Wetlands Northwest LLC

CRITICAL AREA REPORT

of the

Wallace Property

19215 40th PL NE
Lake Forest Park, WA 98155
Tax Parcel Number: 402290-2202
SW Section 3, Township 26N, Range 04E,

Prepared for:

Roger Wallace
5101 25th Ave NE, #B323
Seattle, WA 98105

Dated:
May 3, 2016

Prepared by:
Robert King, Professional Wetland Scientist

Robert King

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1.0 Introduction and Site Description

The address for the site is 19215 40th PL NE in Lake Forest Park, (see Figure 1 Vicinity Map, page 2). Ingress and egress is from 40th PL NE along the property's eastern boundary with a driveway easement along the property's northern boundary. The parcel is trapezoid shaped, measures approximately eighty feet wide and covers an approximate area of 0.30 acres in the RS 9600 Zone. The property is forested with primarily deciduous trees and slopes down to the west at approximately to 19 percent.

2.0 Proposed Use

This critical area report will be used to determine the encumbrances of the on-site critical areas for a future building permit. *Wetlands Northwest LLC* visited the property on May 3, 2016 for data collection. Temperatures were in the mid-70s with clear skies.

3.0 Methodology

The routine methodology described in the Army Corps of Engineers Wetlands Delineation Manual (1987) was utilized during site investigations to make a determination regarding wetlands, as required by King County. *Wetlands Northwest LLC* also evaluated the site using the U.S. Army Corps of Engineers Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region produced in 2010 (hereinafter referred to as "the Corps Regional Supplement"). The Corps Regional Supplement provides technical guidance and procedures for identifying and delineating wetlands that may be subject to regulatory jurisdiction under Section 404 of the Clean Water Act.

According to the federal methodology described above, identification of wetlands is based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soils, and presence or indications of hydrology. Using the subject manuals, the site characteristics for making a wetland determination include the following:

1.) Examination of the site for hydrophytic vegetation (species present/percent cover);

2.) Examination for the presence of hydric soils in areas where hydrophytic vegetation is present; and

3.) Examination to determine if adequate hydrology exists for sufficient durations during the early part of the growing season in the same locations as the previous two steps.

Except where noted in the manuals, the approach requires positive indicators of hydrophytic vegetation, hydric soils, and wetland hydrology for a determination that an area is a wetland.

Wetlands Northwest LLC also reviewed the King County Wetland Inventory GIS data, the Washington State Department of Natural Resources (DNR) GIS data, the National Wetlands Inventory (NWI) GIS data, the Natural Resources Conservation Service (NRCS) soils data and aerial data obtained by the United States Geological Survey (USGS).

Data points for soil profiles were labeled as DP-1 through DP-3. No wetland or ordinary high water mark flags were placed as it appears a wetland and stream complex exists off-site to the west of the property (see Figure 3).

Figure 1 - Vicinity Map

4.0 On-site Inventories

The NRCS Soil Survey of King County does not map this area. Upland soils resembled an Everett profile as observed in DP-3. Norma soils were observed in areas closer to the western boundary (DP-1 and DP-2) near the off-site wetland. Both profiles are described below.

> The Everett series is made up of "somewhat excessively" drained soils that are underlain by very gravelly sand at a depth of 18 to 36 inches. These soils formed in very gravelly glacial outwash deposits, under conifers. They are on terraces and terrace fronts and are gently undulating and moderately steep. In a representative profile, the surface layer and subsoil are 0 to 1 1/2 inches, black (10YR 2/1) sandy loam, l 1/2 to 17 inches, dark-brown (7.5YR 3/4) gravelly sandy loam, yellowish brown (10YR 5/4), 17 to 32 inches, brown (10YR 4/3) very gravelly sandy loam, pale brown (10YR 6/3) dry, 32 to 60 inches, black and dark grayish-brown (10YR 2/1 and 4/2) very gravelly coarse sand.
>
> Norma fine sandy loam. This deep, poorly drained soil is on long, narrow stream bottoms and on till plain depressions in the uplands. It formed in mixed glacial alluvium. Slopes are mainly 0 to 3 percent. Native vegetation is sedges, grasses, conifers, and hardwoods. The elevation ranges from 0 to 300 feet. The average annual precipitation is 35 to 60 inches, the mean annual air temperature is about 50 degrees F, and the average frostfree season is about 170 days. Typically, the surface layer is very dark grayish brown fine sandy loam about 8 inches thick. The subsoil is distinctly mottled, light olive brown fine sandy loam about 14 inches thick. The substratum to a depth of 60 inches is mottled, olive gray and dark yellowish brown stratified sandy loam, clay loam, and loamy sand

