

EXHIBIT # 7.1

November 3, 2015

Alan Kerley  
Lake Forest Park Water District  
c/o Dan Mundall  
Mundall Engineering & Consulting  
Via email: [dan@mundall.com](mailto:dan@mundall.com)

## Re: McKinnon Creek Pumphouse – Wetland and Stream Delineation Study

The Watershed Company Reference Number: 140724

Dear Dan:

On September 21, 2015, Ecologist Mike Foster and I completed a wetland and stream delineation study for the McKinnon Creek Pumphouse relocation project in the City of Lake Forest Park. The study area is on parcel #4019900176. This letter summarizes the findings of this study and details applicable federal, state, and local regulations. The following attachments are included:

- Stream & Wetland Delineation Map in AutoCAD format
- Wetland Determination Data Forms

### Methods

Public-domain information on the subject properties was reviewed for this delineation study. These sources include USDA Natural Resources Conservation Service Soil maps, U.S. Fish and Wildlife Service National Wetland Inventory maps, Washington Department of Fish and Wildlife interactive mapping programs (PHS on the Web), King County WRIA-8 Salmon Distribution maps, and King County's GIS mapping website (iMAP).

### Wetland Methods

The study area was evaluated for wetlands using methodology from the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0* (Regional Supplement) (US Army Corps of Engineers [Corps] May 2010). The wetland boundaries were determined on the basis of an examination of vegetation, soils, and hydrology. Areas meeting the criteria set forth in the Regional Supplement were determined to be wetland. Soil, vegetation, and hydrologic parameters were sampled at several locations along the wetland boundary to make the determination.

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Delineated wetlands were classified using both the City of Lake Forest Park's wetland rating system. Delineated wetland points are marked with pink- and black-stripped flags.

### **Stream Methods**

The ordinary high water mark (OHWM) of the left bank of McKinnon Creek was delineated in 2013. OHWM was determined based on the definition provided by the Washington Department of Fish and Wildlife and WAC 173-22-030. The OHWM is located by examining the bed and bank physical characteristics and vegetation to ascertain the water elevation for mean annual floods. Areas meeting the definition were determined to be the OHWM and flagged. Field observations were used to classify streams according to the City of Lake Forest Park Environmentally Sensitive Areas Ordinance.

### **Mapping Methods**

All delineation flags were GPS-located using a hand-held Trimble Geo-XH unit. Following field location, the GPS data was differentially correcting using GPS Pathfinder Office Program and imported into AutoCAD for mapping.

### **Findings**

The current wetland and stream delineation was based upon a critical area study prepared for the City of Lake Forest Park (The Watershed Company, 2013) for the McKinnon Creek Trail project completed in September 2013. Of the six wetlands delineated in 2013, only Wetland A is found on the subject parcel. Only encumbering wetland boundaries of the Trail Project were delineated in 2013; the current project completed the delineation of Wetland A on the eastern, upslope boundary.

McKinnon Creek is a tributary of Lyon Creek within the Cedar-Sammamish Water Resource Inventory Area 8 (WRIA-8). The study area consists of a forested upland and emergent, slope wetland. Vegetation in non-wetland areas on this site is characterized by bigleaf maple, red alder, salmonberry, sword fern, pacific dewberry and Himalayan blackberry. The description of Wetland A combines data collected in both 2013 and 2015.

### **Wetland A**

Wetland A is slope wetland containing palustrine, forested, scrub-shrub and emergent vegetation classes. Forest canopy is characterized by western red cedar, red alder, and bigleaf maple. Salmonberry, beaked hazelnut and prickly currant dominate the shrub layer. Skunk cabbage, lady fern, giant horsetail, creeping buttercup, and stinging nettle form the groundcover. Within wetland A, east of McKinnon Creek, significant patches of invasive knotweed and Himalayan blackberry are found. Soils in Wetland A exhibit Depleted Matrix (F3). Wetland hydrology was confirmed by observations of Soil Surface Saturation (A3) and a High Water Table (A2) at the time of the fieldwork in 2013. In

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2015, soil saturation was also evident. All three parameters for plants, soils and hydrology have been met.

### **McKinnon Creek**

McKinnon Creek was flowing at the time of our fieldwork (in 2013 and 2015) and appears to be perennial. According to the King County WRIA-8 maps, the entire reach of McKinnon Creek is a cutthroat trout distribution area. The streambed is composed of silt, cobble and gravel. The riparian corridor is well vegetated with native trees and shrubs, although some buffer areas are narrow. Locally dominant patches of Himalayan blackberry and climbing nightshade are also present. The stream originates from a headwater wetland, Wetland D (see the 2013 critical areas study). Several culverts also direct water from adjacent upslope wetlands into McKinnon Creek.

### **Local Regulations**

Wetlands in the City of Lake Forest Park (LFP) are regulated under municipal code Chapter 16.16 – Environmentally Sensitive Areas.

#### **Wetlands**

Wetlands are classified by Lake Forest Park as Category 1, 2 or 3 following specific criteria including the presence or absence of threatened/endangered species, open water, wetland size, number of wetland classes, and presence or absence of a forested wetland class (LFPMC 16.16.040.AA). The subject wetland does not contain any known occurrences of state or federal listed animal species nor has any open water or rare plant associations. Wetland A has a forested wetland class and is therefore, a Category 2 wetland. Wetland classifications and associated buffer requirements are found in LFPMC 16.16.320.A. The standard buffer for wetland A is 100 feet, and the minimum buffer with enhancement is 70 feet. Buffer averaging (LFPMC 16.16.320.D) and/or buffer reduction (LFPMC 16.16.320.E) may be feasible. Due to the presence of invasive plant species, enhancement could be possible.

All buildings or other structures shall have a minimum setback of at least 15 feet from any place on the edge of a wetland buffer. The setback line shall be established by measuring perpendicularly from the edge of a wetland buffer.

#### **Streams**

Streams are classified as Type 1, 2 or 3 based on connectivity to Lake Washington, fish use, and seasonality of flow. McKinnon Creek is a perennial stream with documented fish use; therefore, it is a Type 1 stream. Type 1 streams in the City of Lake Forest Park require a standard 115 foot buffer, or with enhancement, a minimum buffer width of 70 feet (LFPMC 16.16.350.A). Due to the relative location of the wetland on the subject parcel, the wetland buffer would be more encumbering than the stream buffer.

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### Mitigation Sequencing

Pursuant to LFPMC 16.16.130, any plan to impact a critical area or critical area buffer must demonstrate that impacts were avoided where feasible, unavoidable impacts are minimized, and compensatory mitigation will occur.

### Permitted Alterations within Critical Area Buffers

The removal of the following vegetation with hand labor and light equipment is allowed pursuant to LFPMC 16.16.220.F:

1. *Invasive and noxious weeds as listed by state and county agencies;*
2. *English ivy (Hedera helix);*
3. *Himalayan blackberry (Rubus discolor, R. procerus); and*
4. *Evergreen blackberry (Rubus laciniatus). (Ord. 930 § 2, 2005)*

Some utility projects have authorized exceptions to work in sensitive areas (LFPMC 16.16.230.E):

*Utility projects that have minor or short-duration impacts to sensitive areas, and do not significantly impact the function or values of a sensitive area(s), as determined by the planning director according to the following criteria:*

1. *There is no practical alternative to the proposed activity with less impact on sensitive areas;*
2. *The activity involves the placement of a utility pole, street signs, anchor, or vault or other small component of a utility facility;*
3. *The activity involves disturbance of an area less than 75 square feet;*
4. *The project does not result in the permanent transportation of sediment or increased stormwater flow.*

### Steep Slopes

It may be necessary to determine the slope of project area. Development standards and permitted alterations of steep slopes are described in LFP 16.16.310. Compliance with this code section should be reviewed by a licensed geotechnical engineer.

### State and Federal Regulations

Wetlands are also regulated by the Corps under section 404 of the Clean Water Act. Any filling of Waters of the U.S., including wetlands (except isolated wetlands), would require notification and permits from the Corps. Wetland A would likely not be considered isolated. A formal isolated status inquiry can be requested from the Corps through the Jurisdictional Determination process. Federally permitted actions that could affect endangered species (i.e. salmon or bull trout) may also require a biological assessment study and consultation with the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service. Application for Corps permits may also require an

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individual 401 Water Quality Certification and Coastal Zone Management Consistency determination from Ecology.

**Disclaimer**

The information contained in this letter or report is based on the application of technical guidelines currently accepted as the best available science and in conjunction with the manuals and criteria outlined in the methods section. All discussions, conclusions and recommendations reflect the best professional judgment of the author(s) and are based upon information available to us at the time the study was conducted. All work was completed within the constraints of budget, scope, and timing. The findings of this report are subject to verification and agreement by the appropriate local, State and Federal regulatory authorities. No other warranty, expressed or implied, is made.

Please call if you have any questions or if we can provide you with any additional information.

Sincerely,



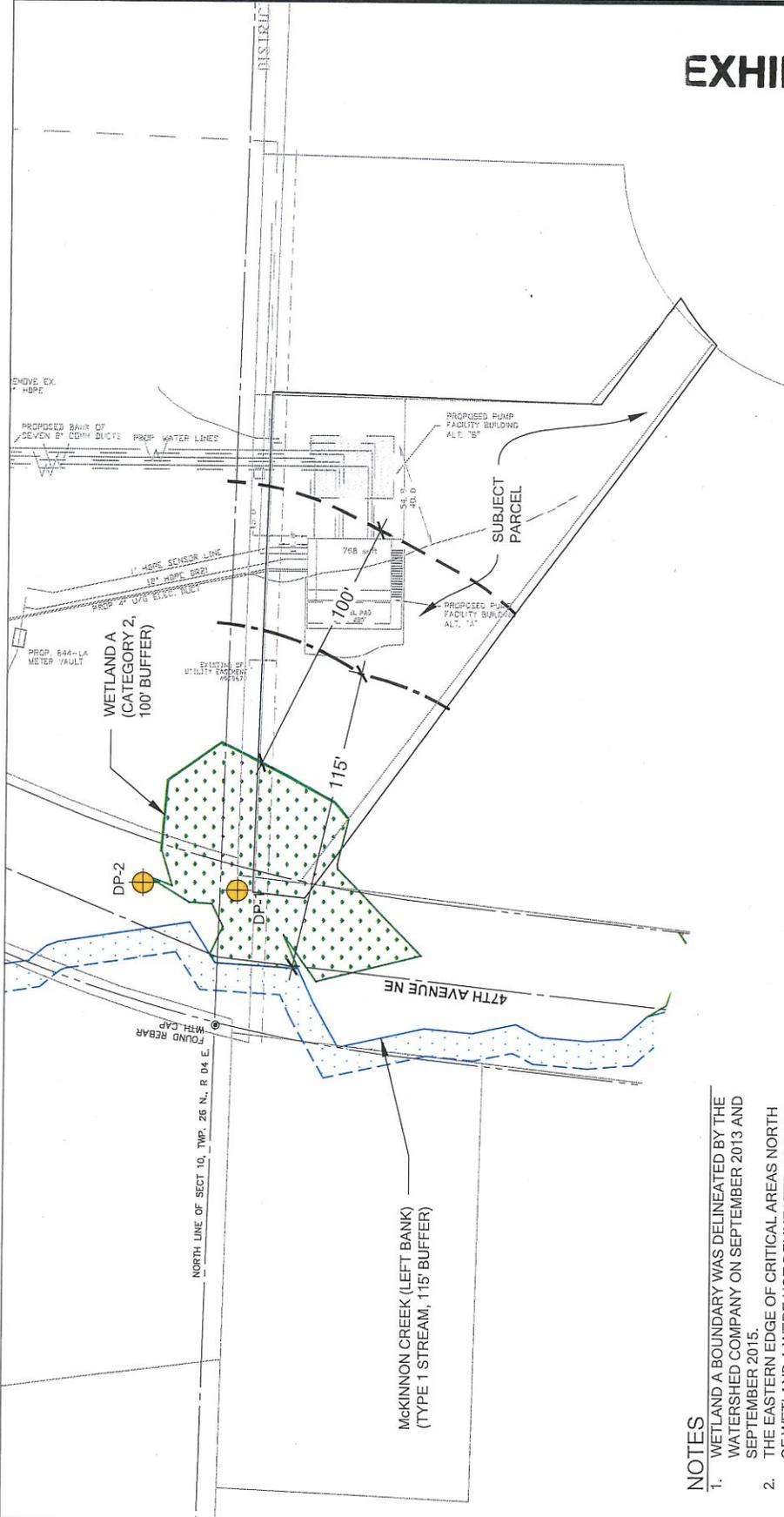
Anna Hoenig  
Ecologist

Enclosures

NO.	DATE	DESCRIPTION
1	9-24-15	DELINEATION PLAN

PROJECT MANAGER: KB  
 DESIGNED: KB  
 CHECKED: KB, AK  
 JOB NUMBER: 140724  
 SHEET NUMBER: W1 OF 1

# EXHIBIT # 7.6



- LEGEND**
- DELINEATED STREAM OHWM
  - STANDARD STREAM BUFFER (115')
  - 2013 DELINEATED WETLAND BOUNDARY
  - 2015 DELINEATED WETLAND BOUNDARY
  - STANDARD WETLAND BUFFER (100')
  - WETLAND DATA POINT

- NOTES**
1. WETLAND A BOUNDARY WAS DELINEATED BY THE WATERSHED COMPANY ON SEPTEMBER 2013 AND SEPTEMBER 2015.
  2. THE EASTERN EDGE OF CRITICAL AREAS NORTH OF WETLAND A WERE NOT DELINEATED AS PART OF THIS PROJECT.
  3. STEEP SLOPE BUFFERS MAY ALSO APPLY.
  4. GPS DATA DISPLAYED ON THIS MAP WAS COLLECTED IN THE FIELD USING A TRIMBLE GEOXH HAND HELD UNIT. THE DATA WAS DIFFERENTIALLY CORRECTED USING TRIMBLE PATHFINDER OFFICE SOFTWARE TO FURTHER INCREASE POSITION ACCURACY. GPS DATA IS BELIEVED RELIABLE FOR GENERAL PLANNING AND MOST REGULATORY PURPOSES. HOWEVER, ACCURACY IS VARIABLE AND SHOULD NOT BE CONSIDERED EQUIVALENT TO A PROFESSIONAL LAND SURVEY. NO WARRANTY IS EXPRESSED OR IMPLIED.



**DELINEATION MAP**

DP- 1

Project Site: <u>LFP McKinnon Crk Trail, NE 184th St. ROW</u>		Sampling Date: <u>Sept. 6, 2013</u>
Applicant/Owner: <u>Broudy, L. / City of LFP Parks</u>		Sampling Point: <u>DP- 1</u>
Investigator: <u>N. Lund, J.M. Foster</u>		City/County: <u>Lake Forest Park / King</u>
Sect., Township, Range: <u>S 10 T 26N R 4E</u>		State: <u>WA</u>
Landform (hillslope, terrace, etc): <u>Hillslope</u>	Slope (%): <u>&gt;5%</u>	Local relief (concave, convex, none): <u>concave</u>
Subregion (LRR): <u>A</u>	Lat: _____	Long: _____ Datum: _____
Soil Map Unit Name: <u>No data available on NRCS website for this location.</u>		NWI classification: <u>N/A</u>
Are climatic/hydrologic conditions on the site typical for this time of year? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		(If no, explain in remarks.)
Are "Normal Circumstances" present on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		(If needed, explain any answers in Remarks.)
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

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

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks: <u>Wetland A</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size 5m diam. )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet	
1.				Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A)	
2.				Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3.				Percent of Dominant Species that are OBL, FACW, or FAC: <u>67</u> (A/B)	
4.					
<u>0</u> = Total Cover					
Sapling/Shrub Stratum (Plot size 3m diam. )				Prevalence Index Worksheet	
1. <u>Corylus cornuta</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	Total % Cover of	
2.				Multiply by	
3.				OBL species	x 1 =
4.				FACW species	x 2 =
5.				FAC species	x 3 =
<u>30</u> = Total Cover				FACU species	x 4 =
				UPL species	x 5 =
				Column totals	(A) (B)
				Prevalence Index = B / A =	
Herb Stratum (Plot size 1m diam. )				Hydrophytic Vegetation Indicators	
1. <u>Ranunculus repens</u>	<u>65</u>	<u>Y</u>	<u>FACW</u>	yes	Dominance test is > 50%
2. <u>Lysichiton americanum</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>		Prevalence test is ≤ 3.0 *
3. <u>Veronica Americana</u>	<u>Trace</u>	<u>N</u>	<u>OBL</u>		Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)
4. <u>Geum macrophyllum</u>	<u>Trace</u>	<u>N</u>	<u>FAC</u>		Wetland Non-Vascular Plants *
5. <u>Equisetum telmateia</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		Problematic Hydrophytic Vegetation * (explain)
6.				* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
7.					
8.					
9.					
10.					
11.					
<u>110</u> = Total Cover					
Woody Vine Stratum (Plot size )					
1.					
2.					
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
% Bare Ground in Herb Stratum					
Remarks:					

**EXHIBIT # 2.7**

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		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 2/1	100					Sandy loam	
2-12	10YR 3/1 2.5Y 4/2	30 60	-- 10YR 3/4	-- 10	-- C	-- M	Loamy sand + organics Loamy sand	Mixed matrix

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains    <sup>2</sup>Loc: PL=Pore Lining, M=Matrix

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Other (explain in remarks)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):  
Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric soil present?    Yes     No

Remarks:    **Organic content is presumed to be masking redoximorphic features in the 10YR 3/1 layer.**

HYDROLOGY

**Wetland Hydrology Indicators:**

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

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

*Secondary Indicators (2 or more required):*

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

**Field Observations**

Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth (in):	
Water Table Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Depth (in):	8" BGS
Saturation Present? (includes capillary fringe)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Depth (in):	surface

Wetland Hydrology Present?    Yes     No

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

Remarks:    **Hillside seep**

**EXHIBIT # 7.8**



**WETLAND DETERMINATION DATA FORM**  
Western Mountains, Valleys, and Coast Supplement to the  
1987 COE Wetlands Delineation Manual

750 Sixth Street South  
Kirkland, Washington  
98033

DP- 2

Project Site: <u>LFP McKinnon Crk Trail, NE 184th St. ROW</u>		Sampling Date: <u>Sept. 6, 2013</u>	
Applicant/Owner: <u>Broudy, L. / City of LFP Parks</u>		Sampling Point: <u>DP- 2</u>	
Investigator: <u>N. Lund, J.M. Foster</u>		City/County: <u>Lake Forest Park / King</u>	
Sect., Township, Range <u>S 10 T 26N R 4E</u>		State: <u>WA</u>	
Landform (hillslope, terrace, etc) <u>Hillslope</u>		Slope (%) <u>&gt;5%</u>	
Subregion (LRR) <u>A</u>		Local relief (concave, convex, none) <u>none</u>	
Soil Map Unit Name <u>No data available on NRCS website for this location.</u>		NW1 classification <u>N/A</u>	
Are climatic/hydrologic conditions on the site typical for this time of year? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		(If no, explain in remarks.)	
Are "Normal Circumstances" present on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?			
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks: <u>outpit</u>	

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size 5m diam. )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet																					
1. <i>Alnus rubra</i>	5	Y	FAC	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)																					
2. <i>Acer macrophyllum</i>	5	Y	FACU																						
3.																									
4.																									
<u>10</u> = Total Cover																									
Sapling/Shrub Stratum (Plot size 3m diam. )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index Worksheet																					
1. <i>Rubus spectabilis</i>	10	Y	FAC	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th align="left" colspan="2">Total % Cover of</th> <th align="left">Multiply by</th> </tr> <tr> <td>OBL species</td> <td></td> <td>x 1 =</td> </tr> <tr> <td>FACW species</td> <td></td> <td>x 2 =</td> </tr> <tr> <td>FAC species</td> <td></td> <td>x 3 =</td> </tr> <tr> <td>FACU species</td> <td></td> <td>x 4 =</td> </tr> <tr> <td>UPL species</td> <td></td> <td>x 5 =</td> </tr> <tr> <td>Column totals</td> <td></td> <td>(A) (B)</td> </tr> </table>	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)
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)																							
2.																									
3.																									
4.																									
5.																									
<u>10</u> = Total Cover																									
Herb Stratum (Plot size 1m diam. )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index Worksheet																					
1. <i>Ranunculus repens</i>	40	Y	FACW	Prevalence Index = B / A =																					
2. <i>Equisetum telmateia</i>	5	N	FACW																						
3.																									
4.																									
5.																									
6.																									
7.																									
8.																									
9.																									
10.																									
11.																									
<u>45</u> = Total Cover																									
Woody Vine Stratum (Plot size )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators																					
1. <i>Rubus armeniacus</i>	35	Y	FACU	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>yes</td> <td>Dominance test is &gt; 50%</td> </tr> <tr> <td></td> <td>Prevalence test is ≤ 3.0 *</td> </tr> <tr> <td></td> <td>Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)</td> </tr> <tr> <td></td> <td>Wetland Non-Vascular Plants *</td> </tr> <tr> <td></td> <td>Problematic Hydrophytic Vegetation * (explain)</td> </tr> </table>	yes	Dominance test is > 50%		Prevalence test is ≤ 3.0 *		Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)		Wetland Non-Vascular Plants *		Problematic Hydrophytic Vegetation * (explain)											
yes	Dominance test is > 50%																								
	Prevalence test is ≤ 3.0 *																								
	Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)																								
	Wetland Non-Vascular Plants *																								
	Problematic Hydrophytic Vegetation * (explain)																								
2.																									
<u>35</u> = Total Cover																									
% Bare Ground in Herb Stratum				* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																					
Remarks:				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																					

**EXHIBIT # 7.9**

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		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/3	100					Sandy loam	
4-12	10YR 4/4	100					Sandy loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains    <sup>2</sup>Loc: PL=Pore Lining, M=Matrix

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

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

**Indicators for Problematic Hydric Soils<sup>3</sup>**

<input type="checkbox"/> 2cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Other (explain in remarks)

<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):  
Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric soil present?    Yes     No

Remarks:

HYDROLOGY

**Wetland Hydrology Indicators:**

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

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

*Secondary Indicators (2 or more required):*

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

**Field Observations**

Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth (in):
Water Table Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth (in):
Saturation Present? (includes capillary fringe)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth (in):

Wetland Hydrology Present?    Yes     No

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

Remarks:    **Moist, not saturated.**

EXHIBIT # 7.10