



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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November 9, 2021

Linda Ritter
City of Mukilteo Planning and Community Development Department
11930 Cyrus Way
Mukilteo, WA 98275

RE: Review of Wetland Findings for Rodriguez Property

Dear Linda Ritter:

Thank you for asking the Washington Department of Ecology (Ecology) to review wetland presence/absence by arranging a site visit to the Johnny Rodriguez property in Mukilteo. This property (Parcel No. 00611600009300) covers 4.5 acres and is located at 4203 78th Street SW. The southern half of this property has been partially cleared and graded without a permit, while the northern half is forested. This Ecology review focused on the northwest corner of the parcel bordering the First Slavic Church Awakening property.

As the state agency responsible for implementing the state Water Pollution Control Act (RCW 90.48), Ecology routinely provides wetland-related technical assistance to local jurisdictions and we are happy to assist the City of Mukilteo (City) in this wetland review. The results of our literature research and site visit, as well as our recommendations is provided below.

Literature Review Findings

Background information that I reviewed prior to the site visit included:

- Snohomish County critical areas map
- Natural Resources Conservation Service (NRCS) Soil Survey map
- *Critical Areas Study for Pellitteri*, prepared by Wetland Resources, dated March 15, 2018
- *Conceptual Buffer Averaging Plan for Casanelles-Skookum Kennel*, prepared by Wetland Resources, dated June 27, 2018
- *Feasibility Report for Skookum Kennels*, prepared by Rolluda Architects, dated May 31, 2018
- *Rodriguez Commercial Site Drawings*, prepared by BRL Services LLC, received by City of Mukilteo on September 15, 2021

The Snohomish County critical areas map shows a wetland in the northern portion of the parcel. The topographic contours indicate there is a linear drainage feature paralleling the northwestern

edge of the parcel. The NRCS Soil Survey map shows the property containing Alderwood gravelly sandy loam on 0-8% slopes and Alderwood-Urban land complex on 8-15% slopes, which are not considered hydric soils.

The critical areas study by Wetland Resources shows a wetland (0.81 acres) in the northwest corner of the Rodriguez property. This depressional wetland is described as being forested and seasonally flooded. They rated this as a Category III wetland with a habitat score of 6, which receives a 165' buffer according to the City of Mukilteo.

A recent wetland reconnaissance by B&A did not identify any wetlands on the Rodriguez property.

Site Visit Findings

I conducted a site visit on October 29, 2021, within the northwest corner of the property to collect data on the presence/absence of wetland indicators based on methods in the federal wetland delineation manual and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*.

I observed a drainage feature paralleling the northwest edge of the property and noted signs of flowing water, saturated soils, and hydrophytic vegetation within this swale (see attached photos). There is a small stream that was 2' wide and 3" deep flowing north in a shallow swale. This stream originates from groundwater seeps that appear to flow from a storm water level spreader on the adjacent parcel.

I examined two soil pits within representative areas near this stream and found positive wetland indicators of vegetation, soil, and hydrology (see attachments). Soil pit # 1 was located approximately 30' east of the stream, while soil pit #2 was located 3' west of the stream.

- At soil pit #1 the dominant vegetation was red alder (*Alnus rubra*), Pacific willow (*Salix lucida*), salmonberry (*Rubus spectabilis*), Himalayan blackberry (*Rubus armeniacus*), slough sedge (*Carex obnupta*), and reed canarygrass (*Phalaris arundinacea*). The soil layer from 0-5" was a dark brown (10YR 2/2) silt loam, from 5-10" it was a (10YR 2/1) silt loam with 2% redoximorphic features, and from 10-18" there was a silt loam (10YR 4/2) with 5% redoximorphic features. This soil profile met the Redox Dark Surface (F6) hydric soil indicator. Signs of hydrology consisted of saturated soil at 8" in the soil pit.
- The dominant vegetation in soil pit #2 was red alder, salmonberry, Himalayan blackberry, slough sedge, reed canarygrass, and lady fern (*Athyrium filix-femina*). The soil layer from 0-6" was a very dark brown (7.5YR 2.5/1) mucky silt, and from 6-18" it was a (7.5YR 2.5/1) sandy silt with 5% redoximorphic features. This soil profile met the Redox Dark Surface (F6) hydric soil indicator. Signs of hydrology consisted of flowing water nearby in the stream and saturated soil at 6" in the soil pit.

Linda Ritter
Review of Strickland Wetland Findings
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Recommendations

Based on the literature review and site visit, Ecology believes there is a wetland in the northwest corner of the Rodriguez property. The wetland boundary shown on the attached drawing is an approximate depiction of wetlands on the Rodriguez property. Therefore, I disagree with the B&A conclusion there are no wetlands on the property.

If you have any questions or would like to discuss my recommendations, please give me a call at (425) 429-1846 or send an email to Doug.Gresham@ecy.wa.gov.

Sincerely,

A handwritten signature in black ink that reads "Doug Gresham". The signature is written in a cursive, flowing style.

Doug Gresham, Senior PWS
Wetland Specialist
Shorelands and Environmental Assistance Program

Sent by email to: lrutter@mukilteowa.gov



Photo 1—Vegetation at soil pit #1 on Rodriguez property.



Photo 2—Vegetation and stream at soil pit #2 on Rodriguez property.

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

Project/Site: Rodriguez commercial property City/County: Mukilteo/Snohomish Sampling Date: 10/29/21
 Applicant/Owner: Johnny Rodriguez State: WA Sampling Point: SP-1
 Investigator(s): Doug Gresham Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Meets all three criteria	

VEGETATION – Use scientific names of plants.

<p><u>Tree Stratum</u> (Plot size: _____)</p> <table style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>1. <u>Alnus rubra</u></td> <td style="text-align: center;">60</td> <td style="text-align: center;">X</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>2. <u>Salix lucida</u></td> <td style="text-align: center;">30</td> <td style="text-align: center;">X</td> <td style="text-align: center;">FACW</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 colspan="2"></td> <td style="text-align: center;">90</td> <td style="text-align: center;">= Total Cover</td> </tr> </tbody> </table> <p><u>Sapling/Shrub Stratum</u> (Plot size: _____)</p> <table style="width: 100%;"> <tbody> <tr> <td>1. <u>Rubus spectabilis</u></td> <td style="text-align: center;">40</td> <td style="text-align: center;">X</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>2. <u>Rubus armeniacus</u></td> <td style="text-align: center;">30</td> <td style="text-align: center;">X</td> <td style="text-align: center;">FAC</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>5. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td colspan="2"></td> <td style="text-align: center;">70</td> <td style="text-align: center;">= Total Cover</td> </tr> </tbody> </table> <p><u>Herb Stratum</u> (Plot size: _____)</p> <table style="width: 100%;"> <tbody> <tr> <td>1. <u>Carex obnupta</u></td> <td style="text-align: center;">70</td> <td style="text-align: center;">X</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>2. <u>Phalaris arundanacea</u></td> <td style="text-align: center;">25</td> <td style="text-align: center;">X</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>3. <u>Polystichum munitum</u></td> <td style="text-align: center;">5</td> <td>_____</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>4. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>5. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>6. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>7. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>8. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>9. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>10. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>11. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td colspan="2"></td> <td style="text-align: center;">100</td> <td style="text-align: center;">= Total Cover</td> </tr> </tbody> </table> <p><u>Woody Vine Stratum</u> (Plot size: _____)</p> <table style="width: 100%;"> <tbody> <tr> <td>1. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>2. _____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td colspan="2"></td> <td>_____</td> <td style="text-align: center;">= Total Cover</td> </tr> </tbody> </table> <p>% Bare Ground in Herb Stratum _____</p>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Alnus rubra</u>	60	X	FAC	2. <u>Salix lucida</u>	30	X	FACW	3. _____	_____	_____	_____	4. _____	_____	_____	_____			90	= Total Cover	1. <u>Rubus spectabilis</u>	40	X	FAC	2. <u>Rubus armeniacus</u>	30	X	FAC	3. _____	_____	_____	_____	4. _____	_____	_____	_____	5. _____	_____	_____	_____			70	= Total Cover	1. <u>Carex obnupta</u>	70	X	OBL	2. <u>Phalaris arundanacea</u>	25	X	FACW	3. <u>Polystichum munitum</u>	5	_____	FACU	4. _____	_____	_____	_____	5. _____	_____	_____	_____	6. _____	_____	_____	_____	7. _____	_____	_____	_____	8. _____	_____	_____	_____	9. _____	_____	_____	_____	10. _____	_____	_____	_____	11. _____	_____	_____	_____			100	= Total Cover	1. _____	_____	_____	_____	2. _____	_____	_____	_____			_____	= Total Cover	<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>6</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)</p> <p>Prevalence Index worksheet:</p> <table style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </tbody> </table> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input checked="" type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Wetland Non-Vascular Plants¹</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <p>Hydrophytic Vegetation Present? 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SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-5	10YR 2/2	100					silt loam	roots and duff
5-10	10YR 2/1	98	10YR 4/4	2	C	M	silt loam	
10-18	10YR 4/2	95	10YR 4/4	5	C	M	silt loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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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"/> High Water Table (A2) <input checked="" 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 8 (includes capillary fringe)				Wetland Hydrology Present? Yes <input checked="" 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: Rodriguez commercial property City/County: Mukilteo/Snohomish Sampling Date: 10/29/21
 Applicant/Owner: Johnny Rodriguez State: WA Sampling Point: SP-2
 Investigator(s): Doug Gresham Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Meets all three criteria	

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: <u>5</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>100</u> (A/B)
1. <u>Alnus rubra</u>	<u>60</u>	<u>X</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	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 = _____
<u>60</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>Rubus spectabilis</u>	<u>30</u>	<u>X</u>	<u>FAC</u>	
2. <u>Rubus armeniacus</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 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.
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
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Herb Stratum (Plot size: _____)				
1. <u>Carex obnupta</u>	<u>60</u>	<u>X</u>	<u>OBL</u>	
2. <u>Phalaris arundanacea</u>	<u>15</u>	_____	<u>FACW</u>	
3. <u>Athyrium filix femina</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<u>95</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-6	7.5 YR 2.5/1	100					mucky silt	roots and duff
6-18	7.5 YR 2.5/1	95	10YR 4/6	5	C	M	sandy silt	

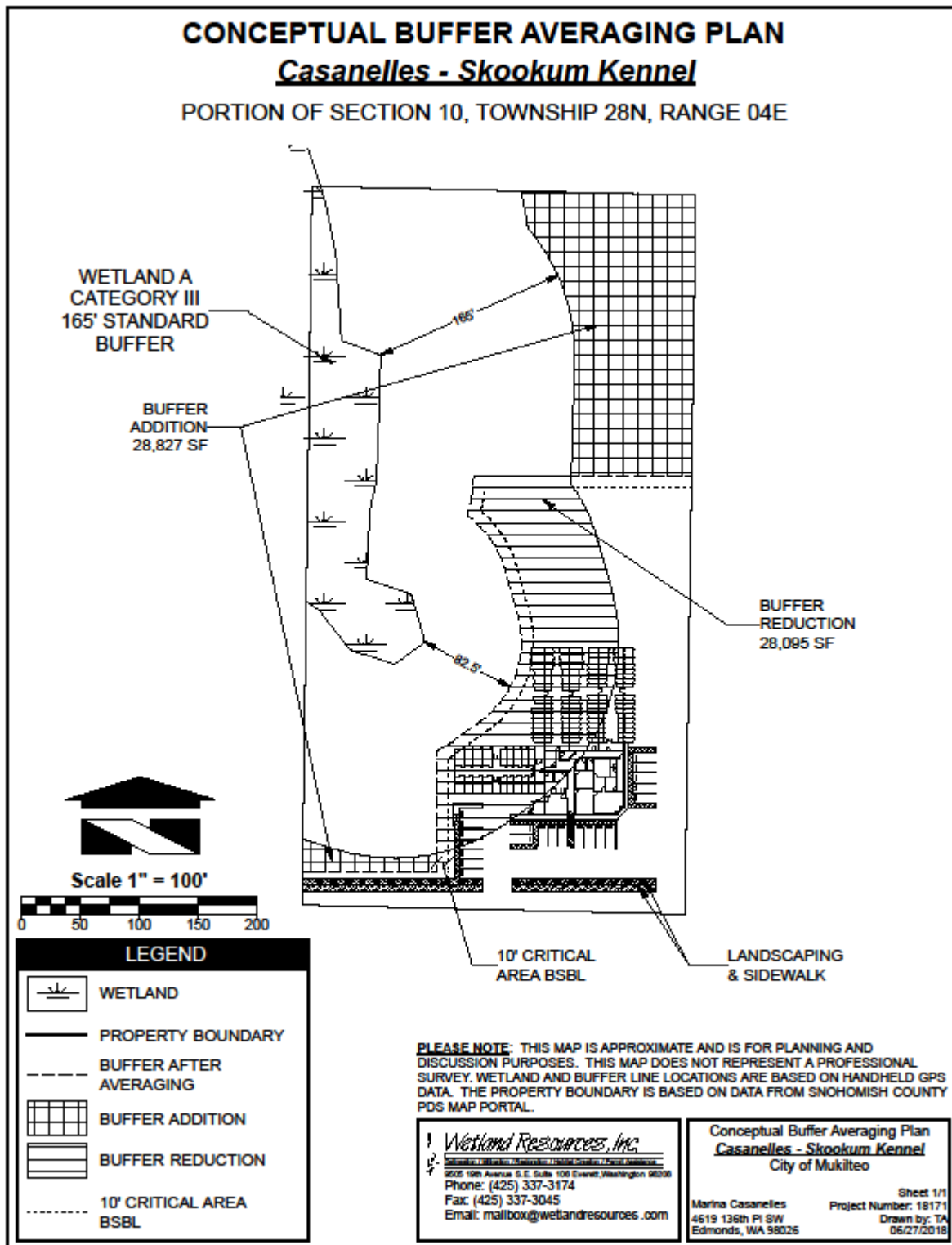
¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)			
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input checked="" 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 checked="" 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> (includes capillary fringe)				Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks: Stream channel flowing near soil pit is 2' wide and 3" deep. Hardpan at 12" is perching water in soil pit.							



Excerpt from *Conceptual Buffer Averaging Plan for Casanelles-Skookum Kennel* showing wetland area on Rodriguez property