H&S Consulting

May 20, 2016

Mr. Roger Hebert
Hebert Construction, Inc.
2020 A Street SE, #101
Auburn, WA 98002
(253)931-8888
Roger@Hebert-Construction.com

RE: Wetland Analysis Report for Site Development
XXX SR410 HWY E, City of Sumner
Parcel # 0520301039

Dear Mr. Hebert,

Following your request H & S Consulting has completed an onsite wetland verification of the 4.48-acre site located at XXX SR410 Hwy East, City of Sumner (Fig. 1). Onsite assessment followed the established criteria and methods as defined within the *Corps of Engineers (CoE) Wetland Delineation Manual - 2010 Western Mountains, Valleys, and Coast (WMVC) Regional Supplement*, the *Washington State Wetlands Identification and Delineation Manual* (Wash. Manual), and the Washington Department of Natural Resources (WDNR) Forest Practice Rules. Site assessment encompassed the entire site and the area within 315 ft. of site boundaries.

> "Wetlands" or "wetland areas" means areas that are inundated or saturated by surface 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 from nonwetland areas to mitigate the conversion of wetlands.-
> (City of Sumner – title 16.46)

Figure 1. Site Vicinity

BACKGROUND INFORMATION

National Wetland Inventory Mapping

The National Wetland Inventory (NWI) mapping completed by the U.S. Fish and Wildlife Service was reviewed as a part of this assessment (Fig. 2). This mapping resource identified a PSSA and a PEMC type wetland on the project site.

Figure 2. National Wetlands Inventory Map

Pierce County Wetland Inventory and DNR Water Type map

The Pierce County Wetland Inventory and DNR Water Type map was reviewed as a part of this assessment (Fig. 3). This mapping resource identified a detention complex, draining the road to the east and parking lot, in the east portion of the site as non-regulated. No streams or other water bodies were identified.

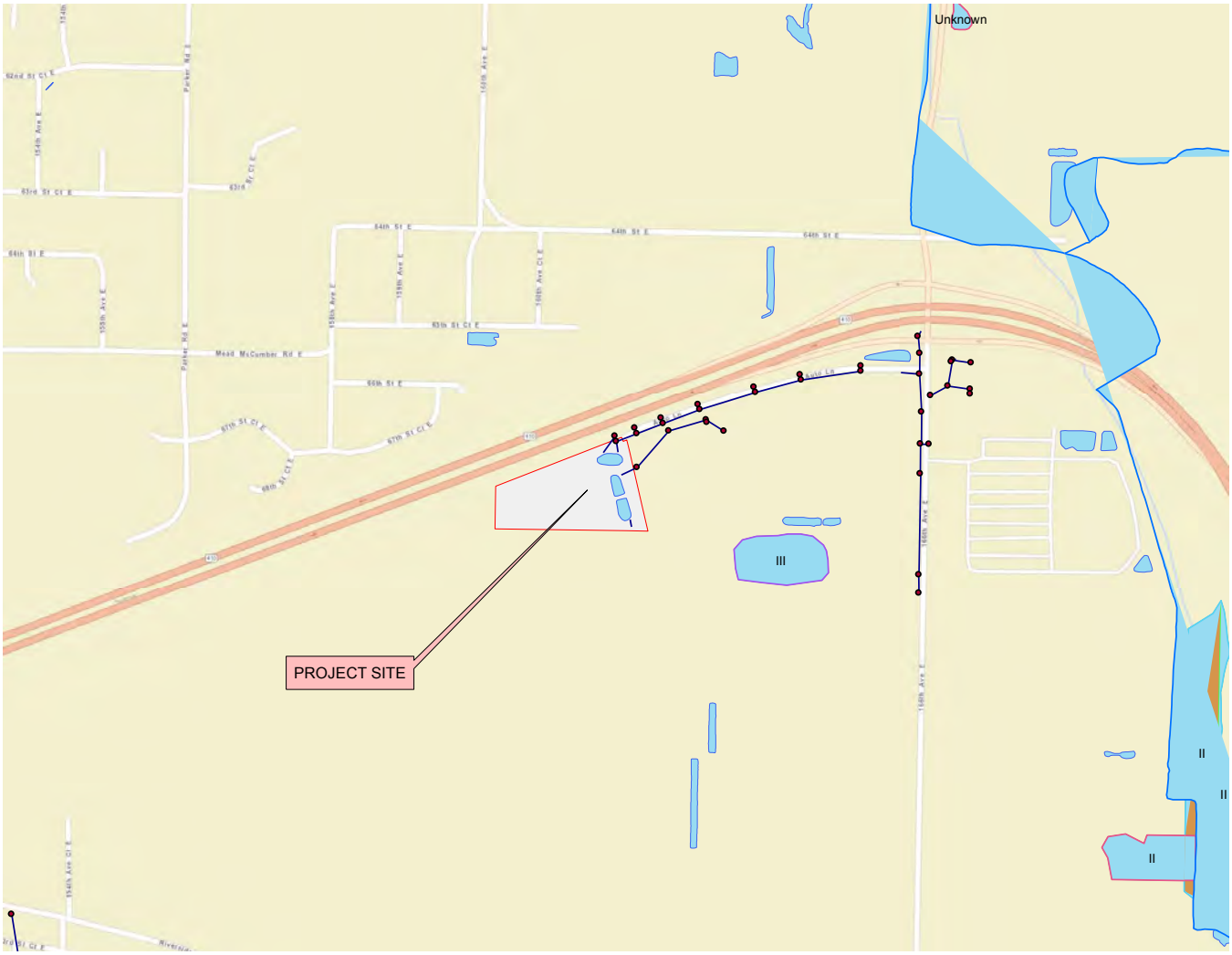


Figure 3. Pierce County wetlands, DNR Hydro, and Storm drain map

NRCS Soil Map

The NRCS soil type map was reviewed as a part of this assessment (Fig. 4). This mapping resource identified soils within the site as Puyallup fine sandy loam. These soils are well drained and not listed as hydric.

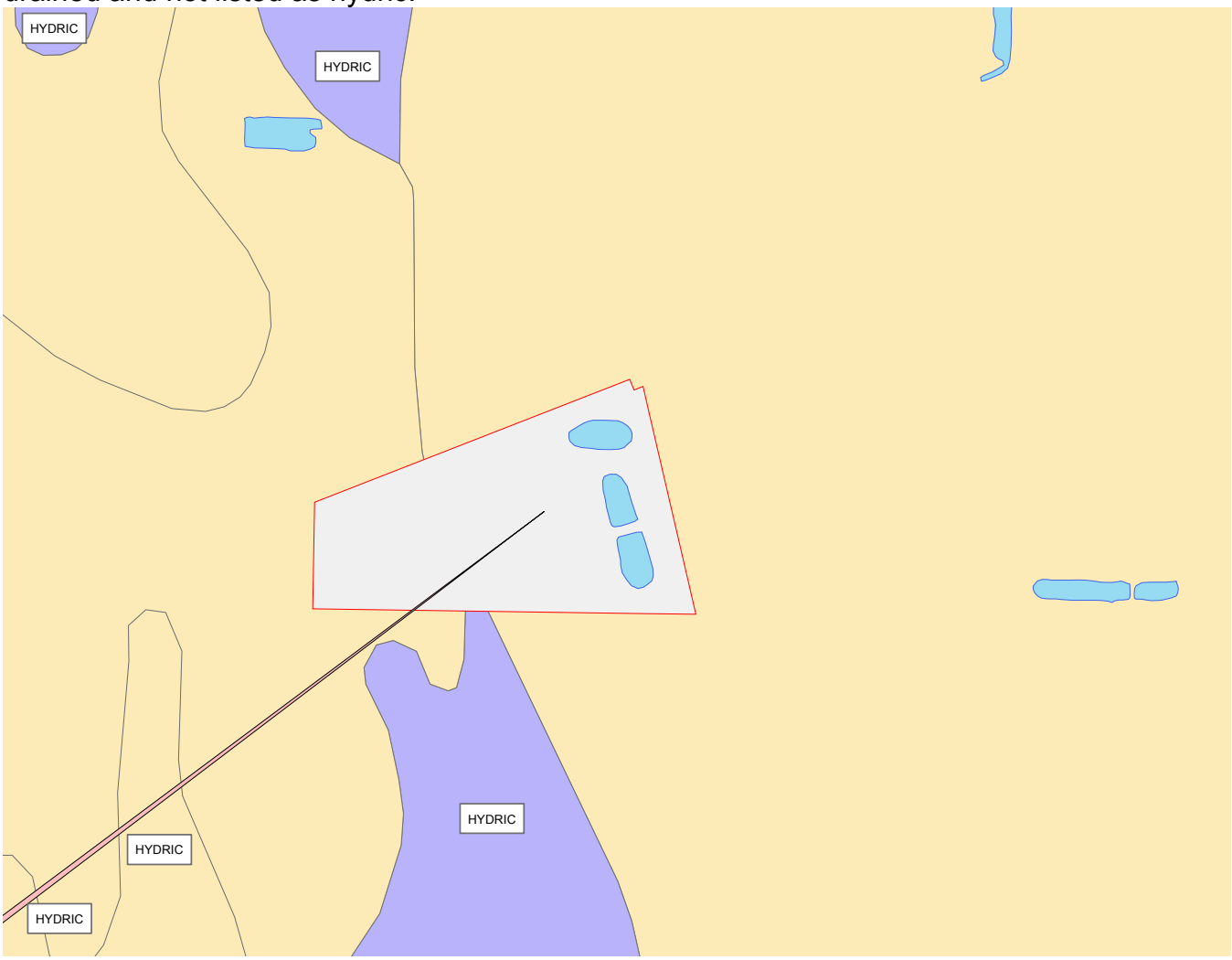


Figure 4. NRCS Hydric Soils Map

Previous Permitting

The storm water detention facility in the east was permitted to accept stormwater from the commercial operation and public road to the east. The area of the detention facility was determined to be in a non-wetland area by City of Sumner. This condition remains the same.

ONSITE EVALUATION

Evaluation Methodologies

Onsite wetland assessment was completed following the methodologies and procedures defined in the CoE Manual, the Wash. Manual, and the WDNR Forest Practice Rules and encompassed the area to 315 feet from the parcel boundaries.

Field Observations

The site is an unmaintained agricultural field showing evidence of previous cultivation. The only structures on the site are a detention complex in the east, and boundary ditches on the south, west, and north.

The site vegetation is indicative of an agricultural field reverting to native vegetation. This plant community was identified as ambivalent to non-hydrophytic in character (i.e. typical of uplands).

As identified at several sample plots throughout the site the soil was a mixed sandy loam (10 YR 3/3 to 4/4) and did not exhibit redoximorphic features. Field indicators of wetland hydrology were also absent.

In the boundary ditches, wetland plants predominate due to hydration supplied by the ditches. The ditches have no discernable connection to downstream wetlands or streams, and apparently terminate at the detention facility. These areas, by virtue of being constructed to convey surface flow from the site, are apparently unregulated by the City of Sumner.
The stormwater detention facility in the east evidences wetland vegetation and hydrology. Since this was constructed to capture surface flow from the development to the east and on-site, and was constructed in upland, this feature appears to be unregulated by Critical Areas regulations.

WETLAND AND STREAM DETERMINATION

Wetland determination was based on sample plots which contained hydrophytic vegetation, hydric soils, and wetland hydrology in accordance with the CoE Manual. Based on these methods no wetland or stream was identified on the site, and no wetland was identified on the adjacent site.

FINDINGS AND CONCLUSIONS

Onsite assessment was completed on May 15, 2016 following the methods and procedures defined within the CoE Manual, and the WDNR Forest Practice Rules. This assessment identified that no area within 315 ft. of the parcel boundaries exhibited all three of the established criteria for designation as “wetland”.

Selected development action: The selected development proposed is the development of the parcel consistent with City of Sumner regulations.

This site development will not encroach on any City of Sumner regulated wetland or buffer.

RECOMMENDATION:

The on-site detention facility is providing function as habitat for wildlife in the area. I recommend that the maintenance of the vegetation be held at the minimum necessary to preserve detention function.

Thank you for allowing H & S Consulting the opportunity to assist with this project. Should you have any questions or require additional assistance please call me at 253 732-6515.

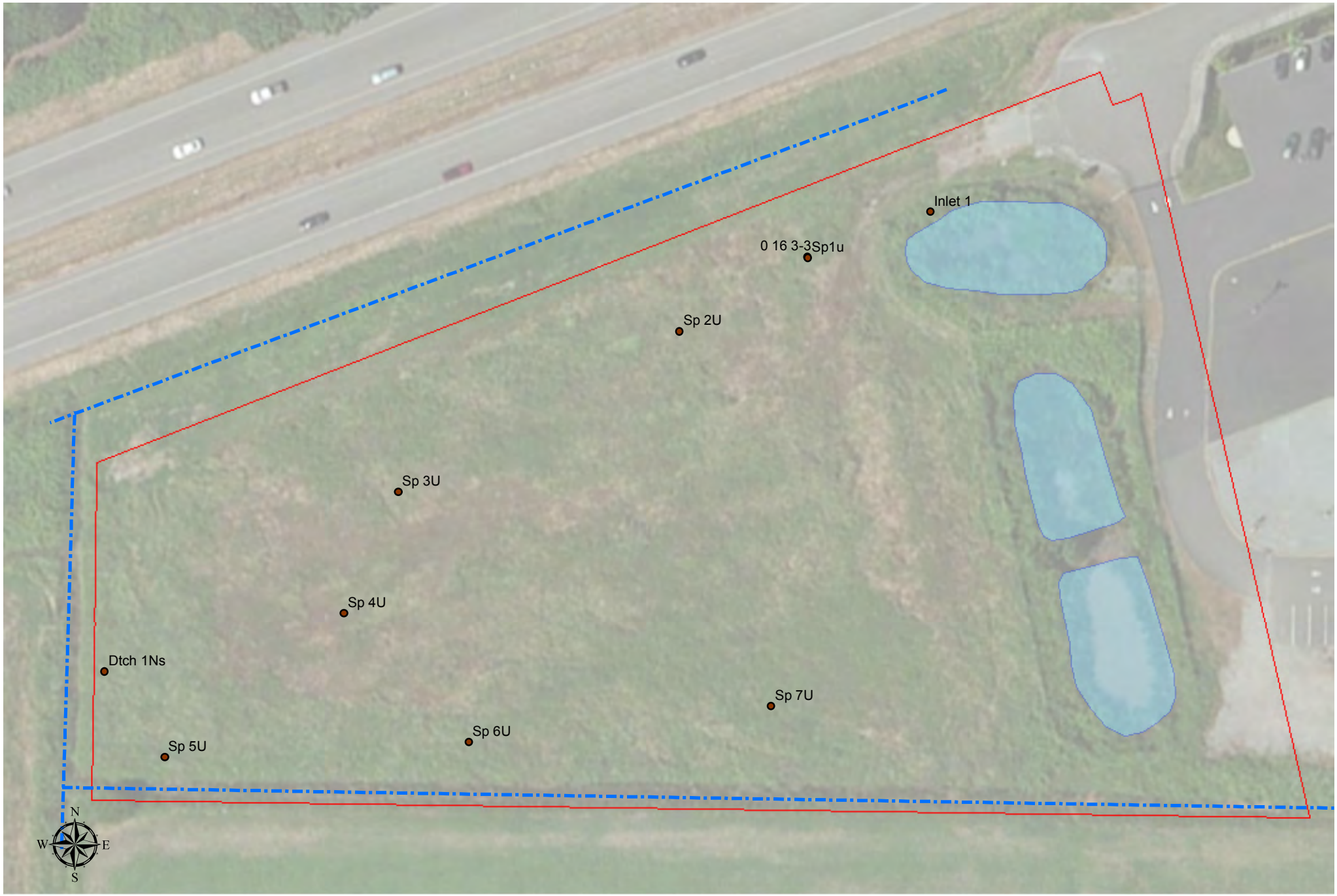
Respectfully Submitted,

Mark Heckert

Mark Heckert

Attachments (1): Att 1 Wetland Analysis Map

ATTACHMENT 1 – WETLAND ANALYSIS MAP



H & S
Consulting
MHeckert@Q.com
253 732 6515
May 20, 2016

1 inch = 70 feet

0 35 70 140 210 Feet

Hebert Site
XXX SR410 HWY E, City of Sumner
Parcel # 0520301039
Wetland Assessment Map
Not from Survey - Locations by Garmin 60Cx GPS

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

Project/Site: Hebert Sumner City/County: Sumner/Pierce Sampling Date: 5/15/16

Applicant/Owner: Hebert Const State: WA Sampling Point: SP 1U

Investigator(s): M. HECKERT Section, Township, Range:

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): level Slope (%): 2%

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: Puyallup Fine sandy loam 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? Yes ☒ No ☐

Are Vegetation X, Soil X, 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: Old Ag field - Ditched & Drained on 3 sides

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10 m)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 10 m)			
1. Equisetum arvense	40	Y	FAC
2. Phalaris arundinacea	20	Y	FACW
3. Holcus lanatus	30	Y	FAC
4. Ipomaea purpurea	10	n	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 20	x 2 = 40
FAC species 70	x 3 = 210
FACU species 00	x 4 = 00
UPL species 10	x 5 = 50
Column Totals: 100 (A)	300 (B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☒ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 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.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks:

SOIL

Sampling Point: SP 1U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10/YR 3/3	100					sandy loam	

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]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: drained ag field

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0

Water Table Present? Yes ☐ No ☒ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 0

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Does not meet WL criteria

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

Project/Site: Hebert Sumner City/County: Sumner/Pierce Sampling Date: 5/15/16

Applicant/Owner: Hebert Const State: WA Sampling Point: SP 2U

Investigator(s): M. HECKERT Section, Township, Range:

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): level Slope (%): 2%

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: Puyallup Fine sandy loam 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? Yes ☒ No ☐

Are Vegetation X, Soil X, 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: Old Ag field - Ditched & Drained on 3 sides

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10 m)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 10 m)			
1. Trifolium pratense	30	Y	FACU
2. Phalaris arundinacea	20	Y	FACW
3. Holcus lanatus	30	Y	FAC
4. Agropyron repens	20	n	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 20	x 2 = 40
FAC species 50	x 3 = 150
FACU species 30	x 4 = 120
UPL species 0	x 5 = 0
Column Totals: 100 (A)	310 (B)

Prevalence Index = B/A = 3.1

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 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.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks:

SOIL

Sampling Point: SP 2U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10/YR 3/3	100					sandy loam	

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]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: drained ag field

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ☐ Salt Crust (B11)
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- ☐ Hydrogen Sulfide Odor (C1)
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- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
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- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0

Water Table Present? Yes ☐ No ☒ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 0

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Does not meet WL criteria

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

Project/Site: Hebert Sumner City/County: Sumner/Pierce Sampling Date: 5/15/16

Applicant/Owner: Hebert Const State: WA Sampling Point: SP 3U

Investigator(s): M. HECKERT Section, Township, Range:

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): level Slope (%): 2%

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: Puyallup Fine sandy loam 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? Yes ☒ No ☐

Are Vegetation X, Soil X, 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: Old Ag field - Ditched & Drained on 3 sides

VEGETATION – Use scientific names of plants.

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5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 20	x 2 = 40
FAC species 70	x 3 = 210
FACU species 00	x 4 = 00
UPL species 10	x 5 = 50
Column Totals: 100 (A)	300 (B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☒ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 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.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: SP 3U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10/YR 3/3	100					sandy loam	

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

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

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- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
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- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]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: drained ag field

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0

Water Table Present? Yes ☐ No ☒ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 0

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Does not meet WL criteria

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

Project/Site: Hebert Sumner City/County: Sumner/Pierce Sampling Date: 5/15/16

Applicant/Owner: Hebert Const State: WA Sampling Point: SP 4U

Investigator(s): M. HECKERT Section, Township, Range:

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): level Slope (%): 2%

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: Puyallup Fine sandy loam 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? Yes ☒ No ☐

Are Vegetation X, Soil X, 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: Old Ag field - Ditched & Drained on 3 sides

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10 m)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 10 m)			
1. Equisetum arvense	40	Y	FAC
2. Phalaris arundinacea	20	Y	FACW
3. Holcus lanatus	30	Y	FAC
4. Ipomaea purpurea	10	n	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 20	x 2 = 40
FAC species 70	x 3 = 210
FACU species 00	x 4 = 00
UPL species 10	x 5 = 50
Column Totals: 100 (A)	300 (B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☒ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 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.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

SOIL

Sampling Point: SP 4U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10/YR 3/3	100					sandy loam	
12-16	10YR 4/4	100					sandy loam	

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]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: drained ag field

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0

Water Table Present? Yes ☐ No ☒ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 0

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Does not meet WL criteria

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

Project/Site: Hebert Sumner City/County: Sumner/Pierce Sampling Date: 5/15/16

Applicant/Owner: Hebert Const State: WA Sampling Point: SP 7U

Investigator(s): M. HECKERT Section, Township, Range:

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): level Slope (%): 2%

Subregion (LRR): Lat: Long: Datum:

Soil Map Unit Name: Puyallup Fine sandy loam 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? Yes ☒ No ☐

Are Vegetation X, Soil X, 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: Old Ag field - Ditched & Drained on 3 sides

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10M)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.			
3.			
4.			
	= Total Cover		
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2.			
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4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 10 m)			
1. Equisetum arvense	40	Y	FAC
2. Phalaris arundinacea	20	Y	FACW
3. Holcus lanatus	30	Y	FAC
4. Ipomaea purpurea	10	n	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 20	x 2 = 40
FAC species 70	x 3 = 210
FACU species 00	x 4 = 00
UPL species 10	x 5 = 50
Column Totals: 100 (A)	300 (B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☒ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 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.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks:

SOIL

Sampling Point: SP 7U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10/YR 3/3	100					sandy loam	

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

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

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]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: drained ag field

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0

Water Table Present? Yes ☐ No ☒ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 0

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: Does not meet WL criteria