

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deschutes County LWI City/County: Sunriver/Deschutes Sampling Date: 05-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 203
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 7 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope: 2.0% / 1.1 °
Subregion (LRR): LRR B Lat.: 43.8627 Long.: -121.4600 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: 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>3</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>3</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>	50	<input checked="" type="checkbox"/> 62.5%	FACW	Total % Cover of: _____ Multiply by: _____
2. <u>Spiraea douglasii</u>	30	<input checked="" type="checkbox"/> 37.5%	FACW	OBL species <u>40</u> x 1 = <u>40</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>0</u> x 3 = <u>0</u>
5. _____	0	<input type="checkbox"/> 0.0%	_____	FACU species <u>0</u> x 4 = <u>0</u>
	80	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>
Herb Stratum (Plot size: <input type="text"/>)				Column Totals: <u>120</u> (A) <u>200</u> (B)
1. <u>Carex aquatilis</u>	40	<input checked="" type="checkbox"/> 100.0%	OBL	Prevalence Index = B/A = <u>1.667</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%	_____	
	40	= 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		
% Bare Ground in Herb Stratum: 0		% Cover of Biotic Crust 0		
Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>				

Remarks:
60% SURFACE WATER

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

Soil

Sampling Point: SP 203

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	100%				Mucky silt	
8-20	10YR	3/1	100%				Sandy Clay Loam	

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):

1

Water Table Present?

Yes ☒

No ☐

Depth (inches):

0

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:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deachutes County LWI City/County: Sunriver/Deschutes Sampling Date: 05-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 205
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 6 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8695 Long.: -121.4610 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 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. _____	_____	<input type="checkbox"/> 0.0%	_____	Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	<input type="checkbox"/> 0.0%	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	<input type="checkbox"/> 0.0%	_____	Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
4. _____	<u>0</u>	<input type="checkbox"/> 0.0%	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <input type="text"/>)				Prevalence Index worksheet:
1. _____	<u>0</u>	<input type="checkbox"/> 0.0%	_____	Total % Cover of: _____ Multiply by: _____
2. _____	<u>0</u>	<input type="checkbox"/> 0.0%	_____	OBL species <u>95</u> x <u>1</u> = <u>95</u>
3. _____	<u>0</u>	<input type="checkbox"/> 0.0%	_____	FACW species <u>5</u> x <u>2</u> = <u>10</u>
4. _____	<u>0</u>	<input type="checkbox"/> 0.0%	_____	FAC species <u>0</u> x <u>3</u> = <u>0</u>
5. _____	<u>0</u>	<input type="checkbox"/> 0.0%	_____	FACU species <u>0</u> x <u>4</u> = <u>0</u>
	<u>0</u>	= Total Cover		UPL species <u>0</u> x <u>5</u> = <u>0</u>
Herb Stratum (Plot size: <input type="text"/>)				Column Totals: <u>100</u> (A) <u>105</u> (B)
1. <u>Carex aquatilis</u>	<u>90</u>	<input checked="" type="checkbox"/> 90.0%	OBL	Prevalence Index = B/A = <u>1.050</u>
2. <u>Juncus balticus</u>	<u>5</u>	<input type="checkbox"/> 5.0%	FACW	
3. <u>Typha latifolia</u>	<u>5</u>	<input type="checkbox"/> 5.0%	OBL	
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"/>)				
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> % Cover of Biotic Crust <u>0</u>				

Remarks:

Carex dominant through majority of wetland, small clumps dominated by other two species

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

Soil

Sampling Point: SP 205

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		

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:

no access - hydric soils assumed based on OBL dominant veg.

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:

Aerial photos

Remarks:

no access - hydrology assumed based on aerial photo, landscape position, and observations of adjacent river elevation [approx. At wetland elevation]

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deschutes County LWI City/County: Sunriver/Deschutes Sampling Date: 05-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 206
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 6 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope: 1.0% / 0.6 °
Subregion (LRR): LRR B Lat.: 43.8764 Long.: -121.4601 Datum: NAD 83
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, 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 determination. Area contains hydrophytic veg, wetland hydrology observed from aerial photos and veg., hydric soils assumed [no access]	

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>95</u> x 1 = <u>95</u>
3. _____	0	<input type="checkbox"/> 0.0%		FACW species <u>5</u> x 2 = <u>10</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>105</u> (B)
1. <u>Carex aquatilis</u>	65	<input checked="" type="checkbox"/> 65.0%	OBL	Prevalence Index = B/A = <u>1.050</u>
2. <u>Typha latifolia</u>	30	<input checked="" type="checkbox"/> 30.0%	OBL	
3. <u>Juncus balticus</u>	5	<input type="checkbox"/> 5.0%	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"/>)				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)

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:
Carex and Typha dominated, patches of Salix throughout. Mostly on edges.

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

Soil

Sampling Point: SP 206

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		

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:
no access - hydric soils assumed based on OBL dominant veg.

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)

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☐ Hydrogen Sulfide Odor (C1)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Presence of Reduced Iron (C4)

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☐ Thin Muck Surface (C7)

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☐ 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:

Aerial photo

Remarks:
no access - hydrology assumed based on aerial photo, landscape position, and observations of adjacent river elevation [wetland outlet near river elevation wetland elevation]

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 207
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 6 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope: 0.5% / 0.3 °
Subregion (LRR): LRR B Lat.: 43.8769 Long.: -121.4628 Datum: NAD 83
Soil Map Unit Name: Not available 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, 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 determination. Area contains hydrophytic veg, wetland hydrology observed from aerial photos and veg., hydric soils assumed [no access].	

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>	100	<input checked="" type="checkbox"/> 100.0%	FACW	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>100</u> x 2 = <u>200</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>
	100	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>
Herb Stratum (Plot size: <input type="text"/>)				Column Totals: <u>200</u> (A) <u>300</u> (B)
1. <u>Carex aquatilis</u>	100	<input checked="" type="checkbox"/> 100.0%	OBL	Prevalence Index = B/A = <u>1.500</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		
% Bare Ground in Herb Stratum: 0		% Cover of Biotic Crust 0		Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>

Remarks:

Several lone pines observed, however PSS is Salix dominated.

