

TECHNICAL MEMORANDUM



Date: February 9, 2022
To: Grace Feng
From: Justin Kay, Ecologist
Project Name: Mercer Island Feng
Project Number: 220112

Re: Feng Property, Reconnaissance Study

On February 8, 2022, Ecologist Justin Kay visited the property located at 7204 78th Avenue SE (parcel #2524049068) on Mercer Island, Washington to screen for jurisdictional wetlands and streams. This technical memo summarizes the findings of the study.

The following documents are enclosed:

- Site Photos
- Wetland Determination Data Forms

Summary

No jurisdictional wetlands or streams were found within or directly adjacent to the study area. The subject property does not meet wetland criteria for hydrophytic vegetation or wetland hydrology at any location and there are no indications of permanent or seasonal flowing water on-site.

Study Area

The study area for this project is defined as parcel #5561401330 located at 24860 SE 146th Street in unincorporated King County. The surrounding properties within approximately 300 feet were surveyed visually or where publicly accessible.



Figure 1. Vicinity map of the study area (source: King County iMap, 2019).

Methodology

Public-domain information on the subject property was reviewed for this reconnaissance study. Resources and review findings are presented in Table 1 of the “Findings” section of this letter.

The subject property 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). Identified wetlands were classified according to the *2014 Western Washington Wetland Rating System* (Ecology Publication 14-06-029).

The study area was evaluated for streams based on the presence or absence of an ordinary high water mark (OHWM) as defined by Section 404 of the Clean Water Act, the Washington Administrative Code (WAC) 220-660-030, and the Revised Code of Washington (RCW) 90.58.030 and guidance documents including *Determining the Ordinary High Water Mark for*

Shoreline Management Act Compliance in Washington State (Anderson 2016) and A Guide to Ordinate High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States (Mersel 2016).

Assessment of fish use of streams and waterbodies was based on the Washington Administrative Code (WAC) 222-16-031, *Interim Water Typing System*. Specifically, we assessed stream width and natural migration barriers (typically gradient-based) per the WAC criteria.

Characterization of climatic conditions for precipitation in the Wetland Determination Data Forms were determined using the WETS table methodology (USDA, NRCS 2015). The “Seattle Tacoma Intl AP” station from 1991-2020 was used as a source for precipitation data (<http://agacis.rcc-acis.org/>). The WETS table methodology uses climate data from the three months prior to the site visit month to determine if normal conditions are present in the study area region.

Findings

The subject property is within the Mercer Island drainage basin of the Cedar-Sammamish River watershed (WRIA 8); Section 25 of Township 24 North, Range 04 East of the Public Land Survey System. The subject property is 0.51 acres in size per the King County Assessor and is developed.

The subject property generally slopes downhill to the north and is graded to near level in the east. Grading causes a four- to five-foot elevation difference from ground level on parcel to the sidewalk along the north and east parcel boundaries. The surrounding area is zoned residential with a minimum lot size of 9,600 square feet (R-9.6).

Table 1. Summary of online mapping and inventory resources.

Resource	Summary
USDA NRCS: Web Soil Survey	<i>Arents, Alderwood material, 6 to 15 percent slopes. Non-hydric, moderately well-drained soil.</i>
USFWS: NWI Wetland Mapper	<i>No features are mapped within the subject property. Riverine habitat (R4SBC) is mapped approximately 600 feet west of the subject property. Freshwater Ponds (PUBHx) are mapped east of the subject property with the closest being approximately 800 feet away.</i>
WDFW: PHS on the Web	<i>No features are mapped within 500 feet of the subject property.</i>
WDFW: SalmonScape	<i>No features are mapped within 500 feet of the subject property.</i>
DNR Mapping Tool	<i>No features are mapped within 500 feet of the subject property. The riverine feature mapped by NWI is classified as a Type N stream. This stream transitions to Type F down gradient near West Mercer Way.</i>
King County iMap	<i>No features are mapped within 500 feet of the subject property.</i>
Mercer Island GIS Portal	<i>The stream feature mapped is similar to the feature mapped by DNR. This stream extends further uphill and is as close as approximately 400 feet, behind the residence at 7643 SE 72nd Place. The stream is classified as Type Ns, non-fish bearing and seasonal. Mercer Islands environmental map suggests that this stream is not visible within 1000 feet as it runs underground and through private property.</i>
WETS Climatic Condition	<i>Wetter than normal.</i>

Non-wetland Areas

No jurisdictional wetlands or streams were found within or directly adjacent to the study area. The subject property does not meet wetland criteria for hydrophytic vegetation or wetland hydrology at any location and there are no indications of flowing water on-site. Dominant vegetation includes big-leaf maple, western red cedar, Douglas fir, Pacific dogwood, cherry, juniper, St. John’s wort, English ivy, and western sword fern. All species are indicative of either upland or neutral conditions. No hydrophytic vegetation was observed within the subject property.

Soils north of the existing residence met criteria for hydric soils within a small, isolated, compacted depression vegetated with lawn grasses and common residential weeds. This area appears to be disturbed from regular foot traffic. It is possible this compaction has created a semi-restrictive layer occasionally impounding water during heavy rainfall. Hydric soils were not observed anywhere else within the subject property. No wetland hydrology was observed

onsite during wetter than normal conditions indicating a lack of significant wetland hydrology within the subject property.

Disclaimer

Please note: The information contained in this 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 in good faith, 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 warranty, expressed or implied, is made.

Should you have any questions or concerns regarding our findings, please feel free to contact me.

Sincerely,



Justin Kay
Ecologist

Report reviewed and approved by:



Hugh Mortenson, PWS
President / Senior Ecologist

Enclosures

Site Photos



Photo 1. Shallow depressional feature near north side of residence.



Photo 2. Undeveloped eastern half of subject parcel.



Photo 3. Front yard of subject property from driveway near 78th Avenue Southeast. Note upland plant community.



Photo 4. Backyard of subject property. 72nd Street is accessible along dirt driveway (right).

Project/Site: Mercer Island Feng City/County: Mercer Island / King Sampling date: 2/8/22
 Applicant/Owner: Grace Feng State: WA Sampling Point: 1
 Investigator(s): J Kay Section, Township, Range: S 25, T 24N, R 04E
 Landform (hillslope, terrace, etc): Shallow depression on terrace Local relief (concave, convex, none): concave Slope (%): <2%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Arents, Alderwood material, 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soils Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Wetter than normal per WETS. Shallow depression near N side of house. Compacted from foot traffic. Soils meet criteria.	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 5-m diameter)				
1. <u><i>Acer macrophyllum</i></u>	65	Y	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>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A/B)
2. <u><i>*Prunus sp.</i></u>	15	N	FACU	
3. _____				
4. _____				
<u>80</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u><i>Prunus laurocerasus</i></u>	10	N	NL	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>
2. <u><i>*Juniperus sp.</i></u>	45	Y	NL	
3. <u><i>Ilex aquifolium</i></u>	3	N	FACU	
4. _____				
5. _____				
<u>58</u> = Total Cover				
Herb Stratum (Plot size: 1-m diameter)				
1. <u><i>Polystichum munitum</i></u>	15	Y	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Taraxacum officinale</i></u>	3	N	FACU	
3. <u><i>Lapsana communis</i></u>	1	N	FACU	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>19</u> = Total Cover				
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____				
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum: <u>85%</u>				
Remarks: <u>*Presumed FACU</u>				

Project/Site: Mercer Island Feng City/County: Mercer Island / King Sampling date: 2/8/22
 Applicant/Owner: Grace Feng State: WA Sampling Point: 2
 Investigator(s): J Kay Section, Township, Range: S 25, T 24N, R 04E
 Landform (hillslope, terrace, etc): hillslope Local relief (concave, convex, none): concave Slope (%): 5-10%
 Subregion (LRR): A Lat: - Long: - Datum: -
 Soil Map Unit Name: Arents, Alderwood material, 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 <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"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Wetter than normal per WETS. DP east of dirt driveway near mulch pile.	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Notes
Tree Stratum (Plot size: 5-m diameter)				
1. <u><i>Pseudotsuga menziesii</i></u>	40	Y	FACU	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>6</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>17%</u> (A/B)
2. <u><i>Acer macrophyllum</i></u>	25	Y	FACU	
3. <u><i>Thuja plicata</i></u>	20	Y	FAC	
4. <u><i>Arbutus menziesii</i></u>	10	N	NL	
	<u>95</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3-m diameter)				
1. <u><i>Oemleria cerasiformis</i></u>	2	N	FACU	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>
2. <u><i>Gaultheria shallon</i></u>	15	Y	FACU	
3. <u><i>Ilex aquifolium</i></u>	2	N	FACU	
4. <u><i>*Prunus sp.</i></u>	10	Y	FACU	
5. <u><i>Corylus cornuta</i></u>	3	N	FACU	
	<u>32</u>	= Total Cover		
Herb Stratum (Plot size: 1-m diameter)				
1. <u><i>Cardimine hirsute</i></u>	10	Y	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 – Dominance Test is > 50% <input type="checkbox"/> 3 – Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 – Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 – Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Hypochaeris radicata</i></u>	2	N	FACU	
3. <u><i>Taraxacum officinale</i></u>	2	N	FACU	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
		= Total Cover		
Woody Vine Stratum (Plot size: 3-m diameter)				
1. _____				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____				
		= Total Cover		
% Bare Ground in Herb Stratum: _____				
Remarks: *Presumed FACU				

