

APPENDIX B

Wetland Determination Data Forms

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 9-21-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-1
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S19, T16N, R04E
 Landform (hillslope, terrace, etc): Small depression Local relief (concave, convex, none): None Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Barneston gravelly ashy coarse sandy loam, 0 to 8% slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☐	No ☒
Hydric Soils Present?	Yes ☐	No ☒			
Wetland Hydrology Present?	Yes ☐	No ☒			
Remarks: Click here to enter text.					

VEGETATION – Use scientific names of plants.

<table style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: 5-m diameter)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Populus balsamifera</u></td><td style="text-align: center;">70</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u>Thuja plicata</u></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center;">90</td> <td colspan="2" style="text-align: right;">= Total Cover</td> </tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: 3-m diameter)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Fraxinus latifolia</u></td><td style="text-align: center;">85</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Corylus cornuta</u></td><td style="text-align: center;">10</td><td style="text-align: center;">No</td><td style="text-align: center;">FACU</td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center;">95</td> <td colspan="2" style="text-align: right;">= Total Cover</td> </tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: 1-m diameter)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Rubus ursinus</u></td><td style="text-align: center;">15</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>2. <u>Carex deweyana</u></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. <u>Galium aparine</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FACU</td></tr> <tr><td>4. <u>Phalaris arundinacea</u></td><td style="text-align: center;">1</td><td style="text-align: center;">No</td><td style="text-align: center;">FACW</td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr><td>8. _____</td><td></td><td></td><td></td></tr> <tr><td>9. _____</td><td></td><td></td><td></td></tr> <tr><td>10. _____</td><td></td><td></td><td></td></tr> <tr><td>11. _____</td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center;">31</td> <td colspan="2" style="text-align: right;">= Total Cover</td> </tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: 3-m diameter)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center;">-</td> <td colspan="2" style="text-align: right;">= Total Cover</td> </tr> </table> % Bare Ground in Herb Stratum: <u>75</u>	Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Populus balsamifera</u>	70	Yes	FAC	2. <u>Thuja plicata</u>	20	Yes	FAC	3. _____				4. _____					90	= Total Cover		Sapling/Shrub Stratum (Plot size: 3-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Fraxinus latifolia</u>	85	Yes	FACW	2. <u>Corylus cornuta</u>	10	No	FACU	3. _____				4. _____				5. _____					95	= Total Cover		Herb Stratum (Plot size: 1-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Rubus ursinus</u>	15	Yes	FACU	2. <u>Carex deweyana</u>	10	Yes	FAC	3. <u>Galium aparine</u>	5	No	FACU	4. <u>Phalaris arundinacea</u>	1	No	FACW	5. _____				6. _____				7. _____				8. _____				9. _____				10. _____				11. _____					31	= Total Cover		Woody Vine Stratum (Plot size: 3-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. _____				2. _____					-	= Total Cover		Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>80%</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0¹ ☐ 4 – Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants¹ ☐ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 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SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-8	10YR 3/2	100					Loam	
8-16	10YR 3/4	100					Loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☐ No ☒		
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☐ Saturation (A3)	☐ Water Marks (B1)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)	☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Salt Crust (B11)	☐ Dry-Season Water Table (C2)
☐ Surface Soil Cracks (B6)	☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)
			☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Hydrogen Sulfide Odor (C1)	☒ Geomorphic Position (D2)
			☐ Presence of Reduced Iron (C4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Shallow Aquitard (D3)
			☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Other (explain in remarks)	☐ FAC-Neutral Test (D5)
					☐ Raised Ant Mounds (D6) (LRR A)
					☐ Frost-Heave Hummocks
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)				Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Soil profile dry to 18-inches BSG. Geomorphic position is a depression.					

**WETLAND DETERMINATION DATA FORM –
Western Mountains, Valleys, and Coast Region**
DP-2

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 9-21-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-2
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S19, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): <2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Barneston gravelly ashy coarse sandy loam, 0 to 8% slopes NWI classification: none

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 on the site? ☒ 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 ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks: Wetland CC in-pit.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) 1. <u>Fraxinus latifolia</u> Absolute % Cover: 95 Dominant Species? Yes Indicator Status: FACW 2. <u>Acer macrophyllum</u> Absolute % Cover: 5 Dominant Species? No Indicator Status: FACU 3. _____ 4. _____ _____ = 100 = Total Cover	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>75%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 3-m diameter) 1. <u>Symphoricarpos albus</u> Absolute % Cover: 20 Dominant Species? Yes Indicator Status: FACU 2. <u>Ribes divaricatum</u> Absolute % Cover: 10 Dominant Species? Yes Indicator Status: FAC 3. _____ 4. _____ 5. _____ _____ = 30 = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
Herb Stratum (Plot size: 1-m diameter) 1. <u>Carex obnupta</u> Absolute % Cover: 85 Dominant Species? Yes Indicator Status: OBL 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ _____ = 85 = Total Cover	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ _____ = _____ = Total Cover % Bare Ground in Herb Stratum: <u>15</u>	Hydrophytic Vegetation Present? Yes ☒ No ☐
Remarks:	

SOIL

Sampling Point: DP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-13	10YR 2/1	95					Silty loam	Mixed matrix Greasy/organics
0-13	10YR 2/2	5					Silty loam	Mixed matrix Greasy/organics
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☒ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: <u>Cobble</u> Depth (inches): <u>13-inches BSG</u>						Hydric soil present? Yes ☒ No ☐		
Remarks: High organic matter content masking redox; presumed to meet indicator F6.								

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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): <u>-</u> Water Table Present? Yes ☐ No ☒ Depth (in): <u>-</u> Saturation Present? Yes ☐ No ☒ Depth (in): <u>-</u> (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Geomorphic position is a depression.			

**WETLAND DETERMINATION DATA FORM –
Western Mountains, Valleys, and Coast Region**
DP-3

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 9-21-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-3
 Investigator(s): Roen Hohlfeld and Jamie Sloan Section, Township, Range: S19, T16N, R4E
 Landform (hillslope, terrace, etc): Hummocky depression Local relief (concave, convex, none): none Slope (%): <2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Barneston gravelly ashy coarse sandy loam, 0 to 8% slopes NWI classification: none

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 on the site? ☒ 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 ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒		
Wetland Hydrology Present?	Yes ☐ No ☒		
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) <table border="1"> <thead> <tr> <th></th> <th>Absolute % Cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u>Frangula purshiana</u></td> <td>25</td> <td>Yes</td> <td>FAC</td> </tr> <tr> <td>2. <u>Acer macrophyllum</u></td> <td>25</td> <td>Yes</td> <td>FACU</td> </tr> <tr> <td>3. <u>Pseudotsuga menziesii</u></td> <td>20</td> <td>Yes</td> <td>FACU</td> </tr> <tr> <td>4. <u>Fraxinus latifolia</u></td> <td>20</td> <td>Yes</td> <td>FACW</td> </tr> <tr> <td></td> <td>90</td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Frangula purshiana</u>	25	Yes	FAC	2. <u>Acer macrophyllum</u>	25	Yes	FACU	3. <u>Pseudotsuga menziesii</u>	20	Yes	FACU	4. <u>Fraxinus latifolia</u>	20	Yes	FACW		90	= Total Cover		Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>9</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>22%</u> (A/B)																												
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Sapling/Shrub Stratum (Plot size: 3-m diameter) <table border="1"> <thead> <tr> <th></th> <th>Absolute % Cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u>Oemleria cerasiformis</u></td> <td>20</td> <td>Yes</td> <td>FACU</td> </tr> <tr> <td>2. <u>Gaultheria shallon</u></td> <td>15</td> <td>Yes</td> <td>FACU</td> </tr> <tr> <td>3. <u>Acer macrophyllum</u></td> <td>12</td> <td>Yes</td> <td>FACU</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>47</td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Oemleria cerasiformis</u>	20	Yes	FACU	2. <u>Gaultheria shallon</u>	15	Yes	FACU	3. <u>Acer macrophyllum</u>	12	Yes	FACU	4. _____				5. _____					47	= Total Cover		Prevalence Index worksheet: <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td>-</td> <td>x 1 = -</td> </tr> <tr> <td>FACW species</td> <td>20</td> <td>x 2 = 40</td> </tr> <tr> <td>FAC species</td> <td>25</td> <td>x 3 = 75</td> </tr> <tr> <td>FACU species</td> <td>195</td> <td>x 4 = 780</td> </tr> <tr> <td>UPL species</td> <td>-</td> <td>x 5 = -</td> </tr> <tr> <td>Column Totals:</td> <td>240</td> <td>(A) 895 (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>3.7</u>	Total % Cover of:	Multiply by:		OBL species	-	x 1 = -	FACW species	20	x 2 = 40	FAC species	25	x 3 = 75	FACU species	195	x 4 = 780	UPL species	-	x 5 = -	Column Totals:	240	(A) 895 (B)			
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Remarks:																																																					

SOIL

Sampling Point: DP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-14	10YR 3/4	90	7.5 YR 3/4	5	C	M	Sandy loam w/cobble	Mixed matrix
			10YR 3/6	5	C	M	Sandy loam w/cobble	Mixed matrix
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☐ No ☒		
Remarks: 5-10% cobble								

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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Soil profile dry to 14-inches BSG. Geomorphic position is a depression.			

Project/Site: Nisqually State Park City/County: Eatonville/Pierce Sampling date: 9-22-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-4
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R4E
 Landform (hillslope, terrace, etc): depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Barneston gravelly ashy coarse sandy loam, 8 to 15% slopes NWI classification: PEM1C
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☒	No ☐
Hydric Soils Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			
Remarks: Wetland EE in-pit.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) 1. <u>Fraxinus latifolia</u> 2. _____ 3. _____ 4. _____ 80 = Total Cover Sapling/Shrub Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ - = Total Cover Herb Stratum (Plot size: 1-m diameter) 1. <u>Oenanthse sarmentosa</u> 2. <u>Carex obnupta</u> 3. <u>Sparganium emersum</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ 90 = Total Cover Woody Vine Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ - = Total Cover % Bare Ground in Herb Stratum: <u>15</u>	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals:</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present?	Total % Cover of:	Multiply by:	OBL species	x 1 = _____	FACW species	x 2 = _____	FAC species	x 3 = _____	FACU species	x 4 = _____	UPL species	x 5 = _____	Column Totals:	(A) _____ (B) _____
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FACW species	x 2 = _____														
FAC species	x 3 = _____														
FACU species	x 4 = _____														
UPL species	x 5 = _____														
Column Totals:	(A) _____ (B) _____														
Remarks:															

SOIL

Sampling Point: DP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features		Type ¹	Loc ²	Texture	Remarks
0-8	10YR 2/1	100						Silt loam	High OM
8-16	10YR 2/1	85	7.5YR 3/3	15		C	M	Silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						² Loc: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils³:			
☐ Histosol (A1)		☐ Sandy Redox (S5)		☐ 2cm Muck (A10)					
☐ Histic Epipedon (A2)		☐ Stripped Matrix (S6)		☐ Red Parent Material (TF2)					
☐ Black Histic (A3)		☐ Loamy Mucky Mineral (F1) (except MLRA 1)		☐ Very Shallow Dark Surface (TF12)					
☐ Hydrogen Sulfide (A4)		☐ Loamy Gleyed Matrix (F2)		☐ Other (Explain in Remarks)					
☐ Depleted Below Dark Surface (A11)		☐ Depleted Matrix (F3)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
☐ Thick Dark Surface (A12)		☒ Redox Dark Surface (F6)							
☐ Sandy Mucky Mineral (S1)		☐ Depleted Dark Surface (F7)							
☐ Sandy Gleyed Matrix (S4)		☐ Redox Depressions (F8)							
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)	☐ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A & 4B)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	
☐ High Water Table (A2)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres along Living Roots (C3)	☒ Geomorphic Position (D2)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ FAC-Neutral Test (D5)	
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Surface Soil Cracks (B6)	☐ Other (explain in remarks)	☐ Frost-Heave Hummocks	
☐ Inundation Visible on Aerial Imagery (B7)			
☐ Sparsely Vegetated Concave Surface (B8)			
Field Observations:			
Surface Water Present?	Yes ☐ No ☒	Wetland Hydrology Present? Yes ☒ No ☐	
Water Table Present?	Yes ☐ No ☒		
Saturation Present?	Yes ☐ No ☒		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Soils moist throughout. Geomorphic position is a depression.			

Project/Site: Nisqually State Park City/County: Eatonville/Pierce Sampling date: 9-22-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-5
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R4E
 Landform (hillslope, terrace, etc): slope Local relief (concave, convex, none): none Slope (%): 10
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Barneston gravelly ashy coarse sandy loam, 8 to 15% slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☐	No ☒	
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>60</u> (A/B)
1. <u>Pseudotsuga menziesii</u>	40	Y	FACU	
2. <u>Frangula purshiana</u>	25	Y	FAC	
3. <u>Acer mnacrophyllum</u>	15	N	FACU	
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
			<u>80</u> = Total Cover	
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Acer circinatum</u>	85	Y	FAC	
2. <u>Symphoricarpos albus</u>	5	N	FACU	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. <u>Mahonia nervosa</u>	3	N	FACU	
4. <u>Oemleria cerasiformis</u>	3	N	FACU	
5. _____				
			<u>96</u> = Total Cover	Hydrophytic Vegetation Present? Yes ☒ No ☐
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Polystichum munitum</u>	50	Y	FACU	
2. <u>Carex deweyana</u>	40	Y	FAC	
3. <u>Rubus ursinus</u>	15	N	FACU	Hydrophytic Vegetation Present? Yes ☒ No ☐
4. _____				
5. _____				
6. _____				
7. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
8. _____				
9. _____				
10. _____				
11. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
			<u>105</u> = Total Cover	
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				
2. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
			<u>-</u> = Total Cover	
% Bare Ground in Herb Stratum: <u>0</u>				
Remarks:				

SOIL

Sampling Point: DP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features		Type¹	Loc²	Texture	Remarks
0-15	10YR 2/2	100						Sandy loam	50% cobble
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						² Loc: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils³:			
☐ Histosol (A1)				☐ Sandy Redox (S5)		☐ 2cm Muck (A10)			
☐ Histic Epipedon (A2)				☐ Stripped Matrix (S6)		☐ Red Parent Material (TF2)			
☐ Black Histic (A3)				☐ Loamy Mucky Mineral (F1) (except MLRA 1)		☐ Very Shallow Dark Surface (TF12)			
☐ Hydrogen Sulfide (A4)				☐ Loamy Gleyed Matrix (F2)		☐ Other (Explain in Remarks)			
☐ Depleted Below Dark Surface (A11)				☐ Depleted Matrix (F3)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
☐ Thick Dark Surface (A12)				☐ Redox Dark Surface (F6)					
☐ Sandy Mucky Mineral (S1)				☐ Depleted Dark Surface (F7)					
☐ Sandy Gleyed Matrix (S4)				☐ Redox Depressions (F8)					
Restrictive Layer (if present):						Hydric soil present? Yes ☐ No ☒			
Type: _____									
Depth (inches): _____									
Remarks:									

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required: check all that apply)		Secondary Indicators (2 or more required)	
☐ Surface water (A1)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	
☐ High Water Table (A2)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ FAC-Neutral Test (D5)	
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Surface Soil Cracks (B6)	☐ Other (explain in remarks)	☐ Frost-Heave Hummocks	
☐ Inundation Visible on Aerial Imagery (B7)			
☐ Sparsely Vegetated Concave Surface (B8)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): <u> -</u> Water Table Present? Yes ☐ No ☒ Depth (in): <u> -</u> Saturation Present? Yes ☐ No ☒ Depth (in): <u> -</u> (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Eatonville/Pierce Sampling date: 9-22-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-6
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R4E
 Landform (hillslope, terrace, etc): depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Barneston gravelly ashy coarse sandy loam, 8 to 15% slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Populus balsamifera</u>	75	Y	FAC	
2. <u>Fraxinus latifolia</u>	20	Y	FACW	
3. _____				
4. _____				
	<u>95</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Fraxinus latifolia</u>	60	Y	FACW	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. <u>Acer circinatum</u>	50	Y	FAC	
3. _____				
4. _____				
5. _____				
	<u>110</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				
1. _____				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Carex deweyana</u>	3	Y	FAC	
3. <u>Rubus ursinus</u>	trace	N	FACU	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>4</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>96</u>				
Remarks:				

SOIL

Sampling Point: DP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-8	2.5YR 2.5/1	100					Sandy loam	
8-14	2.5Y 4/2	98	10YR 3/3	2			Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☐ No ☒		
Remarks: Rocks prevent excavation beyond 14-inches. Redox is faint.								