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

Soil

Sampling Point: SP 207

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		

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:

no access - hydric soils assumed based on FAC and wetter dominant veg.

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:

Aerial photo

Remarks:

no access - hydrology assumed based on aerial photo, landscape position, and observations of adjacent river elevation [approx. At wetland elevation]

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deachutes County LWI City/County: Sunriver/Deschutes Sampling Date: 05-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 208
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 1 T 20 S R 10 E
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): flat Slope: 1.0% / 0.6 °
Subregion (LRR): LRR B Lat.: 43.8694 Long.: -121.4691 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: Off-site determination.	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species? Rel. Strat. Cover	Indicator Status	Dominance Test worksheet:
1. <u>Pinus contorta</u>	<u>2</u>	<input checked="" type="checkbox"/> 100.0%	<u>FAC</u>	Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	<u>0</u>	<input type="checkbox"/> 0.0%		
3. _____	<u>0</u>	<input type="checkbox"/> 0.0%		Total Number of Dominant Species Across All Strata: <u>3</u> (B)
4. _____	<u>0</u>	<input type="checkbox"/> 0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
	<u>2</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species? Rel. Strat. Cover	Indicator Status	Prevalence Index worksheet:
1. <u>Salix geyeriana</u>	<u>60</u>	<input checked="" type="checkbox"/> 100.0%	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____
2. _____	<u>0</u>	<input type="checkbox"/> 0.0%		OBL species <u>80</u> x 1 = <u>80</u>
3. _____	<u>0</u>	<input type="checkbox"/> 0.0%		FACW species <u>60</u> x 2 = <u>120</u>
4. _____	<u>0</u>	<input type="checkbox"/> 0.0%		FAC species <u>2</u> x 3 = <u>6</u>
5. _____	<u>0</u>	<input type="checkbox"/> 0.0%		FACU species <u>0</u> x 4 = <u>0</u>
	<u>60</u>	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species? Rel. Strat. Cover	Indicator Status	Column Totals: <u>142</u> (A) <u>206</u> (B)
1. <u>Carex aquatilis</u>	<u>80</u>	<input checked="" type="checkbox"/> 100.0%	<u>OBL</u>	Prevalence Index = B/A = <u>1.451</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%		
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>80</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species? Rel. Strat. Cover	Indicator Status	
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>20</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

Several lone pines observed, however PSS wetland is Salix dominated w/ Carex dominant herb layer

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

Soil

Sampling Point: SP 208

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		

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:

no access - hydric soils assumed based on FAC and wetter dominant veg.

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):

Wetland Hydrology Present? Yes ☒ No ☐

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

Aerial photo

Remarks:

no access - hydrology assumed based on aerial photo, landscape position, and observations of adjacent channel elevation [approx. At wetland elevation]

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deachutes County LWI City/County: Sunriver/Deschutes Sampling Date: 05-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 209
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 7 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope: 1.0% / 0.6 °
Subregion (LRR): LRR B Lat.: 43.8571 Long.: -121.4574 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
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 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. <u>Pinus contorta</u>	3	<input checked="" type="checkbox"/> 100.0%	FAC	Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)
2. <u></u>	0	<input type="checkbox"/> 0.0%		Total Number of Dominant Species Across All Strata: <u>3</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%		
	3	= Total Cover		
Sapling/Shrub Stratum (Plot size: <input type="text"/>)				Prevalence Index worksheet:
1. <u>Salix geyeriana</u>	5	<input checked="" type="checkbox"/> 100.0%	FACW	Total % Cover of: <u>100</u> Multiply by: <u>1</u>
2. <u></u>	0	<input type="checkbox"/> 0.0%		OBL species <u>100</u> x 1 = <u>100</u>
3. <u></u>	0	<input type="checkbox"/> 0.0%		FACW species <u>5</u> x 2 = <u>10</u>
4. <u></u>	0	<input type="checkbox"/> 0.0%		FAC species <u>3</u> x 3 = <u>9</u>
5. <u></u>	0	<input type="checkbox"/> 0.0%		FACU species <u>0</u> x 4 = <u>0</u>
	5	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>
Herb Stratum (Plot size: <input type="text"/>)				Column Totals: <u>108</u> (A) <u>119</u> (B)
1. <u>Carex aquatilis</u>	90	<input checked="" type="checkbox"/> 90.0%	OBL	Prevalence Index = B/A = <u>1.102</u>
2. <u>Carex nebrascensis</u>	10	<input type="checkbox"/> 10.0%	OBL	
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"/>)				Hydrophytic Vegetation Indicators:
1. <u></u>	0	<input type="checkbox"/> 0.0%		<input checked="" type="checkbox"/> Dominance Test is > 50%
2. <u></u>	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>0</u>	% Cover of Biotic Crust <u>0</u>			<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (plain)

Remarks:

Carex dominant through majority of wetland, individual Salix and Pinus as well.

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

Soil

Sampling Point: SP 209

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		

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:
no access - hydric soils assumed based on OBL dominant veg.

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:

Aerial photo

Remarks:
no access - hydrology assumed based on aerial photo, landscape position, and observations of adjacent river elevation [approx. At wetland elevation]

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deachutes County LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 210
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 7 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave Slope: 1.0% / 0.6 °
Subregion (LRR): LRR B Lat.: 43.8599 Long.: -121.4570 Datum: NAD 83
Soil Map Unit Name: W: Water 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. _____	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 210

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	2/2	100%				Silt Loam	w/ roots
5-20	10YR	2/1	100%				Silt	

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 PERSISTANT 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): 10

Depth (inches): 4

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: Deachutes County LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 212
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 7 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope: 1.0% / 0.6 °
Subregion (LRR): LRR B Lat.: 43.8538 Long.: -121.4587 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
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 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>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>80</u> x 1 = <u>80</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>100</u> (A) <u>120</u> (B)
1. <u>Carex aquatilis</u>	80	<input checked="" type="checkbox"/> 80.0%	OBL	Prevalence Index = B/A = <u>1.200</u>
2. <u>Juncus balticus</u>	20	<input checked="" type="checkbox"/> 20.0%	FACW	
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 212

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		

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 BASED ON PERSISTANT 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:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deachutes County LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 213
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 7 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope: 1.0% / 0.6 °
Subregion (LRR): LRR B Lat.: 43.8529 Long.: -121.4592 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
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 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%	_____	
	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>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. Typha latifolia	10	<input type="checkbox"/> 10.0% OBL	_____	Prevalence Index = B/A = <u>1.000</u>
2. Carex aquatilis	90	<input checked="" type="checkbox"/> 90.0% 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%	_____	
	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 213

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		

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:

ASSUME HYDRIC SOILS BASED ON AERIAL MAP AND LANDSCAPE POSITION

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:

Aerial Photo

Remarks:

ASSUME HYDROLOGY BASED ON LOW ELEVATION AND PROXIMITY TO THE RIVER

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deachutes County LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 214
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 18 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): flat Slope: 1.0% / 0.6 °
Subregion (LRR): LRR B Lat.: 43.8464 Long.: -121.4595 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: 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>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>3</u> (B)
4. _____	0	<input type="checkbox"/> 0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)
	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: _____ Multiply by: _____
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>40</u> x 2 = <u>80</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>
	10	= 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>140</u> (B)
1. <u>Carex aquatilis</u>	60	<input checked="" type="checkbox"/> 60.0%	OBL	Prevalence Index = B/A = <u>1.400</u>
2. <u>Juncus balticus</u>	40	<input checked="" type="checkbox"/> 40.0%	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			

Remarks:

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

Soil

Sampling Point: SP 214

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	3/2	100%						Loam	duff
2-8	10YR	3/2	100%						Silt	decaying sedge material
8-20	10YR	3/1	80%	10YR	3/4	20%	C	PL	Clay Loam	

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):

0

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks: SATURATION AT SURFACE

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deachutes County LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 217
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 19 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): convex Slope: 2.0% / 1.1 °
Subregion (LRR): LRR B Lat.: 43.8323 Long.: -121.4481 Datum: NAD 83
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, 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 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>2</u> (B)
4. _____	0	<input type="checkbox"/> 0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: <input type="text"/>)				Prevalence Index worksheet:
1. <u>Salix geyeriana</u>	50	<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 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>
	50	= 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%		Hydrophytic Vegetation Indicators:
4. _____	0	<input type="checkbox"/> 0.0%		<input 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%		
	90	= 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: 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 217

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		

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:
ASSUME HYDRIC SOILS BASED ON HYDROLOGY INDICATOR.

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)

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☐ 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:
Aerial photo

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deachutes County LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 218
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 19 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): convex Slope: 2.0% / 1.1 °
Subregion (LRR): LRR B Lat.: 43.8320 Long.: -121.4481 Datum: NAD 83
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, 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 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>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>	30	<input checked="" type="checkbox"/> 85.7%	FACW	Total % Cover of: _____ Multiply by: _____
2. <u>Spiraea douglasii</u>	5	<input type="checkbox"/> 14.3%	FACW	OBL species <u>50</u> x 1 = <u>50</u>
3. _____	0	<input type="checkbox"/> 0.0%	_____	FACW species <u>35</u> x 2 = <u>70</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>
	35	= 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>120</u> (B)
1. <u>Carex aquatilis</u>	50	<input checked="" type="checkbox"/> 100.0%	OBL	Prevalence Index = B/A = <u>1.412</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%	_____	
	50	= 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		
% Bare Ground in Herb Stratum: 50		% Cover of Biotic Crust 0		
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: SP 218

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		

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:
 ASSUME HYDRIC SOILS BASED ON HYDROLOGY INDICATORS.

Hydrology

Wetland Hydrology Indicators:

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

☐ Surface Water (A1)
 ☐ Salt Crust (B11)

☐ High Water Table (A2)
 ☐ Biotic Crust (B12)

☐ Saturation (A3)
 ☐ Aquatic Invertebrates (B13)

☐ Water Marks (B1) (Nonriverine)
 ☐ Hydrogen Sulfide Odor (C1)

☐ Sediment Deposits (B2) (Nonriverine)
 ☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Drift deposits (B3) (Nonriverine)
 ☐ Presence of Reduced Iron (C4)

☐ Surface Soil Cracks (B6)
 ☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Inundation Visible on Aerial Imagery (B7)
 ☐ Thin Muck Surface (C7)

☐ Water-Stained Leaves (B9)
 ☐ 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: _____
 Aerial photo _____

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deachutes County LWI City/County: Sunriver/Deschutes Sampling Date: 07-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 221
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 31 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): flat Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8016 Long.: -121.4593 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 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>2</u> (B)
4. _____	0	<input type="checkbox"/> 0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: <input type="text"/>)				Prevalence Index worksheet:
1. <u>Salix geyeriana</u>	2	<input checked="" type="checkbox"/> 100.0%		Total % Cover of: _____ Multiply by: _____
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>5</u> x 2 = <u>10</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>
	2	= 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>105</u> (B)
1. <u>Carex aquatilis</u>	95	<input checked="" type="checkbox"/> 95.0%	OBL	Prevalence Index = B/A = <u>1.050</u>
2. <u>Juncus balticus</u>	5	<input type="checkbox"/> 5.0%	FACW	
3. _____	0	<input type="checkbox"/> 0.0%		Hydrophytic Vegetation Indicators:
4. _____	0	<input type="checkbox"/> 0.0%		<input 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 221

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		

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:

ASSUME HYDRIC SOILS BASED ON WETLAND HYDROLOGY INDICATORS AND HYDROPHYTIC VEGETATION.

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:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deachutes County LWI City/County: Sunriver/Deschutes Sampling Date: 07-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 222
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 31 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): flat Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8014 Long.: -121.4588 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 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:	

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. _____	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>20</u> x 2 = <u>40</u>
4. _____	0	<input type="checkbox"/> 0.0%	_____	FAC species <u>50</u> x 3 = <u>150</u>
5. _____	0	<input type="checkbox"/> 0.0%	_____	FACU species <u>30</u> x 4 = <u>120</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>310</u> (B)
1. Poa sp.	50	<input checked="" type="checkbox"/> 50.0%	FAC	Prevalence Index = B/A = <u>3.100</u>
2. Achillea millefolium	20	<input checked="" type="checkbox"/> 20.0%	FACU	
3. Juncus balticus	20	<input checked="" type="checkbox"/> 20.0%	FACW	
4. Taraxacum officinale	10	<input type="checkbox"/> 10.0%	FACU	
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			

Remarks:

Poa sp. assumed FAC.

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

Soil

Sampling Point: SP 222

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%				Silt Loam	

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:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deachutes County LWI City/County: Deschutes Sampling Date: 07-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: 223
Investigator(s): Sarah Hartung, Aaron Booy Section, Township, Range: S 31 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): convex Slope: 1.0% / 0.6 °
Subregion (LRR): LRR B Lat.: 43.8000 Long.: -121.4545 Datum: NAD 83
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, 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>3</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>3</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>	50	<input checked="" type="checkbox"/> 100.0%	FACW	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>50</u> x 2 = <u>100</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>
	50	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>
Herb Stratum (Plot size: <input type="text"/>)				Column Totals: <u>150</u> (A) <u>200</u> (B)
1. <u>Carex aquatilis</u>	60	<input checked="" type="checkbox"/> 60.0%	OBL	Prevalence Index = B/A = <u>1.333</u>
2. <u>Carex nebrascensis</u>	40	<input checked="" type="checkbox"/> 40.0%	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%		
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: 223

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	80%	7.5YR	4/6	20%	C	M	Loam	
7-20	10YR	3/1	70%	7.5YR	4/6	30%	C	M	Clay Loam	

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):

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 County LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 400
Investigator(s): John Gordon Section, Township, Range: S 34 T 20 S R 10 E
Landform (hillslope, terrace, etc.): oxbow Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.7908 Long.: -121.5198 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: In oxbow south of Fall 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. <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>Salix geyeriana</u>	15	<input checked="" type="checkbox"/> 60.0%	FACW	Total % Cover of: _____ Multiply by: _____
2. <u>Betula glandulosa</u>	10	<input checked="" type="checkbox"/> 40.0%	OBL	OBL species <u>100</u> x 1 = <u>100</u>
3. _____	0	<input type="checkbox"/> 0.0%		FACW species <u>15</u> x 2 = <u>30</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>
	25	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>
Herb Stratum (Plot size: <input type="text"/>)				Column Totals: <u>125</u> (A) <u>160</u> (B)
1. <u>Carex aquatilis</u>	80	<input checked="" type="checkbox"/> 88.9%	OBL	Prevalence Index = B/A = <u>1.280</u>
2. <u>Carex nebrascensis</u>	10	<input type="checkbox"/> 11.1%	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%		
	90	= 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:

about 10% openwater

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

Soil

Sampling Point: SP 400

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		
0-14	7.5YR	2.5/1	100%				organic	
14-20	7.5YR	3/2	100%				organic	

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:

Depths approximate; soil very wet and unconsolidated except 0-14" is very full of roots making extraction of sample difficult

Hydrology

Wetland Hydrology Indicators:

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

☒ Surface Water (A1)

☐ Salt Crust (B11)

☒ High Water Table (A2)

☐ Biotic Crust (B12)

☒ Saturation (A3)

☐ Aquatic Invertebrates (B13)

☐ Water Marks (B1) (Nonriverine)

☐ Hydrogen Sulfide Odor (C1)

☐ Sediment Deposits (B2) (Nonriverine)

☐ Oxidized Rhizospheres along Living Roots (C3)

☐ Drift deposits (B3) (Nonriverine)

☐ Presence of Reduced Iron (C4)

☐ Surface Soil Cracks (B6)

☐ Recent Iron Reduction in Plowed Soils (C6)

☐ Inundation Visible on Aerial Imagery (B7)

☐ Thin Muck Surface (C7)

☐ Water-Stained Leaves (B9)

☐ 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):

1

Water Table Present?

Yes ☒

No ☐

Depth (inches):

0

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 varies, to 2 inches deep to 1 inch near pit.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deschutes County LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 402
Investigator(s): John Gordon Section, Township, Range: S 30 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave Slope: 1.0% / 0.6 °
Subregion (LRR): LRR B Lat.: 43.8169 Long.: -121.4514 Datum: NAD 83
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, 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%		
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>	30	<input checked="" type="checkbox"/> 100.0%	FACW	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>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>110</u> (A) <u>140</u> (B)
1. <u>Carex aquatilis</u>	75	<input checked="" type="checkbox"/> 93.8%	OBL	Prevalence Index = B/A = <u>1.273</u>
2. <u>Carex nebrascensis</u>	5	<input type="checkbox"/> 6.3%	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%		
	80	= 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>20</u>	% Cover of Biotic Crust <u>0</u>			

Remarks:

Bare soil covered with litter. About 5% unvegetated open water in small patches.

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

Soil

Sampling Point: SP 402

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	7.5YR	2.5/2	100%						Sandy Loam	many roots
3-12	7.5YR	3/2	100%						Silt	
12-20	7.5YR	3/1	95%	7.5YR	3/3	5%	C	PL	Sandy Loam	

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:
ASSUME HYDRIC SOILS BASED PERSISTENT SATURATION.

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):

6

Depth (inches):

0

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:
Surface water with a depth of 6 inches was located several feet south of pit.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deschutes County LWI City/County: Sunriver/Deschutes Sampling Date: 06-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 403
Investigator(s): John Gordon Section, Township, Range: S 30 T 20 S R 11 E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8178 Long.: -121.4564 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 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: No access to wetland to the west. Vegetation community is similar, except it has large patches of Juncus balticus.	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:)	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: 1 (A)
2.	0	<input type="checkbox"/> 0.0%		
3.	0	<input type="checkbox"/> 0.0%		Total Number of Dominant Species Across All Strata: 2 (B)
4.	0	<input type="checkbox"/> 0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)
= Total Cover				
Sapling/Shrub Stratum (Plot size:)				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 35 x 2 = 70
4.	0	<input type="checkbox"/> 0.0%		FAC species 25 x 3 = 75
5.	0	<input type="checkbox"/> 0.0%		FACU species 30 x 4 = 120
= Total Cover				UPL species 0 x 5 = 0
Herb Stratum (Plot size:)				Column Totals: 90 (A) 265 (B)
1. Juncus balticus	35	<input checked="" type="checkbox"/> 38.9%	FACW	Prevalence Index = B/A = 2.944
2. Achillea millefolium	20	<input checked="" type="checkbox"/> 22.2%	FACU	
3. Poa sp.	15	<input type="checkbox"/> 16.7%	FAC	Hydrophytic Vegetation Indicators:
4. Taraxacum officinale	10	<input type="checkbox"/> 11.1%	FACU	<input type="checkbox"/> Dominance Test is > 50%
5. Agropyron repens	10	<input type="checkbox"/> 11.1%	FAC	<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:)				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: 10	% Cover of Biotic Crust 0			

Remarks:

Poa sp. assumed FAC. Pinus contorta adjacent are not included. SP is for meadow/grassland community on this lot and adjacent lot to the west.

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

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	2/2	100%					Sand
4-8	10YR	4/2	100%					Sand
8-20	10YR	6/2						Sand

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 ☒

Water Table Present?

Yes ☐

No ☒

Saturation Present?
(includes capillary fringe)

Yes ☐

No ☒

Depth (inches):

Depth (inches):

Depth (inches):

Wetland Hydrology Present?

Yes ☐

No ☒

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

Remarks:

Soil is very well drained, porous, slightly moist.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deschutes County LWI City/County: Sunriver/Deschutes Sampling Date: 07-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 404
Investigator(s): John Gordon Section, Township, Range: S 6 T 21 S R 11 E
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave Slope: 1.0% / 0.6 °
Subregion (LRR): LRR B Lat.: 43.7895 Long.: -121.4623 Datum: NAD 83
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, 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%		
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>	30	<input checked="" type="checkbox"/> 100.0%	FACW	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>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>100</u> (A) <u>130</u> (B)
1. <u>Carex aquatilis</u>	70	<input checked="" type="checkbox"/> 100.0%	OBL	Prevalence Index = B/A = <u>1.300</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%		
	70	= 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		
% Bare Ground in Herb Stratum: 30		% Cover of Biotic Crust 0		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: SP 404

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	7.5YR	2.5/2	95%	7.5YR	3/3	5%	C	PL	Sand	
4-9	7.5YR	2.5/1	95%	7.5YR	3/3	5%	C	PL	Sand	
9-20	7.5YR	2.5/1	100%						Sand	

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): 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:

Water table still rising when pit closed. Surface water is present in nearby parts of oxbow.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Deschutes County LWI City/County: Sunriver/Deschutes Sampling Date: 12-May-10
Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 405
Investigator(s): John Gordon Section, Township, Range: S 24 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): flat Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8202 Long.: -121.4668 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 type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" 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: Offsite determination. No visual or physical access. Determination based on aerial photos, NWI, soil maps and project experience.	

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>0</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>0</u> (B)
4. _____	0	<input type="checkbox"/> 0.0%	_____	
	0	= Total Cover		Percent of dominant Species That Are OBL, FACW, or FAC: <u>0.0%</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>0</u> x 1 = <u>0</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>0</u> (A) <u>0</u> (B)
1. <u>Carex sp.</u>	0	<input type="checkbox"/> 0.0%	FACW	Prevalence Index = B/A = <u>0.000</u>
2. _____	0	<input type="checkbox"/> 0.0%	_____	Hydrophytic Vegetation Indicators:
3. _____	0	<input type="checkbox"/> 0.0%	_____	<input type="checkbox"/> Dominance Test is > 50%
4. _____	0	<input type="checkbox"/> 0.0%	_____	<input 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%	_____	
	0	= 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 type="radio"/> No <input checked="" type="radio"/>
% Bare Ground in Herb Stratum: 0		% Cover of Biotic Crust 0		

Remarks:

Vegetation appears similar to vegetation in floodplain and oxbow wetlands in study area. Predominant emergent group is Carex. Carex sp. assumed FACW.

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

Soil

Sampling Point: **SP 405**

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: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Landscape position and vegetation indicate hydric conditions.

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 type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input 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 checked="" 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:

Vegetation indicates wetland hydrology is present, based on vegetation consistent with oxbow wetlands nearby.

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 408
Investigator(s): ALISON SIGLER, ROSEMARY BAKER Section, Township, Range: S 26 T 20 S R 10 E
Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
Subregion (LRR): LRR B Lat.: 43.8105 Long.: -121.4888 Datum: NAD 83
Soil Map Unit Name: Not available 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, 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>	20	<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>5</u> (B)
4. _____	0	<input type="checkbox"/> 0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: <u>80.0%</u> (A/B)
	20	= Total Cover		
Sapling/Shrub Stratum (Plot size: <input type="text"/>)				Prevalence Index worksheet:
1. <u>Spiraea douglasii</u>	5	<input checked="" type="checkbox"/> 50.0%	FACW	Total % Cover of: _____ Multiply by: _____
2. _____		<input type="checkbox"/> 0.0%		OBL species <u>0</u> x 1 = <u>0</u>
3. _____	5	<input checked="" type="checkbox"/> 50.0%		FACW species <u>15</u> x 2 = <u>30</u>
4. _____	0	<input type="checkbox"/> 0.0%		FAC species <u>50</u> x 3 = <u>150</u>
5. _____	0	<input type="checkbox"/> 0.0%		FACU species <u>5</u> x 4 = <u>20</u>
	10	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>
Herb Stratum (Plot size: <input type="text"/>)				Column Totals: <u>70</u> (A) <u>200</u> (B)
1. <u>Juncus sp.</u>	10	<input checked="" type="checkbox"/> 22.2%	FACW	Prevalence Index = B/A = <u>2.857</u>
2. <u>Poa sp.</u>	30	<input checked="" type="checkbox"/> 66.7%	FAC	
3. <u>Fragaria virginiana</u>	5	<input type="checkbox"/> 11.1%	FACU	
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%		
	45	= 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: 55				
% 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 408

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%						Loam	
4-20	10YR	3/2	90%	10YR	4/3	10%	C	M	Silty Clay	

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)

☐ Sandy Redox (S5)

☐ 1 cm Muck (A9) (LRR C)

☐ Histic Epipedon (A2)

☐ Stripped Matrix (S6)

☐ 2 cm Muck (A10) (LRR B)

☐ Black Histic (A3)

☐ Loamy Mucky Mineral (F1)

☐ Reduced Vertic (F18)

☐ Hydrogen Sulfide (A4)

☐ Loamy Gleyed Matrix (F2)

☐ Red Parent Material (TF2)

☐ Stratified Layers (A5) (LRR C)

☐ Depleted Matrix (F3)

☐ Other (Explain in Remarks)

☐ 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)

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):

7

Depth (inches):

1

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>17-Nov-10</u>	
Applicant/Owner: <u>DESCHUTES COUNTY</u>		State: <u>OR</u>		Sampling Point: <u>SP 600</u>	
Investigator(s): <u>Sarah Hartung</u>		Section, Township, Range: <u>S 19</u> <u>T 20 S</u> <u>R 11 E</u>			
Landform (hillslope, terrace, etc.): <u>Valley bottom</u>		Local relief (concave, convex, none): <u>slight concave</u>		Slope: <u>1.0%</u> / <u>0.0</u> °	
Subregion (LRR): <u>LRR A</u>		Lat.: <u>43.7402</u>		Long.: <u>-121.4654</u>	
		Datum: <u>NAD83</u>			
Soil Map Unit Name: <u>29A: Crvaquolls, 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: Site is normally irrigated, but has not been irrigated in the past 3-4 years.	

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	75	x 2 = 150	
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	<input type="checkbox"/> 0.0%	_____	UPL species	5	x 5 = 25	
	0	= Total Cover		Column Totals:	100	(A) 235 (B)	
Herb Stratum (Plot size: <input type="text"/>)				Prevalence Index = B/A = 2.350			
1 Juncus balticus	75	<input checked="" type="checkbox"/> 75.0%	FACW	Hydrophytic Vegetation Indicators:			
2 Poa spp.	20	<input checked="" type="checkbox"/> 20.0%	FAC	<input checked="" type="checkbox"/> Dominance Test is > 50%			
3 Thinopyrum intermedium	5	<input type="checkbox"/> 5.0%	UPL	<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:							
Poa spp. assumed FAC.							

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

Soil

Sampling Point: SP 600

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%				Sandy Loam	dense w/roots
3-4	10YR	2/2	100%				loamy duff	many composite colors
4-8	10YR	4/2	100%				Sandy Loam	many composite colors
8-20	10YR	4/3	100%				Loamy Sand	many composite colors

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 irrigated conditions. Site receives overflow from irrigation channels.

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:

Saturation present in early part of growing season. Very moist at 0.5", sand layer moist 8-13" but no saturation, lots of organic decaying.

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 17-Nov-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 601
 Investigator(s): Sarah Hartung Section, Township, Range: S 24 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope: 1.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.7413 Long.: -121.4689 Datum: NAD83
 Soil Map Unit Name: 115A: Shanahan loamy coarse sand, low, 0 to 3 percent slopes NWI classification:

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 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"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <input type="text"/>)	Absolute % Cover	Dominant Species? Rel. Str. 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: <input type="text"/>)	Absolute % Cover	Dominant Species? Rel. Str. 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: <input type="text"/>)	Absolute % Cover	Dominant Species? Rel. Str. Cover	Indicator Status
1. Juncus balticus	10	<input type="checkbox"/> 10.0%	FACW
2. Carex sp.	10	<input type="checkbox"/> 10.0%	FACW
3. Trifolium repens	20	<input checked="" type="checkbox"/> 20.0%	FAC
4. Taraxacum officinale	20	<input checked="" type="checkbox"/> 20.0%	FACU
5. Thinopyrum intermedium	20	<input checked="" type="checkbox"/> 20.0%	UPL
6. Poa sp.	20	<input checked="" type="checkbox"/> 20.0%	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"/>)	Absolute % Cover	Dominant Species? Rel. Str. 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

Remarks:

Carex sp. assumed FACW and Poa sp. assumed FAC.

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

Soil

Sampling Point: SP 601

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	3/3	100%				Sandy Loam	dense roots
0-8.5	10YR	3/2	100%				Sandy Loam	
8.5-20	10YR	5/4	50%				Sand	mixed colors
	10YR	4/4	50%				Sand	no redox

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:

somewhat moist

Project/Site: <u>DESCHUTES LWI</u>		City/County: <u>SUNRIVER/DESCHUTES</u>		Sampling Date: <u>17-Nov-10</u>	
Applicant/Owner: <u>DESCHUTES COUNTY</u>		State: <u>OR</u>		Sampling Point: <u>SP 602</u>	
Investigator(s): <u>Sarah Hartung</u>		Section, Township, Range: <u>S 24</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>0.0</u> °	
Subregion (LRR): <u>LRR A</u>		Lat.: <u>43.7453</u>		Long.: <u>-121.4694</u> Datum: <u>NAD83</u>	
Soil Map Unit Name: <u>144A: Sunriver sandy loam, 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:)		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: 0.0% (A/B)			
4. _____	0	<input type="checkbox"/> 0.0%	_____				
		0	= Total Cover				
Sapling/Shrub Stratum (Plot size:)					Prevalence Index worksheet:		
1. _____	0	<input type="checkbox"/> 0.0%	_____	<div style="display: flex; justify-content: space-between;"> Total % Cover of: Multiply by: </div>			
2. _____	0	<input type="checkbox"/> 0.0%	_____	<div style="display: flex; justify-content: space-between;"> OBL species 0 x 1 = 0 </div>			
3. _____	0	<input type="checkbox"/> 0.0%	_____	<div style="display: flex; justify-content: space-between;"> FACW species 60 x 2 = 120 </div>			
4. _____	0	<input type="checkbox"/> 0.0%	_____	<div style="display: flex; justify-content: space-between;"> FAC species 35 x 3 = 105 </div>			
5. _____	0	<input type="checkbox"/> 0.0%	_____	<div style="display: flex; justify-content: space-between;"> FACU species 5 x 4 = 20 </div>			
		0	= Total Cover		<div style="display: flex; justify-content: space-between;"> UPL species 0 x 5 = 0 </div>		
		0	= Total Cover		<div style="display: flex; justify-content: space-between;"> Col um n Total s: 100 (A) 245 (B) </div>		
Herb Stratum (Plot size:)					Prevalence Index = B/A = 2.450		
1 Juncus balticus	60	<input checked="" type="checkbox"/> 60.0%	FACW	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is > 50% <input 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 Trifolium repens	30	<input checked="" type="checkbox"/> 30.0%	FAC				
3 Festuca arundinacea	5	<input type="checkbox"/> 5.0%	FAC				
4 Taraxacum officinale	5	<input type="checkbox"/> 5.0%	FACU				
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:)					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: 							
Remarks:							

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

Soil

Sampling Point: SP 602

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	7.5YR	3/3	100%					Loam	40% organic
3-6	10YR	3/2	100%					Loamy Sand	
6-18	10YR	4/3	80%					Sand	20% silts
	10YR	5/6	20%					Sand	no streaking

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 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 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 information about irrigating the site in the spring.

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

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 03-Dec-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 603
 Investigator(s): Sarah Hartung Section, Township, Range: S T R
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope: 0.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: Long.: Datum: NAD83
 Soil Map Unit Name: 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. <u> </u>	0	<input type="checkbox"/> 0.0%		Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)
2. <u> </u>	0	<input type="checkbox"/> 0.0%		Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u> </u>	0	<input type="checkbox"/> 0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
4. <u> </u>	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>	0	<input type="checkbox"/> 0.0%	FACW	Total % Cover of: <u>0</u> Multiply by: <u> </u>
2. <u> </u>	0	<input type="checkbox"/> 0.0%		OBL species <u>0</u> x 1 = <u>0</u>
3. <u> </u>	0	<input type="checkbox"/> 0.0%		FACW species <u>0</u> x 2 = <u>0</u>
4. <u> </u>	0	<input type="checkbox"/> 0.0%		FAC species <u>0</u> x 3 = <u>0</u>
5. <u> </u>	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"/>)				Col umn Total s: <u>0</u> (A) <u>0</u> (B)
1. <u>Carex aquatilis</u>	70	<input checked="" type="checkbox"/> 70.0%	FACW	Prevalence Index = B/A = <u>0.000</u>
2. <u>Veronica americana</u>	10	<input type="checkbox"/> 10.0%	OBL	
3. <u>Poa sp.</u>	10	<input type="checkbox"/> 10.0%	FAC	
4. <u>Agrostis sp.</u>	10	<input type="checkbox"/> 10.0%	FAC	
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"/>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	0	<input type="checkbox"/> 0.0%		<input type="checkbox"/> Dominance Test is > 50%
2. <u> </u>	0	<input type="checkbox"/> 0.0%		<input 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>0</u>				<input type="checkbox"/> Wetland Non-Vascular Plants ¹
Remarks:				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
Poa sp. and Agrostis sp. assumed FAC.				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 603

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	2/2	100%						peat	
6-18	10YR	3/1	90%	10YR	3/3	10%	C	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 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 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)

- | |
|--|
| <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:

Saturation along ped surfaces. Best professional judgement- expect saturation in upper part during early growing season.

Project/Site: <u>DESCHUTES LWI</u>		City/County: <u>SUNRIVER/DESCHUTES</u>		Sampling Date: <u>17-Nov-10</u>	
Applicant/Owner: <u>DESCHUTES COUNTY</u>		State: <u>OR</u>		Sampling Point: <u>SP 604</u>	
Investigator(s): <u>Sarah Hartung</u>		Section, Township, Range: <u>S 2</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>concave</u>		Slope: <u>2.0%</u> / <u>0.0</u> °	
Subregion (LRR): <u>LRR A</u>		Lat.: <u>43.7892</u>		Long.: <u>-121.5030</u>	
		Datum: <u>NAD83</u>			
Soil Map Unit Name: <u>29A: Crvaquolls, 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:)		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: 0.0% (A/B)		
4. _____	0	<input type="checkbox"/> 0.0%	_____			
	0	= Total Cover				
Sapling/Shrub Stratum (Plot size:)						
1. _____	0	<input type="checkbox"/> 0.0%	_____	Prevalence Index worksheet:		
2. _____	0	<input type="checkbox"/> 0.0%	_____			
3. _____	0	<input type="checkbox"/> 0.0%	_____	Total % Cover of: _____ Multiply by: _____		
4. _____	0	<input type="checkbox"/> 0.0%	_____	OBL species	80 x 1 = 80	
5. _____	0	<input type="checkbox"/> 0.0%	_____	FACW species	10 x 2 = 20	
	0	<input type="checkbox"/> 0.0%	_____	FAC species	10 x 3 = 30	
	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		Column Total s:	100 (A) 130 (B)	
Herb Stratum (Plot size:)						
1 Carex aquatilis	80	<input checked="" type="checkbox"/> 80.0%	OBL	Prevalence Index = B/A = 1.300		
2 Phalaris arundinacea	10	<input type="checkbox"/> 10.0%	FACW	Hydrophytic Vegetation Indicators:		
3 Hordeum jubatum	10	<input type="checkbox"/> 10.0%	FAC			
4. _____	0	<input type="checkbox"/> 0.0%	_____	<input type="checkbox"/> Dominance Test is > 50%		
5. _____	0	<input type="checkbox"/> 0.0%	_____	<input 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"/> Wetland Non-Vascular Plants ¹		
8. _____	0	<input type="checkbox"/> 0.0%	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)		
9. _____	0	<input type="checkbox"/> 0.0%	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
10. _____	0	<input type="checkbox"/> 0.0%	_____			
11. _____	0	<input type="checkbox"/> 0.0%	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>		
	100	= Total Cover				
Woody Vine Stratum (Plot size:)						
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: SP 604

