

June 17, 2023 - additional pages added 9/6/23

Gagandeep Oberoi
4682 Arbors Circle
Mukilteo, WA 98275
Via email at: magnificantw@gmail.com

RE: Wetland Reconnaissance on vacant land just south of property addressed 9xx Webster Street, Mukilteo, WA 98059; Tax Parcel # 00527504701200

Dear Gagandeep,

This Wetland Reconnaissance was prepared in association with your proposed home at the above-noted property (site). As you are aware, there is a wetland and stream located just inside the site's north property line. These are critical areas and are protected by City of Mukilteo Municipal Code (MMC). Additionally, the critical areas have critical area buffers that extend from the wetland boundary and stream edge. The stream buffer is 50 feet. The wetland buffer is 40 feet. MMC prohibits clearing or grading in critical area buffers. Because of the buffers' significant impact onsite, the only available area to build a home on your site is on the site's south side. The buffer encumbrance is impactful enough that a Reasonable Use Exception (RUE) is the only option to obtain approval for a reasonable home on this single-family residentially zoned property. In the year 2016, there was a very small offsite wetland identified on the hillside above and south of the site. When the wetland was delineated by Wetland Resources 7 years ago, the wetland was determined to have a 40-foot wide wetland buffer and 15-foot wide building setback (bsbl). The presence of the offsite wetland squeezes the building envelope even further.

The purpose of this Wetland Reconnaissance is to evaluate if a wetland exists just south of the site. This Wetland Reconnaissance provides findings, photos and conclusions on the formerly delineated offsite wetland (see attached Critical Areas Map by Wetlands & Wildlife for the wetland delineated in 2016 by Wetland Resources, Inc.) beyond the south property line. Wetland boundaries can change over time as they can shrink or increase in area. Since 2016 is more than 5 years ago and because Scott Spooner told me he didn't closely review the offsite wetland area, it made sense for this area to be evaluated based on 2023 conditions.

I. Findings:

1. I visited the site on Sunday June 11, 2023 to perform the Wetland Reconnaissance for the possible wetland south of the site's south property line. Weather conditions were overcast and approximately 60 degrees. It rained during the previous several days. During the preceding March and April, the local weather conditions were typical for the Seattle / Everett area. The weather in the month of May was warmer than usual.
2. The rectangular-shaped site's dimensions are 147.72 feet x 130 feet, which equals an area of 19,204 square feet (0.44 acres). The site's high point is near the southeast property corner at elevation 154. The site's low point is near the northwest property corner at elevation 111. The site is partly forested, containing mostly deciduous trees and a thick sub-canopy of shrubs such as salmonberry, sword fern and Himalayan blackberry. I observed a wetland and narrow stream inside the site's north property line. These two critical areas are located on the lower portion of the site. The stream has a confluence with the roadside drainage ditch (significantly less flow) just east of Webster Street

pavement. During my site investigation, the stream flow was only a trickle of water, which I estimated at 0.1 gallons per minute.

3. Surrounding the site, the land use is as follows: West of the site is partly improved Webster Street with approx. 20 feet of road pavement, a roadside drainage ditch, a fire hydrant and other infrastructure improvements. Webster Street is public right-of-way. South of the site is un-improved 10th Street public right-of-way. East of the site is un-developed property. North of the site contains more of the wetland area and a single-family home.
4. A Geotechnical (engineering) Evaluation by Phil Haberman, P.E. from Cobalt Geosciences was completed onsite on June 22, 2021. A Topographic Survey (and map) by David West Jr. P.L.S. from West Alliance Professional Land Surveyors was completed in 2021. A Critical Areas Report by Scott Spooner from Wetlands & Wildlife was completed on July 19, 2022.
5. Scott Spooner's Critical Areas Report is very detailed for the onsite wetland and stream with a description of those two critical areas, buffer mitigation recommendations, and monitoring of possible mitigation plantings. In the Report is a reference to a formerly (2016) delineated wetland by Wetland Resources, which occurred more than 5 years ago. Common industry practice is that a wetland determination and delineation is valid for up to 5 years, but after 5 years has lapsed, it's prudent to conduct an updated wetland assessment and/or delineation. An updated wetland assessment is commonly referred to as a wetland reconnaissance. The purpose of this analysis is to provide a wetland reconnaissance on the offsite wetland.
6. City of Mukilteo Municipal Code (MMC) defines a wetland as, *"means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created to mitigate conversion of wetlands."*
7. More succinctly, if an area has positive indicators for all three wetland criteria (hydrophytic vegetation, hydric soils, and wetland hydrology), then the area is considered wetland. This Wetland Reconnaissance only targets the area along the site south property line and immediately south of the property line. During my investigation, I hung 2 striped blue and white flags labeled with black pen SP-1 (Sample Point) and SP-2. SP-1 is located along the south property line, whereas SP-2 is approximately 15 feet south of the property line and in a localized low point where signs of occasional runoff sheet flow are present. SP-2 is upslope of the roadside drainage ditch on Webster Street. Upslope of the confluence with the stream, the drainage ditch was dry and had no flowing water.
8. Hydrophytic Vegetation: Near the onsite wetland, there was significant hydrophytic vegetation present such as creeping buttercup (*Ranunculus repens* - FACW), lady fern (*Athyrium filix-femina* - FAC+), dying western red cedar (*Thuja plicata* - FAC) saplings, and red alder (*Alnus rubra* - FAC), but this area has saturated soils unlike the area near the site's south property line. Within 50 feet of the site's south property line, I observed the following: red alder, Douglas fir (*Psuedotsuga menziesii* - FACU), beaked hazelnut (*Corylus cornuta* - FACU), bracken fern (*Pteridium aquilinum* - FACU), a significant amount of Himalayan blackberry (*Rubus procerus* - FAC), salmonberry (*Rubus spectabilis*

- FAC), horsetail (*Equisetum arvense* - FAC), sword fern (*Polystichum munitum* - FACU).

