

APPENDIX C: WETLAND DETERMINATION FORMS

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: WILD RIVER/DESCHUTES Sampling Date: 03-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 1
Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 23 T 21 S R 9 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.7434 Long.: -121.6076 Datum: NAD 83
Soil Map Unit Name: Not available NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: ONSITE AT WILD RIVER | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|---|------------------|--|------------------|---|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. <u>Spiraea douglasii</u> | 15 | <input checked="" type="checkbox"/> 100.0% | FACW | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | OBL species <u>10</u> x 1 = <u>10</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACW species <u>55</u> x 2 = <u>110</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FAC species <u>40</u> x 3 = <u>120</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACU species <u>10</u> x 4 = <u>40</u> |
| | 15 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>115</u> (A) <u>280</u> (B) |
| 1. <u>Juncus effusus</u> | 35 | <input checked="" type="checkbox"/> 35.0% | FACW | Prevalence Index = B/A = <u>2.435</u> |
| 2. <u>Taraxacum officinale</u> | 10 | <input type="checkbox"/> 10.0% | FACU | |
| 3. <u>Veronica americana</u> | 10 | <input type="checkbox"/> 10.0% | OBL | |
| 4. <u>Poa palustris</u> | 25 | <input checked="" type="checkbox"/> 25.0% | FAC | |
| 5. <u>Salix sp.</u> | 5 | <input type="checkbox"/> 5.0% | FACW | |
| 6. <u>Agrostis sp.</u> | 15 | <input type="checkbox"/> 15.0% | FAC | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 100 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust 0 | | | | |

Remarks:

Salix sp. assumed FACW. Salix sp. and Agrostis sp. assumed FAC.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: **SP 1**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox depressions (F8) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils:³

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☒ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: BEDROCK

Depth (inches): 6

Hydric Soil Present? Yes ☒ No ☐

Remarks:

SOILS ARE HYDRIC BASED ON PERSISTENT SATURATION

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Other (Explain in Remarks) |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches):

Water Table Present? Yes ☒ No ☐

Depth (inches): 4

Saturation Present?
(includes capillary fringe) Yes ☒ No ☐

Depth (inches): 3

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

SURFACE WATER WITHIN 2 FEET OF PLOT

| | | | | | |
|---|--|--|--|---|--|
| Project/Site: <u>DESCHUTES LWI</u> | | City/County: <u>SUNRIVER/DESCHUTES</u> | | Sampling Date: <u>21-Jun-10</u> | |
| Applicant/Owner: <u>DESCHUTES COUNTY</u> | | State: <u>OR</u> | | Sampling Point: <u>SP 01A</u> | |
| Investigator(s): <u>ALISON SIGLER, SARAH HARTUNG</u> | | Section, Township, Range: <u>S 18</u> | | <u>T 21 S</u> <u>R 11 E</u> | |
| Landform (hillslope, terrace, etc.): <u>Valley bottom</u> | | Local relief (concave, convex, none): <u>concave</u> | | Slope: <u>2.0%</u> / <u>1.1</u> ° | |
| Subregion (LRR): <u>LRR A</u> | | Lat.: <u>43.7543</u> | | Long.: <u>-121.4672</u> Datum: <u>NAD83</u> | |
| Soil Map Unit Name: <u>144A: Sunriver sandy loam. 0 to 3 percent slopes</u> | | | | NW1 classification: <u>PEMA</u> | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | | | | | |
|------------------------------------|--------------------------------------|--------------------------|--|--------------------------------------|--------------------------|
| Hydrophytic Vegetation Present? | Yes <input checked="" type="radio"/> | No <input type="radio"/> | Is the Sampled Area within a Wetland? | Yes <input checked="" type="radio"/> | No <input type="radio"/> |
| Hydric Soil Present? | Yes <input checked="" type="radio"/> | No <input type="radio"/> | | | |
| Wetland Hydrology Present? | Yes <input checked="" type="radio"/> | No <input type="radio"/> | | | |
| Remarks: OFF-SITE DETERMINATION | | | | | |

| Tree Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: | |
|--|-----|---|---------------------------|---|-----------------------------|-------------|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: | 1 | (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: | 1 | (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: | 100.0% | (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | | Prevalence Index worksheet: | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total % Cover of: Multiply by: | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | OBL species | 2 | x 1 = 2 |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACW species | 98 | x 2 = 196 |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FAC species | 0 | x 3 = 0 |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACU species | 0 | x 4 = 0 |
| | 0 | <input type="checkbox"/> 0.0% | _____ | UPL species | 0 | x 5 = 0 |
| | 0 | = Total Cover | | Col um n Total s: | 100 | (A) 198 (B) |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index = B/A = 1.980 | | |
| 1. Carex sp. | 10 | <input type="checkbox"/> 10.0% | FACW | Hydrophytic Vegetation Indicators: | | |
| 2. Juncus balticus | 88 | <input checked="" type="checkbox"/> 88.0% | FACW | <input checked="" type="checkbox"/> Dominance Test is > 50% | | |
| 3. Typha latifolia | 2 | <input type="checkbox"/> 2.0% | OBL | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 100 | = Total Cover | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| % Bare Ground in Herb Stratum: 0 | | | | | | |
| Remarks: | | | | | | |
| Carex sp. assumed to be FACW. | | | | | | |

Western Mountains, Valleys, and Coast Region -- Interim version

Soil

Sampling Point: **SP 01A**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
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| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input checked="" type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ **No** ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:Surface Water Present? **Yes** ☐ **No** ☒Depth (inches): Water Table Present? **Yes** ☐ **No** ☒Depth (inches): Saturation Present? **Yes** ☒ **No** ☐
(includes capillary fringe)Depth (inches): Wetland Hydrology Present? **Yes** ☒ **No** ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Aerial photo

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 03-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 2
Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 31 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.7978 Long.: -121.5722 Datum: NAD 83
Soil Map Unit Name: 115A: Shanahan loamy coarse sand, 0 to 3 percent slopes NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|----------------------------------|--|------------------|---|
| 1. <u>Salix sp.</u> | 20 | <input checked="" type="checkbox"/> 100.0% | FACW | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>2</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 20 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | OBL species <u>85</u> x 1 = <u>85</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>20</u> x 2 = <u>40</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>0</u> x 3 = <u>0</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>0</u> x 4 = <u>0</u> |
| | 0 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>105</u> (A) <u>125</u> (B) |
| 1. <u>Carex aquatilis</u> | 85 | <input checked="" type="checkbox"/> 100.0% | OBL | Prevalence Index = B/A = <u>1.190</u> |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 85 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: <u>15</u> | % Cover of Biotic Crust <u>0</u> | | | |

Remarks:
Salix sp. assumed FACW.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|------|-------------------|------------------|---|----|------------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-3 | 10YR | 3/2 | 95% | 10YR | 4/6 | 5% | C | PL | Loamy Sand | |
| 3-20 | 10YR | 4/1 | 100% | | | | | | Loam | |
| | | | | | | | | | | |
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| | | | | | | | | | | |
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| | | | | | | | | | | |

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☒ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5) (LRR C)

☐ 1 cm Muck (A9) (LRR D)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Muck Mineral (S1)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☐ Depleted Matrix (F3)

☐ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox depressions (F8)

☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:³

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present?

Yes ☒

No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

☐ Surface Water (A1)

☒ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Drift deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Thin Muck Surface (C7)

☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)

☐ Sediment Deposits (B2) (Riverine)

☐ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present?

Yes ☐

No ☒

Depth (inches):

Water Table Present?

Yes ☒

No ☐

Depth (inches):

5

Saturation Present?
(includes capillary fringe)

Yes ☒

No ☐

Depth (inches):

0

Wetland Hydrology Present?

Yes ☒

No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

| | | | | | |
|--|--|---|--|--------------------------|--|
| Project/Site: DESCHUTES LWI | | City/County: SUNRIVER/DESCHUTES | | Sampling Date: 21-Jun-10 | |
| Applicant/Owner: DESCHUTES COUNTY | | State: OR | | Sampling Point: SP 2A | |
| Investigator(s): ALISON SIGLER, SARAH HARTUNG | | Section, Township, Range: S 18 T 21 S R 11 E | | | |
| Landform (hillslope, terrace, etc.): Valley bottom | | Local relief (concave, convex, none): concave | | Slope: 0.0% / 0.0 ° | |
| Subregion (LRR): LRR A | | Lat.: 43.7543 | | Long.: -121.4665 | |
| | | | | Datum: NAD83 | |
| Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes | | | | NWI classification: PEMA | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: OFF-SITE DETERMINATION | |

| Tree Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: | |
|--|-----|---|---------------------------|---|---------------------------|-------------|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: | 2 | (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: | 2 | (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: | 100.0% | (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total % Cover of: Multiply by: | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | OBL species | 0 | x 1 = 0 |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACW species | 100 | x 2 = 200 |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FAC species | 0 | x 3 = 0 |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACU species | 0 | x 4 = 0 |
| | 0 | = Total Cover | | UPL species | 0 | x 5 = 0 |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Col um n Total s: | 100 | (A) 200 (B) |
| 1. Carex sp. | 20 | <input checked="" type="checkbox"/> 20.0% | FACW | Prevalence Index = B/A = 2.000 | | |
| 2. Juncus balticus | 80 | <input checked="" type="checkbox"/> 80.0% | FACW | Hydrophytic Vegetation Indicators: | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Dominance Test is > 50% | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 100 | = Total Cover | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| % Bare Ground in Herb Stratum: 0 | | | | | | |
| Remarks: | | | | | | |
| Carex sp. assumed to be FACW. | | | | | | |

Western Mountains, Valleys, and Coast Region -- Interim version

Soil

Sampling Point: **SP 2A**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

SOILS ASSUMED HYDRIC BY SATURATION

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
☐ Drainage Patterns (B10)
☐ Dry Season Water Table (C2)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☐ FAC-neutral Test (D5)
☐ Raised Ant Mounds (D6) (LRR A)
☐ Frost Heave Hummocks (D7)

Field Observations:Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): **Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Aerial photo

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 21-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 3A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 13 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): Shoreline Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.7550 Long.: -121.4862 Datum: NAD83
 Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|--|------------------|---|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>3</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. <u>Salix exigua</u> | 20 | <input checked="" type="checkbox"/> 100.0% | OBL | Total % Cover of: <u>70</u> Multiply by: <u>x 1 = 70</u> |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | OBL spec ¹ es <u>70</u> x 2 = <u>90</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | FACW spec ¹ es <u>45</u> x 3 = <u>0</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC spec ¹ es <u>0</u> x 4 = <u>0</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU spec ¹ es <u>0</u> x 5 = <u>0</u> |
| | 20 | = Total Cover | | UPL spec ¹ es <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Col umn Total s: <u>115</u> (A) <u>160</u> (B) |
| 1. <u>Carex nebrascensis</u> | 50 | <input checked="" type="checkbox"/> 52.6% | OBL | Prevalence Index = B/A = <u>1.391</u> |
| 2. <u>Juncus nevadensis</u> | 30 | <input checked="" type="checkbox"/> 31.6% | FACW | |
| 3. <u>Rumex occidentalis</u> | 10 | <input type="checkbox"/> 10.5% | FACW | |
| 4. <u>Potentilla sp.</u> | 5 | <input type="checkbox"/> 5.3% | FACW | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 95 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: <u>5</u> | | | | |
| Remarks: | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Potentilla sp. assumed FACW. | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 3A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | | Redox Features | | | | | Texture | Remarks |
|-------------------|---------------|-----|-----|----------------|-----|-----|-------------------|------------------|-----------------|-----------------------------|
| | Color (moist) | | % | Color (moist) | | % | Type ¹ | Loc ² | | |
| 0-12 | 2.5YR | 3/1 | 95% | 10YR | 4/4 | 5% | C | M | Silt Loam | 5% small rocks; dense roots |
| 12-14 | 2.5YR | 3/1 | 90% | 10YR | 3/4 | 10% | C | M | Sandy Clay Loam | w/silts and gravel |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: extreme saturation

Depth (inches): 14

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☒ No ☐

Depth (inches): 1

Water Table Present? Yes ☒ No ☐

Depth (inches): 5

Saturation Present? (includes capillary fringe) Yes ☒ No ☐

Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks: Surface water present within 2 feet of soil pit.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 03-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 4
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 31 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.7950 Long.: -121.5856 Datum: NAD 83
Soil Map Unit Name: 114C: Shanahan loamy coarse sand, 0 to 15 percent slopes NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|---------------------------|---|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: <u>2</u> (B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 0 | = Total Cover | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | OBL species <u>70</u> x 1 = <u>70</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACW species <u>20</u> x 2 = <u>40</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FAC species <u>8</u> x 3 = <u>24</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACU species <u>2</u> x 4 = <u>8</u> |
| | 0 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>100</u> (A) <u>142</u> (B) |
| 1. <u>Carex aquatilis</u> | 70 | <input checked="" type="checkbox"/> 70.0% | OBL | Prevalence Index = B/A = <u>1.420</u> |
| 2. <u>Salix sp.</u> | 20 | <input checked="" type="checkbox"/> 20.0% | FACW | Hydrophytic Vegetation Indicators: |
| 3. <u>Poa sp.</u> | 8 | <input type="checkbox"/> 8.0% | FAC | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 4. <u>Fragaria virginiana</u> | 2 | <input type="checkbox"/> 2.0% | FACU | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Morphological Adaptations ¹ provide supporting data in Remarks or on a separate sheet) |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (plain) |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 100 | = Total Cover | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: 0 | % Cover of Biotic Crust 0 | | | |

Remarks:

Salix sp. assumed FACW. Poa sp. assumed FAC.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
 - ☐ Histic Epipedon (A2)
 - ☐ Black Histic (A3)
 - ☐ Hydrogen Sulfide (A4)
 - ☐ Stratified Layers (A5) (LRR C)
 - ☐ 1 cm Muck (A9) (LRR D)
 - ☐ Depleted Below Dark Surface (A11)
 - ☐ Thick Dark Surface (A12)
 - ☐ Sandy Muck Mineral (S1)
 - ☐ Sandy Gleyed Matrix (S4)
 - ☐ Sandy Redox (S5)
 - ☐ Stripped Matrix (S6)
 - ☐ Loamy Mucky Mineral (F1)
 - ☐ Loamy Gleyed Matrix (F2)
 - ☐ Depleted Matrix (F3)
 - ☐ Redox Dark Surface (F6)
 - ☐ Depleted Dark Surface (F7)
 - ☐ Redox depressions (F8)
 - ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:³

- ☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☒ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

SOILS HYDRIC BY SATURATION

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Other (Explain in Remarks) |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches):

Water Table Present? Yes ☒ No ☐

Depth (inches): 5

Saturation Present? Yes ☒ No ☐

Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 21-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 4A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 14 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0%
 Subregion (LRR): LRR A Lat.: 43.7606 Long.: -121.4890 Datum: NAD83
 Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☒ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: WETLAND WITH PROBLEM SOILS. FILL MATERIAL WITHIN WETLAND IN SEVERAL POCKETS. SOILS COLOR VARIABLE THROUGHOUT IT, HEAVILY GRAZED AND TRAMPLED BY HORSES | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|---|------------------|--|
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 3. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 4. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 0 = Total Cover | | | | Prevalence Index worksheet: Total % Cover of: <u>0</u> Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>70</u> x 2 = <u>140</u> FAC species <u>30</u> x 3 = <u>90</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>230</u> (B) Prevalence Index = B/A = <u>2.300</u> |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | |
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 3. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: <input type="text"/>) | | | | |
| 1. Potentilla sp. | 10 | <input type="checkbox"/> 10.0% | FACW | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 2. Poa sp. | 25 | <input checked="" type="checkbox"/> 25.0% | FAC | |
| 3. Trifolium repens | 5 | <input type="checkbox"/> 5.0% | FAC | |
| 4. Carex sp. | 60 | <input checked="" type="checkbox"/> 60.0% | FACW | |
| 5. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 6. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 7. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 8. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 9. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 10. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 11. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 100 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 0 = Total Cover | | | | |
| % Bare Ground in Herb Stratum: <u>0</u> | | | | |

Remarks:
Poa sp. assumed FAC. Carex sp. and Potentilla sp. assumed FACW.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 4A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---------------|-----|----|-------------------|------------------|-----------------|-------------------------|
| | Color (moist) | | % | Color (moist) | | % | Type ¹ | Loc ² | | |
| 0-7 | 10YR | 2/1 | 100% | | | | | | Sandy silt loam | DENSE ROOTS, VERY MOIST |
| 7-16 | 10YR | 5/2 | 95% | 10YR | 4/6 | 5% | C | PL | Sand | |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

PROBLEM SOIL. THERE ARE POCKETS OF FILLED MATERIAL IN WETLAND.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
☐ Drainage Patterns (B10)
☐ Dry Season Water Table (C2)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☐ FAC-neutral Test (D5)
☐ Raised Ant Mounds (D6) (LRR A)
☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☒ No ☐Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 03-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 5
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 24 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8312 Long.: -121.4737 Datum: NAD 83
Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: R2UBH

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|---------------------------|---|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: <u>2</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total % Cover of: _____ Multiply by: |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | OBL species <u>50</u> x 1 = <u>50</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACW species <u>0</u> x 2 = <u>0</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FAC species <u>25</u> x 3 = <u>75</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACU species <u>0</u> x 4 = <u>0</u> |
| | 0 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>75</u> (A) <u>125</u> (B) |
| 1. <u>Carex aquatilis</u> | 50 | <input checked="" type="checkbox"/> 66.7% | OBL | Prevalence Index = B/A = <u>1.667</u> |
| 2. <u>Equisetum arvense</u> | 25 | <input checked="" type="checkbox"/> 33.3% | FAC | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Hydrophytic Vegetation Indicators: |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Morphological Adaptations ¹ provide supporting data in Remarks or on a separate sheet) |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (plain) |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 75 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: 25 | % Cover of Biotic Crust 0 | | | |

Remarks:

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|----------------|---------------|-----|----------------|-------|-------------------|------------------|---|---|-----------------|-------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-3 | 10YR | 2/2 | 100% | | | | | | Loam | DENSE ROOTS |
| 3-20 | 10YR | 4/2 | 85% | 7.5YR | 4/6 | 15% | C | M | Silty Clay Loam | |
| | | | | | | | | | | |
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| | | | | | | | | | | |

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox depressions (F8) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils:³

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Other (Explain in Remarks) |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☒ No ☐ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches):

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 21-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 5A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 14 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.7526 Long.: -121.4962 Datum: NAD83
 Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Remarks: On-site determination. | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: |
|---|------------------|--|------------------|---|
| 1. <u>Pinus contorta</u> | 5 | <input checked="" type="checkbox"/> 100.0% | FAC | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>2</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 5 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | OBL species <u>0</u> x 1 = <u>0</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>70</u> x 2 = <u>140</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>27</u> x 3 = <u>81</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>2</u> x 4 = <u>8</u> |
| | 0 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>99</u> (A) <u>229</u> (B) |
| 1. <u>Juncus sp.</u> | 70 | <input checked="" type="checkbox"/> 74.5% | FACW | Prevalence Index = B/A = <u>2.313</u> |
| 2. <u>Epilobium sp.</u> | 5 | <input type="checkbox"/> 5.3% | FAC | Hydrophytic Vegetation Indicators: |
| 3. <u>Iris douglasiana</u> | 5 | <input type="checkbox"/> 5.3% | FAC | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 4. <u>Poa palustris</u> | 10 | <input type="checkbox"/> 10.6% | FAC | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| 5. <u>Trifolium sp.</u> | 2 | <input type="checkbox"/> 2.1% | FAC | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 6. <u>Sidalcea sp.</u> | 2 | <input type="checkbox"/> 2.1% | FACU | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 94 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: <u>6</u> | | | | |
| Remarks: Trifolium sp. assumed FAC. Sidalcea sp. assumed FACU. | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 5A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|------------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-11 | 10YR | 2/1 | 100% | | | | Silt Loam | |
| 11-18 | 10YR | 3/1 | 100% | | | | Silty Clay | |
| | | | | | | | | |
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¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☐ No ☒Depth (inches): Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 05-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 6
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 24 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8323 Long.: -121.4704 Datum: NAD 83
Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|---|------------------|---|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>1</u> (B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | OBL species <u>70</u> x 1 = <u>70</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>2</u> x 2 = <u>4</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>5</u> x 3 = <u>15</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>0</u> x 4 = <u>0</u> |
| | 0 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>77</u> (A) <u>89</u> (B) |
| 1. <u>Carex aquatilis</u> | 70 | <input checked="" type="checkbox"/> 90.9% | OBL | Prevalence Index = B/A = <u>1.156</u> |
| 2. <u>Ranunculus repens</u> | 2 | <input type="checkbox"/> 2.6% | FACW | |
| 3. <u>Rumex crispus</u> | 5 | <input type="checkbox"/> 6.5% | FAC | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 77 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: 23 | | | | |
| % Cover of Biotic Crust 0 | | | | |

Remarks:
RUMEX ROOTS, VEGETATIVE NOT PRESENT

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|------|-------------------|------------------|---|---|-----------|------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-2 | 10YR | 2/2 | 100% | | | | | | Silt Loam | |
| 2-20 | 10YR | 3/2 | 82% | 10YR | 4/6 | 10% | C | M | Silt Loam | 2 types of redox |
| | | | | 10YR | 5/6 | 2% | C | M | | |
| | | | | | | | | | | |
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¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils:³

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5) (LRR C)

☐ 1 cm Muck (A9) (LRR D)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Muck Mineral (S1)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☐ Depleted Matrix (F3)

☒ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox depressions (F8)

☐ Vernal Pools (F9)

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

☐ Surface Water (A1)

☐ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Drift deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Thin Muck Surface (C7)

☐ Other (Explain in Remarks)

☐ Water Marks (B1) (Riverine)

☐ Sediment Deposits (B2) (Riverine)

☐ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒

Water Table Present? Yes ☐ No ☒

Saturation Present? (includes capillary fringe) Yes ☒ No ☐

Depth (inches):

Depth (inches):

Depth (inches):

6

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available: Remarks:

| | | | | | |
|---|--|---|--|---|--|
| Project/Site: <u>DESCHUTES LWI</u> | | City/County: <u>SUNRIVER/DESCHUTES</u> | | Sampling Date: <u>21-Jun-10</u> | |
| Applicant/Owner: <u>DESCHUTES COUNTY</u> | | State: <u>OR</u> | | Sampling Point: <u>SP 6A</u> | |
| Investigator(s): <u>ALISON SIGLER, SARAH HARTUNG</u> | | Section, Township, Range: <u>S 14</u> | | <u>T 21 S</u> <u>R 10 E</u> | |
| Landform (hillslope, terrace, etc.): <u>Lowland</u> | | Local relief (concave, convex, none): <u>flat</u> | | Slope: <u>2.0%</u> / <u>1.1</u> ° | |
| Subregion (LRR): <u>LRR A</u> | | Lat.: <u>43.7485</u> | | Long.: <u>-121.4932</u> Datum: <u>NAD83</u> | |
| Soil Map Unit Name: <u>29A: Crvaquolls, 0 to 3 percent slopes</u> | | | | NWI classification: <u>PSSC</u> | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: | |

| Tree Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: | |
|--|----|--|---------------------------|---|---|-------------|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: | 3 | (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: | 3 | (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: | 100.0% | (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Prevalence Index worksheet: | |
| 1. Salix exigua | 70 | <input checked="" type="checkbox"/> 100.0% | OBL | Total % Cover of: | Multiply by: | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | OBL species | 70 | x 1 = 70 |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACW species | 85 | x 2 = 170 |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FAC species | 0 | x 3 = 0 |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACU species | 0 | x 4 = 0 |
| | 70 | = Total Cover | | UPL species | 0 | x 5 = 0 |
| | | | | Column Total s: | 155 | (A) 240 (B) |
| Herb Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Prevalence Index = B/A = 1.548 | |
| 1. Juncus balticus | 50 | <input checked="" type="checkbox"/> 58.8% | FACW | Hydrophytic Vegetation Indicators: | | |
| 2. Carex sp. | 30 | <input checked="" type="checkbox"/> 35.3% | FACW | <input checked="" type="checkbox"/> Dominance Test is > 50% | | |
| 3. Rumex occidentalis | 5 | <input type="checkbox"/> 5.9% | FACW | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 85 | = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| % Bare Ground in Herb Stratum: 15 | | | | | | |
| Remarks: Carex sp. assumed to be FACW. | | | | | | |

Western Mountains, Valleys, and Coast Region -- Interim version

Soil

Sampling Point: 6A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|---------|------------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 10YR | 2/1 | 100% | | | | muck | |
| 2-20 | 10YR | 3/1 | 20% | | | | peat | mixed matrix, 2 layers |
| | 10YR | 3/2 | 80% | | | | peat | mixed matrix |
| | | | | | | | | |
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¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☒ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Muck Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1) (except in MLRA 1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox depressions (F8)

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☒ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Stunted or Stressed Plants (D1) (LRR A)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
☐ Drainage Patterns (B10)
☐ Dry Season Water Table (C2)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☐ FAC-neutral Test (D5)
☐ Raised Ant Mounds (D6) (LRR A)
☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☒ No ☐Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 05-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 7
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 13 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8341 Long.: -121.4745 Datum: NAD 83
Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes NWI classification: R2UBH

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: On-site determination. | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|---------------------------|---|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>1</u> (B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | 0 | <input type="checkbox"/> 0.0% | | Prevalence Index worksheet: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Total % Cover of: Multiply by: |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | OBL species <u>80</u> x 1 = <u>80</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>0</u> x 2 = <u>0</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>0</u> x 3 = <u>0</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>0</u> x 4 = <u>0</u> |
| = Total Cover | | | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | 0 | <input type="checkbox"/> 0.0% | | Column Totals: <u>80</u> (A) <u>80</u> (B) |
| 1. <u>Carex nebrascensis</u> | 75 | <input checked="" type="checkbox"/> 93.8% OBL | | Prevalence Index = B/A = <u>1.000</u> |
| 2. <u>Carex aquatilis</u> | 5 | <input type="checkbox"/> 6.3% OBL | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Hydrophytic Vegetation Indicators: |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | <input type="checkbox"/> Morphological Adaptations ¹ provide supporting data in Remarks or on a separate sheet) |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (plain) |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | 0 | <input type="checkbox"/> 0.0% | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| = Total Cover | | | | |
| % Bare Ground in Herb Stratum: 20 | % Cover of Biotic Crust 0 | | | |

Remarks:

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|-------|-------------------|------------------|---|----|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-6 | 10YR | 3/2 | 100% | | | | | | Silt | |
| 6-13 | 10YR | 4/2 | 100% | | | | | | Silt | |
| 13-20 | 10YR | 3/2 | 95% | 7.5YR | 4/4 | 5% | C | PL | Silt | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5) (LRR C)

☐ 1 cm Muck (A9) (LRR D)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Muck Mineral (S1)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☐ Depleted Matrix (F3)

☐ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox depressions (F8)

☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:³

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☒ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present?

Yes ☒

No ☐

Remarks:
HYDRIC SOILS ASSUMED BASED ON WETLAND HYDROLOGY INDICATORS. HAS CHARCOAL IN TRACE AMOUNTS THROUGH ENTIRE PROFILE.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

☐ Surface Water (A1)

☒ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Drift deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Thin Muck Surface (C7)

☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)

☐ Sediment Deposits (B2) (Riverine)

☐ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present?

Yes ☐

No ☒

Depth (inches):

Water Table Present?

Yes ☒

No ☐

Depth (inches): 12

Saturation Present?
(includes capillary fringe)

Yes ☒

No ☐

Depth (inches): 7

Wetland Hydrology Present?

Yes ☒

No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 21-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 7A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 35 T 20 S R 10 E
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope: 1.0% / 0.6 °
 Subregion (LRR): LRR A Lat.: 43.7968 Long.: -121.5008 Datum: NAD83
 Soil Map Unit Name: W: Water NWI classification: PEMF

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: DIRT ROADS BLOCKED; COULD NOT ACCESS. OFF-SITE DATA PLOT | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|---|------------------|--|------------------|---|
| 1. <u>Pinus contorta</u> | 30 | <input checked="" type="checkbox"/> 100.0% | FAC | Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>4</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 30 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. <u>Salix exigua</u> | 10 | <input checked="" type="checkbox"/> 100.0% | OBL | Total % Cover of: <u>60</u> Multiply by: <u>x 1 = 60</u> |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | OBL species <u>60</u> x 1 = <u>60</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>50</u> x 2 = <u>100</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>30</u> x 3 = <u>90</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>0</u> x 4 = <u>0</u> |
| 10 = Total Cover | | | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Col umn Total s: <u>140</u> (A) <u>250</u> (B) |
| 1. <u>Juncus balticus</u> | 50 | <input checked="" type="checkbox"/> 50.0% | FACW | Prevalence Index = B/A = <u>1.786</u> |
| 2. <u>Carex nebrascensis</u> | 10 | <input type="checkbox"/> 10.0% | OBL | |
| 3. <u>Carex aquatilis</u> | 40 | <input checked="" type="checkbox"/> 40.0% | OBL | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 100 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 0 = Total Cover | | | | |
| % Bare Ground in Herb Stratum: <u>0</u> | | | | |
| Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | |
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | | |
| Remarks: | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 7A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
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| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

ASSUMED HYDRIC SOILS BASED ON HYDROLOGY

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☒ No ☐Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

SURFACE WATER ALONG WETLAND EDGE

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 05-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 8
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 24 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): convex Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8235 Long.: -121.4766 Datum: NAD 83
Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: PEMF

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|---------------------------|--|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: <u>1</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | OBL species <u>100</u> x 1 = <u>100</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACW species <u>0</u> x 2 = <u>0</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FAC species <u>0</u> x 3 = <u>0</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACU species <u>0</u> x 4 = <u>0</u> |
| | 0 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>100</u> (A) <u>100</u> (B) |
| 1. <u>Carex aquatilis</u> | 100 | <input checked="" type="checkbox"/> 100.0% | OBL | Prevalence Index = B/A = <u>1.000</u> |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Hydrophytic Vegetation Indicators: |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Morphological Adaptations ¹ provide supporting data in Remarks or on a separate sheet) |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (plain) |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 100 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: 0 | % Cover of Biotic Crust 0 | | | |
| Remarks: | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|------|-------------------|------------------|---|----|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-12 | 10YR | 3/2 | 100% | | | | | | Silt | |
| 12-20 | 10YR | 4/2 | 95% | 10YR | 5/6 | 5% | C | PL | Silt | |
| | | | | | | | | | | |
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| | | | | | | | | | | |

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5) (LRR C)

☐ 1 cm Muck (A9) (LRR D)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Muck Mineral (S1)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☐ Depleted Matrix (F3)

☐ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox depressions (F8)

☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:³

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☒ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDRIC SOILS BY SATURATION

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

☐ Surface Water (A1)

☒ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☒ Sediment Deposits (B2) (Nonriverine)

