | | |
|---|---|---|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | | Yes | X | No | | | Yes | X 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 nonwetland.

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

| | | | |
|---|---|---|---|
| Project Site: | SR 502 Widening | Date: | 03/17/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TSS | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Phalaris arundinacea* (reed canarygrass) | H | FACW | 1 | *Trifolium pratense* (red clover) | H | FACU |
| 2 | | | | 2 | *Rubus laciniatus* (cutleaf blackberry) | V | FACU+ |
| 3 | | | | 3 | *Carex obnupta* (slough sedge) | H | OBL |
| 4 | | | | 4 | *Lotus corniculatus* (birdsfoot trefoil) | H | FAC |
| 5 | | | | 5 | *Cardamine pensylvanica* (Pennsylvania bitter cress) | H | FACW |
| 6 | | | | 6 | *Rumex crispus* (curly dock) | H | FAC+ |
| 7 | | | | 7 | *Plantago lanceolata* (narrowleaf plantain) | H | FAC |
| | | | | | *Cirsium vulgare* (bull thistle) | 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: <1 (In.)
- Depth to Free Water in Pit: 10 (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:* 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. |
|---|---|---|---|---|---|
| 0-5 | | 10YR 3/2 | 10YR 3/4 | Few/fine/faint | Silt loam |
| 5-13 | | 10YR 4/1 | 7.5YR 5/8 | Many/coarse/distinct | Silt loam |
| 13-18 | | 10YR 5/1 | 7.5YR 5/8 | Many/coarse/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.

Form Content Approved by HQUSACE 3/92

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

| | | | |
|---|---|---|---|
| Project Site: | SR 502 Widening | Date: | 04/19/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TK, TSS | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Alopecurus geniculatus* (water foxtail) | H | OBL | 1 | *Polygonum* sp. (knotweeds or smartweeds) | H | |
| 2 | *Holcus lanatus* (common velvetgrass) | H | 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: 8 (In.)
- Depth to Free Water in Pit: 0 (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:* 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. |
|---|---|---|---|---|---|
| 0-8 | | 2.5Y 4/1 | 7.5YR 4/6 | Common/fine/prominent | Silt loam |
| 8+ | | 2.5Y 5/2 | 7.5YR 4/6 | Common/coarse/ prominent | 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.

Form Content Approved by HQUSACE 3/92

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

| | | | |
|---|---|---|---|
| Project Site: | SR 502 Widening | Date: | 03/16/05 |
| 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: | SL |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | ☐ Yes | ☒ No | Plot ID: | SL-DW1 |

## VEGETATION

| Dominant Plant Species | Stratum | Indicator | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|
| 1 *Alopecurus pratensis* (meadow foxtail) | H | FACW | 1 | | |
| 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
- ☒ Aerial Photographs
- ☐ Other

☐ No recorded data available

Field Observations:
- Depth of Surface Water: 12+ (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:* 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 Palehumults

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. |
|---|---|---|---|---|---|
| 0-12 | A | 2.5Y 4/2 | 7.5YR 4/6 | Common/fine/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:* Inundation prevented further investigation of the soil.
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: | 03/24/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | Paul Dreisbach | State: | WA |

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

## VEGETATION

| Dominant Plant Species | Stratum | Indicator | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|
| 1 *Alopecurus geniculatus* (water foxtail) OBL | H | OBL | 8 | | |
| 2 | | | 9 | | |
| 3 | | | 10 | | |
| 4 | | | 11 | | |
| 5 | | | 12 | | |
| 6 | | | 13 | | |
| 7 | | | 14 | | |

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

*Remarks:* 75% of wetland was dominated by *Alopecurus geniculatus* (water foxtail) and 25% was open water (qualitative estimate).
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: 0-6" (In.)

Wetland Hydrology Indicators:

*Primary Indicators:*
- [x] 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 made in pit after 10 min.
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. |
|---|---|---|---|---|---|
| 0-16+ | A | 10YR 4/1 | 10YR 4/3 | Few/medium/faint | 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.

Form Content Approved by HQUSACE 3/92

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

| | | | |
|---|---|---|---|
| Project Site: | SR 502 Widening | Date: | 03/24/05 |
| 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: | Nonwetland |
| Is the site significantly disturbed (Atypical Situation)? | | Yes | X | No | Transect ID: | SN |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | | Yes | X | No | Plot ID: | SN-DU1 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | Agrostis capallaris | H | FAC | 8 | Compositae sp. | Herb | |
| 2 | | | | 9 | | | |
| 3 | | | | 10 | | | |
| 4 | | | | 11 | | | |
| 5 | | | | 12 | | | |
| 6 | | | | 13 | | | |
| 7 | | | | 14 | | | |

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

*Remarks:* This area was a mowed lawn making the identification of vegetation difficult.
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): 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. |
|---|---|---|---|---|---|
| 0-16+ | A | 10YR 4/4 | | | Silty clay 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:* Hydric soils were not present.
No Indicators of hydric soils were observed, thus failing to meet 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? | | 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.

Form Content Approved by HQUSACE 3/92

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

| | | | |
|---|---|---|---|
| Project Site: | SR 502 Widening | Date: | 03/24/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | PD | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | Poa sp. | H | FAC or FACW | 8 | Vicia americana | Herb | FAC |
| 2 | | | | 9 | Alopecurus pratensis | Herb | FACW |
| 3 | | | | 10 | | | |
| 4 | | | | 11 | | | |
| 5 | | | | 12 | | | |
| 6 | | | | 13 | | | |
| 7 | | | | 14 | | | |

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

*Remarks:* This wetland was a mowed lawn area dominated (90%) by an unidentifiable *Poa* speices. Most of the possible candidates in this genus are FAC or wetter species. Based on this information and the strength of the other indicators for the other 2 parameters, it is my best professional judgement that more than 50% of the dominant species would normally 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: 9 (In.)
- Depth to Saturated Soil: 5 (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:* According to the current resident at this address, a drainage ditch was cut into the lawn in approximately 1999 and a pond constructed to hold water at the base of the slope near the ditch adjacent to SR 502. It appears this was done to move water out of the lawn and away from the house. 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. |
|---|---|---|---|---|---|
| 0-16+ | A | 10YR 3/2 | 10YR 4/3 | Common/fine/faint | 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

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

*Remarks:* Strong evidence of wetland hydrology and hydric soils were observed, thus despite the current lack of species identification of hydrophytic dominant vegetation, we believe the area is a wetland.

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

| | | | |
|---|---|---|---|
| Project Site: | SR 502 Widening | Date: | 03/24/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TK, TSS | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | Phalaris arundinacea (reed canarygrass) | H | FACW | 1 | *Spiraea douglasii* (hardhack) | S | FACW |
| 2 | *Alopecurus geniculatus* (water foxtail) | H | OBL | 2 | *Rosa nutkana* (Nootka rose) | S | FAC |
| 3 | | | | 3 | | | |
| 4 | | | | 4 | | | |
| 5 | | | | 5 | | | |
| 6 | | | | 6 | | | |
| 7 | | | | 7 | | | |

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

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

## HYDROLOGY

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

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

Wetland Hydrology Indicators:

*Primary Indicators:*
- [ ] Inundated
- [ ] 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
- [X] Other (explain in remarks)

*Remarks:* Landowner confirmed that surface inundation usually occurs for extended periods during the spring. Algal mats observed. 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 | | 2.5Y 2.5/1 | | | |
| 6+ | | 7.5YR 4/2 | 7.5YR 5/8 | Many/coarse/prominent | Silt loam, concretions present |
| | | | | | |
| | | | | | |
| | | | | | |

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

| | | | | | Is this Sampling Point Within a Wetland? | | | |
|---|---|---|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | X | Yes | | No | | 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: | 03/27/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TK, TSS | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Tolmiea menziesii* (youth on age) | H | FAC+ | 1 | *Physocarpus capitatus* (Pacific ninebark) | S | FACW- |
| 2 | *Cornus sericea* (red-osier dogwood) | S | FACW | 2 | *Sambucus racemosa* (Red elderberry) | S | FACU |
| 3 | *Lonicera involucrata* (twinberry) | S | FAC+ | 3 | *Gaultheria shallon* (salal) | H | FACU |
| 4 | *Pseudotsuga menziesii* (Douglas-fir) | T | FACU | 4 | | | |
| 5 | | | | 5 | | | |
| 6 | | | | 6 | | | |
| 7 | | | | 7 | | | |

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

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

## HYDROLOGY

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

☐ No recorded data available

Field Observations:
- Depth of Surface Water: 14 (In.)
- Depth to Free Water in Pit: 2 (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): Hesson clay loam
Taxonomy (Subgroup): Xeric Palehumults

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 | A | 2.5Y 3/2 | - | | Silt loam |
| 4-16 | B | 2.5Y 4/2 | 7.5 YR 4/6 | many/ 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? | 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:* Forested 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: | 03/27/05 |
| 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: | SP |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | ☐ | Yes | ☒ | No | Plot ID: | SP-DW1 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | **Non**-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Phalaris arundinacea* (reed canarygrass) | H | FACW | 1 | | | |
| 2 | *Oenanthe sarmentosa* (water parsley) | H | OBL | 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
- ☒ Aerial Photographs
- ☐ Other

☐ No recorded data available

Field Observations:
- Depth of Surface Water: 12 (In.)
- Depth to Free Water in Pit: 4 (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): Hesson clay loam
Taxonomy (Subgroup): Xeric Palehumults

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 | A | 2.5Y 3/2 | - | | Silt loam |
| 4+ | B | 2.5Y 4/2 | 7.5YR 4/6 | many/ 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? | 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:* Emergent wetland. The area appears to have been disturbed by earth moving activity. A large manure storage area was located directly adjacent to the 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: | 03/28/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TSS, 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: | SQ |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | | Yes | X | No | Plot ID: | SQ-DW1 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Agrostis capillaris* (colonial bentgrass) *(A. tenuis)* | H | FAC | 8 | | | |
| 2 | *Juncus effuses* (soft rush) | H | FACW | 9 | | | |
| 3 | | | | 10 | | | |
| 4 | | | | 11 | | | |
| 5 | | | | 12 | | | |
| 6 | | | | 13 | | | |
| 7 | | | | 14 | | | |

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

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

## HYDROLOGY

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

Field Observations:
- Depth of Surface Water: 1.0" (In.)
- Depth to Free Water in Pit: 0 (inun. to surface) (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:* Soil was saturated to the surface and standing water was at the surface in the hole after 10 minutes. 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: *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 | | | |
| 5-16+ | | 10 R 3/2 | 10YR 3/6 | Common/medium/prominent | 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 |
| Wetland Hydrology Present? | X | Yes | | No | | | |
| Hydric Soils Present? | X | Yes | | No | | | |

| | |
|---|---|
| | 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: | 03/28/05 |
| 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: | Nonwetland |
| Is the site significantly disturbed (Atypical Situation)? | | Yes | X | No | Transect ID: | SR |
| Is Area a Potential Problem Area? *(if needed, explain on reverse)* | | Yes | X | No | Plot ID: | SR-DU1 |

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | *Agrostis capillaris* (colonial bentgrass) *(A. tenuis)* | H | FAC | 8 | Composite sp. | H | - |
| 2 | *Trifolium repens* (white clover) | H | FAC | 9 | *Vicia* sp. (vetches) | H | - |
| 3 | | | | 10 | *Plantago major* (common plantain) | H | FACU+ |
| 4 | | | | 11 | | | |
| 5 | | | | 12 | | | |
| 6 | | | | 13 | | | |
| 7 | | | | 14 | | | |

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

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

## HYDROLOGY

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): Hesson clay loam

Taxonomy (Subgroup): Xeric Palehumult

Drainage Class: W *Circle*

Field Observations Confirm Mapped Type? Undetermined

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 3/3 | | | SiCL |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

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? | X | Yes | | No | Is this Sampling Point Within a Wetland? | | Yes | X | 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 nonwetland.

Form Content Approved by HQUSACE 3/92

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

| | | | |
|---|---|---|---|
| Project Site: | SR 502 Widening | Date: | 03/28/05 |
| Applicant/Owner: | Washington State Department of Transportation | County: | Clark |
| Investigator: | TSS, PD | State: | WA |

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

## VEGETATION

| | Dominant Plant Species | Stratum | Indicator | | Non-Dominant Plant Species | Stratum | Indicator |
|---|---|---|---|---|---|---|---|
| 1 | Poa sp. | H | - | 8 | *Epilobium ciliatum* (fringed willowherb) | H | FACW- |
| 2 | *Agrostis capillaris* (colonial bentgrass) *(A. tenuis)* | H | FAC | 9 | *Rosa nutkana* (Nootka rose) | H | FAC |
| 3 | *Ranunculus repens* (creeping buttercup) | H | FACW | 10 | Composite sp. | H | - |
| 4 | | | | 11 | | | |
| 5 | | | | 12 | | | |
| 6 | | | | 13 | | | |
| 7 | | | | 14 | | | |

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 (inun. to surface) (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:* Soil was saturated to the surface and standing water was at the surface in the hole after 10 minutes. 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. |
|---|---|---|---|---|---|
| 0-7 | | 10YR 3/2 | | | |
| 7-16+ | | 10 YR 3/2 | 10YR 4/6 | Common/medium/prominent | SiCL |
| | | | | | |
| | | | | | |
| | | | | | |

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.

Form Content Approved by HQUSACE 3/92