According to the King County and DNR GIS inventories, there are no wetlands or streams inventoried within 150 feet of the property's boundary (see Figure 2 Wetlands and Streams Inventory Map, page 4). According to the Lake Forest Park Sensitive Areas Map, there is a stream inventoried off-site of the west of the property and a wetland inventoried approximately 175 feet to the northwest..

5.0 Results

5.1 Off-site Wetland

There is an off-site wetland immediately to the west of the property whose vegetation is comprised of a handful of alders (*Alnus rubra*) with an understory of salmonberry (*Rubus spectabilis*) and skunk cabbage (*Lysichiton americnum*). The wetland is interspersed with upland vegetation that includes Indian Plum (*Oemleria cerasiforis*), sword fern (*Polystichum munitum)*, English ivy (*Hedera helix*)

The boundary of the wetland follows a break in upland to hydrophytic vegetation along areas where skunk cabbage is present. The area of the wetland is approximately 4,400 square feet based on LIDAR topography (see Figure 3, page 6). The alders constitute a forested canopy, which meets the criteria of a wetland forested class canopy. Due to the presence of the forested wetland class, the wetland is classified as a Category 2 wetland per Lake Forested Park Municipal Code (LFPMC) Chapter 16.16.320. Category 2 wetlands

require a standard 100-foot buffer or a Minimum Buffer or 70 feet if enhancement is proposed.

5.2 Stream

The aforementioned wetland is part of a stream riparian complex located in a channel further to the west. The stream will lose flow before the start of the summer solstice. It is tributary to the main stem of Lyons Creek and is not used by fish for spawning. Seasonal streams not used for fish spawning are a Type 3 streams according to the LFPMC definition. Type 3 Streams require a 35-foot buffer. The wetland buffer will encompass the buffer of the stream.

6.0 Impacts

The applicant may propose to reduce the standard buffer from 100 feet to 70 feet through enhancement of the existing buffer. There is significant invasive vegetation that includes English ivy, cherry laurel and holly within 70 feet of the wetland. Combining this treatment with installation of additional native plants will meet the enhancement criteria for buffer reduction. The applicant may also choose to submit a building permit with a standard 100-foot buffer and have sufficent room for single-family development without utilizing the reasonable economic use exception permitting process.

7.0 Limitations and Use of this Report

This report is supplied to the Lake Forest Park Planning and Building Department on behalf of Roger Wallace as a means of determining the critical area encumbrances for future development. *Wetlands Northwest LLC* upheld professional industry standards when completing this review. The information included in this report constitutes a professional opinion and does not guarantee approval by any federal, state, and/or local permitting agencies.

The laws applicable to Critical Areas are subject to varying interpretations. The work for this report has conformed to the standard of care employed by professional ecologists in the Puget Sound region. No other representation or warranty, expressed or implied, is made concerning the work or this report. This report is based largely on readily observable conditions and, to a lesser extent, on readily ascertainable conditions. No attempt has been made to determine hidden or concealed conditions. If hidden or concealed conditions arise, the information contained in this report may change based upon those conditions.