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	2/2	100%						peat	
6-20	10YR	3/1	60%	10YR	4/1	30%	D	M	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 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 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: 17-Nov-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 605
 Investigator(s): Sarah Hartung Section, Township, Range: S 2 T 20 S R 10 E
 Landform (hillslope, terrace, etc.): swale, valley bottom Local relief (concave, convex, none): concave Slope: 2.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.7864 Long.: -121.5067 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	Dominant Species? Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:
1. <u>Pinus contorta</u>	<u>30</u>	<input checked="" type="checkbox"/> 100.0%	<u>FAC</u>	Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	<u>0</u>	<input type="checkbox"/> 0.0%		Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	<u>0</u>	<input type="checkbox"/> 0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
4. _____	<u>0</u>	<input type="checkbox"/> 0.0%		
	<u>30</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <input type="text"/>)				Prevalence Index worksheet:
1. <u>Salix geyeriana</u>	<u>50</u>	<input checked="" type="checkbox"/> 100.0%	<u>FACW</u>	Total % Cover of: <u>10</u> Multiply by: <u>x 1 = 10</u>
2. _____	<u>0</u>	<input type="checkbox"/> 0.0%		OBL species <u>10</u> x 1 = <u>10</u>
3. _____	<u>0</u>	<input type="checkbox"/> 0.0%		FACW species <u>55</u> x 2 = <u>110</u>
4. _____	<u>0</u>	<input type="checkbox"/> 0.0%		FAC species <u>115</u> x 3 = <u>345</u>
5. _____	<u>0</u>	<input type="checkbox"/> 0.0%		FACU species <u>0</u> x 4 = <u>0</u>
	<u>50</u>	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>
Herb Stratum (Plot size: <input type="text"/>)				Col umn Total s: <u>180</u> (A) <u>465</u> (B)
1. <u>Geum macrophyllum</u>	<u>5</u>	<input type="checkbox"/> 5.0%	<u>FACW</u>	Prevalence Index = B/A = <u>0.000</u>
2. <u>Veronica americana</u>	<u>10</u>	<input type="checkbox"/> 10.0%	<u>OBL</u>	
3. <u>Agrostis sp.</u>	<u>75</u>	<input checked="" type="checkbox"/> 75.0%	<u>FAC</u>	
4. <u>Bromus sp.</u>	<u>10</u>	<input type="checkbox"/> 10.0%	<u>FAC</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%		
	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: <input type="text"/>)				Hydrophytic Vegetation Indicators:
1. _____	<u>0</u>	<input type="checkbox"/> 0.0%		<input type="checkbox"/> Dominance Test is > 50%
2. _____	<u>0</u>	<input type="checkbox"/> 0.0%		<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
	<u>0</u>	= Total Cover		<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum: <u>0</u>				<input type="checkbox"/> Wetland Non-Vascular Plants ¹
Remarks:				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
Agrostis sp. and Bromus sp. assumed FAC.				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 605

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	2/2	100%				peat	
6-20	10YR	2/1	70%				Silt Loam	mixed matrix
	10YR	3/2	30%					

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 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 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:

Very moist 0-9", Best professional judgement indicates area would be saturated for at least 2 weeks during the growing season.

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

Project/Site: DESCHUTES LWI City/County: SUNRIVER/DESCHUTES Sampling Date: 17-Nov-10
 Applicant/Owner: DESCHUTES COUNTY State: OR Sampling Point: SP 606
 Investigator(s): Sarah Hartung Section, Township, Range: S 2 T 21 S R 10 E
 Landform (hillslope, terrace, etc.): bottom of slope Local relief (concave, convex, none): flat Slope: 2.0% / 0.0 °
 Subregion (LRR): LRR A Lat.: 43.7856 Long.: -121.5067 Datum: NAD83
 Soil Map Unit Name: 29A: Cryaquolls, 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. <u>Pinus contorta</u>	50	<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>3</u> (B)
3. _____	0	<input type="checkbox"/> 0.0%		Percent of dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
4. _____	0	<input type="checkbox"/> 0.0%		
50 = 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>0</u> x 2 = <u>0</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>12</u> x 4 = <u>48</u>
0 = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>
Herb Stratum (Plot size: <input type="text"/>)				Column Total s: <u>132</u> (A) <u>408</u> (B)
1. <u>Achillea millefolium</u>	2	<input type="checkbox"/> 2.2%	FACU	Prevalence Index = B/A = <u>0.000</u>
2. <u>Fragaria virginiana</u>	10	<input type="checkbox"/> 10.9%	FACU	
3. <u>Carex sp.</u>	40	<input checked="" type="checkbox"/> 43.5%	FAC	
4. <u>Poa sp.</u>	30	<input checked="" type="checkbox"/> 32.6%	FAC	
5. <u>Unknown herb</u>	10	<input type="checkbox"/> 10.9%		
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%		
92 = 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>8</u>				
Remarks:				
Carex sp. and Poa sp. assumed to be FAC.				

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

Soil

Sampling Point: SP 606

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%						Silt Loam	with 30% duff/organics
3-10	10YR	4/1	90%	10YR	4/4	10%	C	M	Clay Loam	
10-20	10YR	6/2	80%	10YR	4/4	20%	C	M	Sand	streaking in 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 checked="" 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 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)

- | |
|--|
| <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:

Saturation in spring based on landowner information. Springs located at base of the hill provide hydrology for the area. Water ponds on nearby roads throughout spring.