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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☒ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Soils moist throughout. Geomorphic position is a depression.			

**WETLAND DETERMINATION DATA FORM –
Western Mountains, Valleys, and Coast Region**
DP-7

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 9-28-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-4
 Investigator(s): Sam Payne and Jamie Sloan Section, Township, Range: S19, T16N, R04E
 Landform (hillslope, terrace, etc): depression Local relief (concave, convex, none): concave Slope (%): <2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Barneston gravelly ashy coarse sandy loam, 0 to 8% slopes NWI classification: none

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 on the site? ☒ 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 ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks: Wetland FF in-pit.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) 1. <u>Populus balsamifera</u> Absolute % Cover: <u>100</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FAC</u> 2. <u>Fraxinus latifolia</u> Absolute % Cover: <u>20</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACW</u> 3. _____ 4. _____ <u>120</u> = Total Cover	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 3-m diameter) 1. <u>Fraxinus latifolia</u> Absolute % Cover: <u>30</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACW</u> 2. <u>Lonicera involucrata</u> Absolute % Cover: <u>25</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FAC</u> 3. <u>Spiraea douglasii</u> Absolute % Cover: <u>10</u> Dominant Species? <u>No</u> Indicator Status: <u>FACW</u> 4. _____ 5. _____ <u>65</u> = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
Herb Stratum (Plot size: 1-m diameter) 1. <u>Carex obnupta</u> Absolute % Cover: <u>50</u> Dominant Species? <u>Yes</u> Indicator Status: <u>OBL</u> 2. <u>Phalaris arundinacea</u> Absolute % Cover: <u>1</u> Dominant Species? <u>No</u> Indicator Status: <u>FACW</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <u>51</u> = Total Cover	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ _____ = Total Cover % Bare Ground in Herb Stratum: <u>49</u>	Hydrophytic Vegetation Present? Yes ☒ No ☐
Remarks:	

SOIL

Sampling Point: DP-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks	
0-16	10YR 2/1	100					Sandy loam	Greasy/organics	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☒ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☒ Other (Explain in Remarks)
Restrictive Layer (if present):					Hydric soil present? Yes ☒ No ☐				
Type: _____									
Depth (inches): _____									
Remarks: High organic matter content masking redox; presumed to meet indicator F6.									

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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			
Field Observations:				Wetland Hydrology Present? Yes ☒ No ☐	
Surface Water Present? Yes ☐ No ☒ Depth (in): -					
Water Table Present? Yes ☐ No ☒ Depth (in): -					
Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Geomorphic position is a depression.					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 9-28-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-5
 Investigator(s): Sam Payne and Jamie Sloan Section, Township, Range: S19, T16N, R04E
 Landform (hillslope, terrace, etc): slope Local relief (concave, convex, none): none Slope (%): 10
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Barneston gravelly ashy coarse sandy loam, 0 to 8% slopes NWI classification: none
 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 on the site? ☒ 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 ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒		
Wetland Hydrology Present?	Yes ☐ No ☒		
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>40%</u> (A/B)
1. <u>Populus balsamifera</u>	80	Yes	FAC	
2. <u>Pseudotsuga menziesii</u>	20	No	FACU	
3. <u>Alnus rubra</u>	10	No	FAC	
4. _____				
	<u>130</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Symphoricarpos albus</u>	90	Yes	FACU	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>-</u> x 1 = <u>-</u> FACW species <u>8</u> x 2 = <u>16</u> FAC species <u>93</u> x 3 = <u>279</u> FACU species <u>152</u> x 4 = <u>608</u> UPL species <u>-</u> x 5 = <u>-</u> Column Totals: <u>253</u> (A) <u>903</u> (B) Prevalence Index = B/A = <u>3.6</u>
2. <u>Gaultheria shallon</u>	40	Yes	FACU	
3. <u>Spiraea douglasii</u>	5	No	FACW	
4. <u>Rubus armeniacus</u>	3	No	FAC	
5. _____				
	<u>138</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Phalaris arundinacea</u>	3	Yes	FACW	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Rubus ursinus</u>	2	Yes	FACU	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>5</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present?
2. _____				
	<u>-</u>	= Total Cover		Yes ☐ No ☒
% Bare Ground in Herb Stratum: <u>95</u>				
Remarks:				

SOIL

Sampling Point: DP-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-16	10YR 2/1	100					Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)			
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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 10-7-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-9
 Investigator(s): Roan Hohlfeld and Sage Presster Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): terrace Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Barneston gravelly ashy coarse sandy loam, 0 to 8% slopes NWI classification: none
 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 on the site? ☒ 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 ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks: Hydrologic conditions for the three-month period prior to the site visit were drier than normal.		

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 5-m diameter)				
1. <u>Acer macrophyllum</u>	55	Yes	FACU	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. <u>Pseudotsuga menziesii</u>	50	Yes	FACU	
3. <u>Prunus emarginata</u>	5	No	FACU	
4. _____				
	<u>110</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Corylus cornuta</u>	50	Yes	FACU	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>-</u> x 1 = <u>-</u> FACW species <u>-</u> x 2 = <u>-</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>235</u> x 4 = <u>940</u> UPL species <u>-</u> x 5 = <u>-</u> Column Totals: <u>240</u> (A) <u>955</u> (B) Prevalence Index = B/A = <u>3.8</u>
2. <u>Symphoricarpos albus</u>	15	No	FACU	
3. <u>Mahonia aquifolium</u>	15	No	FACU	
4. <u>Gaultheria shallon</u>	10	No	FACU	
5. <u>Rosa nutkana</u>	5	No	FAC	
	<u>95</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Rubus ursinus</u>	30	Yes	FACU	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Pteridium aquilinum</u>	5	No	FACU	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>35</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes ☐ No ☒
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>65</u>				
Remarks:				

SOIL

Sampling Point: DP-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks	
0-6	10YR 2/2	100					Sandy loam		
6-16	7.5Y 4/3	100					Sandy loam		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☐ No ☒				
Remarks:									

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☐ Saturation (A3)	☐ Water Marks (B1)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)	☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Salt Crust (B11)	☐ Dry-Season Water Table (C2)
☐ Surface Soil Cracks (B6)	☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)
			☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Presence of Reduced Iron (C4)	☐ Geomorphic Position (D2)
			☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Shallow Aquitard (D3)
			☐ Other (explain in remarks)	☐ FAC-Neutral Test (D5)	☐ Raised Ant Mounds (D6) (LRR A)
				☐ Frost-Heave Hummocks	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)				Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 11-16-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-10
 Investigator(s): Ryan Kahlo and Jamie Sloan Section, Township, Range: S25, T16N, R03E
 Landform (hillslope, terrace, etc): depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Aquic Xerofluvents, level 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 5-m diameter)				
1. _____				Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>-</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Rubus spectabilis</u>	60	Yes	FAC	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. <u>Cornus sericea</u>	60	Yes	FACW	
3. <u>Lonicera involucrata</u>	5	No	FAC	
4. _____				
5. _____				
<u>125</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Carex obnupta</u>	100	Yes	OBL	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Phalaris arundinacea</u>	12	No	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>112</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
2. _____				
<u>-</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>-</u>				
Remarks:				

SOIL

Sampling Point: DP-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-9	7.5Y 2.5/2	100					Sandy loam	
9-15	10Y 2/2	95	7.5YR 3/4	5	C	M	Loamy sand	w/cobbles
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 11" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 9" BSG (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 11-16-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-11
 Investigator(s): Ryan Kahlo and Jamie Sloan Section, Township, Range: S25, T16N, R03E
 Landform (hillslope, terrace, etc): Depression/swale Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Aquic Xerofluvents, level NWI classification: R3USC

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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland HH in-pit			

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 5-m diameter)				
1. _____				Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>-</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Cornus sericea</u>	25	Yes	FACW	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. <u>Rubus spectabilis</u>	10	Yes	FAC	
3. _____				
4. _____				
5. _____				
<u>35</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Phalaris arundinacea</u>	100	Yes	FACW	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Urtica dioica</u>	10	No	FAC	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>110</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
2. _____				
<u>-</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>-</u>				
Remarks:				

SOIL

Sampling Point: DP-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 3/2	100					Silt loam	
6-16	2.5Y 3/1	70	10YR 3/2	15	C	M	Silt loam	2 redox colors present
			7.5YR 3/3	10	C	M		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						² Loc: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils³:		
☐ Histosol (A1)		☐ Sandy Redox (S5)		☐ 2cm Muck (A10)				
☐ Histic Epipedon (A2)		☐ Stripped Matrix (S6)		☐ Red Parent Material (TF2)				
☐ Black Histic (A3)		☐ Loamy Mucky Mineral (F1) (except MLRA 1)		☐ Very Shallow Dark Surface (TF12)				
☐ Hydrogen Sulfide (A4)		☐ Loamy Gleyed Matrix (F2)		☐ Other (Explain in Remarks)				
☐ Depleted Below Dark Surface (A11)		☐ Depleted Matrix (F3)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
☐ Thick Dark Surface (A12)		☒ Redox Dark Surface (F6)						
☐ Sandy Mucky Mineral (S1)		☐ Depleted Dark Surface (F7)						
☐ Sandy Gleyed Matrix (S4)		☐ Redox Depressions (F8)						
Restrictive Layer (if present):					Hydric soil present? Yes ☒ No ☐			
Type: _____ Depth (inches): _____								
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Primary Indicators (minimum of one required: check all that apply)		Secondary Indicators (2 or more required)	
☐	Surface water (A1)	☐	Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐	Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)		
☒	High Water Table (A2)	☐	Salt Crust (B11)	☐	Drainage Patterns (B10)		
☒	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Dry-Season Water Table (C2)		
☐	Water Marks (B1)	☐	Hydrogen Sulfide Odor (C1)	☐	Saturation Visible on Aerial Imagery (C9)		
☐	Sediment Deposits (B2)	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Geomorphic Position (D2)		
☐	Drift Deposits (B3)	☐	Presence of Reduced Iron (C4)	☐	Shallow Aquitard (D3)		
☐	Algal Mat or Crust (B4)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	FAC-Neutral Test (D5)		
☐	Iron Deposits (B5)	☐	Stunted or Stressed Plants (D1) (LRR A)	☐	Raised Ant Mounds (D6) (LRR A)		
☐	Surface Soil Cracks (B6)	☐	Other (explain in remarks)	☐	Frost-Heave Hummocks		
☐	Inundation Visible on Aerial Imagery (B7)						
☐	Sparsely Vegetated Concave Surface (B8)						
Field Observations:							
Surface Water Present?	Yes ☐	No ☒	Depth (in):	Wetland Hydrology Present? Yes ☒ No ☐			
Water Table Present?	Yes ☒	No ☐	Depth (in):				
Saturation Present?	Yes ☒	No ☐	Depth (in):				
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 11-23-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-12
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S25, T16N, R03E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Aquic Xerofluvents, level 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>67%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
			<u>-</u> = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Physocarpus capitatus</u>	15	Yes	FACW	
2. <u>Symphoricarpos albus</u>	15	Yes	FACU	
3. <u>Rubus armeniacus</u>	5	No	FAC	
4. <u>Rubus laciniatus</u>	3	No	FACU	
			<u>38</u> = Total Cover	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Phalaris arundinacea</u>	98	Yes	FACW	
2. <u>Rubus ursinus</u>	5	No	FACU	
3. <u>Carex obnupta</u>	2	No	OBL	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
			<u>105</u> = Total Cover	Hydrophytic Vegetation Present? Yes ☒ No ☐
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				
2. _____				
			<u>-</u> = Total Cover	
% Bare Ground in Herb Stratum: <u>-</u>				
Remarks:				

SOIL

Sampling Point: DP-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features				
				%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 3/2	100					Silt loam	
5-8	10YR 3/2	97	7.5YR 3/4	3	C	M	Silt loam	
8-11	10YR 4/2	50	7.5YR 4/6	5	C	M	Silt loam	Mixed matrix
8-11	10YR 3/3	45					Silt loam	Mixed matrix
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						² Loc: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils³:		
☐ Histosol (A1)			☐ Sandy Redox (S5)			☐ 2cm Muck (A10)		
☐ Histic Epipedon (A2)			☐ Stripped Matrix (S6)			☐ Red Parent Material (TF2)		
☐ Black Histic (A3)			☐ Loamy Mucky Mineral (F1) (except MLRA 1)			☐ Very Shallow Dark Surface (TF12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ Depleted Below Dark Surface (A11)			☐ Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☐ Thick Dark Surface (A12)			☐ Redox Dark Surface (F6)					
☐ Sandy Mucky Mineral (S1)			☐ Depleted Dark Surface (F7)					
☐ Sandy Gleyed Matrix (S4)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):					Hydric soil present? Yes ☐ No ☒			
Type: _____ Depth (inches): _____								
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required: check all that apply)		Secondary Indicators (2 or more required)	
☐ Surface water (A1)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	
☐ High Water Table (A2)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres along Living Roots (C3)	☒ Geomorphic Position (D2)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ FAC-Neutral Test (D5)	
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Surface Soil Cracks (B6)	☐ Other (explain in remarks)	☐ Frost-Heave Hummocks	
☐ Inundation Visible on Aerial Imagery (B7)			
☐ Sparsely Vegetated Concave Surface (B8)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): <u> -</u> Water Table Present? Yes ☐ No ☒ Depth (in): <u> -</u> Saturation Present? Yes ☐ No ☒ Depth (in): <u> -</u> (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Geomorphic position is a depression.			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 11-23-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-13
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S25, T16N, R03E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Aquic Xerofluvents, level 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☐	No ☒	
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>60%</u> (A/B)
1. <u>Populus balsamifera</u>	15	Yes	FAC	
2. <u>Acer macrophyllum</u>	10	Yes	FACU	
3. _____				
4. _____				
	<u>25</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
1. <u>Lonicera involucrata</u>	80	Yes	FAC	
2. <u>Rubus armeniacus</u>	20	No	FAC	
3. <u>Cornus alba</u>	10	No	FACW	
4. <u>Physocarpus capitatus</u>	5	No	FACW	
5. _____				
	<u>115</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Rubus ursinus</u>	25	Yes	FACU	
2. <u>Phalaris arundinacea</u>	20	Yes	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>45</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____				
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>70</u>				
Remarks:				

SOIL

Sampling Point: DP-13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-11	10YR 3/2	100					Silt loam	Redox in sandy inclusions
11-16	10YR 3/2	92	10YR 3/6	8	C	M	Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☐ No ☒		
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☐ Saturation (A3)	☐ Water Marks (B1)	☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Surface Soil Cracks (B6)	☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)
☐ Salt Crust (B11)	☐ Aquatic Invertebrates (B13)	☐ Hydrogen Sulfide Odor (C1)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Presence of Reduced Iron (C4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)				Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Geomorphic position is a depression.					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 11-23-2020

Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-14

Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S25, T16N, R03E

Landform (hillslope, terrace, etc): Swale Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): A Lat: - Long: - Datum: -

Soil Map Unit Name: Aquic Xerofluvents, level 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☒	No ☐
Hydric Soils Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			
Remarks: Wetland GG.					

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 5-m diameter)					
1. <u>Alnus rubra</u>	90	Yes	FAC	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____					
3. _____					
4. _____					
	<u>90</u>	= Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: 3-m diameter)					
1. <u>Fraxinus latifolia</u>	3	Yes	FACW		
2. _____					
3. _____					
4. _____					
5. _____					
	<u>3</u>	= Total Cover			
Herb Stratum (Plot size: 1-m diameter)					
1. <u>Phalaris arundinacea</u>	100	Yes	FACW	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
	<u>100</u>	= Total Cover			
Woody Vine Stratum (Plot size: 3-m diameter)					
1. _____				Hydrophytic Vegetation Present?	
2. _____					
	<u>-</u>	= Total Cover		Yes ☒ No ☐	
% Bare Ground in Herb Stratum: <u>-</u>					
Remarks:					

SOIL

Sampling Point: DP-14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 2/2	100					Loam	High OM
5-9	10YR 4/1	80	5YR 3/4	20	C	M	Loam	High OM
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☒ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks: Rock at 9-inches BSG. Hydric soils presumed to continue below rock layer.								

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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 4" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 0" BSG (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 11-23-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-15
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S25, T16N, R03E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Aquic Xerofluvents, level 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 5-m diameter)				
1. <u><i>Alnus rubra</i></u>	100	Yes	FAC	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>100</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u><i>Rubus spectabilis</i></u>	30	Yes	FAC	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. _____				
3. _____				
4. _____				
5. _____				
<u>30</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u><i>Carex obnupta</i></u>	100	Yes	OBL	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
2. _____				
<u>-</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>-</u>				
Remarks:				

SOIL

Sampling Point: DP-15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features		Type ¹	Loc ²	Texture	Remarks
0-8	10YR 3/2	100						Silt loam	
8-16	10YR 3/2	50						Silt loam	Mixed matrix
8-16	10YR 2/1	50						Sand	Mixed matrix
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						² Loc: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils³:			
☐ Histosol (A1)			☐ Sandy Redox (S5)			☐ 2cm Muck (A10)			
☐ Histic Epipedon (A2)			☐ Stripped Matrix (S6)			☐ Red Parent Material (TF2)			
☐ Black Histic (A3)			☐ Loamy Mucky Mineral (F1) (except MLRA 1)			☐ Very Shallow Dark Surface (TF12)			
☐ Hydrogen Sulfide (A4)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)			
☐ Depleted Below Dark Surface (A11)			☐ Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
☐ Thick Dark Surface (A12)			☐ Redox Dark Surface (F6)						
☐ Sandy Mucky Mineral (S1)			☐ Depleted Dark Surface (F7)						
☐ Sandy Gleyed Matrix (S4)			☐ Redox Depressions (F8)						
Restrictive Layer (if present):						Hydric soil present? Yes ☐ No ☒			
Type: _____ Depth (inches): _____									
Remarks: Rock at 9-inches BSG.									

HYDROLOGY

Wetland Hydrology Indicators:				Primary Indicators (minimum of one required: check all that apply)				Secondary Indicators (2 or more required)																																															
☐	Surface water (A1)	☐	Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐	Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐	High Water Table (A2)	☐	Salt Crust (B11)	☐	Drainage Patterns (B10)	☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Dry-Season Water Table (C2)	☐	Water Marks (B1)	☐	Hydrogen Sulfide Odor (C1)	☐	Saturation Visible on Aerial Imagery (C9)	☐	Sediment Deposits (B2)	☐	Oxidized Rhizospheres along Living Roots (C3)	☒	Geomorphic Position (D2)	☐	Shallow Aquitard (D3)	☒	FAC-Neutral Test (D5)	☐	Algal Mat or Crust (B4)	☐	Presence of Reduced Iron (C4)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Stunted or Stressed Plants (D1) (LRR A)	☐	Raised Ant Mounds (D6) (LRR A)	☐	Iron Deposits (B5)	☐	Other (explain in remarks)	☐	Frost-Heave Hummocks	☐	Surface Soil Cracks (B6)	☐	Inundation Visible on Aerial Imagery (B7)	☐	Sparsely Vegetated Concave Surface (B8)
Field Observations:												Wetland Hydrology Present? Yes ☒ No ☐																																											
Surface Water Present?		Yes	☐	No	☒	Depth (in):		-																																															
Water Table Present?		Yes	☐	No	☒	Depth (in):		-																																															
Saturation Present?		Yes	☐	No	☒	Depth (in):		-																																															
(includes capillary fringe)																																																							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																																							
Remarks: Geomorphic position is a depression.																																																							

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 11-24-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-16
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S30, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 6 to 15 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland II in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>80%</u> (A/B)
1. <u>Fraxinus latifolia</u>	40	Yes	FACW	
2. <u>Frangula purshiana</u>	25	Yes	FAC	
3. _____				
4. _____				
	<u>65</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Fraxinus latifolia</u>	80	Yes	FACW	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. <u>Frangula purshiana</u>	25	No	FAC	
3. <u>Populus balsamifera</u>	20	No	FAC	
4. <u>Symphoricarpos albus</u>	15	No	FACU	
5. <u>Pseudotsuga menziesii</u>	12	No	FACU	
6. <u>Physocarpus capitatus</u>	5	No	FACW	
	<u>157</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Rubus ursinus</u>	50	Yes	FACU	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Carex deweyana</u>	50	Yes	FAC	
3. <u>Grass species*</u>	10	No	FAC	
4. <u>Polystichum munitum</u>	5	No	FACU	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>115</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>-</u>				
Remarks: <u>*assumed FAC.</u>				

SOIL

Sampling Point: DP-16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks	
0-1	10YR 2/2	100					Loam	High OM	
1-7	2.5Y 3/1	100					Loam		
7-13	2.5Y 6/2	98	7.5YR 5/8	2	C	M	Loamy clay		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☒ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☒ No ☐				
Remarks: Rock at 9-inches BSG.									

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): 0" BSG Saturation Present? Yes ☐ No ☒ Depth (in): 0" BSG (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 11-24-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-17
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S30, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 3
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 6 to 15 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland H in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Populus balsamifera</u>	30	Yes	FAC	
2. <u>Fraxinus latifolia</u>	30	Yes	FACW	
3. _____				
4. _____				
	<u>60</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Fraxinus latifolia</u>	70	Yes	FACW	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. <u>Spiraea douglasii</u>	25	Yes	FACW	
3. <u>Populus balsamifera</u>	20	No	FAC	
4. <u>Thuja plicata</u>	5	No	FACW	
5. <u>Lonicera involucrata</u>	3	No	FAC	
	<u>123</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Carex deweyana</u>	3	Yes	FAC	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>3</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>97</u>				
Remarks:				

SOIL

Sampling Point: DP-17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks		
0-4	10YR 3/2	100					Loam	60% cobble		
4-14	10YR 4/2	70	20YR 5/6	30	C	M	Loamy sand			
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☒ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)	
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☒ No ☐					
Remarks: Rock at 9-inches BSG.										

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☐ Saturation (A3)	☐ Water Marks (B1)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)	☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Salt Crust (B11)	☐ Dry-Season Water Table (C2)
☐ Surface Soil Cracks (B6)	☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)
			☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Hydrogen Sulfide Odor (C1)	☒ Geomorphic Position (D2)
			☐ Presence of Reduced Iron (C4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ FAC-Neutral Test (D5)
			☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Other (explain in remarks)	☐ Raised Ant Mounds (D6) (LRR A)
					☐ Frost-Heave Hummocks
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Geomorphic position is a depression.					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 11-24-2020
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-18
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S30, T16N, R04E
 Landform (hillslope, terrace, etc): Terrace Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 6 to 15 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks: Click here to enter text.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) 1. <u>Populus balsamifera</u> Absolute % Cover: <u>70</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FAC</u> 2. <u>Fraxinus latifolia</u> Absolute % Cover: <u>5</u> Dominant Species? <u>No</u> Indicator Status: <u>FACW</u> 3. _____ 4. _____ <u>75</u> = Total Cover	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>50%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 3-m diameter) 1. <u>Acer circinatum</u> Absolute % Cover: <u>40</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FAC</u> 2. <u>Fraxinus latifolia</u> Absolute % Cover: <u>10</u> Dominant Species? <u>No</u> Indicator Status: <u>FACW</u> 3. <u>Ribes lacustre</u> Absolute % Cover: <u>10</u> Dominant Species? <u>No</u> Indicator Status: <u>FAC</u> 4. _____ 5. _____ <u>60</u> = Total Cover	
Herb Stratum (Plot size: 1-m diameter) 1. <u>Rubus ursinus</u> Absolute % Cover: <u>60</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 2. <u>Polystichum munitum</u> Absolute % Cover: <u>15</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <u>75</u> = Total Cover	
Woody Vine Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ _____ = Total Cover % Bare Ground in Herb Stratum: <u>20</u>	
Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>15</u> x 2 = <u>30</u> FAC species <u>120</u> x 3 = <u>360</u> FACU species <u>75</u> x 4 = <u>300</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>210</u> (A) <u>690</u> (B) Prevalence Index = B/A = <u>3.3</u>	
Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Hydrophytic Vegetation Present? Yes ☐ No ☒	
Remarks:	

SOIL

Sampling Point: DP-18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-11	10YR 2/1	100					Loamy sand	w/cobble
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☐ No ☒		
Remarks: Rock at 11-inches BSG.								

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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-13-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-19
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S30, T16N, R04E
 Landform (hillslope, terrace, etc): Swale Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 6 to 15 percent slopes NWI classification: none

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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Physocarpus capitatus</u>	80	Yes	FACW	
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Carex deweyana</u>	5	Yes	FAC	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum: <u>95</u>				
Remarks:				

SOIL

Sampling Point: DP-19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-6	2.5Y 3/1	100					Sandy loam	
6-13	2.5Y 3/2	98	10YR 3/6	2	C	M	Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☐ No ☒		
Remarks: Rock at 13-inches BSG.								

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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 4" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 0" BSG (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-13-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-210
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Slope Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) 1. <u><i>Alnus rubra</i></u> Absolute % Cover: <u>5</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FAC</u> 2. <u><i>Populus balsamifera</i></u> Absolute % Cover: <u>5</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FAC</u> 3. <u><i>Fraxinus latifolia</i></u> Absolute % Cover: <u>5</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACW</u> 4. _____ <u>15</u> = Total Cover	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across all Strata: <u>7</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>86%</u> (A/B)		
Sapling/Shrub Stratum (Plot size: 3-m diameter) 1. <u><i>Rosa pisocarpa</i></u> Absolute % Cover: <u>10</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FAC</u> 2. <u><i>Fraxinus latifolia</i></u> Absolute % Cover: <u>5</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACW</u> 3. <u><i>Amelanchier alnifolia</i></u> Absolute % Cover: <u>5</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 4. _____ 5. _____ <u>20</u> = Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____	
Herb Stratum (Plot size: 1-m diameter) 1. <u><i>Carex deweyana</i></u> Absolute % Cover: <u>10</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FAC</u> 2. <u><i>Rubus ursinus</i></u> Absolute % Cover: <u>trace</u> Dominant Species? <u>No</u> Indicator Status: <u>FAC</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <u>10</u> = Total Cover			Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ _____ = Total Cover % Bare Ground in Herb Stratum: <u>90</u>			
Remarks:			

SOIL

Sampling Point: DP-20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-8	10YR 2/1	100					Sandy loam	
8-17	10YR 4/2	97	10YR 3/3	2	C	M	Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☐ No ☒		
Remarks: Faint redox.								

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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☒ No ☐ Depth (in): <u>1"</u> Water Table Present? Yes ☒ No ☐ Depth (in): <u>0" BSG</u> Saturation Present? Yes ☒ No ☐ Depth (in): <u>0" BSG</u> (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-13-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-21
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☒	No ☐
Hydric Soils Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			
Remarks: Wetland A in-pit.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B) Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: (A) <u> </u> (B) <u> </u> Prevalence Index = B/A = <u> </u>
1. <u>Populus balsamifera</u>	20	Yes	FAC	
2. <u>Fraxinus latifolia</u>	15	Yes	FACW	
3. <u> </u>				
4. <u> </u>				
<u>25</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Rosa pisocarpa</u>	15	Yes	FAC	
2. <u>Fraxinus latifolia</u>	10	Yes	FACW	
3. <u>Amelanchier alnifolia</u>	5	No	FACU	
4. <u> </u>				
5. <u> </u>				
<u>30</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Carex obnupta</u>	40	Yes	OBL	
2. <u>Rubus ursinus</u>	5	No	FACU	
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
9. <u> </u>				
10. <u> </u>				
11. <u> </u>				
<u>45</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. <u> </u>				
2. <u> </u>				
<u>-</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>60</u>				
Remarks:				

SOIL

Sampling Point: DP-21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-8	10YR 2/1	100					Silt loam	
8-17	10YR 4/1	93	10YR 3/3	7	C	M	Gravelly sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☒ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required: check all that apply)							
☒ Surface water (A1)	☐ Water Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Salt Crust (B11)	☐ Water Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)				
☒ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)				
☒ Saturation (A3)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Presence of Reduced Iron (C4)	☐ Dry-Season Water Table (C2)				
☐ Water Marks (B1)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Saturation Visible on Aerial Imagery (C9)				
☐ Sediment Deposits (B2)	☐ Other (explain in remarks)		☐ Geomorphic Position (D2)				
☐ Drift Deposits (B3)			☐ Shallow Aquitard (D3)				
☐ Algal Mat or Crust (B4)			☐ FAC-Neutral Test (D5)				
☐ Iron Deposits (B5)			☐ Raised Ant Mounds (D6) (LRR A)				
☐ Surface Soil Cracks (B6)			☐ Frost-Heave Hummocks				
☐ Inundation Visible on Aerial Imagery (B7)							
☐ Sparsely Vegetated Concave Surface (B8)							
Field Observations: Surface Water Present? Yes ☒ No ☐ Depth (in): <u>2"</u> Water Table Present? Yes ☒ No ☐ Depth (in): <u>0" BSG</u> Saturation Present? Yes ☒ No ☐ Depth (in): <u>0" BSG</u> (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-13-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-22
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 3
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 5-m diameter)					
1. <u>Populus balsamifera</u>	60	Yes	FAC	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. <u>Fraxinus latifolia</u>	15	Yes	FACW		
3. _____					
4. _____					
	<u>75</u>	= Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: 3-m diameter)					
1. <u>Acer circinatum</u>	50	Yes	FAC		
2. <u>Alnus rubra</u>	10	Yes	FAC		
3. _____					
4. _____					
5. _____					
	<u>60</u>	= Total Cover			
Herb Stratum (Plot size: 1-m diameter)					
1. <u>Polystichum munitum</u>	20	Yes	FACU	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Rubus ursinus</u>	5	No	FACU		
3. <u>Carex deweyana</u>	3	No	FAC		
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
	<u>28</u>	= Total Cover			
Woody Vine Stratum (Plot size: 3-m diameter)					
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐	
2. _____					
	<u>-</u>	= Total Cover			
% Bare Ground in Herb Stratum: <u>75</u>					
Remarks:					

SOIL

Sampling Point: DP-22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks		
0-14	10YR 3/2	100					Sandy loam			
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)						☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)			Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)	
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☐ No ☒				
Remarks:										

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ Water Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Salt Crust (B11)	☐ Water Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)	
☒ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	☐ Dry-Season Water Table (C2)	
☒ Saturation (A3)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Presence of Reduced Iron (C4)	☐ Geomorphic Position (D2)	☐ Shallow Aquitard (D3)	
☐ Water Marks (B1)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ FAC-Neutral Test (D5)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Sediment Deposits (B2)	☐ Other (explain in remarks)		☐ Frost-Heave Hummocks		
☐ Drift Deposits (B3)					
☐ Algal Mat or Crust (B4)					
☐ Iron Deposits (B5)					
☐ Surface Soil Cracks (B6)					
☐ Inundation Visible on Aerial Imagery (B7)					
☐ Sparsely Vegetated Concave Surface (B8)					
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 1" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 0" BSG (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-13-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-23
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 3
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland NN in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Populus balsamifera</u>	5	Yes	FAC	
2. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
3. _____				
4. _____				
			<u>5</u> = Total Cover	
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Fraxinus latifolia</u>	5	Yes	FACW	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Spiraea douglasii</u>	3	Yes	FACW	
3. <u>Acer circinatum</u>	trace	No	FAC	
4. _____				
5. _____				
			<u>8</u> = Total Cover	
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Rubus ursinus</u>	15	Yes	FACU	Hydrophytic Vegetation Present? Yes ☒ No ☐
2. <u>Carex deweyana</u>	5	Yes	FAC	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
			<u>20</u> = Total Cover	
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				
2. _____				
			<u>-</u> = Total Cover	
% Bare Ground in Herb Stratum: <u>80</u>				
Remarks:				

SOIL

Sampling Point: DP-23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 2/1	100					Silt loam	
3-8	10YR 3/1	100					Sandy loam	
8-13	10YR 3/1	93	10YR 3/3	7	C	M	Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						² Loc: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils³:		
☐ Histosol (A1)		☐ Sandy Redox (S5)		☐ 2cm Muck (A10)				
☐ Histic Epipedon (A2)		☐ Stripped Matrix (S6)		☐ Red Parent Material (TF2)				
☐ Black Histic (A3)		☐ Loamy Mucky Mineral (F1) (except MLRA 1)		☐ Very Shallow Dark Surface (TF12)				
☐ Hydrogen Sulfide (A4)		☐ Loamy Gleyed Matrix (F2)		☐ Other (Explain in Remarks)				
☐ Depleted Below Dark Surface (A11)		☐ Depleted Matrix (F3)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
☐ Thick Dark Surface (A12)		☒ Redox Dark Surface (F6)						
☐ Sandy Mucky Mineral (S1)		☐ Depleted Dark Surface (F7)						
☐ Sandy Gleyed Matrix (S4)		☐ Redox Depressions (F8)						
Restrictive Layer (if present):					Hydric soil present? Yes ☒ No ☐			
Type: _____ Depth (inches): _____								
Remarks: Redox is faint.								

HYDROLOGY

Wetland Hydrology Indicators:				Primary Indicators (minimum of one required: check all that apply)		Secondary Indicators (2 or more required)	
☒	Surface water (A1)	☐	Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐	Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)		
☒	High Water Table (A2)	☐	Salt Crust (B11)	☐	Drainage Patterns (B10)		
☒	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Dry-Season Water Table (C2)		
☐	Water Marks (B1)	☐	Hydrogen Sulfide Odor (C1)	☐	Saturation Visible on Aerial Imagery (C9)		
☐	Sediment Deposits (B2)	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Geomorphic Position (D2)		
☐	Drift Deposits (B3)	☐	Presence of Reduced Iron (C4)	☐	Shallow Aquitard (D3)		
☐	Algal Mat or Crust (B4)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	FAC-Neutral Test (D5)		
☐	Iron Deposits (B5)	☐	Stunted or Stressed Plants (D1) (LRR A)	☐	Raised Ant Mounds (D6) (LRR A)		
☐	Surface Soil Cracks (B6)	☐	Other (explain in remarks)	☐	Frost-Heave Hummocks		
☐	Inundation Visible on Aerial Imagery (B7)						
☐	Sparsely Vegetated Concave Surface (B8)						
Field Observations:				Wetland Hydrology Present? Yes ☒ No ☐			
Surface Water Present?	Yes ☒ No ☐	Depth (in):	<u>3"</u>				
Water Table Present?	Yes ☒ No ☐	Depth (in):	<u>0" BSG</u>				
Saturation Present?	Yes ☒ No ☐	Depth (in):	<u>0" BSG</u>				
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-13-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-24
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 3
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland NN in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>67%</u> (A/B)
1. <u>Fraxinus latifolia</u>	5	Yes	FACW	
2. _____				
3. _____				
4. _____				
	<u>5</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Physocarpus capitatus</u>	50	Yes	FACW	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. _____				
3. _____				
4. _____				
5. _____				
	<u>50</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Rubus ursinus</u>	10	Yes	FACU	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>10</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>90</u>				
Remarks:				

SOIL

Sampling Point: DP-24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 3/2	100					Silt loam	
3-14	10YR 4/2	95	10YR 3/4	5	C	M	Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☒ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
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)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	
☒ High Water Table (A2)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☒ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ FAC-Neutral Test (D5)	
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Surface Soil Cracks (B6)	☐ Other (explain in remarks)	☐ Frost-Heave Hummocks	
☐ Inundation Visible on Aerial Imagery (B7)			
☐ Sparsely Vegetated Concave Surface (B8)			
Field Observations: Surface Water Present? Yes ☒ No ☐ Depth (in): <u>1"</u> Water Table Present? Yes ☒ No ☐ Depth (in): <u>0" BSG</u> Saturation Present? Yes ☒ No ☐ Depth (in): <u>0" BSG</u> (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-13-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-25
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u>Fraxinus latifolia</u></td> <td style="text-align: center;">85</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2. <u>Populus balsamifera</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>100</u> = Total Cover</td> <td colspan="2"></td> </tr> </tbody> </table> Sapling/Shrub Stratum (Plot size: 3-m diameter) <table style="width: 100%;"> <tbody> <tr> <td>1. <u>Symphoricarpos albus</u></td> <td style="text-align: center;">30</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>2. <u>Gaultheria shallon</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>3. <u>Amelanchier alnifolia</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>4. <u>Fraxinus latifolia</u></td> <td style="text-align: center;">5</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>5. <u>Acer circinatum</u></td> <td style="text-align: center;">5</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>70</u> = Total Cover</td> <td colspan="2"></td> </tr> </tbody> </table> Herb Stratum (Plot size: 1-m diameter) <table style="width: 100%;"> <tbody> <tr> <td>1. <u>Polystichum munitum</u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>2. <u>Carex deweyana</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>6. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>7. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>8. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>9. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>10. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>11. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>35</u> = Total Cover</td> <td colspan="2"></td> </tr> </tbody> </table> Woody Vine Stratum (Plot size: 3-m diameter) <table style="width: 100%;"> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>-</u> = Total Cover</td> <td colspan="2"></td> </tr> </tbody> </table> % Bare Ground in Herb Stratum: <u>75</u>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Fraxinus latifolia</u>	85	Yes	FACW	2. <u>Populus balsamifera</u>	15	No	FAC	3. _____				4. _____				<u>100</u> = Total Cover				1. <u>Symphoricarpos albus</u>	30	Yes	FACU	2. <u>Gaultheria shallon</u>	15	Yes	FACU	3. <u>Amelanchier alnifolia</u>	15	Yes	FACU	4. <u>Fraxinus latifolia</u>	5	No	FACW	5. <u>Acer circinatum</u>	5	No	FAC	<u>70</u> = Total Cover				1. <u>Polystichum munitum</u>	20	Yes	FACU	2. <u>Carex deweyana</u>	15	Yes	FAC	3. _____				4. _____				5. _____				6. _____				7. _____				8. _____				9. _____				10. _____				11. _____				<u>35</u> = Total Cover				1. _____				2. _____				<u>-</u> = Total Cover				Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>6</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>33%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>-</u></td> <td>x 1 = <u>-</u></td> </tr> <tr> <td>FACW species <u>90</u></td> <td>x 2 = <u>180</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>80</u></td> <td>x 4 = <u>320</u></td> </tr> <tr> <td>UPL species <u>-</u></td> <td>x 5 = <u>-</u></td> </tr> <tr> <td>Column Totals: <u>205</u> (A)</td> <td><u>605</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>3.0</u> Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☒ 3 – Prevalence Index is ≤ 3.0¹ ☐ 4 – Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants¹ ☐ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes ☐ No ☒	Total % Cover of:	Multiply by:	OBL species <u>-</u>	x 1 = <u>-</u>	FACW species <u>90</u>	x 2 = <u>180</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>80</u>	x 4 = <u>320</u>	UPL species <u>-</u>	x 5 = <u>-</u>	Column Totals: <u>205</u> (A)	<u>605</u> (B)
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SOIL

Sampling Point: DP-25

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks	
0-13	10YR 2/1	100					Silt loam		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☐ No ☒				
Remarks: Redox nodules (10YR 3/3 and 10YR 3/4) at 10".									

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	☐ Dry-Season Water Table (C2)
☒ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)	☐ Hydrogen Sulfide Odor (C1)	☐ Geomorphic Position (D2)	☐ Shallow Aquitard (D3)
☒ Saturation (A3)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ FAC-Neutral Test (D5)	☐ Presence of Reduced Iron (C4)	☐ Raised Ant Mounds (D6) (LRR A)	☐ Frost-Heave Hummocks
☐ Water Marks (B1)	☐ Recent Iron Reduction in Tilled Soils (C6)		☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	
☐ Sediment Deposits (B2)	☐ Other (explain in remarks)		☐ Surface Soil Cracks (B6)		
☐ Drift Deposits (B3)			☐ Inundation Visible on Aerial Imagery (B7)		
☐ Algal Mat or Crust (B4)			☐ Sparsely Vegetated Concave Surface (B8)		
☐ Iron Deposits (B5)					
☐ Surface Soil Cracks (B6)					
☐ Inundation Visible on Aerial Imagery (B7)					
☐ Sparsely Vegetated Concave Surface (B8)					
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 0" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 0" BSG (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-19-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-26
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S30, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 6 to 15 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland QQ in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>75%</u> (A/B)
1. <u>Alnus rubra</u>	20	Yes	FAC	
2. _____				
3. _____				
4. _____				
	<u>20</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
1. <u>Physocarpus capitatus</u>	15	Yes	FACW	
2. <u>Populus balsamifera</u>	3	No	FAC	
3. _____				
4. _____				
5. _____				
	<u>18</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Rubus ursinus</u>	10	Yes	FACU	
2. <u>Carex deweyana</u>	5	Yes	FAC	
3. <u>Polystichum munitum</u>	trace	No	FACU	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>15</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes ☐ No ☒
1. _____				
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>85</u>				
Remarks:				

SOIL

Sampling Point: DP-26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks				
0-1	10YR 3/1	100					Sandy loam					
1-15	10YR 4/1	70	10YR 3/3	30	C	M	Sandy loam					
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☒ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)			
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☒ No ☐							
Remarks:												

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)							
Primary Indicators (minimum of one required: check all that apply)											
☐ Surface water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)				☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)				☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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			
Field Observations:				Wetland Hydrology Present?							
Surface Water Present? Yes ☐ No ☒ Depth (in): -				Yes ☒ No ☐							
Water Table Present? Yes ☒ No ☐ Depth (in): 0" BSG											
Saturation Present? Yes ☒ No ☐ Depth (in): 0" BSG (includes capillary fringe)											
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:											
Remarks:											

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-19-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-27
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S30, T16N, R04E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): convex Slope (%): 15
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 6 to 15 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☐	No ☒
Hydric Soils Present?	Yes ☐	No ☒			
Wetland Hydrology Present?	Yes ☐	No ☒			
Remarks: Click here to enter text.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u>Frangula purshiana</u></td> <td style="text-align: center;">70</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>2. <u>Pseudotsuga menziesii</u></td> <td style="text-align: center;">10</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>80</u></td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table> Sapling/Shrub Stratum (Plot size: 3-m diameter) <table style="width: 100%;"> <tbody> <tr> <td>1. <u>Physocarpus capitatus</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2. <u>Populus balsamifera</u></td> <td style="text-align: center;">5</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>3. <u>Alnus rubra</u></td> <td style="text-align: center;">3</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>23</u></td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table> Herb Stratum (Plot size: 1-m diameter) <table style="width: 100%;"> <tbody> <tr> <td>1. <u>Mahonia nervosa</u></td> <td style="text-align: center;">45</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>2. <u>Rubus ursinus</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>6. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>7. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>8. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>9. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>10. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>11. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>60</u></td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table> Woody Vine Stratum (Plot size: 3-m diameter) <table style="width: 100%;"> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>-</u></td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table> % Bare Ground in Herb Stratum: <u>45</u>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Frangula purshiana</u>	70	Yes	FAC	2. <u>Pseudotsuga menziesii</u>	10	No	FACU	3. _____				4. _____				<u>80</u>		= Total Cover		1. <u>Physocarpus capitatus</u>	15	Yes	FACW	2. <u>Populus balsamifera</u>	5	Yes	FAC	3. <u>Alnus rubra</u>	3	No	FAC	4. _____				5. _____				<u>23</u>		= Total Cover		1. <u>Mahonia nervosa</u>	45	Yes	FACU	2. <u>Rubus ursinus</u>	15	Yes	FACU	3. _____				4. _____				5. _____				6. _____				7. _____				8. _____				9. _____				10. _____				11. _____				<u>60</u>		= Total Cover		1. _____				2. _____				<u>-</u>		= Total Cover		Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>60%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </tbody> </table> Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0¹ ☐ 4 – Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants¹ ☐ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes ☐ No ☒	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
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SOIL

Sampling Point: DP-27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 2/1	100					Loam	w/OM
3-13	10YR 3/2	100					Sandy loam	
13-15	2.5Y 4/3	98	7.5YR 3/3	2	C	M	Silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)					Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)			
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☐ No ☒			
Remarks: Cobble at 15" BSG.								

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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Soils moist throughout profile.			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-21-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-28
 Investigator(s): Roan Hohlfeld and Sage Presster Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) 1. <u>Pseudotsuga menziesii</u> Absolute % Cover: <u>95</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 2. <u>Fraxinus latifolia</u> Absolute % Cover: <u>5</u> Dominant Species? <u>No</u> Indicator Status: <u>FACW</u> 3. _____ 4. _____ <u>100</u> = Total Cover	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>50%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 3-m diameter) 1. <u>Acer circinatum</u> Absolute % Cover: <u>5</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FAC</u> 2. <u>Rubus spectabilis</u> Absolute % Cover: <u>5</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FAC</u> 3. _____ 4. _____ 5. _____ <u>10</u> = Total Cover	
Herb Stratum (Plot size: 1-m diameter) 1. <u>Polystichum munitum</u> Absolute % Cover: <u>15</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 2. <u>Rubus ursinus</u> Absolute % Cover: <u>trace</u> Dominant Species? <u>No</u> Indicator Status: <u>FACU</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <u>60</u> = Total Cover	
Woody Vine Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ _____ = Total Cover % Bare Ground in Herb Stratum: <u>85</u>	
Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>110</u> x 4 = <u>440</u> UPL species _____ x 5 = _____ Column Totals: <u>125</u> (A) <u>480</u> (B) Prevalence Index = B/A = <u>3.8</u>	
Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Hydrophytic Vegetation Present? Yes ☐ No ☒	
Remarks:	

SOIL

Sampling Point: DP-28

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-2	10YR 3/2	100					Sandy loam	
2-18	10YR 4/3	98	7.5Y 4/4	2	C	M	Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): <u> - </u> Water Table Present? Yes ☒ No ☐ Depth (in): <u> 16" BSG </u> Saturation Present? Yes ☒ No ☐ Depth (in): <u> 10" BSG </u> (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-21-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-29
 Investigator(s): Roan Hohlfeld and Sage Presster Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland NN in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>60%</u> (A/B)
1. <u>Populus balsamifera</u>	20	Yes	FAC	
2. <u>Prunus emarginata</u>	5	Yes	FACU	
3. _____				
4. _____				
	<u>25</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
1. <u>Acer circinatum</u>	20	Yes	FAC	
2. <u>Rubus spectabilis</u>	10	Yes	FAC	
3. <u>Physocarpus capitatus</u>	3	No	FACW	
4. <u>Populus balsamifera</u>	trace	No	FAC	
5. _____				
	<u>33</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Rubus ursinus</u>	15	Yes	FACU	
2. <u>Dryopteris expansa</u>	trace	No	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>15</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____				
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>85</u>				
Remarks:				

SOIL

Sampling Point: DP-29

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 2/1	100					Sandy loam	
5-16	10YR 5/2	95	7.5Y 4/4	5	C	M	Sandy silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☒ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required: check all that apply)							
☐ Surface water (A1)	☐ Water Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Salt Crust (B11)	☐ Water Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)				
☒ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Drainage Patterns (B10)				
☒ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☐ Presence of Reduced Iron (C4)	☐ Dry-Season Water Table (C2)				
☐ Water Marks (B1)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Saturation Visible on Aerial Imagery (C9)				
☐ Sediment Deposits (B2)	☐ Other (explain in remarks)		☐ Geomorphic Position (D2)				
☐ Drift Deposits (B3)			☐ Shallow Aquitard (D3)				
☐ Algal Mat or Crust (B4)			☐ FAC-Neutral Test (D5)				
☐ Iron Deposits (B5)			☐ Raised Ant Mounds (D6) (LRR A)				
☐ Surface Soil Cracks (B6)			☐ Frost-Heave Hummocks				
☐ Inundation Visible on Aerial Imagery (B7)							
☐ Sparsely Vegetated Concave Surface (B8)							
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 5" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 0" BSG (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-21-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-30
 Investigator(s): Roan Hohlfeld and Sage Presster Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☒	No ☐
Hydric Soils Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			
Remarks: Wetland C in-pit.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%;">Absolute % Cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 20%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u>Fraxinus latifolia</u></td> <td style="text-align: center;">80</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2. <u>Populus balsamifera</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;"><u>105</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> Sapling/Shrub Stratum (Plot size: 3-m diameter) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%;">Absolute % Cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 20%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u>Spiraea douglasii</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2. <u>Symphoricarpos albus</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>3. <u>Malus fusca</u></td> <td style="text-align: center;">10</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;"><u>40</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> Herb Stratum (Plot size: 1-m diameter) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%;">Absolute % Cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 20%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u>Phalaris arundinacea</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACW</td> </tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr><td>8. _____</td><td></td><td></td><td></td></tr> <tr><td>9. _____</td><td></td><td></td><td></td></tr> <tr><td>10. _____</td><td></td><td></td><td></td></tr> <tr><td>11. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;"><u>15</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> Woody Vine Stratum (Plot size: 3-m diameter) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%;">Absolute % Cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 20%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;"><u>-</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> % Bare Ground in Herb Stratum: <u>85</u>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Fraxinus latifolia</u>	80	Yes	FACW	2. <u>Populus balsamifera</u>	15	No	FAC	3. _____				4. _____				<u>105</u>	= Total Cover				Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Spiraea douglasii</u>	15	Yes	FACW	2. <u>Symphoricarpos albus</u>	15	Yes	FACU	3. <u>Malus fusca</u>	10	Yes	FACW	4. _____				5. _____				<u>40</u>	= Total Cover				Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Phalaris arundinacea</u>	15	Yes	FACW	2. _____				3. _____				4. _____				5. _____				6. _____				7. _____				8. _____				9. _____				10. _____				11. _____				<u>15</u>	= Total Cover				Absolute % Cover	Dominant Species?	Indicator Status	1. _____				2. _____				<u>-</u>	= Total Cover			Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>80%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Total % Cover of:</th> <th style="width: 40%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </tbody> </table> Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0¹ ☐ 4 – Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants¹ ☐ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes ☒ No ☐	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
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SOIL