Figure 2 - Wetland and Stream Inventory Map

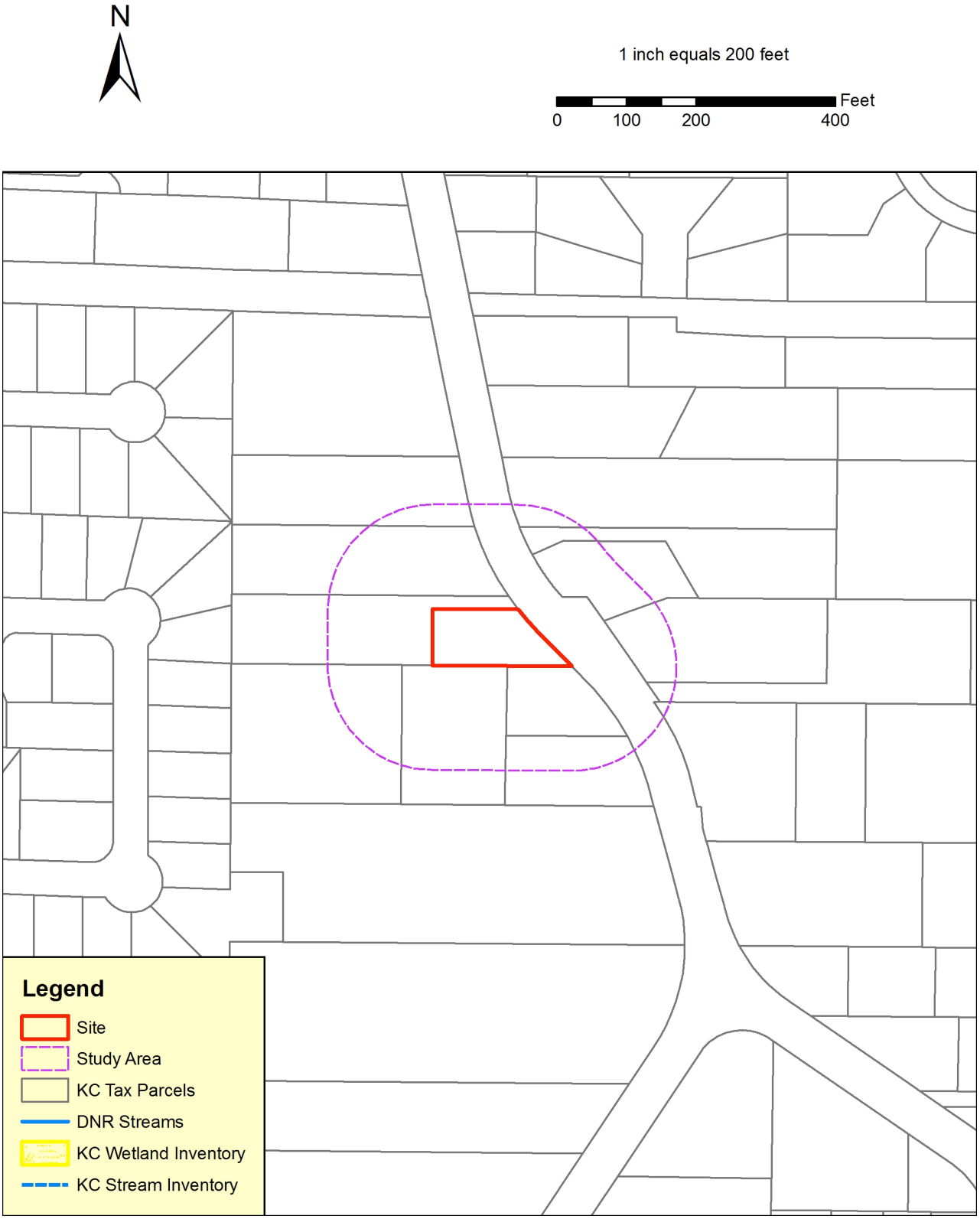
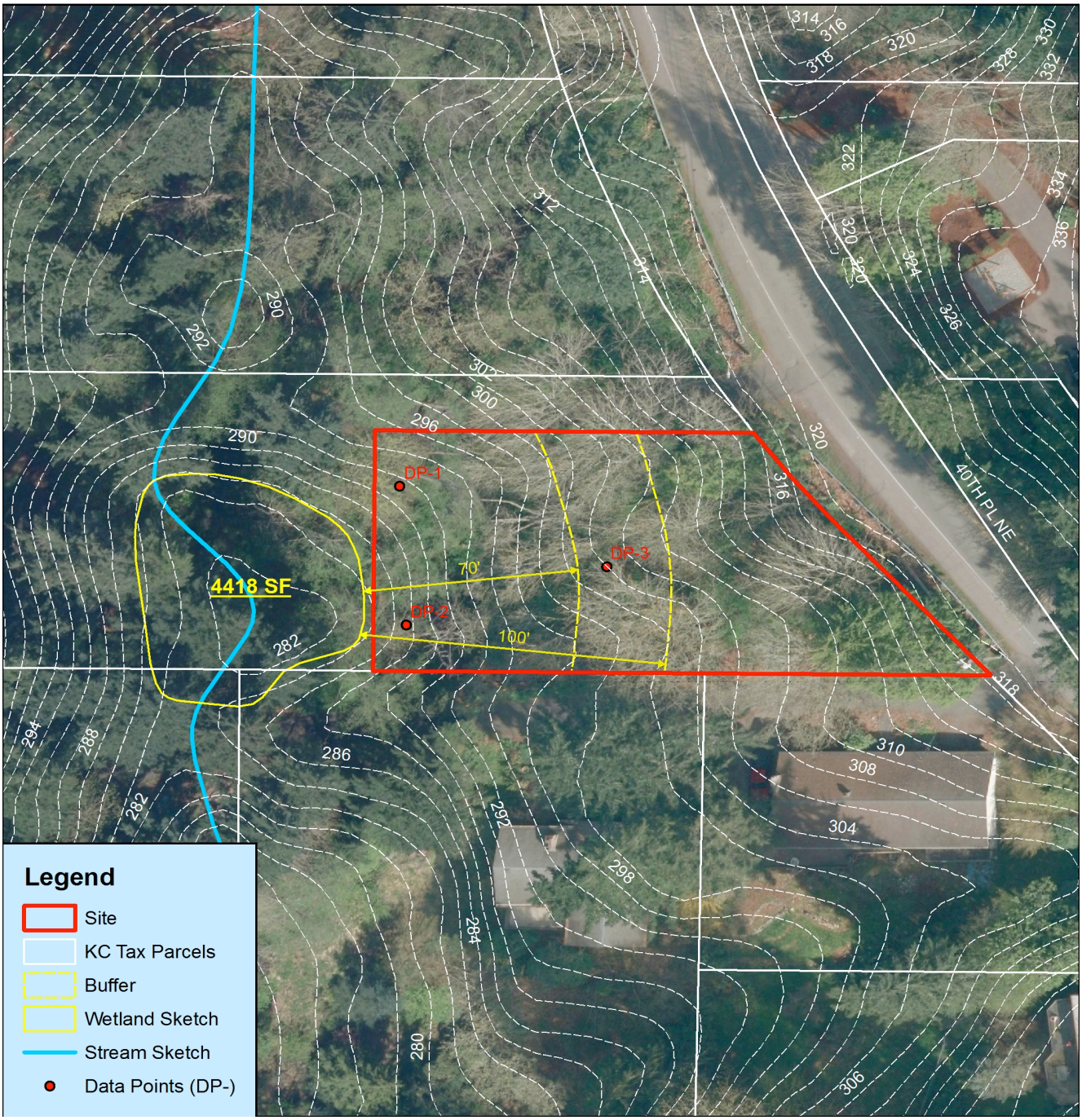