Himalayan blackberry was the most dominant species, which is an indicator of a disturbed site. The hydrophytic vegetation criteria was generally not met near the south property line. In general, the vegetation was between clearly non-hydrophytic (at SP-1) to 2 dominant FAC species and 2 dominant FACU species (at SP-2) which does not meet the dominance test, thus the hydrophytic vegetation criteria was not met in this area.

9. Hydric Soils: The Natural Resources Conservation Service (NRCS) mapped the site as being underlain by Alderwood-Everett gravelly sandy loams (25 to 70 percent slopes) and Everett very gravelly sandy loam (0 to 8 percent slopes). Alderwood is a till type soil and usually not a wetland soil. Alderwood and Everett series soils are generally non-hydric soils. SP-1 soil in the upper 12 inches were brightly colored, 7.5 YR 3/3, and displayed no mottling. The soils at SP-1 were clearly non-hydric. At SP-2, the soils were 7.5 YR 2/2 and lacked distinct mottling. This soil may have been fill from a prior source from long ago. SP-2 was fairly close to being a hydric soil, but did not meet the hydric soil criteria in my opinion.
10. Wetland Hydrology: SP-1 certainly did not display any primary or secondary wetland hydrology indicators such as inundation, saturation to the ground surface, FAC Neutral Test etc. The soils were very dry at SP-1, and there were no signs of wetland hydrology. SP-2 was conducted in a localized low point. The upper 4 inches of soil were moist, but not saturated. At 4-6 inches, the soil started becoming drier as the soil went from moist to damp. I would attribute the upper 6 inches of soil to having some moisture from the recent rainfall events during previous days. Below 6 inches from ground surface, the soil became drier. I believe in large enough storm events (multiple times per year), there would be very shallow sheet flow of runoff in this area as the area slopes toward the roadside drainage ditch on Webster Street. There is likely more than 1 acre of tributary area that drains toward this low point, with a likely sheet flow length of at least 300 feet. However, I do not believe that saturated soil conditions to the ground surface would be present for more than 12.5% of the growing season, so I determined that SP-2 did not meet the wetland hydrology criteria as it relates to it being a wetland. That said, this drainage course needs to be accounted for in the design of the driveway, utilities and/or home. Flowing water occasionally does appear to occur here.

II. Photos:



Photo A: Looking north. Webster Street is on left side of photo and depression is left of the black fence. Subject site is in the trees.



Photo B: SP-1 flag is on the site's south property line on the right side of the photo. SP-2 flag is difficult to see in this photo, but it's left (south) of the fence and in the depression (where the Himalayan blackberry is very dominant). A big leaf maple tree is on the left side of the photo.

III. Conclusions:

1. Because not all three wetland criteria were present in the area near (SP-1) or beyond (SP-2) the site's south property line, I do not believe this area meets the wetland definition. Note that the wetland and stream exist on the site's north side, and those critical areas have associated critical area buffers that impact the project and trigger the Reasonable Use Exception.
2. I recommend you submit this Wetland Reconnaissance (letter) in association with your reasonable use exception application to the City of Mukilteo. It's possible the City will be pleased to know the property south of your site, that appears to be publicly owned, is no longer wetland. The City may wish to use that property for a different purpose than the current condition which is dominated by heavily invasive Himalayan blackberry. In the future, the City or different property owner will have the option to partly or fully develop the area with a trail, park, utility or some other use.

If you have any questions, please do not hesitate to contact me at markrigos@hotmail.com.

Sincerely,

Mark Rigos, P.E.
Wetland Biologist
440 SE Darst Street
Issaquah, WA 98027
(425) 652-6013

Cc: Sanjeev Sharma; seattlearchitect@gmail.com; designlyric.1@gmail.com
Encl: Sample Point Forms (4 pages)
Wetland Map (by others) showing 2016 Former Offsite Wetland (1 page)

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

Project/Site: _____ City/County: _____ Sampling Date: _____
 Applicant/Owner: _____ State: _____ Sampling Point: _____
 Investigator(s): _____ Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants ¹ ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes _____ No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

SOIL

Sampling Point: _____

[illegible]

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 (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<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) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>
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: _____ City/County: _____ Sampling Date: _____
 Applicant/Owner: _____ State: _____ Sampling Point: _____
 Investigator(s): _____ Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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 _____	Hydric Soil Present? Yes _____ No _____	Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Remarks:			

VEGETATION – Use scientific names of plants.

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

SOIL

Sampling Point: _____

[illegible]

HYDROLOGY

Wetland 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"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <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) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 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 (D7)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		