Sampling Point: DP-30

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 3/1	100					Sandy loam	
4-12	10YR 4/1	95	7.5YR 4/4	5	C	M/PL	Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☒ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☒ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	
☒ Saturation (A3)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Water Marks (B1)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ FAC-Neutral Test (D5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Sediment Deposits (B2)	☐ Other (explain in remarks)	☐ Frost-Heave Hummocks			
☐ Drift Deposits (B3)					
☐ Algal Mat or Crust (B4)					
☐ Iron Deposits (B5)					
☐ Surface Soil Cracks (B6)					
☐ Inundation Visible on Aerial Imagery (B7)					
☐ Sparsely Vegetated Concave Surface (B8)					
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 5" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 0" BSG (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 1-21-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-31
 Investigator(s): Roan Hohlfeld and Sage Presster Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Slope Local relief (concave, convex, none): none Slope (%): 30
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☐	No ☒	
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) 1. <u>Salix scouleriana</u> Absolute % Cover: <u>45</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FAC</u> 2. <u>Fraxinus latifolia</u> Absolute % Cover: <u>20</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACW</u> 3. _____ 4. _____ <u>65</u> = Total Cover	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across all Strata: <u>6</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>67%</u> (A/B)		
Sapling/Shrub Stratum (Plot size: 3-m diameter) 1. <u>Malus fusca</u> Absolute % Cover: <u>25</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACW</u> 2. <u>Rosa pisocarpa</u> Absolute % Cover: <u>10</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FAC</u> 3. _____ 4. _____ 5. _____ <u>35</u> = Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____	
Herb Stratum (Plot size: 1-m diameter) 1. <u>Polystichum munitum</u> Absolute % Cover: <u>10</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 2. <u>Mahonia nervosa</u> Absolute % Cover: <u>5</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <u>15</u> = Total Cover			Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ _____ = Total Cover			
% Bare Ground in Herb Stratum: <u>85</u>			
Remarks:			

SOIL

Sampling Point: DP-31

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 3/1	100					Sandy silt loam	
4-16	10YR 3/2	100					Sandy silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (in): - Water Table Present? Yes ☐ No ☐ Depth (in): - Saturation Present? Yes ☐ No ☐ Depth (in): - (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Dry throughout soil profile.			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-19-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-32
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Slight depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒ No ☐ Hydric Soils Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal. Wetland RR In-pit.	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Notes
Tree Stratum (Plot size: 5-m diameter)				
1. _____				
2. _____				
3. _____				
4. _____				
	-	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Acer circinatum</u>	70	Yes	FAC	
2. <u>Fraxinus latifolia</u>	60	Yes	FACW	
3. _____				
4. _____				
5. _____				
	130	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	-	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				
2. _____				
	-	= Total Cover		
% Bare Ground in Herb Stratum: <u>100</u>				
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across all Strata: 2 (B)
 Percent of Dominant Species that are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals:	(A) _____ (B) _____

 Prevalence Index = B/A = _____

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: DP-32

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 3/2	100					Loam	
6-12	2.5Y 4/1	70	10YR 3/3	30	C	M	Clay loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☒ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☒ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	
☒ Saturation (A3)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Water Marks (B1)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ FAC-Neutral Test (D5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Sediment Deposits (B2)	☐ Other (explain in remarks)	☐ Frost-Heave Hummocks			
☐ Drift Deposits (B3)					
☐ Algal Mat or Crust (B4)					
☐ Iron Deposits (B5)					
☐ Surface Soil Cracks (B6)					
☐ Inundation Visible on Aerial Imagery (B7)					
☐ Sparsely Vegetated Concave Surface (B8)					
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 0" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 0" BSG (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-19-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-33
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): terrace Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☐	No ☒	
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>60%</u> (A/B)
1. <u><i>Alnus rubra</i></u>	60	Yes	FAC	
2. <u><i>Pseudotsuga menziesii</i></u>	40	Yes	FACU	
3. _____				
4. _____				
	<u>100</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
1. <u><i>Acer circinatum</i></u>	70	Yes	FAC	
2. <u><i>Fraxinus latifolia</i></u>	10	Yes	FACW	
3. _____				
4. _____				
5. _____				
	<u>80</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u><i>Polystichum munitum</i></u>	5	Yes	FACU	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>5</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____				
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>95</u>				
Remarks: _____				

SOIL

Sampling Point: DP-33

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks		
0-7	10YR 2/1	100					Silt loam			
7-16	10YR 3/2	100					Silt loam			
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)	
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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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		
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): <u> - </u> Water Table Present? Yes ☒ No ☐ Depth (in): <u> 13" BSG </u> Saturation Present? Yes ☒ No ☐ Depth (in): <u> 13" BSG </u> (includes capillary fringe)			Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks:				

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-19-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-34
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): terrace Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soils Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal. Wetland SS In-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>75%</u> (A/B)
1. <u>Fraxinus latifolia</u>	30	Yes	FACW	
2. <u>Alnus rubra</u>	25	Yes	FAC	
3. _____				
4. _____				
	<u>55</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
1. <u>Acer circinatum</u>	25	Yes	FAC	
2. <u>Symphoricarpos albus</u>	20	Yes	FACU	
3. _____				
4. _____				
5. _____				
	<u>45</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Polystichum munitum</u>	trace	No	FACU	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>-</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present?
1. _____				
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>100</u>				Yes ☒ No ☐
Remarks:				

SOIL

Sampling Point: DP-34

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features				
				%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 2/1	100					Loam	
3-8	12.5Y 4/2	50					Clay loam	Mixed matrix
3-8	10YR 3/3	50					Clay loam	Mixed matrix
8-16	2.5Y 5/2	97	2.5Y 3/4	3	C	M	Clay loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.								
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils³:		
☐ Histosol (A1)			☐ Sandy Redox (S5)			☐ 2cm Muck (A10)		
☐ Histic Epipedon (A2)			☐ Stripped Matrix (S6)			☐ Red Parent Material (TF2)		
☐ Black Histic (A3)			☐ Loamy Mucky Mineral (F1) (except MLRA 1)			☐ Very Shallow Dark Surface (TF12)		
☐ Hydrogen Sulfide (A4)			☐ Loamy Gleyed Matrix (F2)			☐ Other (Explain in Remarks)		
☐ Depleted Below Dark Surface (A11)			☒ Depleted Matrix (F3)			³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
☐ Thick Dark Surface (A12)			☐ Redox Dark Surface (F6)					
☐ Sandy Mucky Mineral (S1)			☐ Depleted Dark Surface (F7)					
☐ Sandy Gleyed Matrix (S4)			☐ Redox Depressions (F8)					
Restrictive Layer (if present):					Hydric soil present? Yes ☒ No ☐			
Type: _____ Depth (inches): _____								
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required: check all that apply)		Secondary Indicators (2 or more required)	
☐ Surface water (A1)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	
☒ High Water Table (A2)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☒ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)	
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ FAC-Neutral Test (D5)	
☐ Iron Deposits (B5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Surface Soil Cracks (B6)	☐ Other (explain in remarks)	☐ Frost-Heave Hummocks	
☐ Inundation Visible on Aerial Imagery (B7)			
☐ Sparsely Vegetated Concave Surface (B8)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): <u> </u> Water Table Present? Yes ☒ No ☐ Depth (in): <u>8" BSG</u> Saturation Present? Yes ☒ No ☐ Depth (in): <u>6" BSG</u> (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-19-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-35
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Slight depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal. Wetland TT In-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>60%</u> (A/B)	
1. <u>Fraxinus latifolia</u>	30	Yes	FACW		
2. <u>Alnus rubra</u>	25	Yes	FAC		
3. _____					
4. _____					
			<u>-</u> = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: 3-m diameter)					
1. <u>Gaultheria shallon</u>	40	Yes	FACU	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Fraxinus latifolia</u>	30	Yes	FACW		
3. <u>Amelanchier alnifolia</u>	20	Yes	FACU		
4. <u>Acer circinatum</u>	5	No	FAC		
5. <u>Physocarpus capitatus</u>	trace	No	FACW		
			<u>95</u> = Total Cover		
Herb Stratum (Plot size: 1-m diameter)					
1. <u>Carex obnupta</u>	70	No	OBL		
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
			<u>70</u> = Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)					
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐	
2. _____					
			<u>-</u> = Total Cover		
% Bare Ground in Herb Stratum: <u>30</u>					
Remarks: _____					

SOIL

Sampling Point: DP-35

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-8	10YR 2/2	100					Silt loam	
8-14	2.5Y 3/2	85	10YR 4/6	15	C	M	Silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☒ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ Water Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Water Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☒ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	
☒ Saturation (A3)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Water Marks (B1)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ FAC-Neutral Test (D5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Sediment Deposits (B2)	☐ Other (explain in remarks)	☐ Frost-Heave Hummocks			
☐ Drift Deposits (B3)					
☐ Algal Mat or Crust (B4)					
☐ Iron Deposits (B5)					
☐ Surface Soil Cracks (B6)					
☐ Inundation Visible on Aerial Imagery (B7)					
☐ Sparsely Vegetated Concave Surface (B8)					
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 2" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 1" BSG (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-19-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-36
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Slight depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>Fraxinus latifolia</u>	30	Yes	FACW	
2. <u>Alnus rubra</u>	25	Yes	FAC	
3. _____				
4. _____				
	<u>55</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Gaultheria shallon</u>	100	Yes	FACU	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>-</u> x 1 = <u>-</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>27</u> x 3 = <u>81</u> FACU species <u>110</u> x 4 = <u>440</u> UPL species <u>-</u> x 5 = <u>-</u> Column Totals: <u>167</u> (A) <u>581</u> (B) Prevalence Index = B/A = <u>3.5</u>
2. <u>Rubus armeniacus</u>	2	No	FAC	
3. _____				
4. _____				
5. _____				
	<u>95</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Mahonia nervosa</u>	10	Yes	FACU	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>10</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes ☐ No ☒
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>90</u>				
Remarks:				

SOIL

Sampling Point: DP-36

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %		Type ¹	Loc ²	Texture	Remarks
0-16	10YR 3/2	100						Silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						² Loc: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils³:			
☐ Histosol (A1)		☐ Sandy Redox (S5)		☐ 2cm Muck (A10)					
☐ Histic Epipedon (A2)		☐ Stripped Matrix (S6)		☐ Red Parent Material (TF2)					
☐ Black Histic (A3)		☐ Loamy Mucky Mineral (F1) (except MLRA 1)		☐ Very Shallow Dark Surface (TF12)					
☐ Hydrogen Sulfide (A4)		☐ Loamy Gleyed Matrix (F2)		☐ Other (Explain in Remarks)					
☐ Depleted Below Dark Surface (A11)		☐ Depleted Matrix (F3)							
☐ Thick Dark Surface (A12)		☐ Redox Dark Surface (F6)							
☐ Sandy Mucky Mineral (S1)		☐ Depleted Dark Surface (F7)							
☐ Sandy Gleyed Matrix (S4)		☐ Redox Depressions (F8)							
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)	☐	Water Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐	Water Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)		
☐	High Water Table (A2)	☐	Salt Crust (B11)	☐	Drainage Patterns (B10)		
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Dry-Season Water Table (C2)		
☐	Water Marks (B1)	☐	Hydrogen Sulfide Odor (C1)	☐	Saturation Visible on Aerial Imagery (C9)		
☐	Sediment Deposits (B2)	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Geomorphic Position (D2)		
☐	Drift Deposits (B3)	☐	Presence of Reduced Iron (C4)	☐	Shallow Aquitard (D3)		
☐	Algal Mat or Crust (B4)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	FAC-Neutral Test (D5)		
☐	Iron Deposits (B5)	☐	Stunted or Stressed Plants (D1) (LRR A)	☐	Raised Ant Mounds (D6) (LRR A)		
☐	Surface Soil Cracks (B6)	☐	Other (explain in remarks)	☐	Frost-Heave Hummocks		
☐	Inundation Visible on Aerial Imagery (B7)						
☐	Sparsely Vegetated Concave Surface (B8)						
Field Observations:				Wetland Hydrology Present? Yes ☐ No ☒			
Surface Water Present?	Yes ☐ No ☒	Depth (in):	-				
Water Table Present?	Yes ☐ No ☒	Depth (in):	-				
Saturation Present?	Yes ☐ No ☒	Depth (in):	-				
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-19-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-37
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal. Wetland VV in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Fraxinus latifolia</u>	70	Yes	FACW	
2. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
3. _____				
4. _____				
<u>70</u> = Total Cover				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Symphoricarpos albus</u>	40	Yes	FACU	
2. <u>Rosa nutkana</u>	15	Yes	FAC	
3. _____				
4. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
5. _____				
<u>65</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. _____				
2. _____				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
8. _____				
9. _____				
10. _____				
11. _____				
<u>-</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
2. _____				
<u>-</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>100</u>				
Remarks:				

SOIL

Sampling Point: DP-37

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks	
0-16	10YR 2/1	100					Silt loam		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☒ Other (Explain in Remarks)
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☒ No ☐				
Remarks: Aquic moisture regime observed.									

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Salt Crust (B11)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)	
☒ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	☐ Geomorphic Position (D2)	
☒ Saturation (A3)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	☐ FAC-Neutral Test (D5)	
☐ Water Marks (B1)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	☐ Frost-Heave Hummocks	
☐ Sediment Deposits (B2)	☐ Other (explain in remarks)				
☐ Drift Deposits (B3)					
☐ Algal Mat or Crust (B4)					
☐ Iron Deposits (B5)					
☐ Surface Soil Cracks (B6)					
☐ Inundation Visible on Aerial Imagery (B7)					
☐ Sparsely Vegetated Concave Surface (B8)					
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 0" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 0" BSG (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-19-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-38
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. <u>Pseudotsuga menziesii</u>	100	Yes	FACU	
2. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species <u>123</u> x 4 = <u>492</u> UPL species _____ x 5 = _____ Column Totals: <u>123</u> (A) <u>492</u> (B) Prevalence Index = B/A = <u>4</u>
3. _____				
4. _____				
<u>100</u> = Total Cover				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Gaultheria shallon</u>	20	Yes	FACU	
2. _____				
3. _____				
4. _____				
<u>20</u> = Total Cover				Hydrophytic Vegetation Present? Yes ☐ No ☒
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Rubus ursinus</u>	3	Yes	FACU	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
<u>-</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				
2. _____				
<u>-</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>0</u>				
Remarks: <u>Moss in herb stratum</u>				

SOIL

Sampling Point: DP-38

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks	
0-10	10YR 2/2	100					Loam		
10-16	10YR 3/4	100					Sandy loam		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☐ No ☒				
Remarks:									

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☐ Saturation (A3)	☐ Water Marks (B1)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)	☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Salt Crust (B11)	☐ Dry-Season Water Table (C2)
☐ Surface Soil Cracks (B6)	☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)
			☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Hydrogen Sulfide Odor (C1)	☒ Geomorphic Position (D2)
			☐ Presence of Reduced Iron (C4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Shallow Aquitard (D3)
			☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Other (explain in remarks)	☐ FAC-Neutral Test (D5)
					☐ Raised Ant Mounds (D6) (LRR A)
					☐ Frost-Heave Hummocks
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)				Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Geomorphic position is a depression.					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-19-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-39
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Slope Local relief (concave, convex, none): concave Slope (%): 10
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal. Wetland UU in-pit.			

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 5-m diameter)				
1. _____				Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>1</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>-</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. _____				
3. _____				
4. _____				
5. _____				
<u>-</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Grass</u>	<u>90</u>	<u>Yes</u>	<u>FAC*</u>	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Juncus effusus</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
2. _____				
<u>-</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>0</u>				
Remarks: <u>*Assumed FAC</u>				

SOIL

Sampling Point: DP-39

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-7	10YR 2/2	100					Sandy loam	
7-14	2.5YR 3/2	90	10YR 3/4	10	C	M	Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☒ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☒ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	
☒ Saturation (A3)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Water Marks (B1)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ FAC-Neutral Test (D5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Sediment Deposits (B2)	☐ Other (explain in remarks)	☐ Frost-Heave Hummocks			
☐ Drift Deposits (B3)					
☐ Algal Mat or Crust (B4)					
☐ Iron Deposits (B5)					
☐ Surface Soil Cracks (B6)					
☐ Inundation Visible on Aerial Imagery (B7)					
☐ Sparsely Vegetated Concave Surface (B8)					
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): <u> - </u> Water Table Present? Yes ☒ No ☐ Depth (in): <u> 8" BSG </u> Saturation Present? Yes ☒ No ☐ Depth (in): <u> 6" BSG </u> (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-19-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-40
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Slope Local relief (concave, convex, none): concave Slope (%): 10
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☐ No ☒ Hydric Soils Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal.	

VEGETATION – Use scientific names of plants.

<table style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: 5-m diameter)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;">_____ = Total Cover</td> <td></td><td></td><td></td> </tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: 3-m diameter)</th> <th></th> <th></th> <th></th> </tr> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;">_____ = Total Cover</td> <td></td><td></td><td></td> </tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: 1-m diameter)</th> <th></th> <th></th> <th></th> </tr> <tr><td>1. Grass</td><td style="text-align: center;">90</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <i>Dactylis glomerata</i></td><td style="text-align: center;">25</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>3. <i>Lotus corniculatus</i></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FAC</td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr><td>8. _____</td><td></td><td></td><td></td></tr> <tr><td>9. _____</td><td></td><td></td><td></td></tr> <tr><td>10. _____</td><td></td><td></td><td></td></tr> <tr><td>11. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;">_____ = Total Cover</td> <td></td><td></td><td></td> </tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: 3-m diameter)</th> <th></th> <th></th> <th></th> </tr> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;">_____ = Total Cover</td> <td></td><td></td><td></td> </tr> </table> % Bare Ground in Herb Stratum: <u>0</u>	Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. _____				2. _____				3. _____				4. _____				_____ = Total Cover				Sapling/Shrub Stratum (Plot size: 3-m diameter)				1. _____				2. _____				3. _____				4. _____				5. _____				_____ = Total Cover				Herb Stratum (Plot size: 1-m diameter)				1. Grass	90	Yes	FAC	2. <i>Dactylis glomerata</i>	25	Yes	FACU	3. <i>Lotus corniculatus</i>	5	No	FAC	4. _____				5. _____				6. _____				7. _____				8. _____				9. _____				10. _____				11. _____				_____ = Total Cover				Woody Vine Stratum (Plot size: 3-m diameter)				1. _____				2. _____				_____ = Total Cover				Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>50%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>-</u></td> <td>x 1 = <u>-</u></td> </tr> <tr> <td>FACW species <u>-</u></td> <td>x 2 = <u>-</u></td> </tr> <tr> <td>FAC species <u>95</u></td> <td>x 3 = <u>285</u></td> </tr> <tr> <td>FACU species <u>25</u></td> <td>x 4 = <u>100</u></td> </tr> <tr> <td>UPL species <u>-</u></td> <td>x 5 = <u>-</u></td> </tr> <tr> <td>Column Totals: <u>120</u></td> <td>(A) <u>385</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.2</u> Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>-</u>	x 1 = <u>-</u>	FACW species <u>-</u>	x 2 = <u>-</u>	FAC species <u>95</u>	x 3 = <u>285</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>-</u>	x 5 = <u>-</u>	Column Totals: <u>120</u>	(A) <u>385</u> (B)
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SOIL

Sampling Point: DP-40

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features		Type ¹	Loc ²	Texture	Remarks
0-10	10YR 3/3	100						Sandy loam	
10-14	10YR 2/1	100						Sandy loam	w/charcoal
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.						² Loc: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)						Indicators for Problematic Hydric Soils³:			
☐ Histosol (A1)		☐ Sandy Redox (S5)		☐ 2cm Muck (A10)					
☐ Histic Epipedon (A2)		☐ Stripped Matrix (S6)		☐ Red Parent Material (TF2)					
☐ Black Histic (A3)		☐ Loamy Mucky Mineral (F1) (except MLRA 1)		☐ Very Shallow Dark Surface (TF12)					
☐ Hydrogen Sulfide (A4)		☐ Loamy Gleyed Matrix (F2)		☐ Other (Explain in Remarks)					
☐ Depleted Below Dark Surface (A11)		☐ Depleted Matrix (F3)		³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.					
☐ Thick Dark Surface (A12)		☐ Redox Dark Surface (F6)							
☐ Sandy Mucky Mineral (S1)		☐ Depleted Dark Surface (F7)							
☐ Sandy Gleyed Matrix (S4)		☐ Redox Depressions (F8)							
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)	☐	Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐	Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)		
☐	High Water Table (A2)	☐	Salt Crust (B11)	☐	Drainage Patterns (B10)		
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Dry-Season Water Table (C2)		
☐	Water Marks (B1)	☐	Hydrogen Sulfide Odor (C1)	☐	Saturation Visible on Aerial Imagery (C9)		
☐	Sediment Deposits (B2)	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Geomorphic Position (D2)		
☐	Drift Deposits (B3)	☐	Presence of Reduced Iron (C4)	☐	Shallow Aquitard (D3)		
☐	Algal Mat or Crust (B4)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	FAC-Neutral Test (D5)		
☐	Iron Deposits (B5)	☐	Stunted or Stressed Plants (D1) (LRR A)	☐	Raised Ant Mounds (D6) (LRR A)		
☐	Surface Soil Cracks (B6)	☐	Other (explain in remarks)	☐	Frost-Heave Hummocks		
☐	Inundation Visible on Aerial Imagery (B7)						
☐	Sparsely Vegetated Concave Surface (B8)						
Field Observations:				Wetland Hydrology Present? Yes ☐ No ☒			
Surface Water Present?	Yes ☐ No ☐	Depth (in):	-				
Water Table Present?	Yes ☐ No ☐	Depth (in):	-				
Saturation Present?	Yes ☐ No ☐	Depth (in):	-				
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-25-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-41
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 10
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒ No ☐ Hydric Soils Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Spiraea douglasii</u>	3	Yes	FACW	
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Phalaris arundinacea</u>	100	Yes	FACW	
2. <u>Rubus ursinus</u>	trace	No	FACU	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum: <u>0</u>				
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across all Strata: 2 (B)
 Percent of Dominant Species that are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

 Prevalence Index = B/A = _____

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: DP-41

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks	
0-8	10YR 3/2	100					Silt loam		
8-16	10YR 3/2	84					Silt loam	Mixed matrix	
8-16	2.5Y 4/2	15	10YR 3/4	1	C	M	Silt loam	Mixed matrix	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 2" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 1" BSG (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-25-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-42
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒ No ☐ Hydric Soils Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal. Wetland WW in-pit.	

VEGETATION – Use scientific names of plants.

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Tree Stratum (Plot size: 5-m diameter)</th> <th style="width: 10%;">Absolute % Cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Fraxinus latifolia</u></td><td style="text-align: center;">40</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Alnus rubra</u></td><td style="text-align: center;">35</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;"><u>75</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Sapling/Shrub Stratum (Plot size: 3-m diameter)</th> <th style="width: 10%;">Absolute % Cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Fraxinus latifolia</u></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Alnus rubra</u></td><td style="text-align: center;">15</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. <u>Acer circinatum</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FAC</td></tr> <tr><td>4. <u>Rosa nutkana</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FAC</td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;"><u>45</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Herb Stratum (Plot size: 1-m diameter)</th> <th style="width: 10%;">Absolute % Cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Cardamine hirsuta</u></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>2. <u>Rubus ursinus</u></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>3. <u>Carex deweyana</u></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr><td>8. _____</td><td></td><td></td><td></td></tr> <tr><td>9. _____</td><td></td><td></td><td></td></tr> <tr><td>10. _____</td><td></td><td></td><td></td></tr> <tr><td>11. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;"><u>15</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Woody Vine Stratum (Plot size: 3-m diameter)</th> <th style="width: 10%;">Absolute % Cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;"><u>-</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> % Bare Ground in Herb Stratum: <u>85</u>	Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Fraxinus latifolia</u>	40	Yes	FACW	2. <u>Alnus rubra</u>	35	Yes	FAC	3. _____				4. _____				<u>75</u>	= Total Cover			Sapling/Shrub Stratum (Plot size: 3-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Fraxinus latifolia</u>	20	Yes	FACW	2. <u>Alnus rubra</u>	15	Yes	FAC	3. <u>Acer circinatum</u>	5	No	FAC	4. <u>Rosa nutkana</u>	5	No	FAC	5. _____				<u>45</u>	= Total Cover			Herb Stratum (Plot size: 1-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Cardamine hirsuta</u>	5	Yes	FACU	2. <u>Rubus ursinus</u>	5	Yes	FACU	3. <u>Carex deweyana</u>	5	Yes	FAC	4. _____				5. _____				6. _____				7. _____				8. _____				9. _____				10. _____				11. _____				<u>15</u>	= Total Cover			Woody Vine Stratum (Plot size: 3-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. _____				2. _____				<u>-</u>	= Total Cover			Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across all Strata: <u>7</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>71%</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0¹ ☐ 4 – Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants¹ ☐ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes ☒ No ☐
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SOIL

Sampling Point: DP-42

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-2	10YR 2/2	100					Sandy loam	
2-12	2.5Y 5/1	90	10YR 4/3	10	C	M	Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☒ Depleted Below Dark Surface (A11) ☒ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 0" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 0" BSG (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-25-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-43
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal. Wetland XX in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)	
1. <u>Thuja plicata</u>	60	Yes	FAC		
2. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____	
3. _____					
4. _____					
			<u>60</u> = Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)					
1. <u>Acer circinatum</u>	60	Yes	FAC	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Rubus spectabilis</u>	10	No	FAC		
3. _____					
4. _____					
5. _____					
			<u>70</u> = Total Cover		
Herb Stratum (Plot size: 1-m diameter)					
1. <u>Carex obnupta</u>	90	Yes	OBL		
2. <u>Rubus ursinus</u>	5	No	FACU		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
			<u>95</u> = Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)					
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐	
2. _____					
			<u>-</u> = Total Cover		
% Bare Ground in Herb Stratum: <u>10</u>					
Remarks:					

SOIL

Sampling Point: DP-43

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-2	2.5Y 3/2	100					Sandy loam	
2-14	2.5Y 5/1	80	10YR 4/6	20	C	M	Clay loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☒ Depleted Below Dark Surface (A11) ☒ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Salt Crust (B11)	☐ Drainage Patterns (B10)	
☒ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)	☐ Hydrogen Sulfide Odor (C1)	☐ Saturation Visible on Aerial Imagery (C9)	
☒ Saturation (A3)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Geomorphic Position (D2)	☐ Presence of Reduced Iron (C4)	☐ Shallow Aquitard (D3)	
☐ Water Marks (B1)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ FAC-Neutral Test (D5)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Raised Ant Mounds (D6) (LRR A)	
☐ Sediment Deposits (B2)	☐ Other (explain in remarks)	☐ Frost-Heave Hummocks			
☐ Drift Deposits (B3)					
☐ Algal Mat or Crust (B4)					
☐ Iron Deposits (B5)					
☐ Surface Soil Cracks (B6)					
☐ Inundation Visible on Aerial Imagery (B7)					
☐ Sparsely Vegetated Concave Surface (B8)					
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): <u>-</u> Water Table Present? Yes ☒ No ☐ Depth (in): <u>8" BSG</u> Saturation Present? Yes ☒ No ☐ Depth (in): <u>4" BSG</u> (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 2-25-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-44
 Investigator(s): Roan Hohlfeld and Sam Payne Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): none Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks: Hydrologic conditions for the three-month period prior to the site visit were wetter than normal.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) 1. <u><i>Pseudotsuga menziesii</i></u> Absolute % Cover: <u>75</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 2. _____ 3. _____ 4. _____ <u>75</u> = Total Cover	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 3-m diameter) 1. <u><i>Gaultheria shallon</i></u> Absolute % Cover: <u>90</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 2. <u><i>Acer circinatum</i></u> Absolute % Cover: <u>15</u> Dominant Species? <u>No</u> Indicator Status: <u>FAC</u> 3. <u><i>Fraxinus latifolia</i></u> Absolute % Cover: <u>10</u> Dominant Species? <u>No</u> Indicator Status: <u>FACW</u> 4. _____ 5. _____ <u>115</u> = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species: <u>-</u> x 1 = <u>-</u> FACW species: <u>10</u> x 2 = <u>20</u> FAC species: <u>15</u> x 3 = <u>45</u> FACU species: <u>170</u> x 4 = <u>680</u> UPL species: <u>-</u> x 5 = <u>-</u> Column Totals: <u>195</u> (A) <u>745</u> (B) Prevalence Index = B/A = <u>3.8</u>
Herb Stratum (Plot size: 1-m diameter) 1. <u><i>Polystichum munitum</i></u> Absolute % Cover: <u>5</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <u>5</u> = Total Cover	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ <u>-</u> = Total Cover % Bare Ground in Herb Stratum: <u>95</u>	Hydrophytic Vegetation Present? Yes ☐ No ☒
Remarks:	

SOIL

Sampling Point: DP-44

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-6	2.5Y 3/2	100					Silt loam	
6-16	2.5Y 4/3	100					Silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)			
					☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)			
					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
Restrictive Layer (if present):					Hydric soil present? Yes ☐ No ☒			
Type: _____								
Depth (inches): _____								
Remarks:								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☐ Saturation (A3)	☐ Water Marks (B1)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)	☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Salt Crust (B11)	☐ Dry-Season Water Table (C2)
☐ Surface Soil Cracks (B6)	☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)
			☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Presence of Reduced Iron (C4)	☐ Geomorphic Position (D2)
			☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Shallow Aquitard (D3)
			☐ Other (explain in remarks)	☐ FAC-Neutral Test (D5)	☐ Raised Ant Mounds (D6) (LRR A)
				☐ Frost-Heave Hummocks	
Field Observations:				Wetland Hydrology Present? Yes ☐ No ☒	
Surface Water Present? Yes ☐ No ☒ Depth (in): -					
Water Table Present? Yes ☐ No ☒ Depth (in): -					
Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 4-15-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-45
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland B in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Fraxinus latifolia</u>	20	Yes	FACW	
2. _____				
3. _____				
4. _____				
			<u>20</u> = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Fraxinus latifolia</u>	20	Yes	FACW	
2. <u>Acer circinatum</u>	15	Yes	FAC	
3. _____				
			<u>35</u> = Total Cover	
Herb Stratum (Plot size: 1-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Claytonia perfoliata</u>	5	Yes	FAC	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
			<u>5</u> = Total Cover	
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____				
2. _____				
			<u>-</u> = Total Cover	
% Bare Ground in Herb Stratum: <u>95</u>				
Remarks:				

SOIL

Sampling Point: DP-45

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-8	2.5Y 3/2	100					Sandy silt loam	
8-17	2.5Y 3/2	95	10YR 4/6	5	C	M	Sandy silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☒ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): <u>7" BSG</u> Saturation Present? Yes ☒ No ☐ Depth (in): <u>0" BSG</u> (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 4-15-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-46
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Toe of slope Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☐	No ☒	Is the Sampled Area within a Wetland?	Yes ☐	No ☒
Hydric Soils Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☐	No ☒			
Remarks:					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u><i>Pseudotsuga menziesii</i></u></td> <td style="text-align: center;">90</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>2. <u><i>Populus balsamifera</i></u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>105</u> = Total Cover</td> <td colspan="2"></td> </tr> </tbody> </table> Sapling/Shrub Stratum (Plot size: 3-m diameter) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u><i>Gaultheria shallon</i></u></td> <td style="text-align: center;">10</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>2. <u><i>Acer circinatum</i></u></td> <td style="text-align: center;">10</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>3. <u><i>Frangula purshiana</i></u></td> <td style="text-align: center;">5</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>25</u> = Total Cover</td> <td colspan="2"></td> </tr> </tbody> </table> Herb Stratum (Plot size: 1-m diameter) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u><i>Polystichum munitum</i></u></td> <td style="text-align: center;">60</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>2. <u><i>Mahonia nervosa</i></u></td> <td style="text-align: center;">35</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>6. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>7. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>8. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>9. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>10. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>11. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>95</u> = Total Cover</td> <td colspan="2"></td> </tr> </tbody> </table> Woody Vine Stratum (Plot size: 3-m diameter) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>-</u> = Total Cover</td> <td colspan="2"></td> </tr> </tbody> </table> % Bare Ground in Herb Stratum: <u>10</u>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u><i>Pseudotsuga menziesii</i></u>	90	Yes	FACU	2. <u><i>Populus balsamifera</i></u>	15	No	FAC	3. _____				4. _____				<u>105</u> = Total Cover					Absolute % Cover	Dominant Species?	Indicator Status	1. <u><i>Gaultheria shallon</i></u>	10	Yes	FACU	2. <u><i>Acer circinatum</i></u>	10	Yes	FAC	3. <u><i>Frangula purshiana</i></u>	5	Yes	FAC	4. _____				5. _____				<u>25</u> = Total Cover					Absolute % Cover	Dominant Species?	Indicator Status	1. <u><i>Polystichum munitum</i></u>	60	Yes	FACU	2. <u><i>Mahonia nervosa</i></u>	35	Yes	FACU	3. _____				4. _____				5. _____				6. _____				7. _____				8. _____				9. _____				10. _____				11. _____				<u>95</u> = Total Cover					Absolute % Cover	Dominant Species?	Indicator Status	1. _____				2. _____				<u>-</u> = Total Cover				Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>6</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>33%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <thead> <tr> <th colspan="2">Total % Cover of:</th> <th colspan="2">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">-</td> <td>x 1 =</td> <td style="text-align: center;">-</td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">-</td> <td>x 2 =</td> <td style="text-align: center;">-</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">30</td> <td>x 3 =</td> <td style="text-align: center;">45</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">195</td> <td>x 4 =</td> <td style="text-align: center;">780</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">-</td> <td>x 5 =</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;">225</td> <td>(A)</td> <td style="text-align: center;">825 (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>3.7</u> Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0¹ ☐ 4 – Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants¹ ☐ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes ☐ No ☒	Total % Cover of:		Multiply by:		OBL species	-	x 1 =	-	FACW species	-	x 2 =	-	FAC species	30	x 3 =	45	FACU species	195	x 4 =	780	UPL species	-	x 5 =	-	Column Totals:	225	(A)	825 (B)
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SOIL

Sampling Point: DP-46

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-8	10YR 3/2	100					Sandy silt loam	
8-17	10YR 3/2	95	7.5YR 3/4	5	C	M	Sandy silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☒ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Soils moist throughout profile. Geomorphic position is toe of slope.			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 4-20-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-47
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland YY in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Populus balsamifera</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Fraxinus latifolia</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	
3. _____				
4. _____				
	<u>35</u>	<u>= Total Cover</u>		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
1. <u>Physocarpus capitatus</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>	
2. <u>Fraxinus latifolia</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	
3. _____				
4. _____				
5. _____				
	<u>15</u>	<u>= Total Cover</u>		
Herb Stratum (Plot size: 1-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>-</u>	<u>= Total Cover</u>		
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____				
2. _____				
	<u>-</u>	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum: <u>100</u>				
Remarks:				

SOIL

Sampling Point: DP-47

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks	
0-5	10YR 2/1	100					Loam	High OM	
5-10	10YR 2/1	100					Loamy sand		
10-16	10YR 4/2	90	10YR 3/4	10	C	M	Loamy sand		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☒ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☒ No ☐				
Remarks:									

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☒ Saturation (A3)	☐ Water Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Water Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)
☐ Water Marks (B1)	☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)	☐ Salt Crust (B11)	☐ Aquatic Invertebrates (B13)	☐ Dry-Season Water Table (C2)
☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Surface Soil Cracks (B6)	☐ Hydrogen Sulfide Odor (C1)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Presence of Reduced Iron (C4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Geomorphic Position (D2)
☐ Other (explain in remarks)		☐ Other (explain in remarks)		☐ Shallow Aquitard (D3)	☐ FAC-Neutral Test (D5)
				☐ Raised Ant Mounds (D6) (LRR A)	☐ Frost-Heave Hummocks
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☒ No ☐ Depth (in): 5" BSG (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 4-20-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-48
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): none Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none

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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☐	No ☒	
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Acer circinatum</u>	45	Yes	FAC	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. <u>Symphoricarpos albus</u>	5	No	FACU	
3. <u>Corylus cornuta</u>	3	No	FACU	
4. <u>Oemleria cerasiformis</u>	trace	No	FACU	
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Viola sp.</u>	40	Yes	FAC*	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Carex deweyana</u>	15	Yes	FAC	
3. <u>Vancouveria hexandra</u>	5	No	NL**	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum: <u>35</u>				
Remarks: *Assumed FAC. **Non-listed plants assumed to be UPL.				

SOIL

Sampling Point: DP-48

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks	
0-5	10YR 2/1	100					Sandy loam		
5-9	10YR 2/1	100					Loamy sand		
9-14	10YR 2/2	100					Loamy sand		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Soils damp throughout profile.			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 4-20-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-49
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland ZZ in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Fraxinus latifolia</u>	65	Yes	FACW	
2. _____				
3. _____				
4. _____				
<u>65</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: 3-m diameter) 1. <u>Fraxinus latifolia</u> 5 Yes FACW 2. _____ 3. _____ 4. _____ 5. _____ <u>5</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter) 1. <u>Carex deweyana</u> 5 Yes FAC 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <u>5</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ <u>-</u> = Total Cover				
% Bare Ground in Herb Stratum: <u>95</u>				
Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				Hydrophytic Vegetation Present? Yes ☒ No ☐
Remarks:				

SOIL

Sampling Point: DP-49

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 2/1	100					Loam	High OM
5-14	10YR 2/1	100					Loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)					Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☒ Other (Explain in Remarks)			
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☒ No ☐			
Remarks: High organic matter content masking redox; presumed to meet indicator F6.								

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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☒ No ☐ Depth (in): 5" BSG Saturation Present? Yes ☒ No ☐ Depth (in): 0" BSG (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 4-28-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-50
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐ No ☒	
Wetland Hydrology Present?	Yes ☐ No ☒	
Remarks: Click here to enter text.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) 1. <u><i>Pseudotsuga menziesii</i></u> Absolute % Cover: <u>75</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 2. _____ 3. _____ 4. _____ <u>75</u> = Total Cover	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 3-m diameter) 1. <u><i>Gaultheria shallon</i></u> Absolute % Cover: <u>80</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 2. <u><i>Holodiscus discolor</i></u> Absolute % Cover: <u>55</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 3. _____ 4. _____ 5. _____ <u>135</u> = Total Cover	
Herb Stratum (Plot size: 1-m diameter) 1. <u><i>Pteridium aquilinum</i></u> Absolute % Cover: <u>5</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 2. <u><i>Rubus ursinus</i></u> Absolute % Cover: <u>5</u> Dominant Species? <u>Yes</u> Indicator Status: <u>FACU</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <u>10</u> = Total Cover	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 3-m diameter) 1. _____ 2. _____ <u>-</u> = Total Cover % Bare Ground in Herb Stratum: <u>90</u>	
Remarks:	

SOIL

Sampling Point: DP-50

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 3/2	100					Silt loam	
6-14	10YR 3/3	97	10YR 3/4	3	C	M	Silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☐ No ☒		
Remarks: Redox is faint.								

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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Soils moist throughout profile. Geomorphic position is a depression.			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 4-28-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-51
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland AAA in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>2</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
			<u>-</u> = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Malus fusca</u>	90	Yes	FACW	
2. <u>Rosa nutkana</u>	15	No	FAC	
3. _____				
			<u>105</u> = Total Cover	
Herb Stratum (Plot size: 1-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Carex obnupta</u>	60	Yes	OBL	
2. <u>Polystichum munitum</u>	5	No	FACU	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
			<u>65</u> = Total Cover	
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____				
2. _____				
			<u>-</u> = Total Cover	
% Bare Ground in Herb Stratum: <u>35</u>				
Remarks:				

SOIL

Sampling Point: DP-51

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-2	10YR2/1	100					Silt loam	
2-9	10YR 2/1	97	10YR 3/3	3	C	M	Silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)						☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☒ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks: Refusal at 9" BSG.								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☐ Saturation (A3)	☐ Water Marks (B1)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)	☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Salt Crust (B11)	☐ Dry-Season Water Table (C2)
☐ Surface Soil Cracks (B6)	☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)
			☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Hydrogen Sulfide Odor (C1)	☒ Geomorphic Position (D2)
			☐ Presence of Reduced Iron (C4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Shallow Aquitard (D3)
			☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Other (explain in remarks)	☒ FAC-Neutral Test (D5)
					☐ Raised Ant Mounds (D6) (LRR A)
					☐ Frost-Heave Hummocks
Field Observations:					
Surface Water Present?	Yes ☐ No ☒	Depth (in):	-	Wetland Hydrology Present? Yes ☒ No ☐	
Water Table Present?	Yes ☐ No ☒	Depth (in):	-		
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (in):	-		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Geomorphic position is a depression.					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 4-28-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-52
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☒	No ☐
Hydric Soils Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			
Remarks: Wetland BBB in-pit.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across all Strata: <u>7</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>86%</u> (A/B)
1. <u>Populus balsamifera</u>	30	Yes	FAC	
2. <u>Fraxinus latifolia</u>	20	Yes	FACW	
3. <u>Frangula purshiana</u>	10	No	FAC	
4. _____				
	<u>60</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Acer circinatum</u>	20	Yes	FAC	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. <u>Fraxinus latifolia</u>	20	Yes	FACW	
3. _____				
4. _____				
5. _____				
	<u>40</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Carex obnupta</u>	15	Yes	OBL	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Phalaris arundinacea</u>	5	Yes	FACW	
3. <u>Rubus ursinus</u>	5	Yes	FACU	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>25</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present?
2. _____				
	<u>-</u>	= Total Cover		Yes ☒ No ☐
% Bare Ground in Herb Stratum: <u>80</u>				
Remarks:				

SOIL

Sampling Point: DP-52

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-7	10YR2/1	100					Silt loam	
7-16	10YR 3/1	90	10YR 2/2	10	C	M	Sandy silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☒ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks: Redox is faint. Aquic moisture regime observed.								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1) ☐ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☒ No ☐ Depth (in): 3" (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 8-4-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-53
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Barneston gravelly ashy coarse sandy loam, 0 to 8% slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☐	No ☒	
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 5-m diameter)					
1. <u>Fraxinus latifolia</u>	95	Yes	FACW	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>40%</u> (A/B)	
2. <u>Populus balsamifera</u>	15	No	FAC		
3. _____					
4. _____					
	<u>110</u>	= Total Cover		Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>15</u> x 1 = <u>15</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>63</u> x 4 = <u>252</u> UPL species <u>-</u> x 5 = <u>-</u> Column Totals: <u>198</u> (A) <u>527</u> (B) Prevalence Index = B/A = <u>2.7</u>	
Sapling/Shrub Stratum (Plot size: 3-m diameter)					
1. <u>Gaultheria shallon</u>	40	Yes	FACU		
2. <u>Fraxinus latifolia</u>	5	No	FACW		
3. <u>Prunus emarginata</u>	3	No	FACU	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☒ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
4. <u>Rubus parviflorus</u>	trace	No	FACU		
5. _____					
	<u>48</u>	= Total Cover			
Herb Stratum (Plot size: 1-m diameter)					
1. <u>Carex obnupta</u>	15	Yes	OBL	Hydrophytic Vegetation Present? Yes ☒ No ☐	
2. <u>Galium aparine</u>	10	Yes	FACU		
3. <u>Rubus ursinus</u>	10	Yes	FACU		
4. <u>Maianthemum dilatatum</u>	5	No	FAC		
5. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐	
6. _____					
7. _____					
8. _____					
9. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐	
10. _____					
11. _____					
	<u>40</u>	= Total Cover			
Woody Vine Stratum (Plot size: 3-m diameter)					
1. _____				Hydrophytic Vegetation Present? Yes ☒ No ☐	
2. _____					
	<u>-</u>	= Total Cover			
% Bare Ground in Herb Stratum: <u>65</u>					
Remarks:					

SOIL

Sampling Point: DP-53

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-7	10YR 2/1	100					Loam	
7-13	10YR 2/2	97	7.5YR 2.5/3	3	C	M	Loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☐ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☐ No ☒		
Remarks: Redox is faint. Refusal at 13" BSG.								

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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Geomorphic position is a depression.			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 8-4-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-54
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Barneston gravelly ashy coarse sandy loam, 0 to 8% slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland CCC in-pit.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Populus balsamifera</u>	45	Yes	FAC	
2. <u>Fraxinus latifolia</u>	20	Yes	FACW	
3. _____				
4. _____				
	<u>65</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Fraxinus latifolia</u>	20	Yes	FACW	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
2. <u>Rosa nutkana</u>	7	Yes	FAC	
3. <u>Lonicera involucrata</u>	5	No	FAC	
4. <u>Amelanchier alnifolia</u>	3	No	FACU	
5. <u>Rubus spectabilis</u>	trace	No	FAC	
6. <u>Spiraea douglasii</u>	trace	No	FACW	
	<u>35</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Carex obnupta</u>	45	Yes	OBL	
2. <u>Oenanthе sарmentosa</u>	10	No	OBL	
3. <u>Juncus effusus</u>	5	No	FACW	
4. <u>Carex deweyana</u>	5	No	FAC	
5. <u>Epilobium ciliatum</u>	trace	No	FACW	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>65</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>40</u>				
Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes ☒ No ☐				
Remarks:				

SOIL

Sampling Point: DP-54

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks	
0-3	10YR 2/1	100					Loam		
3-14	10YR 2/1	95	7.5YR 3/4	5	C	M	Loam		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☒ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☒ No ☐				
Remarks: Refusal at 14" BSG.									

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☐ Saturation (A3)	☐ Water Marks (B1)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)	☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Salt Crust (B11)	☐ Dry-Season Water Table (C2)
☐ Surface Soil Cracks (B6)	☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)
			☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Hydrogen Sulfide Odor (C1)	☒ Geomorphic Position (D2)
			☐ Presence of Reduced Iron (C4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ FAC-Neutral Test (D5)
			☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Other (explain in remarks)	☐ Raised Ant Mounds (D6) (LRR A)
					☐ Frost-Heave Hummocks
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Geomorphic position is a depression.					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 8-9-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-55
 Investigator(s): Roan Hohlfeld and Nell Lund Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soils Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Wetland Z in-pit			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Fraxinus latifolia</u>	90	Yes	FACW	
2. _____				
3. _____				
4. _____				
	<u>90</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
1. <u>Acer circinatum</u>	25	Yes	FAC	
2. _____				
3. _____				
4. _____				
5. _____				
	<u>25</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Glyceria X occidentalis</u>	25	Yes	OBL	
2. <u>Carex sp.</u>	15	Yes	FACW*	
3. <u>Poa sp.</u>	15	Yes	FAC**	
4. <u>Rubus ursinus</u>	5	No	FACU	
5. <u>Polystichum munitum</u>	2	No	FACU	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>62</u>	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____				
2. _____				
	<u>-</u>	= Total Cover		
% Bare Ground in Herb Stratum: <u>40</u>				
Remarks: *Assumed FACW. **Assumed FAC.				

SOIL

Sampling Point: DP-55

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks				
0-12	10YR 3/2	95	10YR 3/4	5	C	M	Loam					
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☒ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)			
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☒ No ☐							
Remarks:												

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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			
Field Observations:				Wetland Hydrology Present?	
Surface Water Present?	Yes ☐ No ☒	Depth (in):	-	Yes ☒ No ☐	
Water Table Present?	Yes ☐ No ☒	Depth (in):	-		
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒	Depth (in):	-		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Geomorphic position is a depression.					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 8-23-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-56
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Click here to enter text.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter) <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u>Populus balsamifera</u></td> <td style="text-align: center;">95</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>2. <u>Fraxinus latifolia</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;"><u>110</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> Sapling/Shrub Stratum (Plot size: 3-m diameter) <table style="width: 100%;"> <tbody> <tr> <td>1. <u>Fraxinus latifolia</u></td> <td style="text-align: center;">10</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2. <u>Acer circinatum</u></td> <td style="text-align: center;">2</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>3. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;"><u>12</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> Herb Stratum (Plot size: 1-m diameter) <table style="width: 100%;"> <tbody> <tr> <td>1. <u>Carex deweyana</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr><td>8. _____</td><td></td><td></td><td></td></tr> <tr><td>9. _____</td><td></td><td></td><td></td></tr> <tr><td>10. _____</td><td></td><td></td><td></td></tr> <tr><td>11. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;"><u>15</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> Woody Vine Stratum (Plot size: 3-m diameter) <table style="width: 100%;"> <tbody> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;"><u>-</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> % Bare Ground in Herb Stratum: <u>95</u>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Populus balsamifera</u>	95	Yes	FAC	2. <u>Fraxinus latifolia</u>	15	No	FACW	3. _____				4. _____				<u>110</u>	= Total Cover			1. <u>Fraxinus latifolia</u>	10	Yes	FACW	2. <u>Acer circinatum</u>	2	No	FAC	3. _____				4. _____				5. _____				<u>12</u>	= Total Cover			1. <u>Carex deweyana</u>	15	Yes	FAC	2. _____				3. _____				4. _____				5. _____				6. _____				7. _____				8. _____				9. _____				10. _____				11. _____				<u>15</u>	= Total Cover			1. _____				2. _____				<u>-</u>	= Total Cover			Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0¹ ☐ 4 – Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants¹ ☐ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes ☒ No ☐
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SOIL

Sampling Point: DP-56

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 2/1	97	10YR 2/2	3	C	M	Loam	
6-11	10YR 3/3	100					Sandy loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)			
					☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)			
					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
Restrictive Layer (if present):					Hydric soil present? Yes ☐ No ☒			
Type: _____								
Depth (inches): _____								
Remarks: Redox is faint. Refusal at 11" BSG.								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☐ Saturation (A3)	☐ Water Marks (B1)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)	☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Salt Crust (B11)	☐ Dry-Season Water Table (C2)
☐ Surface Soil Cracks (B6)	☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)
			☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Hydrogen Sulfide Odor (C1)	☒ Geomorphic Position (D2)
			☐ Presence of Reduced Iron (C4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Shallow Aquitard (D3)
			☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Other (explain in remarks)	☒ FAC-Neutral Test (D5)
					☐ Raised Ant Mounds (D6) (LRR A)
					☐ Frost-Heave Hummocks
Field Observations:				Wetland Hydrology Present? Yes ☒ No ☐	
Surface Water Present?	Yes ☐ No ☒	Depth (in):	-		
Water Table Present?	Yes ☐ No ☒	Depth (in):	-		
Saturation Present?	Yes ☐ No ☒	Depth (in):	-		
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Geomorphic position is a depression.					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 9-16-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-57
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 5
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: Hydrologic conditions for the three-month period prior to the site visit were drier than normal.			

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 5-m diameter)					
1. <u><i>Populus balsamifera</i></u>	45	Yes	FAC	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>75%</u> (A/B)	
2. _____					
3. _____					
4. _____					
	<u>45</u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: 3-m diameter)					
1. <u><i>Gaultheria shallon</i></u>	35	Yes	FACU	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____	
2. <u><i>Fraxinus latifolia</i></u>	20	Yes	FACW		
3. <u><i>Spiraea douglasii</i></u>	10	No	FACW		
4. <u><i>Prunus emarginata</i></u>	trace	No	FACU		
5. _____					
	<u>65</u>	= Total Cover			
Herb Stratum (Plot size: 1-m diameter)					
1. <u><i>Carex obnupta</i></u>	65	Yes	OBL		
2. <u><i>Rubus ursinus</i></u>	trace	No	FACU		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
	<u>65</u>	= Total Cover			
Woody Vine Stratum (Plot size: 3-m diameter)					
1. _____				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. _____					
	<u>-</u>	= Total Cover			
% Bare Ground in Herb Stratum:	35				
Hydrophytic Vegetation Present? Yes ☒ No ☐					
Remarks:					

SOIL

Sampling Point: DP-57

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks		
0-9	10YR 2/1	97	10YR 2/2	1	C	M	Loam			
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)	
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☐ No ☒					
Remarks: Redox is faint. Refusal at 9" BSG.										

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☐ Saturation (A3)	☐ Water Marks (B1)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)	☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Salt Crust (B11)	☐ Dry-Season Water Table (C2)
☐ Surface Soil Cracks (B6)	☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)
			☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Hydrogen Sulfide Odor (C1)	☒ Geomorphic Position (D2)
			☐ Presence of Reduced Iron (C4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Shallow Aquitard (D3)
			☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Other (explain in remarks)	☒ FAC-Neutral Test (D5)
					☐ Raised Ant Mounds (D6) (LRR A)
					☐ Frost-Heave Hummocks
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Geomorphic position is a depression.					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 9-16-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-58
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒ No ☐ Hydric Soils Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Remarks: Hydrologic conditions for the three-month period prior to the site visit were drier than normal. Wetland YY in-pit.	

VEGETATION – Use scientific names of plants.

<table style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: 5-m diameter)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr> <td>1. <u>Fraxinus latifolia</u></td> <td style="text-align: center;">85</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACW</td> </tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;"><u>85</u></td> <td colspan="3">= Total Cover</td> </tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: 3-m diameter)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr> <td>1. <u>Spiraea douglasii</u></td> <td style="text-align: center;">10</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2. <u>Populus balsamifera</u></td> <td style="text-align: center;">3</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;"><u>13</u></td> <td colspan="3">= Total Cover</td> </tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: 1-m diameter)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr> <td>1. <u>Oenanthse sarmentosa</u></td> <td style="text-align: center;">5</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>2. <u>Poa sp.</u></td> <td style="text-align: center;">3</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC*</td> </tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td>6. _____</td><td></td><td></td><td></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr><td>8. _____</td><td></td><td></td><td></td></tr> <tr><td>9. _____</td><td></td><td></td><td></td></tr> <tr><td>10. _____</td><td></td><td></td><td></td></tr> <tr><td>11. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;"><u>8</u></td> <td colspan="3">= Total Cover</td> </tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: 3-m diameter)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr> <td style="text-align: right;"><u>-</u></td> <td colspan="3">= Total Cover</td> </tr> </table> % Bare Ground in Herb Stratum: <u>92</u>	Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Fraxinus latifolia</u>	85	Yes	FACW	2. _____				3. _____				4. _____				<u>85</u>	= Total Cover			Sapling/Shrub Stratum (Plot size: 3-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Spiraea douglasii</u>	10	Yes	FACW	2. <u>Populus balsamifera</u>	3	Yes	FAC	3. _____				4. _____				5. _____				<u>13</u>	= Total Cover			Herb Stratum (Plot size: 1-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Oenanthse sarmentosa</u>	5	Yes	OBL	2. <u>Poa sp.</u>	3	Yes	FAC*	3. _____				4. _____				5. _____				6. _____				7. _____				8. _____				9. _____				10. _____				11. _____				<u>8</u>	= Total Cover			Woody Vine Stratum (Plot size: 3-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	1. _____				2. _____				<u>-</u>	= Total Cover			Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>100%</u> (A/B) Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes ☒ No ☐	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
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Remarks: *Assumed FAC.																																																																																																																																							

SOIL

Sampling Point: DP-58

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks		
0-9	10YR 3/1	90	7.5YR 3/3	10	C	M	Loam			
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.										
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☒ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)	
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☒ No ☐					
Remarks: Redox is faint. Refusal at 9" BSG.										

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☐ Saturation (A3)	☐ Water Marks (B1)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)	☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Salt Crust (B11)	☐ Dry-Season Water Table (C2)
☐ Surface Soil Cracks (B6)	☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)
			☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Hydrogen Sulfide Odor (C1)	☒ Geomorphic Position (D2)
			☐ Presence of Reduced Iron (C4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Shallow Aquitard (D3)
			☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Other (explain in remarks)	☒ FAC-Neutral Test (D5)
					☐ Raised Ant Mounds (D6) (LRR A)
					☐ Frost-Heave Hummocks
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Geomorphic position is a depression.					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 9-16-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-59
 Investigator(s): Roan Hohlfeld and Jamie Sloan Section, Township, Range: S20, T16N, R04E
 Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Kapowsin gravelly ashy loam, 0 to 6 percent slopes NWI classification: none
 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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☐	No ☒	
Remarks: Hydrologic conditions for the three-month period prior to the site visit were drier than normal.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>Fraxinus latifolia</u>	90	Yes	FACW	
2. _____				
3. _____				
4. _____				
			<u>90</u> = Total Cover	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>-</u> x 1 = <u>-</u> FACW species <u>90</u> x 2 = <u>180</u> FAC species <u>6</u> x 3 = <u>18</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>-</u> x 5 = <u>-</u> Column Totals: <u>116</u> (A) <u>278</u> (B) Prevalence Index = B/A = <u>2.4</u>
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Gaultheria shallon</u>	15	Yes	FACU	
2. <u>Rosa nutkana</u>	3	No	FAC	
3. _____				
4. _____				
5. _____				
			<u>18</u> = Total Cover	
Herb Stratum (Plot size: 1-m diameter)				Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☐ 2 – Dominance Test is > 50% ☒ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Linnaea borealis</u>	5	Yes	FACU	
2. <u>Carex deweyana</u>	3	Yes	FAC	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
			<u>8</u> = Total Cover	
Woody Vine Stratum (Plot size: 3-m diameter)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____				
2. _____				
			<u>-</u> = Total Cover	
% Bare Ground in Herb Stratum: <u>92</u>				
Remarks:				

SOIL

Sampling Point: DP-59

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-7	10YR 2/1	98	10YR 2/2	2	C	M	Silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)			
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☐ No ☒			
Remarks: Redox is faint. Refusal at 7" BSG.								

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) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Surface Soil Cracks (B6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Stunted or Stressed Plants (D1) (LRR A) ☐ Other (explain in remarks)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 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	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Geomorphic position is a depression.			

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 9-17-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-60
 Investigator(s): Roan Hohlfeld and Katy Crandall Section, Township, Range: S25, T16N, R03E
 Landform (hillslope, terrace, etc): Toe of slope Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Pilchuck fine sand NWI classification: none

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 on the site? ☒ 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 ☒ No ☐ Hydric Soils Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Remarks: Hydrologic conditions for the three-month period prior to the site visit were drier than normal. Wetland FFF in-pit.	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 5-m diameter)				
1.				
2.				
3.				
4.				
	-	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1.				
2.				
3.				
4.				
5.				
	70	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
	35	= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				
1.				
2.				
	-	= Total Cover		
% Bare Ground in Herb Stratum: 70				
Remarks:				

Dominance Test worksheet:
 Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
 Total Number of Dominant Species Across all Strata: 4 (B)
 Percent of Dominant Species that are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:
 Total % Cover of: 70 Multiply by:
 OBL species 1 x 1 = 70
 FACW species 0 x 2 = 0
 FAC species 0 x 3 = 0
 FACU species 0 x 4 = 0
 UPL species 0 x 5 = 0
 Column Totals: (A) 70 (B) 0
 Prevalence Index = B/A = 0

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: DP-60

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 2/2	100					Silt loam	
6-12	10YR 3/2	88	10YR 3/6	12	C	M	Silt loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: 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) (except MLRA 1) ☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3) ☐ Thick Dark Surface (A12) ☒ Redox Dark Surface (F6) ☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7) ☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)						Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)		
Restrictive Layer (if present): Type: _____ Depth (inches): _____						Hydric soil present? Yes ☒ No ☐		
Remarks: Redox is faint. Refusal at 7" BSG.								

HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (2 or more required)	
Primary Indicators (minimum of one required: check all that apply)					
☐ Surface water (A1)	☐ High Water Table (A2)	☐ Saturation (A3)	☐ Water Marks (B1)	☐ Water-Stained Leaves (B9) (MLRA 1, 2, 4A & 4B)	☐ Drainage Patterns (B10)
☐ Sediment Deposits (B2)	☐ Drift Deposits (B3)	☐ Algal Mat or Crust (B4)	☐ Iron Deposits (B5)	☐ Salt Crust (B11)	☐ Dry-Season Water Table (C2)
☐ Surface Soil Cracks (B6)	☐ Inundation Visible on Aerial Imagery (B7)	☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (except MLRA 1, 2, 4A & 4B) (B9)	☐ Aquatic Invertebrates (B13)	☐ Saturation Visible on Aerial Imagery (C9)
			☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Hydrogen Sulfide Odor (C1)	☒ Geomorphic Position (D2)
			☐ Presence of Reduced Iron (C4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Shallow Aquitard (D3)
			☐ Stunted or Stressed Plants (D1) (LRR A)	☐ Other (explain in remarks)	☐ FAC-Neutral Test (D5)
					☐ Raised Ant Mounds (D6) (LRR A)
					☐ Frost-Heave Hummocks
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)				Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Geomorphic position is a depression. Hydrological conditions drier than normal.					

Project/Site: Nisqually State Park City/County: Pierce Sampling date: 9-17-2021
 Applicant/Owner: Washington State Parks State: WA Sampling Point: DP-61
 Investigator(s): Roan Hohlfeld and Katy Crandall Section, Township, Range: S25, T16N, R03E
 Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): none Slope (%): 15
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Pilchuck fine sand NWI classification: none

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 on the site? ☒ 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 ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒	
Wetland Hydrology Present?	Yes ☐	No ☒	
Remarks: Hydrologic conditions for the three-month period prior to the site visit were drier than normal.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5-m diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>60%</u> (A/B)
1. <u>Acer macrophyllum</u>	90	Yes	FACU	
2. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: (A) _____ (B) _____ Prevalence Index = B/A = _____
3. _____				
4. _____				
			<u>90</u> = Total Cover	
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u>Acer circinatum</u>	30	Yes	FAC	Hydrophytic Vegetation Indicators: ☐ 1 – Rapid Test for Hydrophytic Vegetation ☒ 2 – Dominance Test is > 50% ☐ 3 – Prevalence Index is ≤ 3.0 ¹ ☐ 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ 5 – Wetland Non-Vascular Plants ¹ ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Thuja plicata</u>	15	Yes	FAC	
3. <u>Oplopanax horridus</u>	10	No	FAC	
4. _____				
5. _____				
			<u>55</u> = Total Cover	
Herb Stratum (Plot size: 1-m diameter)				
1. <u>Polystichum munitium</u>	25	Yes	FACU	Hydrophytic Vegetation Present? Yes ☒ No ☐
2. <u>Hydrophyllum tenuipes</u>	10	Yes	FAC	
3. <u>Urtica dioica</u>	5	No	FAC	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
			<u>40</u> = Total Cover	
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				
2. _____				
			<u>-</u> = Total Cover	
% Bare Ground in Herb Stratum: <u>35</u>				
Remarks:				

SOIL

Sampling Point: DP-61

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks	
0-9	10YR 2/2	50					Silt loam	Mixed matrix	
0-9	10YR 3/3	50					Sandy loam	Mixed matrix	
9-14	10YR 4/3	100							
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Loc: PL=Pore Lining, M=Matrix.									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4)					☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Loamy Mucky Mineral (F1) (except MLRA 1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8)				Indicators for Problematic Hydric Soils³: ☐ 2cm Muck (A10) ☐ Red Parent Material (TF2) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)
Restrictive Layer (if present): Type: _____ Depth (inches): _____					Hydric soil present? Yes ☐ No ☒				
Remarks:									

HYDROLOGY

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Primary Indicators (minimum of one required: check all that apply)		Secondary Indicators (2 or more required)	
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Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (in): - Water Table Present? Yes ☐ No ☒ Depth (in): - Saturation Present? Yes ☐ No ☒ Depth (in): - (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			