Figure 3 - Site Plan
(USGS 2012 Aerial Photo)

N

1 inch equals 50 feet

0 25 50 100 Feet



8.0 References

Cowardin, et al, 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S.D.I. Fish and Wildlife Service. FWS/OBS-79/31. December 1979.

Environmental Laboratory. (1987). "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

Lake Forest Park Municipal Code Title 16. Lake Forest Park, Washington. Current as of February 11,2016. http://www.codepublishing.com/WA/LakeForestPark/

National Wetland Plant List 2014. U.S. Army Corps of Engineers

U.S. Army Corps of Engineers (2010). "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)," ERDC/EL TR-10-3, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Attachments

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

Project Site: Wallace City/County: Lake Forest Park/ Sampling Date: 05-03-16
Applicant/Owner: Roger Wallace State: WA Sampling Point: DP-1
Investigator(s): R. King Section, Township, Range: SW03 T26N R03E
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 19
Subregion (LRR): A Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Norma NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks:

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer macrophyllum*	60	yes	FACU
2. ____	____	____	____
3. ____	____	____	____
4. ____	____	____	____
50% = ____, 20% = ____	____	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Oemelaria cerasiformis*	50	yes	FACU
2. *Rubid spectabilis*	20	yes	FAC
3. ____	____	____	____
4. ____	____	____	____
5. ____	____	____	____
50% = ____, 20% = ____	____	= Total Cover	
Herb Stratum (Plot size: ____)			
1. *Polystichim munitum*	20	yes	FACU
2. ____	____	____	____
3. ____	____	____	____
4. ____	____	____	____
5. ____	____	____	____
6. ____	____	____	____
7. ____	____	____	____
8. ____	____	____	____
9. ____	____	____	____
10. ____	____	____	____
11. ____	____	____	____
50% = ____, 20% = ____	____	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1. ____	____	____	____
2. ____	____	____	____
50% = ____, 20% = ____	____	= Total Cover	
% Bare Ground in Herb Stratum ____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	20	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	____	x1 =	____
FACW species	____	x2 =	____
FAC species	____	x3 =	____
FACU species	____	x4 =	____
UPL species	____	x5 =	____
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 ≤3.0[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:

Project Site: Wallace

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)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-18+	10YR 3/2						sandy loam	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ☐ 2 cm 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):

Type: ____

Depth (inches): ____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	N/A
Water Table Present?	Yes	☐	No	☒	Depth (inches):	>18
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	>18

Wetland Hydrology Present? **Yes** ☐ **No** ☒

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

Remarks:

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

Project Site: Wallace City/County: Lake Forest Park/ Sampling Date: 05-03-16
Applicant/Owner: Roger Wallace State: WA Sampling Point: DP-2
Investigator(s): R. King Section, Township, Range: SW03 T26N R03E
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 19
Subregion (LRR): A Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Norma NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks:

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer macrophyllum*	70	yes	FACU
2.			
3.			
4.			
50% = ____, 20% = ____		= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Oemelaria cerasiformis*	50	yes	FACU
2.			
3.			
4.			
5.			
50% = ____, 20% = ____		= Total Cover	
Herb Stratum (Plot size: ____)			
1. *Polystichim munitum*	10	yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = ____, 20% = ____		= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
50% = ____, 20% = ____		= Total Cover	
% Bare Ground in Herb Stratum ____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	____	x1 =	____
FACW species	____	x2 =	____
FAC species	____	x3 =	____
FACU species	____	x4 =	____
UPL species	____	x5 =	____
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 ≤3.0[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:

Project Site: Wallace

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)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-18+	10YR 3/2						sandy loam	

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ 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)**
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)

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

Restrictive Layer (if present):

Type: ____

Depth (inches): ____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	N/A
Water Table Present?	Yes	☐	No	☒	Depth (inches):	>18
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	>18

Wetland Hydrology Present? **Yes** ☐ **No** ☒

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

Remarks:

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

Project Site: Wallace City/County: Lake Forest Park/ Sampling Date: 05-03-16
Applicant/Owner: Roger Wallace State: WA Sampling Point: DP-3
Investigator(s): R. King Section, Township, Range: SW03 T26N R03E
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 19
Subregion (LRR): A Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Everett NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks:

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer macrophyllum*	65	yes	FACU
2.			
3.			
4.			
50% = ____, 20% = ____		= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. *Oemelaria cerasiformis*	50	yes	FACU
2.			
3.			
4.			
5.			
50% = ____, 20% = ____		= Total Cover	
Herb Stratum (Plot size: ____)			
1. *Polystichim munitum*	20	yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = ____, 20% = ____		= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
50% = ____, 20% = ____		= Total Cover	
% Bare Ground in Herb Stratum ____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	____	x1 =	____
FACW species	____	x2 =	____
FAC species	____	x3 =	____
FACU species	____	x4 =	____
UPL species	____	x5 =	____
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 ≤3.0[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:

Project Site: Wallace

SOIL

Sampling Point: DP-3

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/3						sandy loam	
2-18	10YR 4/6						"	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ☐ 2 cm 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):

Type: ____

Depth (inches): ____

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	N/A
Water Table Present?	Yes	☐	No	☒	Depth (inches):	>18
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	>18

Wetland Hydrology Present? **Yes** ☐ **No** ☒

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

Remarks: