

July 20, 2020

Jeffrey and Lisa Lanctot  
% Brad Sturman  
Sturman Architects

## Re: Lanctot Property, Wetland and Stream Delineation Report

The Watershed Company Reference Number: 210614

Dear Jeffrey and Lisa:

On June 30, 2021, Ecologist Jamie Sloan visited the subject property (parcel #0191100645) located adjacent north of 4609 89<sup>th</sup> Street SE in the City of Mercer Island (City) to screen for jurisdictional wetlands and streams present within the property boundaries. This report summarizes the findings of the study and includes a Field Sketch and Wetland Determination Data Form.

### Summary

No wetlands or streams were identified on the subject property during the site visit.

### Methods

Public-domain information for the subject property was reviewed for this delineation study. Resources and review findings are presented in Table 1 below.

The subject property was evaluated for wetlands using methodology from the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0* (U.S. Army Corps of Engineers 2010). Presence or absence of wetlands was determined on the basis of examination of vegetation, soils, and hydrology. These parameters were evaluated at several locations.

Characterization of hydrologic conditions in the Wetland Determination Data Form was determined using WETS table methodology (U.S. Department of Agriculture [USDA] Natural Resources Conservation Service [NRCS] 2015). The "RENTON MUNICIPAL AP, WA" station

from 1991-2020 was used as a source for precipitation data (<http://agacis.rcc-acis.org/>). The WETS table methodology uses rainfall from the three months prior to the site visit to determine if normal hydrologic conditions are present in the study area region.

The subject property was evaluated based on the presence or absence of an ordinary high water mark (OHWM) using methodology from *A Guide to Ordinary High Water Mark Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (Mersel and Lichvar 2014) and as defined by Section 404 of the Clean Water Act, the Washington Administrative Code 220-660-031, and the Revised Code of Washington 90.58.030. The OHWM is typically located by examining the vegetation and bed and bank physical characteristics to approximate the water elevation for mean annual floods.

The subject property and data point location are shown on the enclosed Field Sketch.

## Findings

The subject property is within in the Mercer Island subbasin of the Cedar River/Lake Washington watershed within the Cedar-Sammamish Water Resources Inventory Area (WRIA 8); Section 18 of Township 24 North, Range 5 East of the Public Land Survey System. Surrounding land use is largely characterized as single-family residential, with church and undeveloped City properties nearby.

The subject property is approximately 0.22 acres in size and undeveloped, aside from a treehouse, with generally flat topography, gently sloping to the southeast. Vegetation on site consists of mostly native forest with a shrub and emergent understory. A public trail borders the subject property to the north. To the east, a shallow drainage ditch connects the property to 89<sup>th</sup> Avenue Southeast.

Reviewed public-domain information for the subject property is summarized below in Table 1.

Table 1. Summary of online mapping and inventory resources.

<b>Resource</b>	<b>Summary</b>
USDA NRCS: Web Soil Survey	<i>Arents, Alderwood material, 6 to 15 percent slopes is mapped on the subject property.</i>
U.S. Fish and Wildlife Service: National Wetland Inventory Wetland Mapper	<i>No features are mapped on the subject property.</i>

Washington Department of Fish and Wildlife (WDFW): Priority Habitats and Species on the Web	<i>No features are mapped on the subject property.</i>
WDFW: SalmonScape	<i>No features are mapped on the subject property.</i>
Washington Department of Natural Resources (WA DNR): Forest Practices Application Mapping Tool	<i>No features are mapped on the subject property.</i>
WA DNR Wetlands of High Conservation Value (WHCV)	<i>No WHCV or rare plants are mapped on or near the subject property.</i>
King County iMap	<i>No features are mapped on the subject property.</i>
WETS Hydrologic Condition	<i>Hydrologic conditions were drier than normal for the three-month period prior to the site visit.</i>

### Non-Wetland Areas

The entirety of the subject property comprises non-wetland conditions, which do not meet any of the three criteria for hydrophytic vegetation, hydric soils, or wetland hydrology. In general, vegetation is dominated by a western red cedar, Douglas-fir, and bigleaf maple canopy; beaked hazelnut, English holly, and Pacific rhododendron understory; with a sword fern and English ivy emergent layer. The entire property is dominated by a prevalence of facultative-upland plants. Soils on site are high chroma mineral soils with no redoximorphic features. There are no primary or secondary hydrology indicators present on the property.



Figure 1. Looking south at the subject property vegetated with upland plants.



Figure 2. Looking south at treehouse on the subject property.

### Streams

No streams were observed within the subject property's boundaries. The property is devoid of channels, erosion, hydraulically sorted sediments, and other indicators of stream channels.

### Wetlands

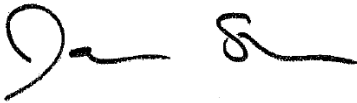
As mentioned above, no wetlands were observed on the subject property.

### Disclaimer

The information contained in this letter is based on the application of technical guidelines currently accepted as the best available science and in conjunction with the manuals and criteria referenced above. All discussions, conclusions, and recommendations reflect the best professional judgment of the author(s) and are based upon information available 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,

A handwritten signature in black ink, appearing to read 'Jamie Sloan', with a stylized flourish at the end.

Jamie Sloan  
Ecologist

## References

- Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- Mersel, M.K. and R.W. Lichvar. 2014. A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States. ERDC/CRREL TR-14-13. Hanover, NH: U.S. Army Engineer Research and Development Center.
- 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. US Army Engineer Research and Development Center. ed. J. S. Wakely, R. W. Lichvar, and C. V. Noble. Vicksburg, MS.
- USDA NRCS. 2015. National Engineering Handbook, Part 650 Engineering Field Handbook, Chapter 19 Hydrology Tools for Wetland Identification and Analysis. ed. R. A. Weber. 210-VI-NEH, Amend. 75. Washington, DC.

## Field Sketch – Mercer Island Lanctot

Site Address: North of 4609 89<sup>th</sup> Street, Mercer Island      Prepared for: Jeffrey and Lisa Lanctot  
Parcel Number: 0191100645      TWC Ref. No.: 210614  
Site Visit Date: June 30, 2021



**Note:** Field sketch only. Features depicted are approximate and not to scale. All observations were made from within the subject property; adjoining private properties were not entered.

Project/Site: Mercer Island Lanctot City/County: Mercer Island, King Co Sampling date: 6/30/21  
 Applicant/Owner: Jeffrey and Lisa Lanctot State: WA Sampling Point: DP-1  
 Investigator(s): Jamie Sloan Section, Township, Range: S18, T24N, R5E  
 Landform (hillslope, terrace, etc): Slight slope Local relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR): A Lat: - Long: - Datum: -  
 Soil Map Unit Name: Arents, Alderwood material, 6 to 15 percent slopes NWI classification: Upland

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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: <b>Hydrologic conditions were drier than normal for the three-month period prior to the site visit.</b>	

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

<p><b>Tree Stratum</b> (Plot size: 5-m diameter)</p> <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:10%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u>Acer macrophyllum</u></td> <td style="text-align: center;">80</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</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>80</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> <p><b>Sapling/Shrub Stratum</b> (Plot size: 3-m diameter)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr> <td>1. <u>Corylus cornuta</u></td> <td style="text-align: center;">75</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>2. <u>Ilex aquifolium</u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>3. <u>Symphoricarpos albus</u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>4. <u>Thuja plicata</u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>5. <u>Rhododendron macrophyllum</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>6. <u>Rubus armeniacus</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 style="text-align: right;"><u>150</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> <p><b>Herb Stratum</b> (Plot size: 1-m diameter)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1. _____</td></tr> <tr><td>2. _____</td></tr> <tr><td>3. _____</td></tr> <tr><td>4. _____</td></tr> <tr><td>5. _____</td></tr> <tr><td>6. _____</td></tr> <tr><td>7. _____</td></tr> <tr><td>8. _____</td></tr> <tr><td>9. _____</td></tr> <tr><td>10. _____</td></tr> <tr><td>11. _____</td></tr> <tr> <td style="text-align: right;">_____</td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> <p><b>Woody Vine Stratum</b> (Plot size: 3-m diameter)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr> <td>1. <u>Hedera helix</u></td> <td style="text-align: center;">50</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>2. <u>Polystichum munitum</u></td> <td style="text-align: center;">3</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td style="text-align: right;"><u>53</u></td> <td colspan="3">= Total Cover</td> </tr> </tbody> </table> <p>% Bare Ground in Herb Stratum: _____</p>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Acer macrophyllum</u>	80	Yes	FACU	2. _____				3. _____				4. _____				<u>80</u>	= Total Cover			1. <u>Corylus cornuta</u>	75	Yes	FACU	2. <u>Ilex aquifolium</u>	20	No	FACU	3. <u>Symphoricarpos albus</u>	20	No	FACU	4. <u>Thuja plicata</u>	20	No	FAC	5. <u>Rhododendron macrophyllum</u>	10	No	FACU	6. <u>Rubus armeniacus</u>	5	No	FAC	<u>150</u>	= Total Cover			1. _____	2. _____	3. _____	4. _____	5. _____	6. _____	7. _____	8. _____	9. _____	10. _____	11. _____	_____	= Total Cover			1. <u>Hedera helix</u>	50	Yes	FACU	2. <u>Polystichum munitum</u>	3	No	FACU	<u>53</u>	= Total Cover			<p><b>Dominance Test worksheet:</b></p> <p>Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across all Strata: <u>3</u> (B)</p> <p>Percent of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A/B)</p> <p><b>Prevalence Index worksheet:</b></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:10%;"></th> <th style="width:10%;">Multiply by:</th> <th style="width:10%;"></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;">25</td> <td>x 3 =</td> <td style="text-align: center;">75</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">258</td> <td>x 4 =</td> <td style="text-align: center;">1,032</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;">283</td> <td>(A)</td> <td style="text-align: center;">1,107 (B)</td> </tr> </tbody> </table> <p>Prevalence Index = B/A = <u>3.9</u></p> <p><b>Hydrophytic Vegetation Indicators:</b></p> <p><input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> 2 – Dominance Test is &gt; 50%</p> <p><input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0<sup>1</sup></p> <p><input type="checkbox"/> 4 – Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> 5 – Wetland Non-Vascular Plants<sup>1</sup></p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)</p> <p><sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <p><b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	Total % Cover of:		Multiply by:		OBL species	_____	x 1 =	_____	FACW species	_____	x 2 =	_____	FAC species	25	x 3 =	75	FACU species	258	x 4 =	1,032	UPL species	_____	x 5 =	_____	Column Totals:	283	(A)	1,107 (B)
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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 <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 3/2	100					Loam	
8-16	7.5YR 4/4	100					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.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>					<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>			
<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"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Gleyed Matrix (F2)					<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3)					<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<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)								
<input type="checkbox"/> Restrictive Layer (if present): Type: _____ Depth (inches): _____								
Remarks:								

**HYDROLOGY**

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