☐ Drift deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Thin Muck Surface (C7)

☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)

☐ Sediment Deposits (B2) (Riverine)

☐ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒

Water Table Present? Yes ☒ No ☐

Saturation Present? (includes capillary fringe) Yes ☒ No ☐

Depth (inches):

Depth (inches): 0

Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 22-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 8A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 3 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): Shoulder slope Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.7801 Long.: -121.5122 Datum: NAD83
 Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: PSSC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: OFF-SITE DETERMINATION | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|--|------------------|--|
| 1. Pinus contorta | 10 | <input checked="" type="checkbox"/> 100.0% | FAC | Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A) |
| 2. | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>4</u> (B) |
| 3. | 0 | <input type="checkbox"/> 0.0% | | |
| 4. | 0 | <input type="checkbox"/> 0.0% | | |
| | | 10 = Total Cover | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: Total % Cover of: <u>20</u> Multiply by: <u>x 1 = 20</u> <u>OBL species</u> <u>20</u> <u>x 1 = 20</u> <u>FACW species</u> <u>30</u> <u>x 2 = 60</u> <u>FAC species</u> <u>75</u> <u>x 3 = 225</u> <u>FACU species</u> <u>0</u> <u>x 4 = 0</u> <u>UPL species</u> <u>0</u> <u>x 5 = 0</u> <u>Column Total s:</u> <u>125</u> (A) <u>305</u> (B) Prevalence Index = B/A = <u>2.440</u> |
| 1. Salix exigua | 15 | <input checked="" type="checkbox"/> 100.0% | OBL | |
| 2. | 0 | <input type="checkbox"/> 0.0% | | |
| 3. | 0 | <input type="checkbox"/> 0.0% | | |
| 4. | 0 | <input type="checkbox"/> 0.0% | | |
| Herb Stratum (Plot size: <input type="text"/>) | | | | |
| 1. Carex aquatilis | 5 | <input type="checkbox"/> 5.0% | OBL | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 2. Poa sp. | 65 | <input checked="" type="checkbox"/> 65.0% | FAC | |
| 3. Juncus sp. | 30 | <input checked="" type="checkbox"/> 30.0% | FACW | |
| 4. | 0 | <input type="checkbox"/> 0.0% | | |
| 5. | 0 | <input type="checkbox"/> 0.0% | | |
| 6. | 0 | <input type="checkbox"/> 0.0% | | |
| 7. | 0 | <input type="checkbox"/> 0.0% | | |
| 8. | 0 | <input type="checkbox"/> 0.0% | | |
| 9. | 0 | <input type="checkbox"/> 0.0% | | |
| 10. | 0 | <input type="checkbox"/> 0.0% | | |
| 11. | 0 | <input type="checkbox"/> 0.0% | | |
| | | 100 = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. | 0 | <input type="checkbox"/> 0.0% | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 2. | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: <u>0</u> | | | | |
| Remarks: Poa sp. assumed FAC and Juncus sp. assumed FACW. | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 8A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
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| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDRIC BASED ON HYDROLOGY

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☒ No ☐Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Aerial photo

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 05-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 9
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 24 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0°
Subregion (LRR): LRR B Lat.: 43.8259 Long.: -121.4767 Datum: NAD 83
Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: PABF

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: LARGE IRRIGATION COMPLEX On-site determination. | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|----------------------------------|--|------------------|---|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>1</u> (B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | OBL species <u>90</u> x 1 = <u>90</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>0</u> x 2 = <u>0</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>0</u> x 3 = <u>0</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>0</u> x 4 = <u>0</u> |
| | 0 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>90</u> (A) <u>90</u> (B) |
| 1. <u>Carex aquatilis</u> | 90 | <input checked="" type="checkbox"/> 100.0% | OBL | Prevalence Index = B/A = <u>1.000</u> |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 90 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: <u>10</u> | % Cover of Biotic Crust <u>0</u> | | | |

Hydrophytic Vegetation Indicators:
☒ Dominance Test is > 50%
☒ Prevalence Index is ≤ 3.0 ¹
☐ Morphological Adaptations ¹ provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation ¹ (plain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-------|----------------|---|-------------------|------------------|---------|-------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-3 | 10YR | 2/2 | 100% | | | | Silt | DENSE ROOTS |
| 3-18 | 7.5YR | 2.5/1 | 100% | | | | Muck | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☒ Histosol (A1)

☐ Sandy Redox (S5)

☐ Histic Epipedon (A2)

☐ Stripped Matrix (S6)

☐ Black Histic (A3)

☐ Loamy Mucky Mineral (F1)

☐ Hydrogen Sulfide (A4)

☐ Loamy Gleyed Matrix (F2)

☐ Stratified Layers (A5) (LRR C)

☐ Depleted Matrix (F3)

☐ 1 cm Muck (A9) (LRR D)

☐ Redox Dark Surface (F6)

☐ Depleted Below Dark Surface (A11)

☐ Depleted Dark Surface (F7)

☐ Thick Dark Surface (A12)

☐ Redox depressions (F8)

☐ Sandy Muck Mineral (S1)

☐ Vernal Pools (F9)

☐ Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils:³

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present?

Yes ☒

No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

☐ Surface Water (A1)

☒ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Drift deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Thin Muck Surface (C7)

☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)

☐ Sediment Deposits (B2) (Riverine)

☐ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present?

Yes ☐

No ☒

Depth (inches):

Water Table Present?

Yes ☒

No ☐

Depth (inches): 12

Saturation Present?
(includes capillary fringe)

Yes ☒

No ☐

Depth (inches): 0

Wetland Hydrology Present?

Yes ☒

No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

LARGE AREA OF SURFACE WATER ABOUT 15 FT AWAY

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 22-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 9A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 3 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.7797 Long.: -121.5108 Datum: NAD83
 Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: PSSC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: WETLAND DITCHED THROUGHOUT SITE, SEVERAL UPLAND AREAS INCLUDED AT ABOUT 10% | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
|--|------------------|--|------------------|---|
| 1. <u>Pinus contorta</u> | <u>10</u> | <input checked="" type="checkbox"/> 100.0% | <u>FAC</u> | |
| 2. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 3. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 4. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| <u>10</u> = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>20</u> x 1 = <u>20</u> FACW species <u>50</u> x 2 = <u>100</u> FAC species <u>60</u> x 3 = <u>180</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>130</u> (A) <u>300</u> (B) Prevalence Index = B/A = <u>2.308</u> |
| 1. <u>Salix exigua</u> | <u>20</u> | <input checked="" type="checkbox"/> 100.0% | <u>OBL</u> | |
| 2. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 3. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 4. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 5. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| <u>20</u> = Total Cover | | | | |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <u>Carex sp.</u> | <u>50</u> | <input checked="" type="checkbox"/> 50.0% | <u>FACW</u> | |
| 2. <u>Lupinus sp.</u> | <u>10</u> | <input type="checkbox"/> 10.0% | <u>FAC</u> | |
| 3. <u>Poa sp.</u> | <u>40</u> | <input checked="" type="checkbox"/> 40.0% | <u>FAC</u> | |
| 4. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 5. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 6. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 7. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 8. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 9. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 10. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 11. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| <u>100</u> = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 1. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| 2. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | _____ | |
| <u>0</u> = Total Cover | | | | |
| % Bare Ground in Herb Stratum: <u>0</u> | | | | |
| Remarks: Carex sp. assumed to be FACW; Lupinus sp. and Poa sp. assumed FAC. | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 9A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-20 | 10YR | 2/1 | 100% | | | | peat | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> FAC-neutral Test (D5) |
| <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Frost Heave Hummocks (D7) |

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 05-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 10
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 24 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8258 Long.: -121.4754 Datum: NAD 83
Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: OFF-SITE INVESTIGATION | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|---------------------------|--|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>1</u> (B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | OBL species <u>100</u> x 1 = <u>100</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>0</u> x 2 = <u>0</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>0</u> x 3 = <u>0</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>0</u> x 4 = <u>0</u> |
| | 0 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>100</u> (A) <u>100</u> (B) |
| 1. <u>Carex aquatilis</u> | 100 | <input checked="" type="checkbox"/> 100.0% | OBL | Prevalence Index = B/A = <u>1.000</u> |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Hydrophytic Vegetation Indicators: |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | <input type="checkbox"/> Morphological Adaptations ¹ provide supporting data in Remarks or on a separate sheet) |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (plain) |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 100 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: 0 | % Cover of Biotic Crust 0 | | | |

Remarks:

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5) (LRR C)

☐ 1 cm Muck (A9) (LRR D)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Muck Mineral (S1)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☐ Depleted Matrix (F3)

☐ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox depressions (F8)

☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:³

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☒ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDRIC SOILS BY SATURATION

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

☐ Surface Water (A1)

☐ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Drift deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Thin Muck Surface (C7)

☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)

☐ Sediment Deposits (B2) (Riverine)

☐ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒

Water Table Present? Yes ☐ No ☒

Saturation Present?
(includes capillary fringe) Yes ☒ No ☐

Depth (inches):

Depth (inches):

Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 22-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 10A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 3 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): flat Slope: 1.0% / 0.6 °
 Subregion (LRR): LRR A Lat.: 43.7794 Long.: -121.5119 Datum: NAD83
 Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: PSSC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|---|------------------|-------------------------------|------------------|---|
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 3. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 4. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| | | 0 = Total Cover | | Total Number of Dominant Species Across All Strata: <u>3</u> (B) |
| | | | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| | | | | Prevalence Index worksheet: |
| | | | | Total % Cover of: <u>50</u> Multiply by: <u>x 1 = 50</u> |
| | | | | OBL species <u>50</u> x 1 = <u>50</u> |
| | | | | FACW species <u>40</u> x 2 = <u>80</u> |
| | | | | FAC species <u>0</u> x 3 = <u>0</u> |
| | | | | FACU species <u>0</u> x 4 = <u>0</u> |
| | | | | UPL species <u>0</u> x 5 = <u>0</u> |
| | | | | Col umn Total s: <u>90</u> (A) <u>130</u> (B) |
| | | | | Prevalence Index = B/A = <u>1.444</u> |
| | | | | Hydrophytic Vegetation Indicators: |
| | | | | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| | | | | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| | | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| | | | | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ |
| | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 10A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-----------------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR | 2/1 | 100% | | | | peaty loam | |
| 4-14 | 10YR | 2/1 | 100% | | | | Silty Clay Loam | |
| 14-20 | 10YR | 3/1 | 100% | | | | Clay Loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

ASSUMED HYDRIC BASED ON PERSISTENT SATURATION

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☒ No ☐Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

ditching along northern boundary, running east-west

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 11
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 24 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8258 Long.: -121.4754 Datum: NAD 83
Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes NWI classification: PEMF

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: OFF-SITE INVESTIGATION | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|---------------------------|--|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: <u>1</u> (B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | OBL species <u>100</u> x 1 = <u>100</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACW species <u>0</u> x 2 = <u>0</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FAC species <u>0</u> x 3 = <u>0</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACU species <u>0</u> x 4 = <u>0</u> |
| | 0 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>100</u> (A) <u>100</u> (B) |
| 1. <u>Carex aquatilis</u> | 100 | <input checked="" type="checkbox"/> 100.0% | OBL | Prevalence Index = B/A = <u>1.000</u> |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Hydrophytic Vegetation Indicators: |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Morphological Adaptations ¹ provide supporting data in Remarks or on a separate sheet) |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (plain) |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 100 | = Total Cover | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 0 | = Total Cover | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| % Bare Ground in Herb Stratum: 0 | % Cover of Biotic Crust 0 | | | |

Remarks:

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5) (LRR C)

☐ 1 cm Muck (A9) (LRR D)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Muck Mineral (S1)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☐ Depleted Matrix (F3)

☐ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox depressions (F8)

☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:³

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☒ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present?

Yes ☒

No ☐

Remarks:

HYDRIC SOIL BY SATURATION

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

☐ Surface Water (A1)

☐ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Drift deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Thin Muck Surface (C7)

☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)

☐ Sediment Deposits (B2) (Riverine)

☐ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present?

Yes ☐

No ☒

Depth (inches):

Water Table Present?

Yes ☐

No ☒

Depth (inches):

Saturation Present?
(includes capillary fringe)

Yes ☒

No ☐

Depth (inches): 0

Wetland Hydrology Present?

Yes ☒

No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

| | | | | | |
|---|--|--|--|-----------------------------------|--|
| Project/Site: <u>DESCHUTES LWI</u> | | City/County: <u>SUNRIVER/DESCHUTES</u> | | Sampling Date: <u>22-Jun-10</u> | |
| Applicant/Owner: <u>DESCHUTES COUNTY</u> | | State: <u>OR</u> | | Sampling Point: <u>SP 11A</u> | |
| Investigator(s): <u>ALISON SIGLER, SARAH HARTUNG</u> | | Section, Township, Range: <u>S 3</u> <u>T 21 S</u> <u>R 10 E</u> | | | |
| Landform (hillslope, terrace, etc.): <u>Floodplain</u> | | Local relief (concave, convex, none): <u>concave</u> | | Slope: <u>0.0%</u> / <u>0.0</u> ° | |
| Subregion (LRR): <u>LRR A</u> | | Lat.: <u>43.7781</u> | | Long.: <u>-121.5169</u> | |
| | | Datum: <u>NAD83</u> | | | |
| Soil Map Unit Name: <u>29A: Cryaquolls, 0 to 3 percent slopes</u> | | | | NW1 classification: <u>PSSC</u> | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input style="width: 50px;" type="text"/>) | Absolute % Cover | Dominant Species? Rel. Str. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|--|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: <u>1</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 0 = Total Cover | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) | | |
| Sapling/Shrub Stratum (Plot size: <input style="width: 50px;" type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>65</u> x 1 = <u>65</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>15</u> x 3 = <u>45</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Total s: <u>80</u> (A) <u>110</u> (B) Prevalence Index = B/A = <u>1.375</u> |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 0 = Total Cover | | | | |
| Herb Stratum (Plot size: <input style="width: 50px;" type="text"/>) | | | | |
| 1. <i>Carex aquatilis</i> | 65 | <input checked="" type="checkbox"/> 81.3% | OBL | |
| 2. <i>Juncus balticus</i> | 15 | <input type="checkbox"/> 18.8% | FAC | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 80 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <input style="width: 50px;" type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 0 = Total Cover | | | | |
| % Bare Ground in Herb Stratum: <u>20</u> | | | | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |

Western Mountains, Valleys, and Coast Region -- Interim version

Soil

Sampling Point: 11A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|------|-------------------|------------------|---|----|-----------|--------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-6 | 10YR | 3/2 | 100% | | | | | | peat | includes some duff |
| 6-20 | 10YR | 2/1 | 30 | | | | | | peat | 2 matrix colors |
| | 10YR | 3/2 | 70% | 10YR | 3/4 | 10% | C | PL | Clay Loam | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> FAC-neutral Test (D5) |
| <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Frost Heave Hummocks (D7) |

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 12
 Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 26 T 20 S R 10 E
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR B Lat.: 43.8175 Long.: -121.4896 Datum: NAD 83
 Soil Map Unit Name: Not available NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: OFF-SITE INVESTIGATION, COULD NOT ACCESS LOT FROM LAND | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|---|------------------|--|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>2</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. <u>Salix geyeriana</u> | 15 | <input checked="" type="checkbox"/> 100.0% | | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | OBL species <u>85</u> x 1 = <u>85</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>0</u> x 2 = <u>0</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>0</u> x 3 = <u>0</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>0</u> x 4 = <u>0</u> |
| | 15 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>85</u> (A) <u>85</u> (B) |
| 1. <u>Carex aquatilis</u> | 85 | <input checked="" type="checkbox"/> 100.0% | OBL | Prevalence Index = B/A = <u>1.000</u> |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 85 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | Hydrophytic Vegetation Indicators: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | <input type="checkbox"/> Dominance Test is > 50% |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| | 0 | = Total Cover | | <input type="checkbox"/> Morphological Adaptations ¹ provide supporting data in Remarks or on a separate sheet) |
| % Bare Ground in Herb Stratum: 15 % Cover of Biotic Crust 0 | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (plain) |
| Remarks: | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
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| | | | | | | | | |

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5) (LRR C)

☐ 1 cm Muck (A9) (LRR D)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Muck Mineral (S1)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☐ Depleted Matrix (F3)

☐ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox depressions (F8)

☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:³

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☒ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present?

Yes ☒

No ☐

Remarks:

HYDRIC SOILS BY SATURATION

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

☐ Surface Water (A1)

☐ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Drift deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Thin Muck Surface (C7)

☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)

☐ Sediment Deposits (B2) (Riverine)

☐ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present?

Yes ☐

No ☒

Depth (inches):

Water Table Present?

Yes ☐

No ☒

Depth (inches):

Saturation Present?
(includes capillary fringe)

Yes ☒

No ☐

Depth (inches): 0

Wetland Hydrology Present?

Yes ☒

No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

| | | | | | |
|---|--|--|--|-----------------------------------|--|
| Project/Site: <u>DESCHUTES LWI</u> | | City/County: <u>SUNRIVER/DESCHUTES</u> | | Sampling Date: <u>22-Jun-10</u> | |
| Applicant/Owner: <u>DESCHUTES COUNTY</u> | | State: <u>OR</u> | | Sampling Point: <u>SP 12A</u> | |
| Investigator(s): <u>ALISON SIGLER, SARAH HARTUNG</u> | | Section, Township, Range: <u>S 3</u> <u>T 21 S</u> <u>R 10 E</u> | | | |
| Landform (hillslope, terrace, etc.): <u>Flat</u> | | Local relief (concave, convex, none): <u>none</u> | | Slope: <u>1.0%</u> / <u>0.6</u> ° | |
| Subregion (LRR): <u>LRR A</u> | | Lat.: <u>43.7780</u> | | Long.: <u>-121.5086</u> | |
| | | | | Datum: <u>NAD83</u> | |
| Soil Map Unit Name: <u>29A: Cryaquolls, 0 to 3 percent slopes</u> | | | | NWI classification: <u>PSSC</u> | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: | |

| Tree Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: | |
|--|----|--|---------------------------|------------------|---|-----------------------------------|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | Number of Dominant Species That are OBL, FACW, or FAC: | <u>2</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | Total Number of Dominant Species Across All Strata: | <u>2</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | Percent of dominant Species That Are OBL, FACW, or FAC: | <u>100.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Prevalence Index worksheet: | |
| 1. Salix exigua | 10 | <input checked="" type="checkbox"/> 100.0% | OBL | | Total % Cover of: | Multiply by: |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | OBL species | <u>10</u> x <u>1</u> = <u>10</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | FACW species | <u>75</u> x <u>2</u> = <u>150</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | FAC species | <u>10</u> x <u>3</u> = <u>30</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | FACU species | <u>0</u> x <u>4</u> = <u>0</u> |
| | 10 | = Total Cover | | | UPL species | <u>10</u> x <u>5</u> = <u>50</u> |
| | | | | | Column Total s: | <u>105</u> (A) <u>240</u> (B) |
| Herb Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Prevalence Index = B/A = <u>2.286</u> | |
| 1. Lupinus sp. | 10 | <input type="checkbox"/> 10.5% | FAC | | Hydrophytic Vegetation Indicators: | |
| 2. Potentilla anserina ssp. pacifica | 10 | <input type="checkbox"/> 10.5% | UPL | | <input checked="" type="checkbox"/> Dominance Test is > 50% | |
| 3. Juncus balticus | 75 | <input checked="" type="checkbox"/> 78.9% | FACW | | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 95 | = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| % Bare Ground in Herb Stratum: <u>5</u> | | | | | | |
| Remarks: Lupinus sp. assumed FAC. | | | | | | |

Western Mountains, Valleys, and Coast Region -- Interim version

Soil

Sampling Point: 12A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|------------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | 10YR | 3/1 | 100% | | | | peat | |
| 5-20 | 10YR | 2/1 | 100% | | | | Silty Clay | |
| | | | | | | | | |
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| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

top peat layer not thick enough to be A2 but exhibits primary characteristics of an A2 profile. Assumed hydric based on hydrology indicators.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 13
 Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 23 T 20 S R 10 E
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): convex Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR B Lat.: 43.8220 Long.: -121.4889 Datum: NAD 83
 Soil Map Unit Name: Not available NWI classification: PEMF

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|---|------------------|--|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>2</u> (B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. <u>Salix geyeriana</u> | 1 | <input checked="" type="checkbox"/> 100.0% | FACW | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | OBL species <u>85</u> x 1 = <u>85</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>16</u> x 2 = <u>32</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>0</u> x 3 = <u>0</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>0</u> x 4 = <u>0</u> |
| | 1 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>101</u> (A) <u>117</u> (B) |
| 1. <u>Carex aquatilis</u> | 85 | <input checked="" type="checkbox"/> 85.0% | OBL | Prevalence Index = B/A = <u>1.158</u> |
| 2. <u>Juncus effusus</u> | 15 | <input type="checkbox"/> 15.0% | FACW | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 100 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust 0 | | | | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (plain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| Remarks: | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|------|-------------------|------------------|----|----|-----------|------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-6 | 10YR | 4/2 | 100% | | | | | | Silt | |
| 6-20 | 10YR | 3/2 | 85% | 10YR | 4/6 | 5% | C | PL | Silt Loam | 2 types of redox |
| | | | | 5YR | 3/4 | 10% | CS | M | | pockets of sand |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |
| | | | | | | | | | | |

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5) (LRR C)

☐ 1 cm Muck (A9) (LRR D)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Muck Mineral (S1)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☐ Depleted Matrix (F3)

☒ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox depressions (F8)

☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:³

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present?

Yes ☒

No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

☐ Surface Water (A1)

☒ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Drift deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Thin Muck Surface (C7)

☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)

☐ Sediment Deposits (B2) (Riverine)

☐ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present?

Yes ☐

No ☒

Depth (inches):

Water Table Present?

Yes ☒

No ☐

Depth (inches):

Saturation Present?
(includes capillary fringe)

Yes ☒

No ☐

Depth (inches):

Wetland Hydrology Present?

Yes ☒

No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

| | | | | | |
|---|--|---|--|-----------------------------------|--|
| Project/Site: <u>DESCHUTES LWI</u> | | City/County: <u>SUNRIVER/DESCHUTES</u> | | Sampling Date: <u>22-Jun-10</u> | |
| Applicant/Owner: <u>DESCHUTES COUNTY</u> | | State: <u>OR</u> | | Sampling Point: <u>SP 13A</u> | |
| Investigator(s): <u>ALISON SIGLER, SARAH HARTUNG</u> | | Section, Township, Range: <u>S 12</u> <u>T 21 S</u> <u>R 10 E</u> | | | |
| Landform (hillslope, terrace, etc.): <u>Floodplain</u> | | Local relief (concave, convex, none): <u>concave</u> | | Slope: <u>2.0%</u> / <u>1.1</u> ° | |
| Subregion (LRR): <u>LRR A</u> | | Lat.: <u>43.7714</u> | | Long.: <u>-121.4795</u> | |
| | | | | Datum: <u>NAD83</u> | |
| Soil Map Unit Name: <u>144A: Sunriver sandy loam. 0 to 3 percent slopes</u> | | | | NWI classification: <u>PEMC</u> | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: | |

| Tree Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: | |
|--|----|---|---------------------------|---|---------------------------|-------------|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: | 2 | (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: | 2 | (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: | 100.0% | (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total % Cover of: Multiply by: | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | OBL species | 40 | x 1 = 40 |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACW species | 45 | x 2 = 90 |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FAC species | 7 | x 3 = 21 |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACU species | 0 | x 4 = 0 |
| | 0 | <input type="checkbox"/> 0.0% | _____ | UPL species | 0 | x 5 = 0 |
| | 0 | = Total Cover | | Col umn Total s: | 92 | (A) 151 (B) |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index = B/A = 1.641 | | |
| 1. Carex aquatilis | 40 | <input checked="" type="checkbox"/> 43.5% | OBL | Hydrophytic Vegetation Indicators: | | |
| 2. Juncus balticus | 35 | <input checked="" type="checkbox"/> 38.0% | FACW | <input checked="" type="checkbox"/> Dominance Test is > 50% | | |
| 3. Poa trivialis | 10 | <input type="checkbox"/> 10.9% | FACW | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ | | |
| 4. Sidalcea sp. | 5 | <input type="checkbox"/> 5.4% | FAC | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | | |
| 5. Lupinus sp, | 2 | <input type="checkbox"/> 2.2% | FAC | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 92 | = Total Cover | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| % Bare Ground in Herb Stratum: 8 | | | | | | |
| Remarks: | | | | | | |
| Lupinus sp. and Sidalcea sp. assumed FAC. | | | | | | |

Western Mountains, Valleys, and Coast Region -- Interim version

Soil

Sampling Point: 13A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|------|-------------------|------------------|---|---|-----------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-9 | 10YR | 2/1 | 100% | | | | | | Silt Loam | |
| 9-20 | 10YR | 4/2 | 60% | 10YR | 3/1 | 40% | D | M | Clay Loam | |
| | | | | | | | | | | |
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¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> FAC-neutral Test (D5) |
| <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Frost Heave Hummocks (D7) |

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☒ No ☐Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 14
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 25 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8157 Long.: -121.4797 Datum: NAD 83
Soil Map Unit Name: 115A: Shanahan loamy coarse sand, 0 to 3 percent slopes NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: OFF-SITE INVESTIGATION | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|--|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: <u>2</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. Salix sp. | 30 | <input checked="" type="checkbox"/> 100.0% | FACW | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | OBL species <u>75</u> x 1 = <u>75</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACW species <u>30</u> x 2 = <u>60</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FAC species <u>0</u> x 3 = <u>0</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACU species <u>0</u> x 4 = <u>0</u> |
| | 30 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>105</u> (A) <u>135</u> (B) |
| 1. Carex aquatilis | 75 | <input checked="" type="checkbox"/> 100.0% | OBL | Prevalence Index = B/A = <u>1.286</u> |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | |
| | 75 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | Hydrophytic Vegetation Indicators: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| | 0 | = Total Cover | | <input type="checkbox"/> Morphological Adaptations ¹ provide supporting data in Remarks or on a separate sheet) |
| % Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust 0 | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (plain) |

Remarks:

25% open water, Salix sp. assumed FACW

¹ Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
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¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5) (LRR C)

☐ 1 cm Muck (A9) (LRR D)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Muck Mineral (S1)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☐ Depleted Matrix (F3)

☐ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox depressions (F8)

☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:³

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☒ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDRIC SOIL BY SATURATION

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

☒ Surface Water (A1)

☐ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Drift deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Thin Muck Surface (C7)

☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)

☐ Sediment Deposits (B2) (Riverine)

☐ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐

Water Table Present? Yes ☐ No ☒

Saturation Present? (includes capillary fringe) Yes ☒ No ☐

Depth (inches): 1

Depth (inches):

Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Aerial photo

Remarks:

| | | | | | |
|---|--|---|--|-----------------------------------|---------------|
| Project/Site: <u>DESCHUTES LWI</u> | | City/County: <u>SUNRIVER/DESCHUTES</u> | | Sampling Date: <u>22-Jun-10</u> | |
| Applicant/Owner: <u>DESCHUTES COUNTY</u> | | State: <u>OR</u> | | Sampling Point: <u>SP 14A</u> | |
| Investigator(s): <u>ALISON SIGLER, SARAH HARTUNG</u> | | Section, Township, Range: <u>S 23</u> | | <u>T 21 S</u> | <u>R 10 E</u> |
| Landform (hillslope, terrace, etc.): <u>Floodplain</u> | | Local relief (concave, convex, none): <u>flat</u> | | Slope: <u>1.0%</u> / <u>0.6</u> ° | |
| Subregion (LRR): <u>LRR A</u> | | Lat.: <u>43.7405</u> | | Long.: <u>-121.4917</u> | |
| | | Datum: <u>NAD83</u> | | | |
| Soil Map Unit Name: <u>29A: Crvaquolls, 0 to 3 percent slopes</u> | | | | NWI classification: <u>PEMA</u> | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: | |

| Tree Stratum (Plot size: <input style="width: 50px;" type="text"/>) | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------------------|------------------|--|-------------|-----|-------|-----|--|--------------|----|-------|----|-------------|---|-------|---|--------------|---|-------|---|-------------|---|-------|---|-----------------|--|---------|---------|--|--|--|--|--|---|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: 2 (A) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: 2 (B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 = Total Cover | | | | Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> Total % Cover of: Multiply by: </div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">OBL species</td> <td style="width: 10%; text-align: center;">120</td> <td style="width: 10%;">x 1 =</td> <td style="width: 10%; text-align: center;">120</td> <td rowspan="5" style="width: 10%;"></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">10</td> <td>x 2 =</td> <td style="text-align: center;">20</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">0</td> <td>x 3 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">0</td> <td>x 4 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td>x 5 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td colspan="2">Column Total s:</td> <td style="text-align: center;">130 (A)</td> <td style="text-align: center;">140 (B)</td> <td></td> </tr> <tr> <td colspan="4"></td> <td>Prevalence Index = B/A = 1.077</td> </tr> </table> | OBL species | 120 | x 1 = | 120 | | FACW species | 10 | x 2 = | 20 | FAC species | 0 | x 3 = | 0 | FACU species | 0 | x 4 = | 0 | UPL species | 0 | x 5 = | 0 | Column Total s: | | 130 (A) | 140 (B) | | | | | | Prevalence Index = B/A = 1.077 |
| OBL species | 120 | x 1 = | 120 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACW species | 10 | x 2 = | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAC species | 0 | x 3 = | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACU species | 0 | x 4 = | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UPL species | 0 | x 5 = | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Column Total s: | | 130 (A) | 140 (B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Prevalence Index = B/A = 1.077 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Western Mountains, Valleys, and Coast Region -- Interim version

Soil

Sampling Point: 14A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|----------------|---------------|-----|----------------|------|-------------------|------------------|---|----|------------|---------------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-6 | 10YR | 3/2 | 100% | | | | | | Clay Loam | |
| 6-20 | 10YR | 4/1 | 60% | 5YR | 4/6 | 38% | C | PL | Sandy Loam | 2 types of redox features |
| | | | | 10YR | 3/1 | 2% | D | M | | |
| | | | | | | | | | | |
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¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 15
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 25 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8121 Long.: -121.4851 Datum: NAD 83
Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes NWI classification: PFOA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: PFO IN AN AREA THAT IS CURRENTLY BEING DRAINED BY SEVERAL DITCH LINES FOR FUTURE DEVELOPMENT | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|----------------------------------|--|------------------|--|
| 1. <u>Pinus contorta</u> | 15 | <input checked="" type="checkbox"/> 100.0% | FAC | Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>4</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>75.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 15 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. <u>Spiraea douglasii</u> | 2 | <input type="checkbox"/> 6.3% | FACW | Total % Cover of: _____ Multiply by: _____ |
| 2. <u>Salix geyeriana</u> | 20 | <input checked="" type="checkbox"/> 62.5% | | OBL species <u>10</u> x 1 = <u>10</u> |
| 3. <u>Betula glandulosa</u> | 10 | <input checked="" type="checkbox"/> 31.3% | OBL | FACW species <u>67</u> x 2 = <u>134</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>17</u> x 3 = <u>51</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>5</u> x 4 = <u>20</u> |
| | 32 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>99</u> (A) <u>215</u> (B) |
| 1. <u>Juncus sp.</u> | 65 | <input checked="" type="checkbox"/> 90.3% | FACW | Prevalence Index = B/A = <u>2.172</u> |
| 2. <u>Fragaria virginiana</u> | 5 | <input type="checkbox"/> 6.9% | FACU | |
| 3. <u>Equisetum arvense</u> | 2 | <input type="checkbox"/> 2.8% | FAC | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 72 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: <u>28</u> | % Cover of Biotic Crust <u>0</u> | | | |

Remarks:

Juncus sp. assumed FACW.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|-------|-------------------|------------------|---|---|-----------------|--|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-3 | 10YR | 2/2 | 100% | | | | | | Loam | |
| 3-18 | 10YR | 3/1 | 70% | 7.5YR | 4/4 | 10% | C | M | Silty Clay Loam | ABOUT 5% CHARCOAL AND AT 13 INCHES SOME MED. GRAVELS |
| | | | | 10YR | 7/1 | 20% | D | M | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils:³

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5) (LRR C)

☐ 1 cm Muck (A9) (LRR D)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Muck Mineral (S1)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☐ Depleted Matrix (F3)

☒ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox depressions (F8)

☐ Vernal Pools (F9)

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☐ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

☐ Surface Water (A1)

☒ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Drift deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Thin Muck Surface (C7)

☐ Other (Explain in Remarks)

☐ Water Marks (B1) (Riverine)

☐ Sediment Deposits (B2) (Riverine)

☐ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒

Water Table Present? Yes ☒ No ☐

Saturation Present? (includes capillary fringe) Yes ☒ No ☐

Depth (inches):

Depth (inches):

12

Depth (inches):

0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available: Remarks:

SURFACE WATER ABOUT 4FT FROM PLOT

| | | | | | |
|---|--|---|--|-----------------------------------|---------------|
| Project/Site: <u>DESCHUTES LWI</u> | | City/County: <u>SUNRIVER/DESCHUTES</u> | | Sampling Date: <u>22-Jun-10</u> | |
| Applicant/Owner: <u>DESCHUTES COUNTY</u> | | State: <u>OR</u> | | Sampling Point: <u>SP 15A</u> | |
| Investigator(s): <u>ALISON SIGLER, SARAH HARTUNG</u> | | Section, Township, Range: <u>S 23</u> | | <u>T 21 S</u> | <u>R 10 E</u> |
| Landform (hillslope, terrace, etc.): <u>Valley bottom</u> | | Local relief (concave, convex, none): <u>flat</u> | | Slope: <u>1.0%</u> / <u>0.6</u> ° | |
| Subregion (LRR): <u>LRR A</u> | | Lat.: <u>43.7400</u> | | Long.: <u>-121.4987</u> | |
| | | | | Datum: <u>NAD83</u> | |
| Soil Map Unit Name: <u>144A: Sunriver sandy loam. 0 to 3 percent slopes</u> | | | | NW1 classification: <u>PEMA</u> | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: OFF-SITE DETERMINATION | |

| Tree Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: | |
|--|-----|---|---------------------------|---|-----------------------------|-------------|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: | 3 | (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: | 3 | (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: | 100.0% | (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | | Prevalence Index worksheet: | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total % Cover of: Multiply by: | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | OBL species | 20 | x 1 = 20 |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACW species | 60 | x 2 = 120 |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FAC species | 20 | x 3 = 60 |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACU species | 0 | x 4 = 0 |
| | 0 | = Total Cover | | UPL species | 0 | x 5 = 0 |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Total s: | 100 | (A) 200 (B) |
| 1 Juncus balticus | 60 | <input checked="" type="checkbox"/> 60.0% | FACW | Prevalence Index = B/A = 2.000 | | |
| 2 Carex aquatilis | 20 | <input checked="" type="checkbox"/> 20.0% | OBL | Hydrophytic Vegetation Indicators: | | |
| 3 Iris sp. | 20 | <input checked="" type="checkbox"/> 20.0% | FAC | <input checked="" type="checkbox"/> Dominance Test is > 50% | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 100 | = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| % Bare Ground in Herb Stratum: 0 | | | | | | |
| Remarks: | | | | | | |
| Iris sp. assumed FAC. | | | | | | |

Western Mountains, Valleys, and Coast Region -- Interim version

Soil

Sampling Point: 15A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

ASSUMED HYDRIC BASED ON HYDROLOGY INDICATORS.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☐ No ☒Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 16
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 25 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8099 Long.: -121.4862 Datum: NAD 83
Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|---------------------------|--|------------------|--|
| 1. <u>Pinus contorta</u> | 10 | <input checked="" type="checkbox"/> 100.0% | FAC | Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>4</u> (B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| | 10 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. <u>Betula glandulosa</u> | 10 | <input checked="" type="checkbox"/> 52.6% | OBL | Total % Cover of: _____ Multiply by: _____ |
| 2. <u>Spiraea douglasii</u> | 5 | <input checked="" type="checkbox"/> 26.3% | FACW | OBL species <u>10</u> x 1 = <u>10</u> |
| 3. <u>Rosa woodsii</u> | 2 | <input type="checkbox"/> 10.5% | FACU | FACW species <u>7</u> x 2 = <u>14</u> |
| 4. <u>Ribes bracteosum</u> | 2 | <input type="checkbox"/> 10.5% | FAC | FAC species <u>109</u> x 3 = <u>327</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>2</u> x 4 = <u>8</u> |
| | 19 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>128</u> (A) <u>359</u> (B) |
| 1. <u>Poa sp.</u> | 97 | <input checked="" type="checkbox"/> 98.0% | FAC | Prevalence Index = B/A = <u>2.805</u> |
| 2. <u>Geum macrophyllum</u> | 2 | <input type="checkbox"/> 2.0% | FACW | |
| 3. _____ | | <input type="checkbox"/> 0.0% | | Hydrophytic Vegetation Indicators: |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | <input type="checkbox"/> Morphological Adaptations ¹ provide supporting data in Remarks or on a separate sheet) |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (plain) |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 99 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: 0 | % Cover of Biotic Crust 0 | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |

Remarks:

Poa sp. assumed FAC.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|------------|---------------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-3 | 10YR | 3/2 | 100% | | | | Loam | Duff layer w/grit & roots |
| 3-20 | 10YR | 3/1 | 100% | | | | Silty Clay | |
| | | | | | | | | |
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¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains

²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)

☐ Histic Epipedon (A2)

☐ Black Histic (A3)

☐ Hydrogen Sulfide (A4)

☐ Stratified Layers (A5) (LRR C)

☐ 1 cm Muck (A9) (LRR D)

☐ Depleted Below Dark Surface (A11)

☐ Thick Dark Surface (A12)

☐ Sandy Muck Mineral (S1)

☐ Sandy Gleyed Matrix (S4)

☐ Sandy Redox (S5)

☐ Stripped Matrix (S6)

☐ Loamy Mucky Mineral (F1)

☐ Loamy Gleyed Matrix (F2)

☐ Depleted Matrix (F3)

☐ Redox Dark Surface (F6)

☐ Depleted Dark Surface (F7)

☐ Redox depressions (F8)

☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:³

☐ 1 cm Muck (A9) (LRR C)

☐ 2 cm Muck (A10) (LRR B)

☐ Reduced Vertic (F18)

☐ Red Parent Material (TF2)

☒ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present?

Yes ☒

No ☐

Remarks:

Hydric soils assumed based on saturation

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

☐ Surface Water (A1)

☒ High Water Table (A2)

☒ Saturation (A3)

☐ Water Marks (B1) (Nonriverine)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Drift deposits (B3) (Nonriverine)

☐ Surface Soil Cracks (B6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)

☐ Biotic Crust (B12)

☐ Aquatic Invertebrates (B13)

☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Thin Muck Surface (C7)

☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)

☐ Sediment Deposits (B2) (Riverine)

☐ Drift Deposits (B3) (Riverine)

☐ Drainage Patterns (B10)

☐ Dry Season Water Table (C2)

☐ Crayfish Burrows (C8)

☐ Saturation Visible on Aerial Imagery (C9)

☐ Shallow Aquitard (D3)

☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present?

Yes ☐

No ☒

Depth (inches):

Water Table Present?

Yes ☒

No ☐

Depth (inches):

6

Saturation Present?
(includes capillary fringe)

Yes ☒

No ☐

Depth (inches):

0

Wetland Hydrology Present?

Yes ☒

No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

appears to be a perched water table

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 22-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 16A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 26 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): Shoulder slope Local relief (concave, convex, none): flat Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.7255 Long.: -121.4971 Datum: NAD83
 Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes NWI classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Remarks: LAWN, PLANTED WITH PINUS CONTORTA, MOWED VERY SHORT | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|--|------------------|---|
| 1. Pinus contorta | 10 | <input checked="" type="checkbox"/> 100.0% | FAC | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B) |
| 2. | 0 | <input type="checkbox"/> 0.0% | | |
| 3. | 0 | <input type="checkbox"/> 0.0% | | |
| 4. | 0 | <input type="checkbox"/> 0.0% | | |
| | | | 10 = Total Cover | Prevalence Index worksheet: Total % Cover of: <u>0</u> Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>45</u> x 2 = <u>90</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>0</u> x 5 = <u>0</u> Column Total s: <u>75</u> (A) <u>200</u> (B) Prevalence Index = B/A = <u>2.667</u> |
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| | | | 0 = Total Cover | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
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| | | | 65 = Total Cover | |
| | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| | | | | |
| | | | | |
| | | | 0 = Total Cover | |
| % Bare Ground in Herb Stratum: <u>35</u> | | | | |
| Remarks: Juncus sp. assumed FACW and Trifolium sp. assumed FAC. | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 16A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-----------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-20 | 10YR | 2/2 | 100% | | | | Silt Loam | |
| | | | | | | | | |
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¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

dry, no moisture

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present?
(includes capillary fringe) Yes ☐ No ☒Depth (inches): Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 07-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 17
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 26 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8119 Long.: -121.4927 Datum: NAD 83
Soil Map Unit Name: Not available NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|----------------------------------|--|------------------|---|
| 1. <u>Pinus contorta</u> | 5 | <input checked="" type="checkbox"/> 100.0% | FAC | Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A) |
| 2. <u></u> | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>4</u> (B) |
| 3. <u></u> | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| | 5 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. <u>Betula glandulosa</u> | 10 | <input checked="" type="checkbox"/> 33.3% | OBL | Total % Cover of: <u>110</u> Multiply by: |
| 2. <u>Salix geyeriana</u> | 20 | <input checked="" type="checkbox"/> 66.7% | FACW | OBL species <u>110</u> x 1 = <u>110</u> |
| 3. <u></u> | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>20</u> x 2 = <u>40</u> |
| 4. <u></u> | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>5</u> x 3 = <u>15</u> |
| 5. <u></u> | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>0</u> x 4 = <u>0</u> |
| | 30 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>135</u> (A) <u>165</u> (B) |
| 1. <u>Carex nebrascensis</u> | 100 | <input checked="" type="checkbox"/> 100.0% | OBL | Prevalence Index = B/A = <u>1.222</u> |
| 2. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| 3. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| 4. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| 5. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| 6. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| 7. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| 8. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| 9. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| 10. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| 11. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| | 100 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| 2. <u></u> | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: <u>0</u> | % Cover of Biotic Crust <u>0</u> | | | |
| Remarks: | | | | |

Hydrophytic Vegetation Indicators:
☒ Dominance Test is > 50%
☒ Prevalence Index is ≤ 3.0 ¹
☐ Morphological Adaptations ¹ provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation ¹ (plain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: SP 17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|-----|----------------|---|-------------------|------------------|---------|---------------------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-3 | 10YR | 2/2 | 100% | | | | | Silt Loam |
| 3-8 | 10YR | 3/3 | 100% | | | | | Peat |
| 8-20 | 10YR | 2/1 | 50% | | | | | Silt Loam some sand, 2 matrices |
| | | | | | | | | |
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| | | | | | | | | |

¹ Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox depressions (F8)
☐ Vernal Pools (F9)

☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR C)
☐ 1 cm Muck (A9) (LRR D)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Muck Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils:³

☐ 1 cm Muck (A9) (LRR C)
☐ 2 cm Muck (A10) (LRR B)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☒ Other (Explain in Remarks)

³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present?
Yes ☒
No ☐

Remarks:
HYDRIC SOILS BY SATURATION.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

☒ Surface Water (A1)
☒ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1) (Nonriverine)
☐ Sediment Deposits (B2) (Nonriverine)
☐ Drift deposits (B3) (Nonriverine)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)

☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☒ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Plowed Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present?
Yes ☐
No ☒
Depth (inches):

Water Table Present?
Yes ☒
No ☐
Depth (inches):

Saturation Present? (includes capillary fringe)
Yes ☒
No ☐
Depth (inches):

Wetland Hydrology Present?
Yes ☒
No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:
SURFACE WATER ABOUT 2 INCHES DEEP AND 3 FT FROM PLOT.

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 22-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 17A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 35 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.7142 Long.: -121.4951 Datum: NAD83
 Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: PSSC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|--|------------------|--|
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 3. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 4. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| | | 0 | = Total Cover | Total Number of Dominant Species Across All Strata: <u>3</u> (B) |
| | | | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | |
| 1. <u>Salix exigua</u> | 20 | <input checked="" type="checkbox"/> 100.0% | OBL | Prevalence Index worksheet: Total % Cover of: <u>40</u> Multiply by: <u>x 1 = 40</u> OBL species FACW species <u>80</u> x 2 = <u>160</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>120</u> (A) <u>200</u> (B) Prevalence Index = B/A = <u>1.667</u> |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 3. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 4. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 5. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| | | 20 | = Total Cover | |
| Herb Stratum (Plot size: <input type="text"/>) | | | | |
| 1. <u>Phalaris arundinacea</u> | 70 | <input checked="" type="checkbox"/> 70.0% | FACW | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 2. <u>Carex aquatilis</u> | 20 | <input checked="" type="checkbox"/> 20.0% | OBL | |
| 3. <u>Juncus balticus</u> | 10 | <input type="checkbox"/> 10.0% | FACW | |
| 4. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 5. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 6. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 7. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 8. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 9. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 10. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 11. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| | | 100 | = Total Cover | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| | | 0 | = Total Cover | |
| % Bare Ground in Herb Stratum: <u>0</u> | | | | |
| Remarks: | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 17A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|------|-------------------|------------------|---|----|-------------------|-------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-4 | 10YR | 3/2 | 100% | | | | | | organics and loam | |
| 4-8 | 10YR | 3/1 | 90% | 10YR | 4/6 | 10% | C | PL | Loam | w/ organics |
| 8-9 | 10YR | 3/1 | 100% | | | | | | Sand | |
| 9-19 | 10YR | 3/1 | 70% | 10YR | 4/6 | 30% | C | M | Sandy Loam | w/ organics |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
☐ Drainage Patterns (B10)
☐ Dry Season Water Table (C2)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ Shallow Aquitard (D3)
☐ FAC-neutral Test (D5)
☐ Raised Ant Mounds (D6) (LRR A)
☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☒ No ☐Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DESCHUTES LWI City/County: Sunriver/Deschutes Sampling Date: 07-May-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 18
 Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 26 T 20 S R 10 E
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave Slope: 0.0% / 0.0°
 Subregion (LRR): LRR B Lat.: 43.8115 Long.: -121.4966 Datum: NAD 83
 Soil Map Unit Name: Not available NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: OFFSITE INVESTIGATION | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|---|------------------|--|------------------|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>3</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. <u>Salix geyeriana</u> | 10 | <input checked="" type="checkbox"/> 100.0% | | Total % Cover of: <u>90</u> Multiply by: <u>1</u> |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | OBL spec ¹ es <u>90</u> x <u>1</u> = <u>90</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | FACW spec ¹ es <u>0</u> x <u>2</u> = <u>0</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC spec ¹ es <u>0</u> x <u>3</u> = <u>0</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU spec ¹ es <u>0</u> x <u>4</u> = <u>0</u> |
| | 10 | = Total Cover | | UPL spec ¹ es <u>0</u> x <u>5</u> = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Total s: <u>90</u> (A) <u>90</u> (B) |
| 1. <u>Carex aquatilis</u> | 65 | <input checked="" type="checkbox"/> 72.2% | OBL | Prevalence Index = B/A = <u>1.000</u> |
| 2. <u>Carex nebrascensis</u> | 25 | <input checked="" type="checkbox"/> 27.8% | OBL | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 90 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: <u>10</u> % Cover of Biotic Crust <u>0</u> | | | | |

Hydrophytic Vegetation Indicators:
☒ Dominance Test is > 50%
☒ Prevalence Index is ≤ 3.0 ¹
☐ Morphological Adaptations ¹ Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation ¹ (plain)
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

Soil

Sampling Point: SP 18

[illegible]

Hydrology

| Wetland Hydrology Indicators: | | |
|---|--|--|
| Primary Indicators (minimum of one required; check all that apply) | | Secondary Indicators (2 or more required) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Drift deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Other (Explain in Remarks) | <input checked="" type="checkbox"/> FAC-neutral Test (D5) |
| Field Observations: <div style="display: flex; justify-content: space-between;"> <div> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> </div> <div> Depth (inches): <input style="width: 100px;" type="text"/> Depth (inches): <input style="width: 100px;" type="text"/> Depth (inches): <input style="width: 100px;" type="text"/> </div> <div> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> </div> </div> | | |
| Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available: <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div> | | |
| Aerial photo <div style="border: 1px solid black; height: 40px; margin-top: 5px;"></div> | | |
| Remarks: Saturation visible from offsite and from aerial photo | | |

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 22-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 18A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 27 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): convex Slope: 0.0% / 0.0%
 Subregion (LRR): LRR A Lat.: 43.7237 Long.: -121.5088 Datum: NAD83
 Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes NWI classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| Remarks: HEAVILY GRAZED BY RESIDENT CATTLE | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|---|------------------|---|------------------|---|
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 3. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 4. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| | | 0 = Total Cover | | Prevalence Index worksheet: Total % Cover of: <u>0</u> Multiply by: <u>1</u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>55</u> x 3 = <u>165</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Col umn Total s: <u>75</u> (A) <u>205</u> (B) Prevalence Index = B/A = <u>2.733</u> |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | |
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 3. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| | | | 0 = Total Cover | |
| Herb Stratum (Plot size: <input type="text"/>) | | | | |
| 1. Gnaphalium sp. | 10 | <input type="checkbox"/> 13.3% | FAC | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 2. Juncus sp. | 20 | <input checked="" type="checkbox"/> 26.7% | FACW | |
| 3. Festuca sp. | 40 | <input checked="" type="checkbox"/> 53.3% | FAC | |
| 4. Poa sp. | 5 | <input type="checkbox"/> 6.7% | FAC | |
| 5. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 6. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 7. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 8. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 9. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 10. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 11. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| | | 75 = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| | | 0 = Total Cover | | |
| % Bare Ground in Herb Stratum: <u>25</u> | | | | |
| Remarks: Poa sp., Gnaphalium sp. and Festuca sp. assumed FAC. Juncus sp. assumed FACW. | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 18A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-11 | 10YR | 2/1 | 100% | | | | Loam | |
| 11-20 | 10YR | 4/1 | 100% | | | | Sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> FAC-neutral Test (D5) |
| <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Frost Heave Hummocks (D7) |

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present?
(includes capillary fringe) Yes ☐ No ☒Depth (inches): Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 22-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 19A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 2 T 22 S R 10 E
 Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0%
 Subregion (LRR): LRR A Lat.: 43.7031 Long.: -121.5032 Datum: NAD83
 Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes NWI classification: PSSC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|--|------------------|---|
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>2</u> (B) |
| 3. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. <u>Salix exigua</u> | 60 | <input checked="" type="checkbox"/> 100.0% | OBL | Total % Cover of: <u>60</u> Multiply by: <u>x 1 = 60</u> |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | OBL species <u>60</u> x 1 = <u>60</u> |
| 3. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>100</u> x 2 = <u>200</u> |
| 4. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>0</u> x 3 = <u>0</u> |
| 5. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>0</u> x 4 = <u>0</u> |
| | 60 | = Total Cover | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Col umn Total s: <u>160</u> (A) <u>260</u> (B) |
| 1. <u>Carex sp.</u> | 100 | <input checked="" type="checkbox"/> 100.0% | FACW | Prevalence Index = B/A = <u>1.625</u> |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Hydrophytic Vegetation Indicators: |
| 3. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 4. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ |
| 5. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 6. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ |
| 7. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 8. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 9. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 10. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 11. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| | 100 | = Total Cover | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| | 0 | = Total Cover | | |
| % Bare Ground in Herb Stratum: <u>0</u> | | | | |
| Remarks: Carex sp. assumed to be FACW. | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 19A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|------------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 10YR | 3/2 | 100% | | | | peat | |
| 6-20 | 10YR | 2/1 | 100% | | | | Silty Clay | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDRIC SOILS ASSUMED BASED ON PERSISTENT SATURATION. NOT THICK ENOUGH TO BE A HISTOSOL

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☒ No ☐Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

| | | | | | |
|---|--|--|--|---|--|
| Project/Site: <u>DESCHUTES LWI</u> | | City/County: <u>SUNRIVER/DESCHUTES</u> | | Sampling Date: <u>23-Jun-10</u> | |
| Applicant/Owner: <u>DESCHUTES COUNTY</u> | | State: <u>OR</u> | | Sampling Point: <u>SP 20A</u> | |
| Investigator(s): <u>ALISON SIGLER, SARAH HARTUNG</u> | | Section, Township, Range: <u>S 34</u> | | <u>T 21 S</u> <u>R 10 E</u> | |
| Landform (hillslope, terrace, etc.): <u>Lowland</u> | | Local relief (concave, convex, none): <u>concave</u> | | Slope: <u>1.0%</u> / <u>0.6</u> ° | |
| Subregion (LRR): <u>LRR A</u> | | Lat.: <u>43.7120</u> | | Long.: <u>-121.5160</u> Datum: <u>NAD83</u> | |
| Soil Map Unit Name: <u>144A: Sunriver sandy loam. 0 to 3 percent slopes</u> | | | | NW1 classification: <u>PEMA</u> | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Remarks: off-site; right of way; heavily grazed - horse pasture; PRAIRIE DOG BURROWS IN FIELD | |

| Tree Stratum (Plot size:) | | Species? | Absolute % Cover | Rel.Strat. Cover | Indicator Status |
|---|---|--------------------------|---------------------|---------------------|---------------------|
| 1. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| | | 0 | = Total Cover | | |

| Sapling/Shrub Stratum (Plot size:) | | Species? | Absolute % Cover | Rel.Strat. Cover | Indicator Status |
|--|---|--------------------------|---------------------|---------------------|---------------------|
| 1. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 3. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 4. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| | | 0 | = Total Cover | | |

| Herb Stratum (Plot size:) | | Species? | Absolute % Cover | Rel.Strat. Cover | Indicator Status |
|---|----|-------------------------------------|---------------------|---------------------|---------------------|
| 1. Carex aquatilis | 30 | <input checked="" type="checkbox"/> | 30.0% | OBL | |
| 2. Poa trivialis | 20 | <input checked="" type="checkbox"/> | 20.0% | FACW | |
| 3. Unidentified pasture grasses | 50 | <input checked="" type="checkbox"/> | 50.0% | FAC | |
| 4. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 6. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 7. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 8. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 9. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 11. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| | | 100 | = Total Cover | | |

| Woody Vine Stratum (Plot size:) | | Species? | Absolute % Cover | Rel.Strat. Cover | Indicator Status |
|---|---|--------------------------|---------------------|---------------------|---------------------|
| 1. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| 2. _____ | 0 | <input type="checkbox"/> | 0.0% | _____ | |
| | | 0 | = Total Cover | | |

% Bare Ground in Herb Stratum: 0

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

| | | | |
|-------------------|-----|--------------|---------|
| Total % Cover of: | | Multiply by: | |
| OBL species | 30 | x 1 = | 30 |
| FACW species | 20 | x 2 = | 40 |
| FAC species | 50 | x 3 = | 150 |
| FACU species | 0 | x 4 = | 0 |
| UPL species | 0 | x 5 = | 0 |
| Column Total s: | 100 | (A) | 220 (B) |

Prevalence Index = B/A = 2.200

Hydrophytic Vegetation Indicators:

☒ Dominance Test is > 50%

☒ Prevalence Index is ≤ 3.0¹

☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Wetland Non-Vascular Plants¹

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: Carex sp. likely due to road run-off. Unidentified pasture grasses assumed FAC.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 20A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-20 | 10YR | 3/2 | 100% | | | | Loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present?
(includes capillary fringe) Yes ☐ No ☒Depth (inches): Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

| | | | | | |
|---|--|--|--|-----------------------------------|--|
| Project/Site: <u>DESCHUTES LWI</u> | | City/County: <u>SUNRIVER/DESCHUTES</u> | | Sampling Date: <u>23-Jun-10</u> | |
| Applicant/Owner: <u>DESCHUTES COUNTY</u> | | State: <u>OR</u> | | Sampling Point: <u>SP 21A</u> | |
| Investigator(s): <u>ALISON SIGLER, SARAH HARTUNG</u> | | Section, Township, Range: <u>S 9</u> <u>T 22 S</u> <u>R 10 E</u> | | | |
| Landform (hillslope, terrace, etc.): <u>Floodplain</u> | | Local relief (concave, convex, none): <u>concave</u> | | Slope: <u>2.0%</u> / <u>1.1</u> ° | |
| Subregion (LRR): <u>LRR A</u> | | Lat.: <u>43.6745</u> | | Long.: <u>-121.5436</u> | |
| | | | | Datum: <u>NAD83</u> | |
| Soil Map Unit Name: <u>144A: Sunriver sandy loam. 0 to 3 percent slopes</u> | | | | NWI classification: <u>PFOA</u> | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: | |

| Tree Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: | |
|--|-----|--|---------------------------|---|---|-----------|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: | 2 | (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: | 2 | (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: | 100.0% | (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Prevalence Index worksheet: | |
| 1. Salix exigua | 20 | <input checked="" type="checkbox"/> 100.0% | OBL | Total % Cover of: | Multiply by: | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | OBL species | 120 | x 1 = 120 |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACW species | 0 | x 2 = 0 |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FAC species | 0 | x 3 = 0 |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | FACU species | 0 | x 4 = 0 |
| | 20 | = Total Cover | | UPL species | 0 | x 5 = 0 |
| | | | | Column Total s: | 120 (A) | 120 (B) |
| Herb Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Prevalence Index = B/A = 1.000 | |
| 1. Carex aquatilis | 100 | <input checked="" type="checkbox"/> 100.0% | OBL | Hydrophytic Vegetation Indicators: | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Dominance Test is > 50% | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 100 | = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | |
| | 0 | = Total Cover | | | | |
| % Bare Ground in Herb Stratum: 0 | | | | | | |
| Remarks: | | | | | | |

Western Mountains, Valleys, and Coast Region -- Interim version

Soil

Sampling Point: 21A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | | Redox Features | | | | | Texture | Remarks |
|-------------------|---------------|-----|-----|----------------|-----|-----|-------------------|------------------|------------|---------|
| | Color (moist) | | % | Color (moist) | | % | Type ¹ | Loc ² | | |
| 0-8 | 10YR | 2/1 | 85% | 10YR | 3/4 | 15% | C | M | Sandy Loam | |
| 8-20 | 7.5YR | 3/1 | 90% | 7.5YR | 3/4 | 10% | C | M | Clay Loam | |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> FAC-neutral Test (D5) |
| <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Frost Heave Hummocks (D7) |

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☒ No ☐Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 23-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 22A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 15 T 22 S R 10 E
 Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): convex Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.6671 Long.: -121.5107 Datum: NAD83
 Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: IN RIGHT OF WAY, WETLAND IN GRAZED HORSE PASTURE | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|---|------------------|---|
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>1</u> (B) |
| 3. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 0 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | Total % Cover of: <u>5</u> Multiply by: <u>5</u> |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | OBL spec ^{ies} <u>5</u> x 1 = <u>5</u> |
| 3. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | FACW spec ^{ies} <u>57</u> x 2 = <u>114</u> |
| 4. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | FAC spec ^{ies} <u>10</u> x 3 = <u>30</u> |
| 5. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | FACU spec ^{ies} <u>15</u> x 4 = <u>60</u> |
| 0 = Total Cover | | | | UPL spec ^{ies} <u>5</u> x 5 = <u>25</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Col umn Total s: <u>92</u> (A) <u>234</u> (B) |
| 1. Claytonia perfoliata | 10 | <input type="checkbox"/> 10.9% | FAC | Prevalence Index = B/A = <u>2.543</u> |
| 2. Capsella bursa-pastoris | 15 | <input type="checkbox"/> 16.3% | FACU | |
| 3. Carex sp. | 55 | <input checked="" type="checkbox"/> 59.8% | FACW | |
| 4. Carex nebrascensis | 5 | <input type="checkbox"/> 5.4% | OBL | |
| 5. Verbascum thapsus | 5 | <input type="checkbox"/> 5.4% | UPL | |
| 6. Myosotis sp. | 2 | <input type="checkbox"/> 2.2% | FACW | |
| 7. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 8. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 9. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 10. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 11. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | |
| 92 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | Hydrophytic Vegetation Indicators: |
| 1. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 2. <input type="text"/> | 0 | <input type="checkbox"/> 0.0% | | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| 0 = Total Cover | | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| % Bare Ground in Herb Stratum: <u>8</u> | | | | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ |
| | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| Remarks: Carex sp. and Myosotis sp. assumed to be FACW. | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 22A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-----------------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-9 | 10YR | 2/1 | 100% | | | | MUCKY PEAT | |
| 9-20 | 10YR | 2/1 | 100% | | | | Silty Clay Loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input checked="" type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> FAC-neutral Test (D5) |
| <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Frost Heave Hummocks (D7) |

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☒ No ☐Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 23-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 23A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 16 T 22 S R 10 E
 Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.6727 Long.: -121.5380 Datum: NAD83
 Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes NWI classification: PFOA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|--|------------------|--|
| 1. Pinus contorta | 60 | <input checked="" type="checkbox"/> 100.0% | FAC | Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) |
| 2. | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>5</u> (B) |
| 3. | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>60.0%</u> (A/B) |
| 4. | 0 | <input type="checkbox"/> 0.0% | | |
| 60 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. Amelanchier alnifolia | 10 | <input checked="" type="checkbox"/> 66.7% | FACU | Total % Cover of: <u>0</u> Multiply by: <u>1</u> = <u>0</u> |
| 2. Rosa sp. | 5 | <input checked="" type="checkbox"/> 33.3% | FAC | OBL species <u>0</u> x 1 = <u>0</u> |
| 3. | | <input type="checkbox"/> 0.0% | | FACW species <u>10</u> x 2 = <u>20</u> |
| 4. | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>120</u> x 3 = <u>360</u> |
| 5. | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>36</u> x 4 = <u>144</u> |
| 15 = Total Cover | | | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Totals: <u>166</u> (A) <u>524</u> (B) |
| 1. Equisetum sp. | 5 | <input type="checkbox"/> 5.5% | FAC | Prevalence Index = B/A = <u>3.16</u> |
| 2. Trifolium sp. | 10 | <input type="checkbox"/> 11.0% | FAC | |
| 3. Fragaria sp. | 25 | <input checked="" type="checkbox"/> 27.5% | FACU | |
| 4. Poa sp. | 40 | <input checked="" type="checkbox"/> 44.0% | FAC | |
| 5. Spiraea sp. | 10 | <input type="checkbox"/> 11.0% | FACW | |
| 6. Taraxacum officinale | 1 | <input type="checkbox"/> 1.1% | FACU | |
| 7. | 0 | <input type="checkbox"/> 0.0% | | |
| 8. | 0 | <input type="checkbox"/> 0.0% | | |
| 9. | 0 | <input type="checkbox"/> 0.0% | | |
| 10. | 0 | <input type="checkbox"/> 0.0% | | |
| 11. | 0 | <input type="checkbox"/> 0.0% | | |
| 91 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. | 0 | <input type="checkbox"/> 0.0% | | |
| 2. | 0 | <input type="checkbox"/> 0.0% | | |
| 0 = Total Cover | | | | |
| % Bare Ground in Herb Stratum: <u>9</u> | | | | |

Hydrophytic Vegetation Indicators:
☒ Dominance Test is > 50%
☐ Prevalence Index is ≤ 3.0¹
☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Wetland Non-Vascular Plants¹
☐ Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:
 Rosa sp., Equisetum sp., Trifolium sp. and Poa sp. assumed FAC. Spiraea sp. assumed FACW. Fragaria sp. assumed FACU.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 23A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|---|----|-----------------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-3 | 10YR | 2/1 | 100% | | | | | | sandy silt loam | |
| 3-5 | 10YR | 3/1 | 100% | | | | | | Clay Loam | |
| 5-20 | 2.5Y | 6/4 | 80% | 5Y | 6/6 | 20% | C | PL | Sandy Clay | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Soils assumed hydric based on hydrology indicator.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒

Depth (inches): _____

Water Table Present? Yes ☐ No ☒

Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☒

Depth (inches): _____

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

Landowner confirms there is early spring hydrology on-site.

| | | | | | |
|---|--|---|--|-----------------------------------|--|
| Project/Site: <u>DESCHUTES LWI</u> | | City/County: <u>SUNRIVER/DESCHUTES</u> | | Sampling Date: <u>23-Jun-10</u> | |
| Applicant/Owner: <u>DESCHUTES COUNTY</u> | | State: <u>OR</u> | | Sampling Point: <u>SP 24A</u> | |
| Investigator(s): <u>ALISON SIGLER, SARAH HARTUNG</u> | | Section, Township, Range: <u>S 17</u> <u>T 22 S</u> <u>R 10 E</u> | | | |
| Landform (hillslope, terrace, etc.): <u>Floodplain</u> | | Local relief (concave, convex, none): <u>convex</u> | | Slope: <u>0.0%</u> / <u>0.0</u> ° | |
| Subregion (LRR): <u>LRR A</u> | | Lat.: <u>43.6701</u> | | Long.: <u>-121.5544</u> | |
| | | Datum: <u>NAD83</u> | | | |
| Soil Map Unit Name: <u>29A: Cryaquolls, 0 to 3 percent slopes</u> | | | | NWI classification: <u>PSSC</u> | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: | |

| Tree Stratum (Plot size: <input style="width: 50px;" type="text"/>) | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: | |
|--|------------------|---|------------------|---|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | |
| | 0 | = Total Cover | | | |
| Sapling/Shrub Stratum (Plot size: <input style="width: 50px;" type="text"/>) | | | | Prevalence Index worksheet: | |
| 1. Salix exigua | 65 | <input checked="" type="checkbox"/> 81.3% | OBL | Total % Cover of: _____ Multiply by: _____ | |
| 2. Spiraea sp. | 15 | <input type="checkbox"/> 18.8% | FACW | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | |
| | 80 | = Total Cover | | | |
| Herb Stratum (Plot size: <input style="width: 50px;" type="text"/>) | | | | | |
| 1. Carex sp. | 45 | <input checked="" type="checkbox"/> 60.0% | FACW | OBL species <u>65</u> x 1 = <u>65</u> | |
| 2. Equisetum arvense | 5 | <input type="checkbox"/> 6.7% | FAC | FACW species <u>80</u> x 2 = <u>160</u> | |
| 3. Stellaria longifolia | 20 | <input checked="" type="checkbox"/> 26.7% | FACW | FAC species <u>5</u> x 3 = <u>15</u> | |
| 4. Galeopsis tetrahit | 5 | <input type="checkbox"/> 6.7% | UPL | FACU species <u>0</u> x 4 = <u>0</u> | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | UPL species <u>5</u> x 5 = <u>25</u> | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Col umn Total s: <u>155</u> (A) <u>265</u> (B) | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Prevalence Index = B/A = <u>1.710</u> | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | |
| | 75 | = Total Cover | | | |
| Woody Vine Stratum (Plot size: <input style="width: 50px;" type="text"/>) | | | | Hydrophytic Vegetation Indicators: | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Dominance Test is > 50% | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | <input checked="" type="checkbox"/> Prevalence Index is $\leq 3.0^1$ | |
| | 0 | = Total Cover | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| | | | | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ | |
| | | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| | | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | |
| | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| <div style="display: flex; justify-content: space-between;"> % Bare Ground in Herb Stratum: 0 % Bare Ground in Sapling/Shrub Stratum: 0 </div> | | | | | |

Remarks: 50% HERB LAYER IS BARE GROUND AND OPEN WATER, Carex sp. and Spiraea sp. assumed FACW.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 24A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|------|-------------------|------------------|---|---|------------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-7 | 10YR | 3/2 | 100% | | | | | | Peat | |
| 7-20 | 2Y | 3/1 | 85% | 10YR | 4/6 | 15% | C | M | Sandy Loam | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input checked="" type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input checked="" type="checkbox"/> FAC-neutral Test (D5) |
| <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Frost Heave Hummocks (D7) |

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☒ No ☐Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

STANDING WATER ABOUT 4 FT AWAY

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 23-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 25A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 17 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): concave Slope: 0.0% / 0.0%
 Subregion (LRR): LRR A Lat.: 43.6733 Long.: -121.5535 Datum: NAD83
 Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes NWI classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel. Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|--|------------------|---|
| 1. <u>Pinus contorta</u> | 10 | <input checked="" type="checkbox"/> 100.0% | FAC | Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>5</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | | | 10 = Total Cover | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | Total % Cover of: _____ Multiply by: _____ |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | OBL species <u>40</u> x 1 = <u>40</u> |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>20</u> x 2 = <u>40</u> |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>15</u> x 3 = <u>45</u> |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>5</u> x 4 = <u>20</u> |
| | | | 0 = Total Cover | UPL species <u>10</u> x 5 = <u>50</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Column Total s: <u>90</u> (A) <u>195</u> (B) |
| 1. <u>Achillea millefolium</u> | 5 | <input type="checkbox"/> 6.3% | FACU | Prevalence Index = B/A = <u>2.167</u> |
| 2. <u>Trifolium sp.</u> | 5 | <input type="checkbox"/> 6.3% | FAC | Hydrophytic Vegetation Indicators: |
| 3. <u>Carex aquatilis</u> | 40 | <input checked="" type="checkbox"/> 50.0% | OBL | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 4. <u>Juncus balticus</u> | 10 | <input checked="" type="checkbox"/> 12.5% | FACW | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ |
| 5. <u>Galeopsis tetrahit</u> | 10 | <input checked="" type="checkbox"/> 12.5% | UPL | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 6. <u>Stellaria longifolia</u> | 10 | <input checked="" type="checkbox"/> 12.5% | FACW | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | | | 80 = Total Cover | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | |
| | | | 0 = Total Cover | |
| % Bare Ground in Herb Stratum: <u>20</u> | | | | |
| Remarks: Trifolium sp. assumed to be FAC. | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: **SP 25A**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|------|-------------------|------------------|---|---|-----------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-13 | 10YR | 3/1 | 100% | | | | | | Clay Loam | |
| 13-20 | 7.5YR | 3/1 | 80% | 10YR | 4/1 | 20% | D | M | Clay Loam | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

ASSUMED HYDRIC SOILS BASED ON HYDROLOGY

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☐ No ☒Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

SOIL IS SOMEWHAT MOIST

| | | | | | |
|--|--|--|--|--------------------------|--|
| Project/Site: DESCHUTES LWI | | City/County: SUNRIVER/DESCHUTES | | Sampling Date: 23-Jun-10 | |
| Applicant/Owner: DESCHUTES COUNTY | | State: OR | | Sampling Point: SP 26A | |
| Investigator(s): ALISON SIGLER, SARAH HARTUNG | | Section, Township, Range: S 17 T 22 S R 10 E | | | |
| Landform (hillslope, terrace, etc.): Valley bottom | | Local relief (concave, convex, none): convex | | Slope: 0.0% / 0.0 ° | |
| Subregion (LRR): LRR A | | Lat.: 43.6721 | | Long.: -121.5551 | |
| | | | | Datum: NAD83 | |
| Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes | | | | NWI classification: PFOA | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: | |

| VEGETATION - Use scientific names of plants. | | | | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | |
|---|------------------|--|-------------------|-------------------|---|---------------------------|-------|---------|--|
| Tree Stratum (Plot size:) | Absolute % Cover | Rel.Strat. Cover | Dominant Species? | Indicator Status | | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | | Number of Dominant Species That are OBL, FACW, or FAC: 2 (A) | | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | | Total Number of Dominant Species Across All Strata: 2 (B) | | | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | | Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B) | | | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | | | | | | |
| = Total Cover | | | | | | | | | |
| 1. <i>Salix exigua</i> | 45 | <input checked="" type="checkbox"/> 100.0% | OBL | | Prevalence Index worksheet: | | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | | Total % Cover of: Multiply by: | | | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | | OBL species | 45 | x 1 = | 45 | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | | FACW species | 98 | x 2 = | 196 | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | | FAC species | 0 | x 3 = | 0 | |
| = Total Cover | | | | | FACU species | 0 | x 4 = | 0 | |
| | | | | | UPL species | 0 | x 5 = | 0 | |
| | | | | | Column Total s: | 143 | (A) | 241 (B) | |
| | | | | | Prevalence Index = B/A = 1.685 | | | | |
| 1. <i>Carex sp.</i> | 98 | <input checked="" type="checkbox"/> 100.0% | FACW | | Hydrophytic Vegetation Indicators: | | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | | <input checked="" type="checkbox"/> Dominance Test is > 50% | | | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | | | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ | | | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | | | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | | | <input type="checkbox"/> Wetland Non-Vascular Plants ¹ | | | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | | | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | | | | | | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | | | | | | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | | | | | | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | | | | | | | |
| = Total Cover | | | | | | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | | | | | | | |
| = Total Cover | | | | | | | | | |
| % Bare Ground in Herb Stratum: 2 | | | | | | | | | |

Remarks:
 Carex sp. assumed to be FACW.

Western Mountains, Valleys, and Coast Region -- Interim version

Soil

Sampling Point: 26A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|------|-------------------|------------------|---|---|--------------|---------------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-7 | 10YR | 2/1 | 100% | | | | | | Clay Loam | |
| 7-10 | 10YR | 4/2 | 90% | 10YR | 2/1 | 10% | C | M | Silty Clay | Mn SOFT MASSES |
| 10-12 | 2.5Y | 3/2 | 100% | | | | | | Sand | |
| 12-16 | 2.5Y | 5/3 | 100% | | | | | | GRAVEL SMALL | BREAKS APART WHEN CRUSHED |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ROCK

Depth (inches): 16

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDRIC SOILS ASSUMED BASED ON HYDROLOGY.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☒ No ☐

Depth (inches): 16

Saturation Present? (includes capillary fringe) Yes ☒ No ☐

Depth (inches): 3

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

| | | | | | |
|---|--|--|--|-----------------------------------|--|
| Project/Site: <u>DESCHUTES LWI</u> | | City/County: <u>SUNRIVER/DESCHUTES</u> | | Sampling Date: <u>23-Jun-10</u> | |
| Applicant/Owner: <u>DESCHUTES COUNTY</u> | | State: <u>OR</u> | | Sampling Point: <u>SP 27A</u> | |
| Investigator(s): <u>ALISON SIGLER, SARAH HARTUNG</u> | | Section, Township, Range: <u>S 25</u> <u>T 22 S</u> <u>R 9 E</u> | | | |
| Landform (hillslope, terrace, etc.): <u>Floodplain</u> | | Local relief (concave, convex, none): <u>convex</u> | | Slope: <u>0.0%</u> / <u>0.0</u> ° | |
| Subregion (LRR): <u>LRR A</u> | | Lat.: <u>43.6453</u> | | Long.: <u>-121.5919</u> | |
| | | | | Datum: <u>NAD83</u> | |
| Soil Map Unit Name: <u>29A: Cryaquolls, 0 to 3 percent slopes</u> | | | | NW1 classification: <u>PSSC</u> | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input style="width: 50px;" type="text"/>) | Absolute % Cover | Dominant Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------|---|------------------|--|--|----|-------|----|--------------|----|-------|-----|-------------|---|-------|---|--------------|---|-------|---|-------------|---|-------|---|-----------------|-----|-----|---------|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: 3 (A) | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: 3 (B) | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | = Total Cover | | Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B) | | | | | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <input style="width: 50px;" type="text"/>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. <i>Salix exigua</i> | 25 | <input checked="" type="checkbox"/> 71.4% | OBL | Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> Total % Cover of: Multiply by: </div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">OBL species</td> <td style="width: 10%; text-align: center;">25</td> <td style="width: 10%; text-align: center;">x 1 =</td> <td style="width: 50%; text-align: center;">25</td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">90</td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;">180</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">0</td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">0</td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Column Total s:</td> <td style="text-align: center;">115</td> <td style="text-align: center;">(A)</td> <td style="text-align: center;">205 (B)</td> </tr> </table> <p style="text-align: right;">Prevalence Index = B/A = <u>1.783</u></p> | OBL species | 25 | x 1 = | 25 | FACW species | 90 | x 2 = | 180 | FAC species | 0 | x 3 = | 0 | FACU species | 0 | x 4 = | 0 | UPL species | 0 | x 5 = | 0 | Column Total s: | 115 | (A) | 205 (B) |
| OBL species | 25 | x 1 = | 25 | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACW species | 90 | x 2 = | 180 | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAC species | 0 | x 3 = | 0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACU species | 0 | x 4 = | 0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| UPL species | 0 | x 5 = | 0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Column Total s: | 115 | (A) | 205 (B) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. <i>Spiraea</i> sp. | 10 | <input checked="" type="checkbox"/> 28.6% | FACW | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 35 | = Total Cover | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <input style="width: 50px;" type="text"/>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. <i>Phalaris arundinacea</i> | 5 | <input type="checkbox"/> 6.3% | FACW | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. <i>Carex</i> sp. | 75 | <input checked="" type="checkbox"/> 93.8% | FACW | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 80 | = Total Cover | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <input style="width: 50px;" type="text"/>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | = Total Cover | | | | | | | | | | | | | | | | | | | | | | | | | | |

% Bare Ground in Herb Stratum:

Remarks:
Carex sp. and Spiraea sp. assumed to be FACW.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 27A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|-------|-------------------|------------------|---|---|-----------------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | | | |
| 0-4 | 10YR | 3/2 | 100% | | | | | | Silty Sand | |
| 4-20 | 10YR | 3/1 | 80% | 7.5YR | 3/1 | 20% | C | M | Sandy Clay Loam | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> FAC-neutral Test (D5) |
| <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Frost Heave Hummocks (D7) |

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 23-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 28A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 24 T 22 S R 9 E
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave Slope: 2.0% / 1.1 °
 Subregion (LRR): LRR A Lat.: 43.6455 Long.: -121.5918 Datum: NAD83
 Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: OFF-SITE DETERMINATION | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Dominant Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|--|------------------|---|
| 1. Pinus contorta | 10 | <input checked="" type="checkbox"/> 100.0% | FAC | Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A) |
| 2. | 0 | <input type="checkbox"/> 0.0% | | Total Number of Dominant Species Across All Strata: <u>4</u> (B) |
| 3. | 0 | <input type="checkbox"/> 0.0% | | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. | 0 | <input type="checkbox"/> 0.0% | | |
| 10 = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | Prevalence Index worksheet: |
| 1. Salix exigua | 75 | <input checked="" type="checkbox"/> 100.0% | OBL | Total % Cover of: <u>95</u> Multiply by: <u>x 1 = 95</u> |
| 2. | 0 | <input type="checkbox"/> 0.0% | | OBL species <u>95</u> x 1 = <u>95</u> |
| 3. | 0 | <input type="checkbox"/> 0.0% | | FACW species <u>80</u> x 2 = <u>160</u> |
| 4. | 0 | <input type="checkbox"/> 0.0% | | FAC species <u>10</u> x 3 = <u>30</u> |
| 5. | 0 | <input type="checkbox"/> 0.0% | | FACU species <u>0</u> x 4 = <u>0</u> |
| 75 = Total Cover | | | | UPL species <u>0</u> x 5 = <u>0</u> |
| Herb Stratum (Plot size: <input type="text"/>) | | | | Col umn Total s: <u>185</u> (A) <u>285</u> (B) |
| 1. Phalaris arundinacea | 80 | <input checked="" type="checkbox"/> 80.0% | FACW | Prevalence Index = B/A = <u>1.541</u> |
| 2. Carex aquatilis | 20 | <input checked="" type="checkbox"/> 20.0% | OBL | |
| 3. | 0 | <input type="checkbox"/> 0.0% | | |
| 4. | 0 | <input type="checkbox"/> 0.0% | | |
| 5. | 0 | <input type="checkbox"/> 0.0% | | |
| 6. | 0 | <input type="checkbox"/> 0.0% | | |
| 7. | 0 | <input type="checkbox"/> 0.0% | | |
| 8. | 0 | <input type="checkbox"/> 0.0% | | |
| 9. | 0 | <input type="checkbox"/> 0.0% | | |
| 10. | 0 | <input type="checkbox"/> 0.0% | | |
| 11. | 0 | <input type="checkbox"/> 0.0% | | |
| 100 = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | |
| 1. | 0 | <input type="checkbox"/> 0.0% | | |
| 2. | 0 | <input type="checkbox"/> 0.0% | | |
| 0 = Total Cover | | | | |
| % Bare Ground in Herb Stratum: <u>0</u> | | | | |
| Remarks: | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 28A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

ASSUMED HYDRIC SOILS BASED ON HYDROLOGY

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:Surface Water Present? Yes ☒ No ☐Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

Assumed there was 2 inches of surface water at sample plot based on close visual field observations of wetland.

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 24-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 29A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 24 T 22 S R 9 E
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave Slope: 1.0% / 0.6 °
 Subregion (LRR): LRR A Lat.: 43.6455 Long.: -121.5918 Datum: NAD83
 Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel. Strat. Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
|--|------------------|--|-------------------|------------------|--|
| 1. <u>Pinus contorta</u> | <u>2</u> | <input checked="" type="checkbox"/> 100.0% | | <u>FAC</u> | |
| 2. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 3. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 4. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>35</u> x 1 = <u>35</u> FACW species <u>70</u> x 2 = <u>140</u> FAC species <u>2</u> x 3 = <u>6</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>107</u> (A) <u>181</u> (B) Prevalence Index = B/A = <u>1.692</u> |
| 1. <u>Salix exigua</u> | <u>5</u> | <input checked="" type="checkbox"/> 100.0% | | <u>OBL</u> | |
| 2. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 3. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 4. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 5. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| Herb Stratum (Plot size: <input type="text"/>) | | | | | |
| 1. <u>Phalaris arundinacea</u> | <u>50</u> | <input checked="" type="checkbox"/> 50.0% | | <u>FACW</u> | |
| 2. <u>Myosotis laxa</u> | <u>5</u> | <input type="checkbox"/> 5.0% | | <u>OBL</u> | |
| 3. <u>Alopecurus pratensis</u> | <u>20</u> | <input checked="" type="checkbox"/> 20.0% | | <u>FACW</u> | |
| 4. <u>Carex aquatilis</u> | <u>25</u> | <input checked="" type="checkbox"/> 25.0% | | <u>OBL</u> | |
| 5. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 6. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 7. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 8. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 9. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 10. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 11. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | | |
| 1. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 2. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| % Bare Ground in Herb Stratum: <u>0</u> | | | | | |

Hydrophytic Vegetation Indicators:
☒ Dominance Test is > 50%
☒ Prevalence Index is ≤ 3.0¹
☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Wetland Non-Vascular Plants¹
☐ Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 29A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | | Redox Features | | | | | Texture | Remarks |
|-------------------|---------------|-----|-----|----------------|-----|-----|-------------------|------------------|-----------|-------------------|
| | Color (moist) | | % | Color (moist) | | % | Type ¹ | Loc ² | | |
| 0-10 | 10YR | 3/1 | 90% | 10YR | 3/4 | 10% | C | PL | Loam | |
| 10-20 | 10YR | 4/1 | 75% | 10YR | 3/6 | 25% | C | M | Silt Loam | w/ 20% fi ne sand |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

profile at 10-20 inches has concentrations in the pore linings too.

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry Season Water Table (C2) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> FAC-neutral Test (D5) |
| <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Frost Heave Hummocks (D7) |

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 24-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 30A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 18 T 22 S R 10 E
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): flat Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.6688 Long.: -121.5714 Datum: NAD83
 Soil Map Unit Name: 114C: Shanahan loamy coarse sand, 0 to 15 percent slopes NWI classification: _____

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: Off-site sample plot | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: |
|--|------------------|--|-------------------|---|
| 1. Pinus contorta | 5 | <input checked="" type="checkbox"/> 100.0% | FAC | Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 2. | 0 | <input type="checkbox"/> 0.0% | | |
| 3. | 0 | <input type="checkbox"/> 0.0% | | |
| 4. | 0 | <input type="checkbox"/> 0.0% | | |
| | | | 5 = Total Cover | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | 0 | <input type="checkbox"/> 0.0% | | Prevalence Index worksheet: Total % Cover of: <u>0</u> Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>80</u> x 2 = <u>160</u> FAC species <u>25</u> x 3 = <u>75</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Total s: <u>105</u> (A) <u>235</u> (B) Prevalence Index = B/A = <u>2.238</u> |
| 1. | 0 | <input type="checkbox"/> 0.0% | | |
| 2. | 0 | <input type="checkbox"/> 0.0% | | |
| 3. | 0 | <input type="checkbox"/> 0.0% | | |
| 4. | 0 | <input type="checkbox"/> 0.0% | | |
| 5. | 0 | <input type="checkbox"/> 0.0% | | |
| | | | 0 = Total Cover | |
| Herb Stratum (Plot size: <input type="text"/>) | 60 | <input checked="" type="checkbox"/> 60.0% | FACW | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. Phalaris arundinacea | 20 | <input checked="" type="checkbox"/> 20.0% | FAC | |
| 2. Poa sp. | 20 | <input checked="" type="checkbox"/> 20.0% | FACW | |
| 3. Juncus balticus | 0 | <input type="checkbox"/> 0.0% | | |
| 4. | 0 | <input type="checkbox"/> 0.0% | | |
| 5. | 0 | <input type="checkbox"/> 0.0% | | |
| 6. | 0 | <input type="checkbox"/> 0.0% | | |
| 7. | 0 | <input type="checkbox"/> 0.0% | | |
| 8. | 0 | <input type="checkbox"/> 0.0% | | |
| 9. | 0 | <input type="checkbox"/> 0.0% | | |
| 10. | 0 | <input type="checkbox"/> 0.0% | | |
| 11. | 0 | <input type="checkbox"/> 0.0% | | |
| | | | 100 = Total Cover | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | 0 | <input type="checkbox"/> 0.0% | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 1. | 0 | <input type="checkbox"/> 0.0% | | |
| 2. | 0 | <input type="checkbox"/> 0.0% | | |
| | | | 0 = Total Cover | |
| % Bare Ground in Herb Stratum: <u>0</u> | | | | |
| Remarks: Poa sp. assumed FAC. | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 30A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

ASSUMED HYDRIC BASED ON HYDROLOGY

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☐ No ☒Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

ASSUME SATURATION BASED ON ROBUST AND VIBRANT GREEN GRASS

| | | | | | |
|--|--|--|--|--------------------------|--|
| Project/Site: DESCHUTES LWI | | City/County: SUNRIVER/DESCHUTES | | Sampling Date: 24-Jun-10 | |
| Applicant/Owner: DESCHUTES COUNTY | | State: OR | | Sampling Point: SP 31A | |
| Investigator(s): ALISON SIGLER, SARAH HARTUNG | | Section, Township, Range: S 10 T 21 S R 10 E | | | |
| Landform (hillslope, terrace, etc.): Floodplain | | Local relief (concave, convex, none): flat | | Slope: 0.0% / 0.0 ° | |
| Subregion (LRR): LRR A | | Lat.: 43.7703 | | Long.: -121.5249 | |
| | | | | Datum: NAD83 | |
| Soil Map Unit Name: 144A: Sunriver sandy loam, 0 to 3 percent slopes | | | | NWI classification: PEMC | |

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

| | |
|--|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Remarks: On-site, located in state park, no digging allowed without a state cultural resource permit. | |

| Tree Stratum (Plot size: <input style="width: 50px;" type="text"/>) | Absolute % Cover | Species? Rel.Strat. Cover | Indicator Status | Dominance Test worksheet: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------|--|------------------|--|--------------|-------------|----|-------|----|--------------|-----|-------|-----|-------------|---|-------|---|--------------|---|-------|---|-------------|---|-------|---|-----------------|-----|-----|---------|--|--|--|--|
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Number of Dominant Species That are OBL, FACW, or FAC: | 3 (A) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Total Number of Dominant Species Across All Strata: | 3 (B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: | 100.0% (A/B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | = Total Cover | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <input style="width: 50px;" type="text"/>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Salix exigua | 40 | <input checked="" type="checkbox"/> 100.0% | OBL | Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> Total % Cover of: Multiply by: </div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td>OBL species</td> <td style="text-align: center;">40</td> <td>x 1 =</td> <td style="text-align: center;">40</td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">100</td> <td>x 2 =</td> <td style="text-align: center;">200</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">0</td> <td>x 3 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">0</td> <td>x 4 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td>x 5 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Column Total s:</td> <td style="text-align: center;">140</td> <td>(A)</td> <td style="text-align: center;">240 (B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = 1.714</td> </tr> </table> | | OBL species | 40 | x 1 = | 40 | FACW species | 100 | x 2 = | 200 | FAC species | 0 | x 3 = | 0 | FACU species | 0 | x 4 = | 0 | UPL species | 0 | x 5 = | 0 | Column Total s: | 140 | (A) | 240 (B) | Prevalence Index = B/A = 1.714 | | | |
| OBL species | 40 | x 1 = | 40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACW species | 100 | x 2 = | 200 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAC species | 0 | x 3 = | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACU species | 0 | x 4 = | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UPL species | 0 | x 5 = | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Column Total s: | 140 | (A) | 240 (B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = 1.714 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 40 | = Total Cover | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <input style="width: 50px;" type="text"/>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Carex sp. | 80 | <input checked="" type="checkbox"/> 80.0% | FACW | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Veratrum californicum | 20 | <input checked="" type="checkbox"/> 20.0% | FACW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 100 | = Total Cover | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <input style="width: 50px;" type="text"/>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | <input type="checkbox"/> 0.0% | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | = Total Cover | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Bare Ground in Herb Stratum: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Remarks: Carex sp. assumed to be FACW. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Western Mountains, Valleys, and Coast Region -- Interim version

Soil

Sampling Point: 31A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

ASSUMED HYDRIC HYDRICS BASED ON HYDROLOGY

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:Surface Water Present? Yes ☒ No ☐Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☒ No ☐Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 24-Jun-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 32A
 Investigator(s): ALISON SIGLER, SARAH HARTUNG Section, Township, Range: S 10 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.7703 Long.: -121.5248 Datum: NAD83
 Soil Map Unit Name: 29A: Cryaquolls, 0 to 3 percent slopes NWI classification: PSSC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

Summary of Findings - Attach site map showing sampling point locations, transects, important features, et

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| Remarks: OFF-SITE DETERMINATION | |

VEGETATION - Use scientific names of plants.

| Tree Stratum (Plot size: <input type="text"/>) | Absolute % Cover | Rel. Strat. Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
|---|------------------|--|-------------------|------------------|--|
| 1. <u>Pinus contorta</u> | <u>5</u> | <input checked="" type="checkbox"/> 100.0% | | <u>FAC</u> | |
| 2. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 3. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 4. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| Sapling/Shrub Stratum (Plot size: <input type="text"/>) | | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>115</u> (A) <u>225</u> (B) Prevalence Index = B/A = <u>1.957</u> |
| 1. <u>Salix exigua</u> | <u>10</u> | <input checked="" type="checkbox"/> 100.0% | | <u>OBL</u> | |
| 2. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 3. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 4. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 5. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| Herb Stratum (Plot size: <input type="text"/>) | | | | | |
| 1. <u>Carex sp.</u> | <u>80</u> | <input checked="" type="checkbox"/> 80.0% | | <u>FACW</u> | |
| 2. <u>Juncus balticus</u> | <u>20</u> | <input checked="" type="checkbox"/> 20.0% | | <u>FACW</u> | |
| 3. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 4. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 5. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 6. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 7. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 8. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 9. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 10. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 11. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| Woody Vine Stratum (Plot size: <input type="text"/>) | | | | | |
| 1. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| 2. _____ | <u>0</u> | <input type="checkbox"/> 0.0% | | | |
| <u>0</u> = Total Cover | | | | | |
| % Bare Ground in Herb Stratum: <u>0</u> | | | | | |
| Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | |
| Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> | | | | | |
| Remarks: Carex sp. assumed to be FACW. | | | | | |

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS

Soil

Sampling Point: 32A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
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| | | | | | | | | |

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (except in MLRA 1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Muck Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox depressions (F8) |

Indicators for Problematic Hydric Soils:³

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

ASSUMED HYDRIC SOILS BASED ON HYDROLOGY

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

Secondary Indicators (minimum of two required)

- ☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (LRR A)
- ☐ Frost Heave Hummocks (D7)

Field Observations:Surface Water Present? Yes ☐ No ☒Depth (inches): Water Table Present? Yes ☐ No ☒Depth (inches): Saturation Present? (includes capillary fringe) Yes ☐ No ☒Depth (inches): Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:

Remarks: