



Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance

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**DELINEATION REPORT**  
**FOR**  
**ORCAS ISLAND AIRPORT**

*Wetland Resources, Inc.* Project #12225

Prepared By:

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For:

Port of Orcas  
c/o WH Pacific  
Attn: Flannan Tam  
12100 NE 195<sup>th</sup> St., #300  
Bothell, WA 98011

May 2015

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## INTRODUCTION

The subject project area is on Orcas Island in the jurisdiction of San Juan County within a portions of Section 11 and 14, Township 37N, Range 2W, W.M. The project includes the following tax parcel numbers: 271412010000, 271412009000, 271412013000, 27114202300, and 271131001000. The Airport facility (“Airport Site”) and adjacent mitigation area covers approximately 40 acres and is located at 147 Schoen Lane. The site south of airport (“South Site”) covers almost 12 acres and has no address, but is bordered to the north by Mt. Baker Rd. and to the west by Lover’s Ln., and can be accessed from either road.

Wetland Resources, Inc. (WRI) conducted several site visits, first to evaluate and verify previously delineated wetland boundaries in and around the tarmac of the Airport and proposed mitigation site, and then to conduct a wetland delineation on the property south of the Airport. The site visits were on November 7 and 8, 2012 and June 3, 2014.

Previously delineated wetland boundaries in and around the airport tarmac were readily discernable based on the presence of the wetland delineation flagging, or by measuring from known, surveyed points such as runway lights.

WRI identified four wetlands and three streams on the site. The identified wetlands on the site are labeled as Wetlands A, B, C, and D and the streams are labeled as Streams 1, 2, and 3. The on-site portions of Wetlands B and C are currently functioning as drainage swales. These wetlands function to store and convey much of the runoff from adjacent impervious surfaces.



Local Vicinity Map (source: [www.google.com/maps](http://www.google.com/maps))

Part of the Airport Site gently slopes to the north and the other part slopes to the south. The only noticeable variation in the surface topography is within the wetland swales. Surrounding land use is comprised of: the Airport, related commercial enterprises, single-family, and a small marina. The investigation area is defined by the vegetated areas between and adjacent to the tarmac. Vegetation is dominated with closely cropped grasses, consisting of: velvetgrass, bluegrass, bentgrass, and reed canarygrass with areas of water parsley, soft rush, and hardhack spirea.

The South Site is situated of a gentle south-facing aspect. Surrounding land use is comprised of: the Airport, related commercial enterprises, single-family residences, open space/conservation easement, and retail. Vegetation communities consist of periodically maintained field and forestlands. In the field, the vegetation consists of soft rush (*Juncus effusus*), taper-tip rush (*Juncus acuminatus*), redtop bentgrass (*Agrostis, gigantia*), velvet grass (*Holcus lanatus*), meadow foxtail (*Alopecurus pratensis*), and slough sedge (*Carex obnupta*). In the forested areas, dominant vegetation consists of Douglas fir (*Pseudotsuga menziesii*), black hawthorn (*Crataegus douglasii*), Nookta rose (*Rosa nutkana*), Himalayan blackberry (*Rubus armeniacus*), scot's broom (*Cytisus scoparius*), snowberry (*Symphoricarpos albus*), tall fescue (*Festuca arundinacea*), and field horsetail (*Equicetum arvense*).

The identified wetlands on the Airport Site are labeled as Wetlands A, B, and C. Based on observations, site topography, previous salinity tests and discussions with the WSDOE, Wetlands A, B, and C were historically two hydrogeomorphically distinct units, which WRI has broken into three wetland units for the purpose of this investigation. The northern unit is a tidally influenced peat wetland (Wetland A). The southwestern unit is a groundwater fed slope wetland (Wetland B). The central unit (Wetland C) is a groundwater and impervious surface fed, slope wetland in the median between the tarmac. The boundary between Wetland Units A and B is approximately halfway between wetland flags NEW19 and NEW20. The portions of Wetlands B and C that lie within the airport expansion site are currently functioning as drainage swales. These wetlands function to store and convey much of the runoff from adjacent impervious surfaces. In addition, two ditched streams are located within the boundary of the site. Stream 1 is a drainage ditch within the boundary of Wetland A, while Stream 2 originates off-site to the east and flows along the eastern property line. Please see the attached figures for a detailed location of the mapped wetland and stream units.

The identified wetland on South Site is labeled as Wetland D, which covers most of the pasture and forested areas of the South Site. Prior to development in the East Sound area, the wetland may have extended all the way to Fishing Bay. A ditched channel (Stream 3) through the on-site portion of this wetland appears to have been intentionally created several decades ago to control and convey the hydrology within the wetland for agricultural use. It shall be classified as a stream because it is conveying natural hydrology. The numerous blocks and lack of spawning habitat are indicators that this onsite stream would not be accessible nor suitable habitat for fish. WRI did not find any documented evidence that the stream supports fish habitat.

## REVIEW OF EXISTING INFORMATION

Before conducting on-site investigations, a literature review was performed to identify records of wetlands within the project area. The following information was collected and examined:

- U.S. Geological Survey (USGS) topographic map of (USGS, on-line quadrangle maps)
- National Wetlands Inventory map of project area (online wetlands mapper found at <http://137.227.242.85/wetland/wetland.html>)

- *Web Soils Survey* (USDA, <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>)
- San Juan County Municipal Code, Chapter 18.30
- National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary Indicator by Region and Subregion (USFWS, March 2, 1997)

#### **WETLAND AND STREAM CLASSIFICATIONS – COWARDIN SYSTEM**

According to the Cowardin System, as described in *Classification of Wetlands and Deepwater Habitats of the United States*, the classifications for the on-site wetlands and streams are as follows:

**Wetland A:** Palustrine, Forested/Emergent, Irregularly Flooded

**Wetlands B:** Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

**Wetlands C:** Palustrine, Emergent, Persistent, Seasonally Flooded

**Wetlands D:** Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

**Streams 1, 2 and 3:** Riverine, Lower Perennial, Streambed, Mud

#### **WETLAND AND STREAM CLASSIFICATIONS – DEPARTMENT OF ECOLOGY**

Wetlands were rated according to the most current/revised version of the *Washington State Wetland Rating System for Western Washington: 2014 Update*. (Publication #14-06-029). Streams are classified according to WAC 222-16-030 and 222-16-031.

#### **Wetland A – Category I**

Wetland A was rated as a Riverine because it is a freshwater tidal system. Wetland A receives a total score of 24 points on the DOE Wetland Rating Form (2014), which equates to a Category I classification.

#### **Wetland B – Category III**

Wetland B is a Slope wetland and receives a total score of 18 points on the DOE Wetland Rating Form (2014), which equates to a Category III classification.

#### **Wetland C – Category IV**

Wetland C is a Slope Wetland and receives a total score of 14 points on the DOE Wetland Rating Form (2014), which equates to a Category IV classification.

#### **Wetland D – Category III**

Wetland D is a Depressional and receives a total score of 18 points on the DOE Wetland Rating Form (2014), which equates to a Category III classification.

#### **Streams 1, 2, and 3**

According to WAC 222-16-030 and 222-16-031, Streams 1, 2, and 3 all meet the criteria of Type Np (Type 4) streams. According to SJCC Chapter 18.30.160.E, the streams are dedicated 100-foot high intensity water quality buffers and 50-foot tree protection buffers.

Table 1 below summarizes the on-site wetland classifications using the various classification systems described above:

**Table 1: Wetland Classification Summary**

Wetland	Category (Cowardin)	Hydrogeomorphic Class (HGM)	Category (DOE/SJC)
A	PFOF	Riverine	Category I
B	PFOC	Slope	Category III
C	PEMC	Slope	Category IV
D	PFOC	Depressional	Category III

## WETLAND DETERMINATION REPORT

### Methodology

Wetland Resources’ staff performed the field investigation to verify the previously delineated wetland boundaries using the routine methodology described in the 1987 *Corps of Engineers Wetlands Delineation Manual* and the U.S. Army Corps of Engineers *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (May 2010)*. Wetlands were evaluated on and within 200 feet of the subject property. In general, the wetland boundary verification consisted of two tasks: (1) assessing vegetation, soil, and hydrologic characteristics to identify areas meeting the wetland identification criteria, and (2) recording the observations on field data forms.

The process for making a wetland determination is based on three sequential steps:

- 1) Examination of the site for hydrophytic vegetation (species present and percentage cover).
- 2) If hydrophytic vegetation is found, then the presence of hydric soils is determined.
- 3) Determination of the presence of wetland hydrology in the area examined under the first two steps.

### Vegetation Criteria

The 2010 Regional Supplement defines hydrophytic vegetation as “assemblage of macrophytes that occurs in areas where inundation or soil saturation is either permanent or have sufficient frequency and duration to influence plant occurrence.” Field indicators were used to determine whether the vegetation meets the definition for hydrophytic vegetation.

### Wetland Soils Criteria and Mapped Description

The 2010 Regional Supplement defines hydric soils as “soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.” Field indicators were used to determine whether a given soil meets the definition for hydric soils.

The USDA Natural Resources Conservation Service (NRCS) has mapped the underlying soils associated with this site as Sholander-Spieden complex (0 to 5 percent slope) and Shalcar muck (0 to 2 percent slopes).

Sholander-Spieden complex soil unit is a mix of Scolander and Spieden soils. The Sholander soil formed in valleys, is 40-60 inches thick above the restrictive layers and is somewhat poorly drained. The typical profile of a Sholander soil unit is gravelly loam in the upper 8 inches over gravelly sandy loam and gravelly loamy sand. The Spieden soil formed in drainageways. It is more than 80 inches

thick above a restrictive layer and is poorly drained. The typical profile of a Spieden soil is approximately 4 inches of mucky silt loam over silt loam from approximately 4-11 inches below the surface and gravelly loamy sand below 11 inches.

Shalcar muck soil formed in depressions. It is a deep, very poorly drained soil comprised of highly decomposed plant material over glacial outwash. The upper 22 inches of the Shalcar muck soil unit profile consist of muck. Sublayers consist of fine sandy loam and silt loam. The Shalcar muck soil unit is listed as a hydric soil.

### **Wetland Hydrology Criteria**

Wetland hydrology encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface for a sufficient duration during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and chemically reducing conditions, respectively.

Additionally, areas which are seasonally inundated and/or saturated to the surface for a consecutive number of days  $\geq$  12.5 percent of the growing season are wetlands, provided the soil and vegetation parameters are met. Areas inundated or saturated between five and 12.5 percent of the growing season in most years may or may not be wetlands. Areas saturated to the surface for less than five percent of the growing season are non-wetlands. Field indicators were used to determine whether wetland hydrology parameters were met on this site.

### **BOUNDARY DETERMINATION FINDINGS**

The previously delineated boundaries of Wetlands A, B, and C have been deemed accurate with very minor changes. Boundary differences observed during the WRI investigation were very minor and are likely a result of climactic conditions at the time of investigation. Due to this, no changes are recommended to the surveyed wetland boundary. Wetland D, located in the parcel south of the airport, had not been previously delineated. Therefore, WRI identified and delineated the boundaries of this wetland within the Port property in June 2014. The following describes existing conditions of Wetlands A, B and C November 2012 and Wetland D in June 2014.

### **On-site Wetlands**

#### **Wetland A**

Wetland A is large tidally influenced peat wetland that extends mostly off-site to the west of the airport runway. It contains Shalcar-Muck soils; and although it is considered a peat wetland, it does not contain plant species typical of peat wetlands. The on-site portion of Wetland A contains reed canarygrass (*Phalaris arundinacea*, FacW), slough sedge (*Carex obnupta*, Obl), and annual bluegrass (*Poa annua*, Fac). Off-site, this wetland consists of forested, shrub, and emergent vegetation, including the following: red alder (*Alnus rubra*, Fac), hardhack (*Spiraea douglasii*, FacW), Nootka rose (*Rosa nutkana*, Fac), black hawthorn (*Crataegus douglasii*, Fac), slough sedge (*Carex obnupta*, Obl), Green saltgrass (*Distichlis spicata*), and reed canarygrass (*Phalaris arundinacea*, FacW).

The soils underlying the investigated on-site portion of the wetland are black (10YR 2/1) and very dark gray (10YR 3/1) silt loam with dark yellowish brown (10YR 4/4) redoximorphic features. The soils were saturated to the surface at the time of the site investigation in November 2012.

### **Wetland B**

Wetland B is vegetated with herbaceous species, including the following: common velvet grass (*Holcus lanatus*, Fac), water parsley (*Oenanthe sarmentosa*, Obl), soft rush (*Juncus effusus*, FacW), dagger leaf rush (*Juncus ensifolius*, FacW), taper-tip rush (*Juncus acuminatus*, Obl), golden-eyed grass (*Sisyrinchium californicum*, FacW), and annual bluegrass (*Poa annua*, Fac).

The soils underlying Wetland B are variable, but typically represented by very dark brown (10YR 2/2) organic sandy loam in the upper 4 inches with dark gray (10YR 4/1) loamy sand in the sub-layers to approximately 18 inches below the surface. The soils were moist to saturated at the time of the site visit. Seepage within the upper 12 inches of the surface was identified in most of the soil pits dug in the wetland areas.

### **Wetland C**

Wetland C is vegetated with herbaceous species, including the following: common velvet grass (*Holcus lanatus*, Fac), water parsley (*Oenanthe sarmentosa*, Obl), soft rush (*Juncus effusus*, FacW), dagger leaf (*Juncus ensifolius*, FacW), taper-tip rush (*Juncus acuminatus*, Obl), golden-eyed grass (*Sisyrinchium californicum*, FacW), and annual bluegrass (*Poa annua*, Fac).

The soils underlying Wetland C are dark grayish brown (2.5Y 4/2) sandy loam with dark yellowish brown (10YR 4/6) redox features and a texture of sandy loam. Other soil colors include dark gray (10YR 4/1) with dark yellowish brown (10YR 3/6) loamy sand in the upper 18 inches. The soils were moist to saturated at the time of the site visit. Seepage within the upper 12 inches of the surface was identified in most of the soil pits dug in the wetland areas.

### **Wetland D**

Wetland D contains a periodically maintained grass field as well as a forested component. In the field, the vegetation consists of soft rush (*Juncus effusus*, FacW), taper-tip rush (*Juncus acuminatus*, FacW), redbow bentgrass (*Agrostis, gigantea*, Fac), velvet grass (*Holcus lanatus*, Fac), meadow foxtail (*Alopecurus pratensis*, FacW), and slough sedge (*Carex obnupta*, Obl). In the forested areas, dominant vegetation consists of Red alder (*Alnus rubra*, Fac), black hawthorn (*Crataegus douglasii*, Fac), Nookta rose (*Rosa nutkana*, FacU), Himalayan blackberry (*Rubus armeniacus*, FacU), and slough sedge.

The soils underlying the areas mapped as Wetland D are typically black (10 YR 2/1) to very dark grayish brown (10YR 3/1) with dark brown (10YR 3/3) and dark yellowish brown (10YR 4/4) redoximorphic features. The soil textures found were loam and sandy loam. The soils were moist to saturated in the upper 18 inches.

Generally, positive hydrology indicators for all areas mapped as wetlands on this site included: saturation to the surface (primary indicator), as well as drainage patterns, saturation visible on aerial images, containing a dominance of plant species with indicators of Fac or wetter. Based on the field indicators found on the site, it appears that the areas mapped as wetlands are saturated to the surface for more than 12.5 percent of the growing season, thereby fulfilling wetland hydrology criteria.

### **Non-Wetland Areas**

The non-wetland areas on adjacent to the airport runway are dominated by velvet grass (*Holcus lanatus*, Fac), red clover (*Trifolium pratense*, FacU), annual bluegrass (*Poa annua*, Fac), bentgrass (*Agrostis tenuis*, Fac), orchard grass (*Dactylis glomerata*, FacU), and Common dandelion (*Taraxacum officinale*, FacU).

In the non-wetland areas of the Port property south of the airport runway, dominant vegetation consists of Douglas fir (*Pseudotsuga menziesii*, FacU), black hawthorn (*Crataegus douglasii*, Fac), Nookta rose (*Rosa nutkana*, Fac), Himalayan blackberry (*Rubus armeniacus*, FacU), scot's broom (*Cytisus scoparius*, Upl), snowberry (*Symphoricarpos albus*, FacU), tall fescue (*Festuca arundinacea*, FacU), and field horsetail (*Equisetum arvense*, Fac).

The soils underlying the areas identified as non-wetland areas on the site are variable and generally include Munsell colors of very dark grayish brown (2.5Y 3/2) very dark brown (10YR 2/2), dark grayish brown 10YR 4/2, very dark grayish brown (10YR 3/2), brown 10YR 4/3, dark grayish brown (10YR 2/2), and yellowish brown (10YR 4/4). The soil textures within the non-wetland areas are typically loamy sand, sandy loam, and fine sandy loam.

No significant redoximorphic features, which indicate reducing conditions, were identified in the non-wetland soils. No saturation or any other hydrology indicators were identified within these areas. Based on the lack of field indicators, it appears that areas of the site mapped as non-wetland are not saturated to the surface for more than 12.5 percent of the growing season, thereby not fulfilling wetland hydrology criteria.

## FUNCTIONS AND VALUES ASSESSMENT

### Methodology

The methodology for this functions and values assessment is based on professional opinion developed through past field analyses and interpretations. This assessment pertains specifically to the on-site wetland systems, but is typical for assessments of similar systems common to western Washington.

### Functions and Values Components

Wetlands in western Washington perform a variety of ecosystem functions. Included among the most important functions provided by wetlands are stormwater control, water quality improvement, fish and wildlife habitat, aesthetic value, recreational opportunities, and education. The most commonly assessed functions are Stormwater Storage/Flood flow Attenuation, Water Quality, and Wildlife Habitat. Assessments of these functions for the project site are provided below.

### Existing Conditions

#### *Wetland A*

Wetland A covers more than 20 acres of land and includes forested, shrub, and emergent vegetation classes. The wetland appears to have been significantly altered several decades ago. The stream flowing through Wetland A has been ditched; and vegetation throughout the wetland has been historically cleared and reestablished (based on Google Earth images).

Most of this wetland is tidally influenced and dominated by emergent vegetation. It is comprised of peat soils (Shalcar Muck). Organic soils, such as the Shalcar Muck soil series mapped on this site, function to control flooding and absorb excess pollutants in the surface waters.

The diverse habitat types and special features in and surrounding this wetland affords this wetland a moderately high habitat score. Based on these existing conditions, this wetland is expected to provide valuable habitat for a variety of bird species. Additionally, there is evidence of use by deer, rabbits, and a variety of other small mammals and rodents.

Overall, Wetland A offers moderately high levels of typical wetland functions and values. Due to its altered condition and established invasive species, there appears to be potential to improve the level of functions within this wetland through vegetation enhancement.

#### *Wetland B*

Wetland B is a slope wetland located immediately along the west side of the airport runway. The main body of Wetland B extends off-site to the west into an immature forested vegetation class. The on-site portion of Wetland B consists of maintained (mowed) emergent vegetation. This wetland receives its hydrology from a high groundwater table as well as from surface runoff. The level of habitat within this wetland is moderate, due to the moderate plant diversity and vertical structure within the off-site portions. However the on-site emergent portion of this wetland severely limited levels of habitat function, due to its proximity to airplane traffic. Based on existing conditions, this wetland received moderately low scores for typical wetland scores on the DOE wetland Rating form.

#### *Wetland C*

Wetland C is a slope wetland located in the median between the taxiway and the runway of the airport. It is comprised of maintained emergent vegetation. This wetland receives its hydrology from a high groundwater table as well as from surface runoff from the paved airport runway, although there is little evidence of significant ponding for long periods within this wetland. This wetland is isolated from other diverse habitats by surrounding paved areas. Thus, potential habitat functions are severely limited. Based on existing conditions, this wetland received moderately low scores for typical wetland scores on the DOE wetland Rating form.

#### *Wetland D*

Wetland D was historically part of a larger wetland complex that extends off-site to the south. It is classified as a depressional, forested wetland. Prior to development in the East Sound area, the wetland may have extended all the way to Fishing Bay, located within 1/2 mile south of the site. The wetland contains a ditched channel, which was constructed for agricultural use many decades ago to control and convey the hydrology within the wetland. Wetland D has moderate potential for hydrologic control and water quality improvement functions, as evidenced by its scores for these functions on the DOE wetland rating form. Wetland D receives a low score of 16 points for habitat functions because it contains forested habitat with special habitat features and multiple water regimes.

Based on existing conditions Wetland A offers moderate levels of typical wetland functions and values. Due to its altered condition of the maintained field component of this wetland, there are potential opportunities to enhance this wetland with native vegetation.

### USE OF THIS REPORT

This Critical Area Study and Mitigation Plan is supplied to WH Pacific as a means of determining on-site wetland conditions and protection requirements as part of the permitting process. This report is based largely on readily observable conditions and, to a lesser extent, on readily ascertainable conditions. No attempt has been made to determine hidden or concealed conditions. Reports may be adversely affected due to the physical condition of the site and the difficulty of access that may lead to observation or probing difficulties.

The laws applicable to wetlands are subject to varying interpretations and may be changed at any time by the courts or legislative bodies. This report is intended to provide information deemed relevant in the applicant's attempt to comply with the laws now in effect. The work for this report has conformed to the standard of care employed by wetland ecologists. No other representation or warranty is made concerning the work or this report and any implied representation or warranty is disclaimed.

*Wetland Resources, Inc.*

Andrea Bachman, PWS  
*Senior Ecologist*

Scott Brainard, PWS  
*Principal Wetland Ecologist*

## REFERENCES

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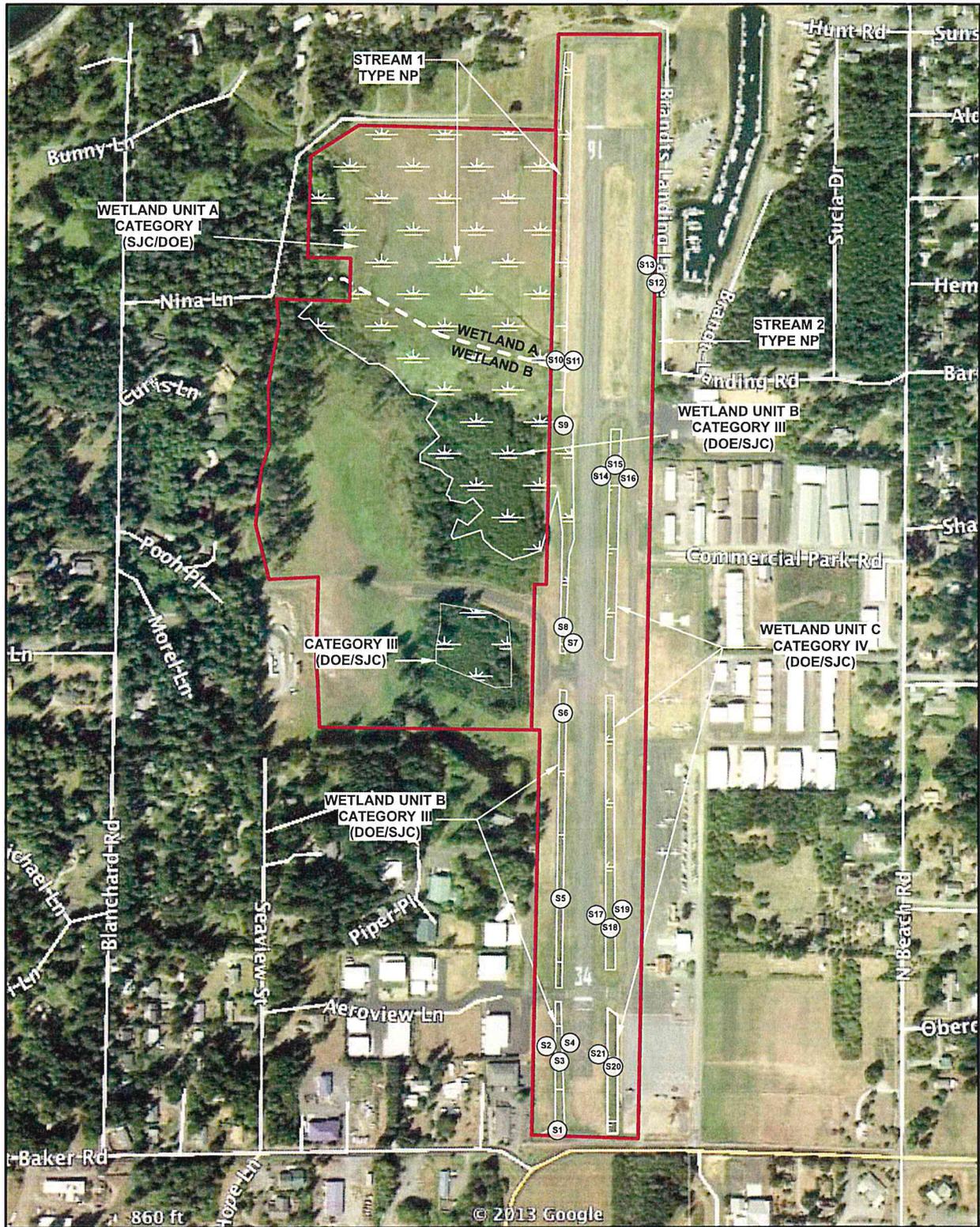
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*Web Soils Survey* (USDA, <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>)

FIGURE 1: DATA SITE LOCATION MAP - AIRPORT SITE  
 ORCAS ISLAND AIRPORT  
 Section 11, Township 37N, Range 2W, W.M.  
 Latitude: 48.706192  
 Longitude: -122.907186



Scale 1" = 500'

LEGEND  
 (S1) — (S21) FIELD DATA SITES 1-21

PURPOSE:  
 Orcas Island Airport Improvements Project:  
 To improve airport facility, operations and to  
 comply with FAA requirements.  
 DATUM: NAVD88

APPLICANT:  
 Port of Orcas  
 c/o WH Pacific  
 Attn: Flannan Tam  
 12100 NE 195th St., #300  
 Bothell, WA 98011

IN: WR1A 2  
 AT: 147 Schoen Ln, Eastsound, WA 98245  
 COUNTY: San Juan  
 STATE: Washington  
 Figure 1  
 DATE: May 2015

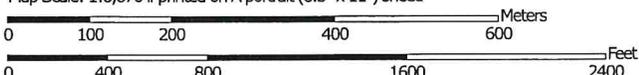
**APPENDIX 1: MAPS**

- FIGURE 1: WETLAND RATING & DATA SITE LOCATION MAP – AIRPORT SITE
- FIGURE 2: WETLAND RATING & DATA SITE LOCATION MAP – SOUTH SITE
- FIGURE 3: NWI MAP
- FIGURE 4: SOIL SURVEY MAP

Soil Map—San Juan County, Washington



Map Scale: 1:8,870 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

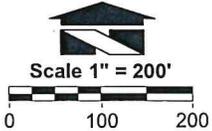
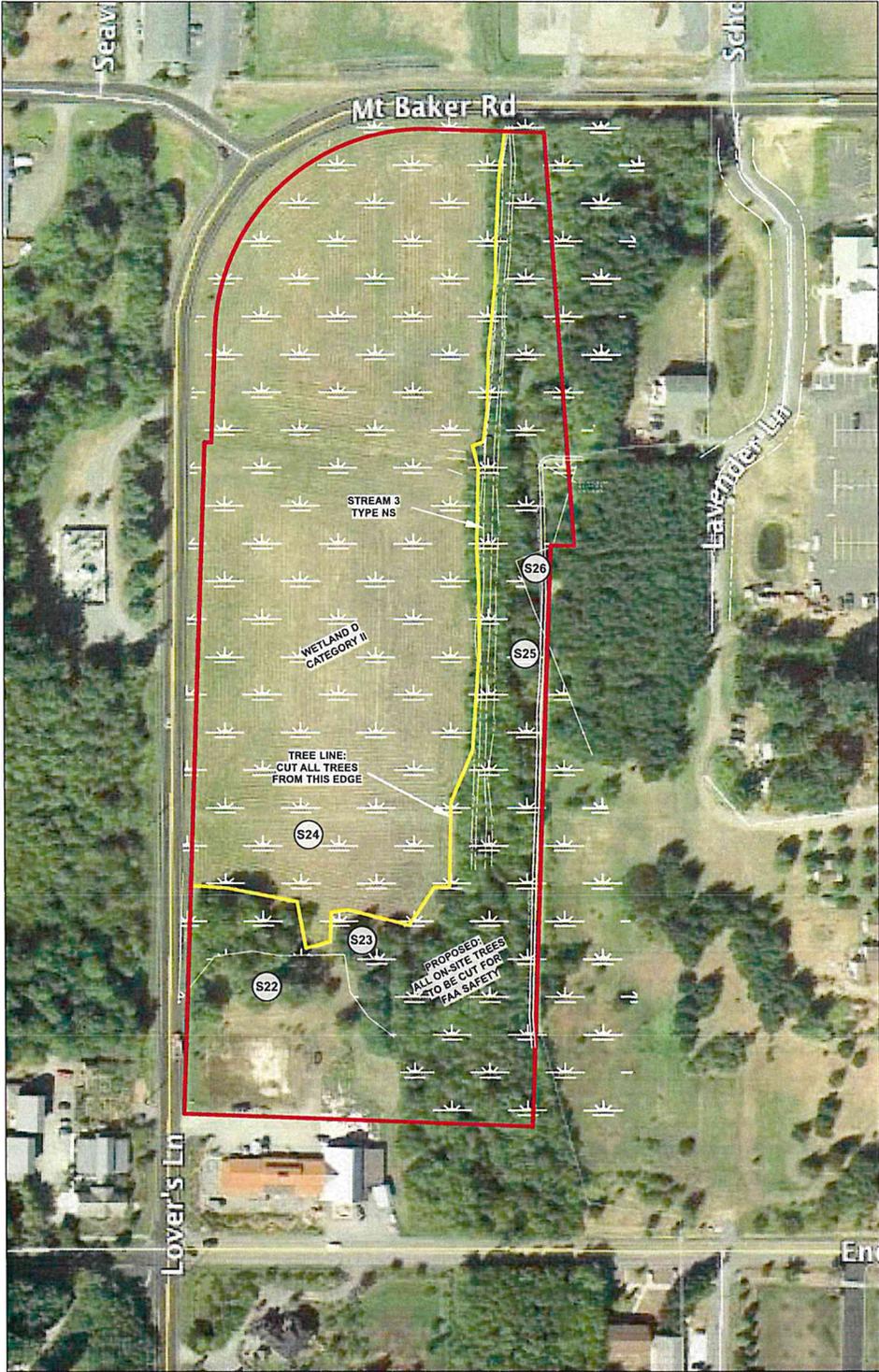


Natural Resources  
Conservation Service

Web Soil Survey  
National Cooperative Soil Survey

11/3/2014  
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FIGURE 2: DATA SITE LOCATION MAP - SOUTH SITE  
 ORCAS ISLAND AIRPORT  
 Section 11, Township 37N, Range 2W, W.M.  
 Latitude: 48.706192  
 Longitude: -122.907186



LEGEND

(S22) — (S26) FIELD DATA SITES 22-26

PURPOSE:  
 Orcas Island Airport Improvements Project:  
 To improve airport facility, operations and to  
 comply with FAA requirements.

DATUM: NAVD88

APPLICANT:  
 Port of Orcas  
 c/o WH Pacific  
 Attn: Flannan Tam  
 12100 NE 195th St., #300  
 Bothell, WA 98011

IN: WRIA 2  
 AT: 147 Schoen Ln, Eastsound, WA 98245

COUNTY: San Juan  
 STATE: Washington  
 Figure 2  
 DATE: May 2015

Soil Map—San Juan County, Washington

**MAP LEGEND**

- |  |  |                       |
|--|--|-----------------------|
| <b>Area of Interest (AOI)</b>  |                       | Spoil Area            |
|  Area of Interest (AOI) |                       | Stony Spot            |
| <b>Soils</b>   |                       | Very Stony Spot       |
|  Soil Map Unit Polygons |                       | Wet Spot              |
|  Soil Map Unit Lines    |                       | Other                 |
|  Soil Map Unit Points   |                       | Special Line Features |
| <b>Special Point Features</b>  | <b>Water Features</b>  |                       |
|  Blowout                | Streams and Canals   |                       |
|  Borrow Pit             | <b>Transportation</b>  |                       |
|  Clay Spot              |  Rails                |                       |
|  Closed Depression      |  Interstate Highways  |                       |
|  Gravel Pit             |  US Routes            |                       |
|  Gravelly Spot         | Major Roads  |                       |
|  Landfill             | Local Roads  |                       |
|  Lava Flow            | <b>Background</b>  |                       |
|  Marsh or swamp       |  Aerial Photography |                       |
|  Mine or Quarry       |  |                       |
|  Miscellaneous Water  |  |                       |
|  Perennial Water      |  |                       |
|  Rock Outcrop         |  |                       |
|  Saline Spot          |  |                       |
|  Sandy Spot           |  |                       |
|  Severely Eroded Spot |  |                       |
|  Sinkhole             |  |                       |
|  Slide or Slip        |  |                       |
|  Sodic Spot           |  |                       |

**MAP INFORMATION**

The soil surveys that comprise your AOI were mapped at 1:12,000. Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Juan County, Washington  
 Survey Area Data: Version 15, Sep 2, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 9, 2010—Aug 28, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

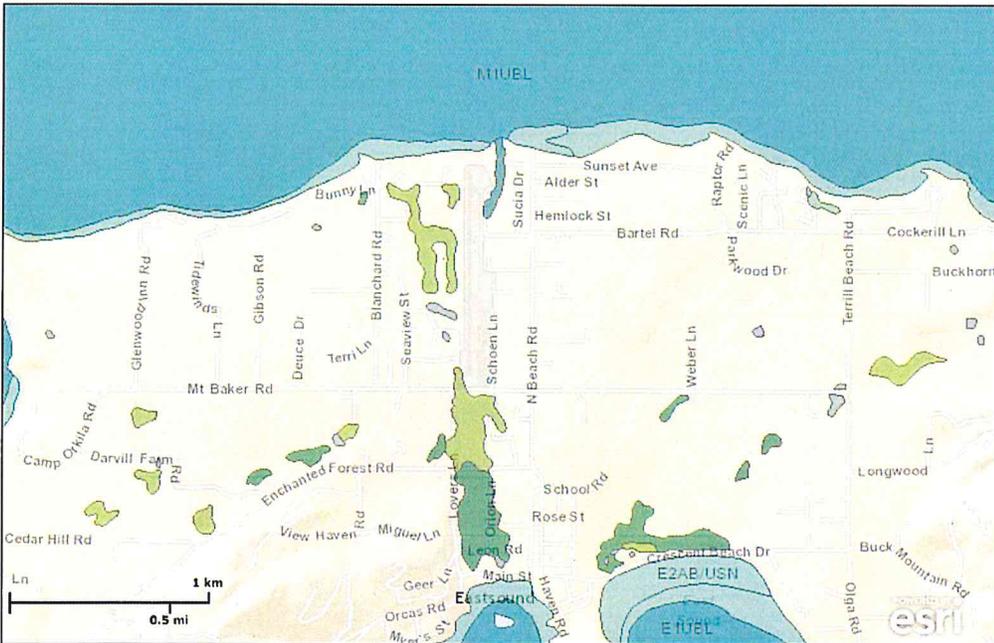
San Juan County, Washington (WA055)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1000	Sholander-Spieden complex, 0 to 5 percent slopes	36.8	50.1%
1005	Shalcar muck, 0 to 2 percent slopes	22.5	30.7%
1010	Deadmanbay-Morancreek complex, 2 to 15 percent slopes	3.0	4.0%
2008	Mitchellbay-Sholander-Bazal complex, 0 to 8 percent slopes	3.5	4.8%
2011	Roche-Killebrew complex, 2 to 10 percent slopes	0.6	0.8%
3013	Everett sandy loam, warm, 3 to 20 percent slopes	7.0	9.5%
<b>Totals for Area of Interest</b>		<b>73.4</b>	<b>100.0%</b>



# U.S. Fish and Wildlife Service National Wetlands Inventory

## NWI Map for Orcas Island Airport

Oct 30, 2014



### Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

**APPENDIX 2: 2014 REVISED DOE WETLAND RATING FORMS AND FIGURES**

Wetland name or number A

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): Dryas Arctica Wetland Date of site visit: 11/8/12  
 Rated by AR/SB Trained by Ecology?  Yes  No Date of training 2010  
 HGM Class used for rating Rivine Wetland has multiple HGM classes?  Yes  No

NOTE: Form is not complete without the figures requested (figures can be combined).  
 Source of base aerial photo/map Google, SJC Polaris

OVERALL WETLAND CATEGORY I (based on functions \_\_\_ or special characteristics \_\_\_)

### 1. Category of wetland based on FUNCTIONS

- Category I – Total score = 23 - 27  
 Category II – Total score = 20 - 22  
 Category III – Total score = 16 - 19  
 Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H (M) L	(H) M L	H (M) L	
Landscape Potential	(H) M L	(H) M L	(H) M L	
Value	H M (L)	H (M) L	(H) M L	TOTAL
Score Based on Ratings	6	8	8	24

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H  
 8 = H,H,M  
 7 = H,H,L  
 7 = H,M,M  
 6 = H,M,L  
 6 = M,M,M  
 5 = H,L,L  
 5 = M,M,L  
 4 = M,L,L  
 3 = L,L,L

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I (II)
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	

Wetland name or number A

## Maps and figures required to answer questions correctly for Western Washington

### Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

### Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	A1
Hydroperiods	H 1.2	B1
Ponded depressions	R 1.1	B1
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	R 2.4	C1
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	A1
Width of unit vs. width of stream ( <i>can be added to another figure</i> )	R 4.1	A1
Map of the contributing basin	R 2.2, R 2.3, R 5.2	E1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C1
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	D
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	D

### Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

### Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of <b>dense</b> trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of <b>dense, rigid</b> trees, shrubs, and herbaceous plants ( <i>can be added to figure above</i> )	S 4.1	
Boundary of 150 ft buffer ( <i>can be added to another figure</i> )	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number A

## HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

NO - go to 2

YES - the wetland class is **Tidal Fringe** - go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

NO - **Saltwater Tidal Fringe (Estuarine)**

YES - **Freshwater Tidal Fringe**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

NO - go to 3

YES - The wetland class is **Flats**

*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?

The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;

At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO - go to 4

YES - The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?

The wetland is on a slope (*slope can be very gradual*),

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,

The water leaves the wetland **without being impounded**.

NO - go to 5

YES - The wetland class is **Slope**

**NOTE:** Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?

The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

The overbank flooding occurs at least once every 2 years.

Wetland name or number A

NO - go to 6

**YES** The wetland class is **Riverine**

**NOTE:** The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

NO - go to 7

**YES** - The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO - go to 8

**YES** - The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide).** Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

**NOTE:** Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine ✓	<b>Riverine</b>
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number A

<b>DEPRESSIONAL AND FLATS WETLANDS</b>	
Water Quality Functions - Indicators that the site functions to improve water quality	
<b>D 1.0. Does the site have the potential to improve water quality?</b>	
<b>D 1.1. Characteristics of surface water outflows from the wetland:</b> Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.	points = 3 points = 2 points = 1 points = 1
<b>D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions).</b> Yes = 4 No = 0	
<b>D 1.3. Characteristics and distribution of persistent plants</b> (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area Wetland has persistent, ungrazed, plants > 1/2 of area Wetland has persistent, ungrazed plants > 1/10 of area Wetland has persistent, ungrazed plants < 1/10 of area	points = 5 points = 3 points = 1 points = 0
<b>D 1.4. Characteristics of seasonal ponding or inundation:</b> <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > 1/2 total area of wetland Area seasonally ponded is > 1/4 total area of wetland Area seasonally ponded is < 1/4 total area of wetland	points = 4 points = 2 points = 0
<b>Total for D 1</b>	Add the points in the boxes above

**Rating of Site Potential** If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the first page

<b>D 2.0. Does the landscape have the potential to support the water quality function of the site?</b>	
<b>D 2.1. Does the wetland unit receive stormwater discharges?</b>	Yes = 1 No = 0
<b>D 2.2. Is &gt; 10% of the area within 150 ft of the wetland in land uses that generate pollutants?</b>	Yes = 1 No = 0
<b>D 2.3. Are there septic systems within 250 ft of the wetland?</b>	Yes = 1 No = 0
<b>D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?</b> Source _____	Yes = 1 No = 0
<b>Total for D 2</b>	Add the points in the boxes above

**Rating of Landscape Potential** If score is: 3 or 4 = H 1 or 2 = M 0 = L Record the rating on the first page

<b>D 3.0. Is the water quality improvement provided by the site valuable to society?</b>	
<b>D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?</b>	Yes = 1 No = 0
<b>D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?</b>	Yes = 1 No = 0
<b>D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?</b>	Yes = 2 No = 0
<b>Total for D 3</b>	Add the points in the boxes above

**Rating of Value** If score is: 2-4 = H 1 = M 0 = L Record the rating on the first page

Wetland name or number A

**DEPRESSIONAL AND FLATS WETLANDS**

**Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation**

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland:

- Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4
- Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2
- Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1
- Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.

- Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7
- Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5
- Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3
- The wetland is a "headwater" wetland points = 3
- Wetland is flat but has small depressions on the surface that trap water points = 1
- Marks of ponding less than 0.5 ft (6 in) points = 0

D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.

- The area of the basin is less than 10 times the area of the unit points = 5
- The area of the basin is 10 to 100 times the area of the unit points = 3
- The area of the basin is more than 100 times the area of the unit points = 0
- Entire wetland is in the Flats class points = 5

Total for D 4

Add the points in the boxes above

Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L

Record the rating on the first page

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges?

Yes = 1 No = 0

D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?

Yes = 1 No = 0

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?

Yes = 1 No = 0

Total for D 5

Add the points in the boxes above

Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L

Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):

- Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2
- Surface flooding problems are in a sub-basin farther down-gradient. points = 1
- Flooding from groundwater is an issue in the sub-basin. points = 1

The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why \_\_\_\_\_ points = 0

There are no problems with flooding downstream of the wetland. points = 0

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?

Yes = 2 No = 0

Total for D 6

Add the points in the boxes above

Rating of Value If score is: 2-4 = H 1 = M 0 = L

Record the rating on the first page

Wetland name or number A

**RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS**

**Water Quality Functions - Indicators that the site functions to improve water quality**

R 1.0. Does the site have the potential to improve water quality?		
R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event:		
Depressions cover $> \frac{3}{4}$ area of wetland	points = 8	
Depressions cover $> \frac{1}{2}$ area of wetland	points = 4	
Depressions present but cover $< \frac{1}{2}$ area of wetland	points = 2	2
No depressions present	points = 0	
R 1.2. Structure of plants in the wetland (areas with $> 90\%$ cover at person height, not Cowardin classes)		
Trees or shrubs $> \frac{2}{3}$ area of the wetland	points = 8	
Trees or shrubs $> \frac{1}{3}$ area of the wetland	points = 6	6
Herbaceous plants ( $> 6$ in high) $> \frac{2}{3}$ area of the wetland	points = 6	
Herbaceous plants ( $> 6$ in high) $> \frac{1}{3}$ area of the wetland	points = 3	
Trees, shrubs, and ungrazed herbaceous $< \frac{1}{3}$ area of the wetland	points = 0	
Total for R 1	Add the points in the boxes above	8

Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the first page

R 2.0. Does the landscape have the potential to support the water quality function of the site?		
R 2.1. Is the wetland within an incorporated city or within its UGA?	Yes = 2 No = 0	2
R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area?	Yes = 1 No = 0	1
R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years?	Yes = 1 No = 0	0
R 2.4. Is $> 10\%$ of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4. Other sources _____	Yes = 1 No = 0	0
Total for R 2	Add the points in the boxes above	4

Rating of Landscape Potential If score is: 3-6 = H 1 or 2 = M 0 = L Record the rating on the first page

R 3.0. Is the water quality improvement provided by the site valuable to society?		
R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?	Yes = 1 No = 0	0
R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?	Yes = 1 No = 0	0
R 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (answer YES if there is a TMDL for the drainage in which the unit is found)	Yes = 2 No = 0	0
Total for R 3	Add the points in the boxes above	0

Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the first page

MHL

Wetland name or number A

<b>RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS</b>		
<b>Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosion</b>		
<b>R 4.0. Does the site have the potential to reduce flooding and erosion?</b>		
<b>R 4.1. Characteristics of the overbank storage the wetland provides:</b> <i>Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average width of stream between banks).</i> If the ratio is more than 20 If the ratio is 10-20 If the ratio is 5-<10 If the ratio is 1-<5 If the ratio is < 1	points = 9 points = 6 points = 4 points = 2 points = 1	9
<b>R 4.2. Characteristics of plants that slow down water velocities during floods: <i>Treat large woody debris as forest or shrub. Choose the points appropriate for the best description (polygons need to have &gt;90% cover at person height. These are NOT Cowardin classes).</i></b> Forest or shrub for >1/3 area OR emergent plants > 2/3 area Forest or shrub for > 1/10 area OR emergent plants > 1/3 area Plants do not meet above criteria	points = 7 points = 4 points = 0	7
<b>Total for R 4</b>	<b>Add the points in the boxes above</b>	<b>16</b>

**Rating of Site Potential** If score is:  12-16 = H     6-11 = M     0-5 = L                      *Record the rating on the first page*

<b>R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?</b>		
<b>R 5.1. Is the stream or river adjacent to the wetland downcut?</b>	Yes = 0 (No = 1)	1
<b>R 5.2. Does the up-gradient watershed include a UGA or incorporated area?</b>	Yes = 1 No = 0	1
<b>R 5.3. Is the up-gradient stream or river controlled by dams?</b>	Yes = 0 (No = 1)	1
<b>Total for R 5</b>	<b>Add the points in the boxes above</b>	<b>3</b>

**Rating of Landscape Potential** If score is:  3 = H     1 or 2 = M     0 = L                      *Record the rating on the first page*

<b>R 6.0. Are the hydrologic functions provided by the site valuable to society?</b>		
<b>R 6.1. Distance to the nearest areas downstream that have flooding problems?</b> <i>Choose the description that best fits the site.</i> The sub-basin immediately down-gradient of the wetland has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream	points = 2 points = 1 points = 0	1
<b>R 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</b>	Yes = 1 No = 0	0
<b>Total for R 6</b>	<b>Add the points in the boxes above</b>	<b>1</b>

**Rating of Value** If score is:  2-4 = H     1 = M     0 = L                      *Record the rating on the first page*

H H M

Wetland name or number A

<b>LAKE FRINGE WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
<b>L 1.0. Does the site have the potential to improve water quality?</b>	
<b>L 1.1. Average width of plants along the lakeshore (use polygons of Cowardin classes):</b>	
Plants are more than 33 ft (10 m) wide	points = 6
Plants are more than 16 ft (5 m) wide and <33 ft	points = 3
Plants are more than 6 ft (2 m) wide and <16 ft	points = 1
Plants are less than 6 ft wide	points = 0
<b>L 1.2. Characteristics of the plants in the wetland: Choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. These are not Cowardin classes. Area of cover is total cover in the unit, but it can be in patches. Herbaceous does not include aquatic bed.</b>	
Cover of herbaceous plants is >90% of the vegetated area	points = 6
Cover of herbaceous plants is > <sup>2</sup> / <sub>3</sub> of the vegetated area	points = 4
Cover of herbaceous plants is > <sup>1</sup> / <sub>3</sub> of the vegetated area	points = 3
Other plants that are not aquatic bed > <sup>2</sup> / <sub>3</sub> unit	points = 3
Other plants that are not aquatic bed in > <sup>1</sup> / <sub>3</sub> vegetated area	points = 1
Aquatic bed plants and open water cover > <sup>2</sup> / <sub>3</sub> of the unit	points = 0
<b>Total for L 1</b>	<b>Add the points in the boxes above</b>

**Rating of Site Potential** If score is: 8-12 = H 4-7 = M 0-3 = L *Record the rating on the first page*

<b>L 2.0. Does the landscape have the potential to support the water quality function of the site?</b>	
<b>L 2.1. Is the lake used by power boats?</b>	Yes = 1 No = 0
<b>L 2.2. Is &gt; 10% of the area within 150 ft of wetland unit on the upland side in land uses that generate pollutants?</b>	Yes = 1 No = 0
<b>L 2.3. Does the lake have problems with algal blooms or excessive plant growth such as milfoil?</b>	Yes = 1 No = 0
<b>Total for L 2</b>	<b>Add the points in the boxes above</b>

**Rating of Landscape Potential:** If score is: 2 or 3 = H 1 = M 0 = L *Record the rating on the first page*

<b>L 3.0. Is the water quality improvement provided by the site valuable to society?</b>	
<b>L 3.1. Is the lake on the 303(d) list of degraded aquatic resources?</b>	Yes = 1 No = 0
<b>L 3.2. Is the lake in a sub-basin where water quality is an issue (at least one aquatic resource in the basin is on the 303(d) list)?</b>	Yes = 1 No = 0
<b>L 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the lake or basin in which the unit is found.</b>	Yes = 2 No = 0
<b>Total for L 3</b>	<b>Add the points in the boxes above</b>

**Rating of Value** If score is: 2-4 = H 1 = M 0 = L *Record the rating on the first page*

Wetland name or number 4

<b>LAKE FRINGE WETLANDS</b>	
<b>Hydrologic Functions - Indicators that the wetland unit functions to reduce shoreline erosion</b>	
L 4.0. Does the site have the potential to reduce shoreline erosion?	
L 4.1. Distance along shore and average width of Cowardin classes along the lakeshore ( <b>do not</b> include Aquatic bed): <i>Choose the highest scoring description that matches conditions in the wetland.</i>	
> ¼ of distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 6
> ¼ of distance is Scrub-shrub or Forested at least 6 ft (2 m) wide	points = 4
> ¼ distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 4
Plants are at least 6 ft (2 m) wide (any type except Aquatic bed)	points = 2
Plants are less than 6 ft (2 m) wide (any type except Aquatic bed)	points = 0

Rating of Site Potential: If score is:     6 = M     0-5 = L

*Record the rating on the first page*

L 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
L 5.1. Is the lake used by power boats with more than 10 hp?	Yes = 1 No = 0
L 5.2. Is the fetch on the lake side of the unit at least 1 mile in distance?	Yes = 1 No = 0
Total for L 5	Add the points in the boxes above

Rating of Landscape Potential If score is:     2 = H     1 = M     0 = L

*Record the rating on the first page*

L 6.0. Are the hydrologic functions provided by the site valuable to society?	
L 6.1. Are there resources along the shore that can be impacted by erosion? If more than one resource is present, choose the one with the highest score.	
There are human structures or old growth/mature forests within 25 ft of OHWM of the shore in the unit	points = 2
There are nature trails or other paths and recreational activities within 25 ft of OHWM	points = 1
Other resources that could be impacted by erosion	points = 1
There are no resources that can be impacted by erosion along the shores of the unit	points = 0

Rating of Value: If score is:     2 = H     1 = M     0 = L

*Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number A

<b>SLOPE WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: ( <i>a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance</i> )	
Slope is 1% or less	points = 3
Slope is > 1%-2%	points = 2
Slope is > 2%-5%	points = 1
Slope is greater than 5%	points = 0
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic ( <i>use NRCS definitions</i> ): Yes = 3 No = 0	
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. <i>Dense means you have trouble seeing the soil surface (&gt;75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i>	
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6
Dense, uncut, herbaceous plants > ½ of area	points = 3
Dense, woody, plants > ½ of area	points = 2
Dense, uncut, herbaceous plants > ¼ of area	points = 1
Does not meet any of the criteria above for plants	points = 0
Total for S 1	Add the points in the boxes above

**Rating of Site Potential** If score is: 12 = H 6-11 = M 0-5 = L *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	Yes = 1 No = 0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources _____	Yes = 1 No = 0
Total for S 2	Add the points in the boxes above

**Rating of Landscape Potential** If score is: 1-2 = M 0 = L *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i>	Yes = 1 No = 0
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i>	Yes = 2 No = 0
Total for S 3	Add the points in the boxes above

**Rating of Value** If score is: 2-4 = H 1 = M 0 = L *Record the rating on the first page*

Wetland name or number A

<b>SLOPE WETLANDS</b>	
<b>Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion</b>	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually &gt; 1/8 in), or dense enough, to remain erect during surface flows.</i>	
Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1
All other conditions	points = 0

Rating of Site Potential If score is:    1 = M    0 = L

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?	
	Yes = 1 No = 0

Rating of Landscape Potential If score is:    1 = M    0 = L

Record the rating on the first page

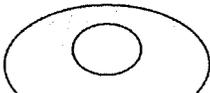
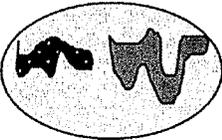
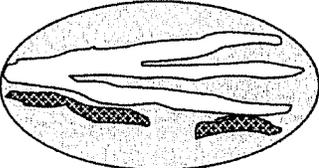
S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds)	points = 2
Surface flooding problems are in a sub-basin farther down-gradient	points = 1
No flooding problems anywhere downstream	points = 0
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	
	Yes = 2 No = 0
Total for S 6	Add the points in the boxes above

Rating of Value If score is:    2-4 = H    1 = M    0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

Wetland name or number A

These questions apply to wetlands of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
<p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i></p> <p><input type="checkbox"/> Aquatic bed <span style="float: right;">4 structures or more: points = 4</span></p> <p><input checked="" type="checkbox"/> Emergent <span style="float: right;">3 structures: points = <u>2</u></span></p> <p><input type="checkbox"/> Scrub-shrub (areas where shrubs have &gt; 30% cover) <span style="float: right;">2 structures: points = 1</span></p> <p><input checked="" type="checkbox"/> Forested (areas where trees have &gt; 30% cover) <span style="float: right;">1 structure: points = 0</span></p> <p><i>If the unit has a Forested class, check if:</i></p> <p><input checked="" type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon</p>	2
<p>H 1.2. Hydroperiods</p> <p>Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).</p> <p><input type="checkbox"/> Permanently flooded or inundated <span style="float: right;">4 or more types present: points = 3</span></p> <p><input type="checkbox"/> Seasonally flooded or inundated <span style="float: right;">3 types present: points = 2</span></p> <p><input type="checkbox"/> Occasionally flooded or inundated <span style="float: right;">2 types present: points = 1</span></p> <p><input type="checkbox"/> Saturated only <span style="float: right;">1 type present: points = 0</span></p> <p><input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland</p> <p><input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland</p> <p><input type="checkbox"/> Lake Fringe wetland <span style="float: right;">2 points</span></p> <p><input checked="" type="checkbox"/> Freshwater tidal wetland <span style="float: right;">2 points</span></p>	2
<p>H 1.3. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. <i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i></p> <p>If you counted: &gt; 19 species <span style="float: right;">points = 2</span></p> <p>5 - 19 species <span style="float: right;">points = <u>1</u></span></p> <p>&lt; 5 species <span style="float: right;">points = 0</span></p>	1
<p>H 1.4. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersions among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p>All three diagrams in this row are <b>HIGH</b> = 3 points</p>	1

Wetland name or number A

<p>H 1.5. Special habitat features:          Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (&gt; 4 in diameter and 6 ft long).</p> <p><input checked="" type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt; 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input checked="" type="checkbox"/> At least 1/4 ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>	3
<p>Total for H 1</p>	7

Rating of Site Potential If score is: 15-18 = H  7-14 = M  0-6 = L Record the rating on the first page

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>	
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p>Calculate: % undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>18</u> = <u>18</u> %</p> <p>If total accessible habitat is:</p> <p>&gt; 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = <u>1</u></p> <p>&lt; 10% of 1 km Polygon points = 0</p>	1
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat <u>51</u> + [(% moderate and low intensity land uses)/2] <u>18</u> = <u>69</u> %</p> <p>Undisturbed habitat &gt; 50% of Polygon points = <u>3</u></p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and &gt; 3 patches points = 1</p> <p>Undisturbed habitat &lt; 10% of 1 km Polygon points = 0</p>	3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>&gt; 50% of 1 km Polygon is high intensity land use points = (-2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = <u>0</u></p>	0
<p>Total for H 2</p>	4

Rating of Landscape Potential If score is:  4-6 = H  1-3 = M  < 1 = L Record the rating on the first page

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>	
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria: points = <u>2</u></p> <p><input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</p> <p><input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input checked="" type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan</p> <p>Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1</p> <p>Site does not meet any of the criteria above points = 0</p>	2

Rating of Value If score is:  2 = H  1 = M  0 = L Record the rating on the first page

MHH

Wetland name or number   A  

## WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE: This question is independent of the land use between the wetland unit and the priority habitat.**

- **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- ✓ **Old-growth/Mature forests:** **Old-growth west of Cascade crest** – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. **Mature forests** – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- ✓ **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- ✓ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- ✓ **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- ✓ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

**Note:** All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

Wetland name or number A

**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

Wetland Type	Category
<p><i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i></p> <p><b>SC 1.0. Estuarine wetlands</b></p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <p><input checked="" type="checkbox"/> The dominant water regime is tidal,</p> <p><input checked="" type="checkbox"/> Vegetated, and</p> <p><input checked="" type="checkbox"/> With a salinity greater than 0.5 ppt</p> <p style="text-align: right;">Yes - Go to SC 1.1    No = Not an estuarine wetland</p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?</p> <p style="text-align: right;">Yes = Category I    <input checked="" type="checkbox"/> No - Go to SC 1.2</p>	Cat. I
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</p> <ul style="list-style-type: none"> <li>— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25)</li> <li>— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.</li> <li>— The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</li> </ul> <p style="text-align: right;">Yes = Category I    <input checked="" type="checkbox"/> No = Category II</p>	<p>Cat. I</p> <p style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">Cat. II</p>
<p><b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b></p> <p>SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value?    Yes - Go to SC 2.2    No - Go to SC 2.3</p> <p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value?    Yes = Category I    No = Not a WHCV</p> <p>SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland?  <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a>          Yes - Contact WNHP/WDNR and go to SC 2.4    No = Not a WHCV</p> <p>SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website?    Yes = Category I    No = Not a WHCV</p>	Cat. I
<p><b>SC 3.0. Bogs</b></p> <p>Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i></p> <p>SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?    Yes - Go to SC 3.3    No - Go to SC 3.2</p> <p>SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?    Yes - Go to SC 3.3    No = Is not a bog</p> <p>SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?    Yes = Is a Category I bog    No - Go to SC 3.4</p> <p><b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.</p> <p>SC 3.4. Is an area with peats or mucks forested (&gt; 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?    Yes = Is a Category I bog    No = Is not a bog</p>	Cat. I





Wetland name or number \_\_\_\_\_

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Wetland name or number B

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): Ducas Airport - Wetland B Date of site visit: 11/8/12  
 Rated by AB/SE Trained by Ecology? Yes \_\_\_ No \_\_\_ Date of training 2010  
 HGM Class used for rating Slope Wetland has multiple HGM classes? \_\_\_ Y  N

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map Google

OVERALL WETLAND CATEGORY III (based on functions \_\_\_ or special characteristics \_\_\_)

### 1. Category of wetland based on FUNCTIONS

- \_\_\_ Category I – Total score = 23 - 27  
 \_\_\_ Category II – Total score = 20 - 22  
 Category III – Total score = 16 - 19  
 \_\_\_ Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H (M) L	H M (L)	H (M) L	
Landscape Potential	H (M) L	H (M) L	(H) M L	
Value	(H) M L	H M (L)	H (M) L	TOTAL
Score Based on Ratings	7	4	7	18

Score for each function based on three ratings (order of ratings is not important)

- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 7 = H,M,M
- 6 = H,M,L
- 6 = M,M,M
- 5 = H,L,L
- 5 = M,M,L
- 4 = M,L,L
- 3 = L,L,L

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	

Wetland name or number B

## Maps and figures required to answer questions correctly for Western Washington

### Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

### Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream ( <i>can be added to another figure</i> )	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

### Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

### Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	A1
Hydroperiods	H 1.2	B1
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	A1
Plant cover of dense, rigid trees, shrubs, and herbaceous plants ( <i>can be added to figure above</i> )	S 4.1	A1
Boundary of 150 ft buffer ( <i>can be added to another figure</i> )	S 2.1, S 5.1	C1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C1
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	D
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	D

Wetland name or number B

NO – go to 6

YES – The wetland class is **Riverine**

**NOTE:** The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

NO – go to 7

YES – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8

YES – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT** (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

**NOTE:** Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number B

## HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

NO go to 2

YES - the wetland class is **Tidal Fringe** - go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

NO - **Saltwater Tidal Fringe (Estuarine)**

YES - **Freshwater Tidal Fringe**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

NO go to 3

YES - The wetland class is **Flats**

*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?

The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;

At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO go to 4

YES - The wetland class is **Lake Fringe (Lacustrine Fringe)**

4. Does the entire wetland unit **meet all** of the following criteria?

The wetland is on a slope (*slope can be very gradual*),

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,

The water leaves the wetland **without being impounded**.

NO - go to 5

YES - The wetland class is **Slope**

**NOTE:** Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?

The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

The overbank flooding occurs at least once every 2 years.

Wetland name or number B

<b>DEPRESSIONAL AND FLATS WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
<b>D 1.0. Does the site have the potential to improve water quality?</b>	
<b>D 1.1. Characteristics of surface water outflows from the wetland:</b>	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet).	points = 3
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	points = 2
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 1
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.	points = 1
<b>D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0</b>	
<b>D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):</b>	
Wetland has persistent, ungrazed, plants > 95% of area	points = 5
Wetland has persistent, ungrazed, plants > ½ of area	points = 3
Wetland has persistent, ungrazed plants > 1/10 of area	points = 1
Wetland has persistent, ungrazed plants < 1/10 of area	points = 0
<b>D 1.4. Characteristics of seasonal ponding or inundation:</b>	
<i>This is the area that is ponded for at least 2 months. See description in manual.</i>	
Area seasonally ponded is > ½ total area of wetland	points = 4
Area seasonally ponded is > ¼ total area of wetland	points = 2
Area seasonally ponded is < ¼ total area of wetland	points = 0
<b>Total for D 1</b>	<b>Add the points in the boxes above</b>

**Rating of Site Potential** If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the first page

<b>D 2.0. Does the landscape have the potential to support the water quality function of the site?</b>	
<b>D 2.1. Does the wetland unit receive stormwater discharges?</b>	Yes = 1 No = 0
<b>D 2.2. Is &gt; 10% of the area within 150 ft of the wetland in land uses that generate pollutants?</b>	Yes = 1 No = 0
<b>D 2.3. Are there septic systems within 250 ft of the wetland?</b>	Yes = 1 No = 0
<b>D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?</b>	Yes = 1 No = 0
Source _____	
<b>Total for D 2</b>	<b>Add the points in the boxes above</b>

**Rating of Landscape Potential** If score is: 3 or 4 = H 1 or 2 = M 0 = L Record the rating on the first page

<b>D 3.0. Is the water quality improvement provided by the site valuable to society?</b>	
<b>D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?</b>	Yes = 1 No = 0
<b>D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?</b>	Yes = 1 No = 0
<b>D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?</b>	Yes = 2 No = 0
<b>Total for D 3</b>	<b>Add the points in the boxes above</b>

**Rating of Value** If score is: 2-4 = H 1 = M 0 = L Record the rating on the first page

Wetland name or number B

**DEPRESSIONAL AND FLATS WETLANDS**

**Hydrologic Functions** - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland:

- Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4
- Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2
- Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1
- Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.

- Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7
- Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5
- Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3
- The wetland is a "headwater" wetland points = 3
- Wetland is flat but has small depressions on the surface that trap water points = 1
- Marks of ponding less than 0.5 ft (6 in) points = 0

D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.

- The area of the basin is less than 10 times the area of the unit points = 5
- The area of the basin is 10 to 100 times the area of the unit points = 3
- The area of the basin is more than 100 times the area of the unit points = 0
- Entire wetland is in the Flats class points = 5

Total for D 4

Add the points in the boxes above

Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L

Record the rating on the first page

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0

D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0

Total for D 5

Add the points in the boxes above

Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L

Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):

- Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2
- Surface flooding problems are in a sub-basin farther down-gradient. points = 1

Flooding from groundwater is an issue in the sub-basin. points = 1

The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why \_\_\_\_\_ points = 0

There are no problems with flooding downstream of the wetland. points = 0

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?

Yes = 2 No = 0

Total for D 6

Add the points in the boxes above

Rating of Value If score is: 2-4 = H 1 = M 0 = L

Record the rating on the first page

Wetland name or number B

<b>RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
<b>R 1.0. Does the site have the potential to improve water quality?</b>	
<b>R 1.1. Area of surface depressions within the Riverline wetland that can trap sediments during a flooding event:</b>	
Depressions cover $> \frac{3}{4}$ area of wetland	points = 8
Depressions cover $> \frac{1}{2}$ area of wetland	points = 4
Depressions present but cover $< \frac{1}{2}$ area of wetland	points = 2
No depressions present	points = 0
<b>R 1.2. Structure of plants in the wetland (areas with <math>&gt; 90\%</math> cover at person height, not Cowardin classes)</b>	
Trees or shrubs $> \frac{2}{3}$ area of the wetland	points = 8
Trees or shrubs $> \frac{1}{3}$ area of the wetland	points = 6
Herbaceous plants ( $> 6$ in high) $> \frac{2}{3}$ area of the wetland	points = 6
Herbaceous plants ( $> 6$ in high) $> \frac{1}{3}$ area of the wetland	points = 3
Trees, shrubs, and ungrazed herbaceous $< \frac{1}{3}$ area of the wetland	points = 0
<b>Total for R 1</b>	Add the points in the boxes above

Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L

Record the rating on the first page

<b>R 2.0. Does the landscape have the potential to support the water quality function of the site?</b>	
<b>R 2.1. Is the wetland within an incorporated city or within its UGA?</b>	Yes = 2 No = 0
<b>R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area?</b>	Yes = 1 No = 0
<b>R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years?</b>	Yes = 1 No = 0
<b>R 2.4. Is <math>&gt; 10\%</math> of the area within 150 ft of the wetland in land uses that generate pollutants?</b>	Yes = 1 No = 0
<b>R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4</b>	Yes = 1 No = 0
Other sources _____	
<b>Total for R 2</b>	Add the points in the boxes above

Rating of Landscape Potential If score is: 3-6 = H 1 or 2 = M 0 = L

Record the rating on the first page

<b>R 3.0. Is the water quality improvement provided by the site valuable to society?</b>	
<b>R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?</b>	Yes = 1 No = 0
<b>R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?</b>	Yes = 1 No = 0
<b>R 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (answer YES if there is a TMDL for the drainage in which the unit is found)</b>	Yes = 2 No = 0
<b>Total for R 3</b>	Add the points in the boxes above

Rating of Value If score is: 2-4 = H 1 = M 0 = L

Record the rating on the first page

Wetland name or number B

**RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS**

**Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosion**

R 4.0. Does the site have the potential to reduce flooding and erosion?

R 4.1. Characteristics of the overbank storage the wetland provides:

*Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average width of stream between banks).*

- If the ratio is more than 20 points = 9
- If the ratio is 10-20 points = 6
- If the ratio is 5-<10 points = 4
- If the ratio is 1-<5 points = 2
- If the ratio is < 1 points = 1

R 4.2. Characteristics of plants that slow down water velocities during floods: *Treat large woody debris as forest or shrub. Choose the points appropriate for the best description (polygons need to have >90% cover at person height. These are NOT Cowardin classes).*

- Forest or shrub for  $> \frac{1}{3}$  area OR emergent plants  $> \frac{2}{3}$  area points = 7
- Forest or shrub for  $> \frac{1}{10}$  area OR emergent plants  $> \frac{1}{3}$  area points = 4
- Plants do not meet above criteria points = 0

Total for R 4 Add the points in the boxes above

Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the first page

R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

R 5.1. Is the stream or river adjacent to the wetland downcut? Yes = 0 No = 1

R 5.2. Does the up-gradient watershed include a UGA or incorporated area? Yes = 1 No = 0

R 5.3. Is the up-gradient stream or river controlled by dams? Yes = 0 No = 1

Total for R 5 Add the points in the boxes above

Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the first page

R 6.0. Are the hydrologic functions provided by the site valuable to society?

R 6.1. Distance to the nearest areas downstream that have flooding problems?

*Choose the description that best fits the site.*

- The sub-basin immediately down-gradient of the wetland has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2
- Surface flooding problems are in a sub-basin farther down-gradient points = 1
- No flooding problems anywhere downstream points = 0

R 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?

Yes = 2 No = 0

Total for R 6 Add the points in the boxes above

Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the first page

Wetland name or number 13

<b>LAKE FRINGE WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
<b>L 1.0. Does the site have the potential to improve water quality?</b>	
<b>L 1.1. Average width of plants along the lakeshore (use polygons of Cowardin classes):</b>	
Plants are more than 33 ft (10 m) wide	points = 6
Plants are more than 16 ft (5 m) wide and <33 ft	points = 3
Plants are more than 6 ft (2 m) wide and <16 ft	points = 1
Plants are less than 6 ft wide	points = 0
<b>L 1.2. Characteristics of the plants in the wetland: Choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. These are not Cowardin classes. Area of cover is total cover in the unit, but it can be in patches. Herbaceous does not include aquatic bed.</b>	
Cover of herbaceous plants is >90% of the vegetated area	points = 6
Cover of herbaceous plants is > <sup>2</sup> / <sub>3</sub> of the vegetated area	points = 4
Cover of herbaceous plants is > <sup>1</sup> / <sub>3</sub> of the vegetated area	points = 3
Other plants that are not aquatic bed > <sup>2</sup> / <sub>3</sub> unit	points = 3
Other plants that are not aquatic bed in > <sup>1</sup> / <sub>3</sub> vegetated area	points = 1
Aquatic bed plants and open water cover > <sup>2</sup> / <sub>3</sub> of the unit	points = 0
<b>Total for L 1</b>	<b>Add the points in the boxes above</b>

**Rating of Site Potential** If score is: 8-12 = H 4-7 = M 0-3 = L *Record the rating on the first page*

<b>L 2.0. Does the landscape have the potential to support the water quality function of the site?</b>	
<b>L 2.1. Is the lake used by power boats?</b>	Yes = 1 No = 0
<b>L 2.2. Is &gt; 10% of the area within 150 ft of wetland unit on the upland side in land uses that generate pollutants?</b>	Yes = 1 No = 0
<b>L 2.3. Does the lake have problems with algal blooms or excessive plant growth such as milfoil?</b>	Yes = 1 No = 0
<b>Total for L 2</b>	<b>Add the points in the boxes above</b>

**Rating of Landscape Potential:** If score is: 2 or 3 = H 1 = M 0 = L *Record the rating on the first page*

<b>L 3.0. Is the water quality improvement provided by the site valuable to society?</b>	
<b>L 3.1. Is the lake on the 303(d) list of degraded aquatic resources?</b>	Yes = 1 No = 0
<b>L 3.2. Is the lake in a sub-basin where water quality is an issue (at least one aquatic resource in the basin is on the 303(d) list)?</b>	Yes = 1 No = 0
<b>L 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the lake or basin in which the unit is found.</b>	Yes = 2 No = 0
<b>Total for L 3</b>	<b>Add the points in the boxes above</b>

**Rating of Value** If score is: 2-4 = H 1 = M 0 = L *Record the rating on the first page*

Wetland name or number B

**LAKE FRINGE WETLANDS**

**Hydrologic Functions - Indicators that the wetland unit functions to reduce shoreline erosion**

L 4.0. Does the site have the potential to reduce shoreline erosion?		
L 4.1. Distance along shore and average width of Cowardin classes along the lakeshore (do not include Aquatic bed): Choose the highest scoring description that matches conditions in the wetland.		
> ¼ of distance is Scrub-shrub or Forested at least 33 ft (10 m) wide		points = 6
> ¼ of distance is Scrub-shrub or Forested at least 6 ft (2 m) wide		points = 4
> ¼ distance is Scrub-shrub or Forested at least 33 ft (10 m) wide		points = 4
Plants are at least 6 ft (2 m) wide (any type except Aquatic bed)		points = 2
Plants are less than 6 ft (2 m) wide (any type except Aquatic bed)		points = 0

Rating of Site Potential: If score is: 6 = M 0-5 = L Record the rating on the first page

L 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

L 5.1. Is the lake used by power boats with more than 10 hp?	Yes = 1 No = 0	
L 5.2. Is the fetch on the lake side of the unit at least 1 mile in distance?	Yes = 1 No = 0	
Total for L 5	Add the points in the boxes above	

Rating of Landscape Potential If score is: 2 = H 1 = M 0 = L Record the rating on the first page

L 6.0. Are the hydrologic functions provided by the site valuable to society?

L 6.1. Are there resources along the shore that can be impacted by erosion? If more than one resource is present, choose the one with the highest score.		
There are human structures or old growth/mature forests within 25 ft of OHWM of the shore in the unit		points = 2
There are nature trails or other paths and recreational activities within 25 ft of OHWM		points = 1
Other resources that could be impacted by erosion		points = 1
There are no resources that can be impacted by erosion along the shores of the unit		points = 0

Rating of Value: If score is: 2 = H 1 = M 0 = L Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

Wetland name or number B

<b>SLOPE WETLANDS</b>	
<b>Hydrologic Functions</b> - Indicators that the site functions to reduce flooding and stream erosion	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually &gt; 1/8 in), or dense enough, to remain erect during surface flows.</i> Dense, uncut, rigid plants cover > 90% of the area of the wetland All other conditions	points = <u>1</u> points = 0

Rating of Site Potential If score is:  1 = M \_\_\_ 0 = L Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?	Yes = <u>1</u> No = 0

Rating of Landscape Potential If score is:  1 = M \_\_\_ 0 = L Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream	points = <u>2</u> points = 1 points = 0
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = <u>0</u>
Total for S 6	Add the points in the boxes above <u>2</u>

Rating of Value If score is:  2-4 = H \_\_\_ 1 = M \_\_\_ 0 = L Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

MMH

Wetland name or number B

<b>SLOPE WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: <i>(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)</i> Slope is 1% or less Slope is > 1%-2% Slope is > 2%-5% Slope is greater than 5%	points = 3 points = 2 points = <u>1</u> points = 0
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = <u>0</u>	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. <i>Dense means you have trouble seeing the soil surface (&gt;75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i> Dense, uncut, herbaceous plants > 90% of the wetland area Dense, uncut, herbaceous plants > 1/2 of area Dense, woody, plants > 1/2 of area Dense, uncut, herbaceous plants > 1/4 of area Does not meet any of the criteria above for plants	points = 6 points = <u>3</u> points = 2 points = 1 points = 0
Total for S 1	
Add the points in the boxes above	
4	

Rating of Site Potential If score is: 12 = H 6-11 = M 0-5 = L Record the rating on the first page

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = <u>1</u> No = 0	1
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources _____ Yes = 1 No = <u>0</u>	0
Total for S 2	
Add the points in the boxes above	
1	

Rating of Landscape Potential If score is: 1-2 = M 0 = L Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = <u>0</u>	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i> Yes = 1 No = <u>0</u>	0
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i> Yes = 2 No = <u>0</u>	0
Total for S 3	
Add the points in the boxes above	
0	

Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the first page

L M L

Wetland name or number B

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (&gt; 4 in diameter and 6 ft long).</p> <p><input checked="" type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt; 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>		3
Total for H 1	Add the points in the boxes above	7

Rating of Site Potential If score is: 15-18 = H  7-14 = M  0-6 = L Record the rating on the first page

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>		
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p>Calculate: % undisturbed habitat <math>2 + [( \% \text{ moderate and low intensity land uses} ) / 2] 18 = 18 \%</math></p> <p>If total accessible habitat is:</p> <p>&gt; 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>&lt; 10% of 1 km Polygon points = 0</p>		1
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat <math>9 + [( \% \text{ moderate and low intensity land uses} ) / 2] 18 = 69 \%</math></p> <p>Undisturbed habitat &gt; 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and &gt; 3 patches points = 1</p> <p>Undisturbed habitat &lt; 10% of 1 km Polygon points = 0</p>		3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>&gt; 50% of 1 km Polygon is high intensity land use points = (-2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>		0
Total for H 2	Add the points in the boxes above	4

Rating of Landscape Potential If score is:  4-6 = H  1-3 = M  < 1 = L Record the rating on the first page

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>		
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria: points = 2</p> <p>— It has 3 or more priority habitats within 100 m (see next page)</p> <p>— It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p>— It is mapped as a location for an individual WDFW priority species</p> <p>— It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p>— It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan</p> <p>Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1</p> <p>Site does not meet any of the criteria above points = 0</p>		1

Rating of Value If score is:  2 = H  1 = M  0 = L Record the rating on the first page

M H M

Wetland name or number B

**These questions apply to wetlands of all HGM classes.**

**HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

- Aquatic bed 4 structures or more: points = 4
  - Emergent 3 structures: points = 2
  - Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1
  - Forested (areas where trees have > 30% cover) 1 structure: points = 0
- If the unit has a Forested class, check if:*
- The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

2

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- Saturated only 1 type present: points = 0
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland 2 points
- Freshwater tidal wetland 2 points

1

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>.

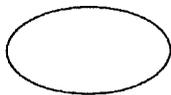
*Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*

- If you counted: > 19 species points = 2
- 5 - 19 species points = 1
- < 5 species points = 0

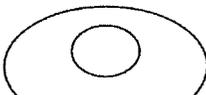
1

H 1.4. Interspersion of habitats

Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*



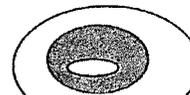
None = 0 points



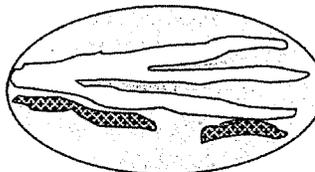
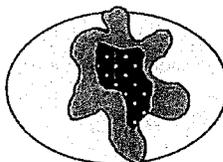
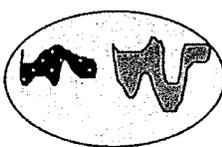
Low = 1 point



Moderate = 2 points



All three diagrams in this row are HIGH = 3 points



1

Wetland name or number 10

## WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE: This question is independent of the land use between the wetland unit and the priority habitat.**

- **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- ✓ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- ✓ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

**Note:** All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

Wetland name or number   E  

**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<b>SC 1.0. Estuarine wetlands</b> Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to SC 1.1    No = Not an estuarine wetland	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I    No - Go to SC 1.2	Cat. I
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I    No = Category II	Cat. I  Cat. II
<b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b> SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to SC 2.2    No – Go to SC 2.3 SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I    No = Not a WHCV SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhwpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhwpwetlands.pdf</a> Yes – Contact WNHP/WDNR and go to SC 2.4    No = Not a WHCV SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I    No = Not a WHCV	Cat. I
<b>SC 3.0. Bogs</b> Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3    No – Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3    No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog    No – Go to SC 3.4 <b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog    No = Is not a bog	Cat. I

Wetland name or number B

<p><b>SC 4.0. Forested Wetlands</b></p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> <li>— Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.</li> <li>— Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).</li> </ul> <p style="text-align: right;">Yes = Category I    No = Not a forested wetland for this section</p>	<p>Cat. I</p>
<p><b>SC 5.0. Wetlands in Coastal Lagoons</b></p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> <li>— The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks</li> <li>— The lagoon in which the wetland is located contains ponded water that is saline or brackish (&gt; 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>)</li> </ul> <p style="text-align: right;">Yes – Go to SC 5.1    No = Not a wetland in a coastal lagoon</p> <p><b>SC 5.1. Does the wetland meet all of the following three conditions?</b></p> <ul style="list-style-type: none"> <li>— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).</li> <li>— At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.</li> <li>— The wetland is larger than 1/10 ac (4350 ft<sup>2</sup>)</li> </ul> <p style="text-align: right;">Yes = Category I    No = Category II</p>	<p>Cat. I</p> <p>Cat. II</p>
<p><b>SC 6.0. Interdunal Wetlands</b></p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> <li>— Long Beach Peninsula: Lands west of SR 103</li> <li>— Grayland-Westport: Lands west of SR 105</li> <li>— Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> </ul> <p style="text-align: right;">Yes – Go to SC 6.1    No = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?  <span style="float: right;">Yes = Category I    No – Go to SC 6.2</span></p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?  <span style="float: right;">Yes = Category II    No – Go to SC 6.3</span></p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?  <span style="float: right;">Yes = Category III    No = Category IV</span></p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p><b>Category of wetland based on Special Characteristics</b>          If you answered No for all types, enter "Not Applicable" on Summary Form</p>	

Wetland name or number \_\_\_\_\_

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Wetland name or number C

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): Orcas Airport - Wetland C Date of site visit: 11/12/12  
 Rated by AS, SB Trained by Ecology?  Yes  No Date of training 2010  
 HGM Class used for rating Slope Wetland has multiple HGM classes?  Y  N

NOTE: Form is not complete without the figures requested (figures can be combined).  
 Source of base aerial photo/map Google

OVERALL WETLAND CATEGORY III (based on functions \_\_\_ or special characteristics \_\_\_)

### 1. Category of wetland based on FUNCTIONS

- \_\_\_ Category I – Total score = 23 - 27
- \_\_\_ Category II – Total score = 20 - 22
- Category III – Total score = 16 - 19
- \_\_\_ Category IV – Total score = 9 - 15

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H  
 8 = H,H,M  
 7 = H,H,L  
 7 = H,M,M  
 6 = H,M,L  
 6 = M,M,M  
 5 = H,L,L  
 5 = M,M,L  
 4 = M,L,L  
 3 = L,L,L

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H M <b>(L)</b>	H M <b>(L)</b>	H M <b>(L)</b>	
Landscape Potential	H <b>(M)</b> L	H <b>(M)</b> L	H <b>(M)</b> L	
Value	H M <b>(L)</b>	<b>(H)</b> M L	H M <b>(L)</b>	<b>TOTAL</b>
Score Based on Ratings	<b>4</b>	<b>6</b>	<b>4</b>	<b>14</b>

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	

Wetland name or number C

## Maps and figures required to answer questions correctly for Western Washington

### Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet <i>(can be added to map of hydroperiods)</i>	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland <i>(can be added to another figure)</i>	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

### Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland <i>(can be added to another figure)</i>	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream <i>(can be added to another figure)</i>	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

### Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland <i>(can be added to another figure)</i>	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

### Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	A1
Hydroperiods	H 1.2	B1
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	A1
Plant cover of dense, rigid trees, shrubs, and herbaceous plants <i>(can be added to figure above)</i>	S 4.1	A1
Boundary of 150 ft buffer <i>(can be added to another figure)</i>	S 2.1, S 5.1	C1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	D
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	D

Wetland name or number C

## HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

NO go to 2

YES - the wetland class is **Tidal Fringe** - go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

NO - **Saltwater Tidal Fringe (Estuarine)**

YES - **Freshwater Tidal Fringe**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

NO go to 3

YES - The wetland class is **Flats**

*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?

The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;

At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO go to 4

YES - The wetland class is **Lake Fringe (Lacustrine Fringe)**

4. Does the entire wetland unit **meet all** of the following criteria?

The wetland is on a slope (*slope can be very gradual*),

The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,

The water leaves the wetland **without being impounded**.

NO - go to 5

YES - The wetland class is **Slope**

**NOTE:** Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?

The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

The overbank flooding occurs at least once every 2 years.

Wetland name or number 0

NO – go to 6

YES – The wetland class is **Riverine**

**NOTE:** The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

NO – go to 7

YES – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8

YES – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide).** Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

**NOTE:** Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as Depressional for the rating.*

Wetland name or number C

<b>DEPRESSIONAL AND FLATS WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
<b>D 1.0. Does the site have the potential to improve water quality?</b>	
<b>D 1.1. Characteristics of surface water outflows from the wetland:</b>	
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	
<b>D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = 0</b>	
<b>D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):</b>	
Wetland has persistent, ungrazed, plants > 95% of area points = 5	
Wetland has persistent, ungrazed, plants > ½ of area points = 3	
Wetland has persistent, ungrazed plants > 1/10 of area points = 1	
Wetland has persistent, ungrazed plants < 1/10 of area points = 0	
<b>D 1.4. Characteristics of seasonal ponding or inundation:</b>	
<i>This is the area that is ponded for at least 2 months. See description in manual.</i>	
Area seasonally ponded is > ½ total area of wetland points = 4	
Area seasonally ponded is > ¼ total area of wetland points = 2	
Area seasonally ponded is < ¼ total area of wetland points = 0	
<b>Total for D 1</b>	Add the points in the boxes above

**Rating of Site Potential** If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the first page

<b>D 2.0. Does the landscape have the potential to support the water quality function of the site?</b>	
<b>D 2.1. Does the wetland unit receive stormwater discharges?</b>	Yes = 1 No = 0
<b>D 2.2. Is &gt; 10% of the area within 150 ft of the wetland in land uses that generate pollutants?</b>	Yes = 1 No = 0
<b>D 2.3. Are there septic systems within 250 ft of the wetland?</b>	Yes = 1 No = 0
<b>D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?</b>	Yes = 1 No = 0
Source _____	
<b>Total for D 2</b>	Add the points in the boxes above

**Rating of Landscape Potential** If score is: 3 or 4 = H 1 or 2 = M 0 = L Record the rating on the first page

<b>D 3.0. Is the water quality improvement provided by the site valuable to society?</b>	
<b>D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?</b>	Yes = 1 No = 0
<b>D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?</b>	Yes = 1 No = 0
<b>D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?</b>	Yes = 2 No = 0
<b>Total for D 3</b>	Add the points in the boxes above

**Rating of Value** If score is: 2-4 = H 1 = M 0 = L Record the rating on the first page

Wetland name or number C

**DEPRESSIONAL AND FLATS WETLANDS**

**Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation**

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland:

- Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4
- Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 2
- Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 1
- Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0

D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.

- Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7
- Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5
- Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3
- The wetland is a "headwater" wetland points = 3
- Wetland is flat but has small depressions on the surface that trap water points = 1
- Marks of ponding less than 0.5 ft (6 in) points = 0

D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.

- The area of the basin is less than 10 times the area of the unit points = 5
- The area of the basin is 10 to 100 times the area of the unit points = 3
- The area of the basin is more than 100 times the area of the unit points = 0
- Entire wetland is in the Flats class points = 5

Total for D 4

Add the points in the boxes above

Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L

Record the rating on the first page

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges?

Yes = 1 No = 0

D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?

Yes = 1 No = 0

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?

Yes = 1 No = 0

Total for D 5

Add the points in the boxes above

Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L

Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):

- Flooding occurs in a sub-basin that is immediately down-gradient of unit. points = 2
- Surface flooding problems are in a sub-basin farther down-gradient. points = 1

Flooding from groundwater is an issue in the sub-basin. points = 1

The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why \_\_\_\_\_ points = 0

There are no problems with flooding downstream of the wetland. points = 0

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?

Yes = 2 No = 0

Total for D 6

Add the points in the boxes above

Rating of Value If score is: 2-4 = H 1 = M 0 = L

Record the rating on the first page

Wetland name or number C

<b>RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
<b>R 1.0. Does the site have the potential to improve water quality?</b>	
<b>R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event:</b>	
Depressions cover $> \frac{3}{4}$ area of wetland	points = 8
Depressions cover $> \frac{1}{2}$ area of wetland	points = 4
Depressions present but cover $< \frac{1}{2}$ area of wetland	points = 2
No depressions present	points = 0
<b>R 1.2. Structure of plants in the wetland (areas with <math>&gt; 90\%</math> cover at person height, not Cowardin classes)</b>	
Trees or shrubs $> \frac{2}{3}$ area of the wetland	points = 8
Trees or shrubs $> \frac{1}{3}$ area of the wetland	points = 6
Herbaceous plants ( $> 6$ in high) $> \frac{2}{3}$ area of the wetland	points = 6
Herbaceous plants ( $> 6$ in high) $> \frac{1}{3}$ area of the wetland	points = 3
Trees, shrubs, and ungrazed herbaceous $< \frac{1}{3}$ area of the wetland	points = 0
<b>Total for R 1</b>	<b>Add the points in the boxes above</b>

**Rating of Site Potential** If score is: 12-16 = H 6-11 = M 0-5 = L *Record the rating on the first page*

<b>R 2.0. Does the landscape have the potential to support the water quality function of the site?</b>	
<b>R 2.1. Is the wetland within an Incorporated city or within its UGA?</b>	Yes = 2 No = 0
<b>R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area?</b>	Yes = 1 No = 0
<b>R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years?</b>	Yes = 1 No = 0
<b>R 2.4. Is <math>&gt; 10\%</math> of the area within 150 ft of the wetland in land uses that generate pollutants?</b>	Yes = 1 No = 0
<b>R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4</b> Other sources _____	Yes = 1 No = 0
<b>Total for R 2</b>	<b>Add the points in the boxes above</b>

**Rating of Landscape Potential** If score is: 3-6 = H 1 or 2 = M 0 = L *Record the rating on the first page*

<b>R 3.0. Is the water quality improvement provided by the site valuable to society?</b>	
<b>R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?</b>	Yes = 1 No = 0
<b>R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?</b>	Yes = 1 No = 0
<b>R 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (answer YES if there is a TMDL for the drainage in which the unit is found)</b>	Yes = 2 No = 0
<b>Total for R 3</b>	<b>Add the points in the boxes above</b>

**Rating of Value** If score is: 2-4 = H 1 = M 0 = L *Record the rating on the first page*

Wetland name or number C

**RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS**

**Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosion**

R 4.0. Does the site have the potential to reduce flooding and erosion?

R 4.1. Characteristics of the overbank storage the wetland provides:

*Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average width of stream between banks).*

- If the ratio is more than 20 points = 9
- If the ratio is 10-20 points = 6
- If the ratio is 5-<10 points = 4
- If the ratio is 1-<5 points = 2
- If the ratio is < 1 points = 1

R 4.2. Characteristics of plants that slow down water velocities during floods: *Treat large woody debris as forest or shrub. Choose the points appropriate for the best description (polygons need to have >90% cover at person height. These are NOT Cowardin classes).*

- Forest or shrub for  $> \frac{1}{3}$  area OR emergent plants  $> \frac{2}{3}$  area points = 7
- Forest or shrub for  $> \frac{1}{10}$  area OR emergent plants  $> \frac{1}{3}$  area points = 4
- Plants do not meet above criteria points = 0

Total for R 4 Add the points in the boxes above

Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the first page

R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

R 5.1. Is the stream or river adjacent to the wetland downcut? Yes = 0 No = 1

R 5.2. Does the up-gradient watershed include a UGA or incorporated area? Yes = 1 No = 0

R 5.3. Is the up-gradient stream or river controlled by dams? Yes = 0 No = 1

Total for R 5 Add the points in the boxes above

Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the first page

R 6.0. Are the hydrologic functions provided by the site valuable to society?

R 6.1. Distance to the nearest areas downstream that have flooding problems?

*Choose the description that best fits the site.*

- The sub-basin immediately down-gradient of the wetland has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2
- Surface flooding problems are in a sub-basin farther down-gradient points = 1
- No flooding problems anywhere downstream points = 0

R 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?

Yes = 2 No = 0

Total for R 6 Add the points in the boxes above

Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the first page

Wetland name or number C

<b>LAKE FRINGE WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
<b>L 1.0. Does the site have the potential to improve water quality?</b>	
<b>L 1.1. Average width of plants along the lakeshore (use polygons of Cowardin classes):</b>	
Plants are more than 33 ft (10 m) wide	points = 6
Plants are more than 16 ft (5 m) wide and <33 ft	points = 3
Plants are more than 6 ft (2 m) wide and <16 ft	points = 1
Plants are less than 6 ft wide	points = 0
<b>L 1.2. Characteristics of the plants in the wetland: Choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. <i>These are not Cowardin classes. Area of cover is total cover in the unit, but it can be in patches. Herbaceous does not include aquatic bed.</i></b>	
Cover of herbaceous plants is >90% of the vegetated area	points = 6
Cover of herbaceous plants is > <sup>2</sup> / <sub>3</sub> of the vegetated area	points = 4
Cover of herbaceous plants is > <sup>1</sup> / <sub>3</sub> of the vegetated area	points = 3
Other plants that are not aquatic bed > <sup>2</sup> / <sub>3</sub> unit	points = 3
Other plants that are not aquatic bed in > <sup>1</sup> / <sub>3</sub> vegetated area	points = 1
Aquatic bed plants and open water cover > <sup>2</sup> / <sub>3</sub> of the unit	points = 0
<b>Total for L 1</b>	<b>Add the points in the boxes above</b>

**Rating of Site Potential** If score is: 8-12 = H 4-7 = M 0-3 = L *Record the rating on the first page*

<b>L 2.0. Does the landscape have the potential to support the water quality function of the site?</b>	
<b>L 2.1. Is the lake used by power boats?</b>	Yes = 1 No = 0
<b>L 2.2. Is &gt; 10% of the area within 150 ft of wetland unit on the upland side in land uses that generate pollutants?</b>	Yes = 1 No = 0
<b>L 2.3. Does the lake have problems with algal blooms or excessive plant growth such as milfoil?</b>	Yes = 1 No = 0
<b>Total for L 2</b>	<b>Add the points in the boxes above</b>

**Rating of Landscape Potential:** If score is: 2 or 3 = H 1 = M 0 = L *Record the rating on the first page*

<b>L 3.0. Is the water quality improvement provided by the site valuable to society?</b>	
<b>L 3.1. Is the lake on the 303(d) list of degraded aquatic resources?</b>	Yes = 1 No = 0
<b>L 3.2. Is the lake in a sub-basin where water quality is an issue (at least one aquatic resource in the basin is on the 303(d) list)?</b>	Yes = 1 No = 0
<b>L 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the lake or basin in which the unit is found.</b>	Yes = 2 No = 0
<b>Total for L 3</b>	<b>Add the points in the boxes above</b>

**Rating of Value** If score is: 2-4 = H 1 = M 0 = L *Record the rating on the first page*

Wetland name or number C

**LAKE FRINGE WETLANDS**

**Hydrologic Functions** - Indicators that the wetland unit functions to reduce shoreline erosion

L 4.0. Does the site have the potential to reduce shoreline erosion?		
L 4.1. Distance along shore and average width of Cowardin classes along the lakeshore (do not include Aquatic bed): Choose the highest scoring description that matches conditions in the wetland.		
> ¼ of distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 6	
> ¼ of distance is Scrub-shrub or Forested at least 6 ft (2 m) wide	points = 4	
> ¼ distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 4	
Plants are at least 6 ft (2 m) wide (any type except Aquatic bed)	points = 2	
Plants are less than 6 ft (2 m) wide (any type except Aquatic bed)	points = 0	

Rating of Site Potential: If score is: 6 = M 0-5 = L *Record the rating on the first page*

L 5.0. Does the landscape have the potential to support the hydrologic functions of the site?		
L 5.1. Is the lake used by power boats with more than 10 hp?	Yes = 1 No = 0	
L 5.2. Is the fetch on the lake side of the unit at least 1 mile in distance?	Yes = 1 No = 0	
Total for L 5	Add the points in the boxes above	

Rating of Landscape Potential If score is: 2 = H 1 = M 0 = L *Record the rating on the first page*

L 6.0. Are the hydrologic functions provided by the site valuable to society?		
L 6.1. Are there resources along the shore that can be impacted by erosion? If more than one resource is present, choose the one with the highest score.		
There are human structures or old growth/mature forests within 25 ft of OHWM of the shore in the unit	points = 2	
There are nature trails or other paths and recreational activities within 25 ft of OHWM	points = 1	
Other resources that could be impacted by erosion	points = 1	
There are no resources that can be impacted by erosion along the shores of the unit	points = 0	

Rating of Value: If score is: 2 = H 1 = M 0 = L *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number C

<b>SLOPE WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: (a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)	
Slope is 1% or less	points = 3
Slope is > 1%-2%	points = 2
Slope is > 2%-5%	points = <u>1</u>
Slope is greater than 5%	points = 0
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = <u>0</u>	
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants:	
Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.	
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6
Dense, uncut, herbaceous plants > 1/2 of area	points = 3
Dense, woody, plants > 1/2 of area	points = 2
Dense, uncut, herbaceous plants > 1/4 of area	points = <u>1</u>
Does not meet any of the criteria above for plants	points = <u>0</u>
Total for S 1	Add the points in the boxes above <u>1</u>

Rating of Site Potential If score is: 12 = H 6-11 = M  0-5 = L Record the rating on the first page

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	
Yes = <u>1</u> No = 0	<u>1</u>
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	
Other sources _____ Yes = 1 No = <u>0</u>	<u>0</u>
Total for S 2	Add the points in the boxes above <u>1</u>

Rating of Landscape Potential If score is:  1-2 = M 0 = L Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	
Yes = 1 No = <u>0</u>	<u>0</u>
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? At least one aquatic resource in the basin is on the 303(d) list.	
Yes = 1 No = <u>0</u>	<u>0</u>
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the basin in which unit is found.	
Yes = 2 No = <u>0</u>	<u>0</u>
Total for S 3	Add the points in the boxes above <u>0</u>

Rating of Value If score is: 2-4 = H 1 = M  0 = L Record the rating on the first page

L M L

Wetland name or number C

<b>SLOPE WETLANDS</b>	
<b>Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion</b>	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually &gt; 1/8 in), or dense enough, to remain erect during surface flows.</i> Dense, uncut, rigid plants cover > 90% of the area of the wetland All other conditions	points = 1 points = 0

0

Rating of Site Potential If score is: 1 = M 0 = L

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?	Yes = 1 No = 0

1

Rating of Landscape Potential If score is: 1 = M 0 = L

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream	points = 2 points = 1 points = 0
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0
Total for S 6	Add the points in the boxes above

2

0

2

Rating of Value If score is: 2-4 = H 1 = M 0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

L M H

Wetland name or number C

**These questions apply to wetlands of all HGM classes.**

**HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

- Aquatic bed 4 structures or more: points = 4
  - Emergent 3 structures: points = 2
  - Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1
  - Forested (areas where trees have > 30% cover) 1 structure: points = 0
- If the unit has a Forested class, check if:*
- The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

0

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- Saturated only 1 type present: points = 0
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland 2 points
- Freshwater tidal wetland 2 points

1

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>.

*Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*

- If you counted: > 19 species points = 2
- 5 - 19 species points = 1
- < 5 species points = 0

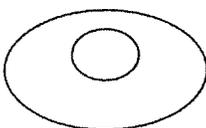
1

H 1.4. Interspersion of habitats

Decide from the diagrams below whether interspersions among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*



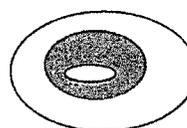
None = 0 points



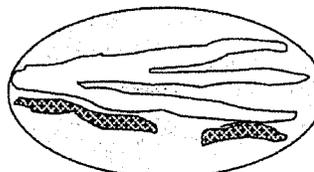
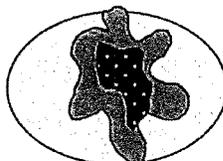
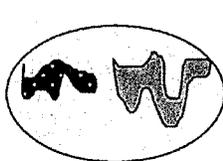
Low = 1 point



Moderate = 2 points



All three diagrams in this row are HIGH = 3 points



0

Wetland name or number C

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (&gt; 4 in diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt; 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>		1
Total for H 1	Add the points in the boxes above	3

Rating of Site Potential If score is: 15-18 = H 7-14 = M  0-6 = L Record the rating on the first page

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>		
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p>Calculate: % undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>0</u> = <u>0</u> %</p> <p>If total accessible habitat is:</p> <p>&gt; 1/3 (33.3%) of 1 km Polygon <span style="float: right;">points = 3</span></p> <p>20-33% of 1 km Polygon <span style="float: right;">points = 2</span></p> <p>10-19% of 1 km Polygon <span style="float: right;">points = 1</span></p> <p>&lt; 10% of 1 km Polygon <span style="float: right;">points = <u>0</u></span></p>		0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat <u>34</u> + [(% moderate and low intensity land uses)/2] <u>29</u> = <u>63</u> %</p> <p>Undisturbed habitat &gt; 50% of Polygon <span style="float: right;">points = <u>3</u></span></p> <p>Undisturbed habitat 10-50% and in 1-3 patches <span style="float: right;">points = 2</span></p> <p>Undisturbed habitat 10-50% and &gt; 3 patches <span style="float: right;">points = 1</span></p> <p>Undisturbed habitat &lt; 10% of 1 km Polygon <span style="float: right;">points = 0</span></p>		3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>&gt; 50% of 1 km Polygon is high intensity land use <span style="float: right;">points = (- 2)</span></p> <p>≤ 50% of 1 km Polygon is high intensity <span style="float: right;">points = <u>0</u></span></p>		0
Total for H 2	Add the points in the boxes above	3

Rating of Landscape Potential If score is: 4-6 = H  1-3 = M < 1 = L Record the rating on the first page

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>		
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria: <span style="float: right;">points = 2</span></p> <p>— It has 3 or more priority habitats within 100 m (see next page)</p> <p>— It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p>— It is mapped as a location for an individual WDFW priority species</p> <p>— It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p>— It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan</p> <p>Site has 1 or 2 priority habitats (listed on next page) within 100 m <span style="float: right;">points = 1</span></p> <p>Site does not meet any of the criteria above <span style="float: right;">points = <u>0</u></span></p>		0

Rating of Value If score is: 2 = H 1 = M  0 = L Record the rating on the first page

*LM*

Wetland name or number C

## WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE:** This question is independent of the land use between the wetland unit and the priority habitat.

- **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

**Note:** All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.



Wetland name or number C

<p><b>SC 4.0. Forested Wetlands</b></p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> <li>— <b>Old-growth forests</b> (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.</li> <li>— <b>Mature forests</b> (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).</li> </ul> <p style="text-align: right;">Yes = Category I    No = Not a forested wetland for this section</p>	Cat. I
<p><b>SC 5.0. Wetlands in Coastal Lagoons</b></p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> <li>— The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks</li> <li>— The lagoon in which the wetland is located contains ponded water that is saline or brackish (&gt; 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>)</li> </ul> <p style="text-align: right;">Yes – Go to SC 5.1    No = Not a wetland in a coastal lagoon</p> <p><b>SC 5.1. Does the wetland meet all of the following three conditions?</b></p> <ul style="list-style-type: none"> <li>— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).</li> <li>— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</li> <li>— The wetland is larger than 1/10 ac (4350 ft<sup>2</sup>)</li> </ul> <p style="text-align: right;">Yes = Category I    No = Category II</p>	Cat. I  Cat. II
<p><b>SC 6.0. Interdunal Wetlands</b></p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> <li>— Long Beach Peninsula: Lands west of SR 103</li> <li>— Grayland-Westport: Lands west of SR 105</li> <li>— Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> </ul> <p style="text-align: right;">Yes – Go to SC 6.1    No = not an interdunal wetland for rating</p> <p><b>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</b> Yes = Category I    No – Go to SC 6.2</p> <p><b>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?</b> Yes = Category II    No – Go to SC 6.3</p> <p><b>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</b> Yes = Category III    No = Category IV</p>	Cat I  Cat. II  Cat. III  Cat. IV
<p><b>Category of wetland based on Special Characteristics</b> If you answered No for all types, enter "Not Applicable" on Summary Form</p>	

Wetland name or number \_\_\_\_\_

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Wetland name or number D

## RATING SUMMARY – Western Washington

Name of wetland (or ID #): Orcas Island - Wetland D Date of site visit: 6/2/14  
 Rated by AB Trained by Ecology?  Yes \_\_\_ No Date of training 2000  
 HGM Class used for rating Depressional Wetland has multiple HGM classes? \_\_\_ Y  N

NOTE: Form is not complete without the figures requested (figures can be combined).  
 Source of base aerial photo/map Google, STC Polaris

OVERALL WETLAND CATEGORY III (based on functions \_\_\_ or special characteristics \_\_\_)

### 1. Category of wetland based on FUNCTIONS

- \_\_\_ Category I – Total score = 23 - 27
- \_\_\_ Category II – Total score = 20 - 22
- Category III – Total score = 16 - 19
- \_\_\_ Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality		Hydrologic		Habitat		
<i>Circle the appropriate ratings</i>							
Site Potential	H	(M) L	H	(M) L	H	(M) L	
Landscape Potential	H	(M) L	(H) M	L	H	(M) L	
Value	H	M (L)	H	(M) L	H	(M) L	TOTAL
Score Based on Ratings	5		7		6		18

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H  
 8 = H,H,M  
 7 = H,H,L  
 7 = H,M,M  
 6 = H,M,L  
 6 = M,M,M  
 5 = H,L,L  
 5 = M,M,L  
 4 = M,L,L  
 3 = L,L,L

### 2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY			
	I	II	III	IV
Estuarine	I	II		
Wetland of High Conservation Value	I			
Bog	I			
Mature Forest	I			
Old Growth Forest	I			
Coastal Lagoon	I	II		
Interdunal	I	II	III	IV
None of the above				

Wetland name or number D

## Maps and figures required to answer questions correctly for Western Washington

### Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	A2
Hydroperiods	D 1.4, H 1.2	B2
Location of outlet ( <i>can be added to map of hydroperiods</i> )	D 1.1, D 4.1	B2
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	D 2.2, D 5.2	C3
Map of the contributing basin	D 4.3, D 5.3	E2
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	D
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	D

### Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream ( <i>can be added to another figure</i> )	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

### Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland ( <i>can be added to another figure</i> )	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

### Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants ( <i>can be added to figure above</i> )	S 4.1	
Boundary of 150 ft buffer ( <i>can be added to another figure</i> )	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number D

## HGM Classification of Wetlands in Western Washington

For questions 1-7, the criteria described must apply to the entire unit being rated.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

NO - go to 2

YES - the wetland class is **Tidal Fringe** - go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

NO - Saltwater Tidal Fringe (Estuarine)

YES - Freshwater Tidal Fringe

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is an Estuarine wetland and is not scored. This method cannot be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

NO - go to 3

YES - The wetland class is **Flats**

*If your wetland can be classified as a Flats wetland, use the form for Depressional wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?

- The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
- At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO - go to 4

YES - The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?

- The wetland is on a slope (*slope can be very gradual*),
- The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
- The water leaves the wetland **without being impounded**.

NO - go to 5

YES - The wetland class is **Slope**

**NOTE:** Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?

- The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- The overbank flooding occurs at least once every 2 years.

Wetland name or number D

**NO** - go to 6

**YES** - The wetland class is **Riverine**

**NOTE:** The Riverine unit can contain depressions that are filled with water when the river is not flooding

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year? *This means that any outlet, if present, is higher than the interior of the wetland.*

NO - go to 7

**YES** - The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO - go to 8

**YES** - The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT** (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

**NOTE:** Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

*If you are still unable to determine which of the above criteria apply to your wetland, or if you have **more than 2 HGM classes** within a wetland boundary, classify the wetland as *Depressional* for the rating.*

Wetland name or number D

**DEPRESSIONAL AND FLATS WETLANDS**

**Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation**

D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland:		
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	2
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0	
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.		
Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	3
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
The wetland is a "headwater" wetland	points = 3	
Wetland is flat but has small depressions on the surface that trap water	points = 1	
Marks of ponding less than 0.5 ft (6 in)	points = 0	
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.		
The area of the basin is less than 10 times the area of the unit	points = 5	3
The area of the basin is 10 to 100 times the area of the unit	points = 3	
The area of the basin is more than 100 times the area of the unit	points = 0	
Entire wetland is in the Flats class	points = 5	
Total for D 4	Add the points in the boxes above	8

Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the first page

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	1
Total for D 5	Add the points in the boxes above	3

Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.		
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):		1
• Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	
• Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
Flooding from groundwater is an issue in the sub-basin.	points = 1	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____	points = 0	
There are no problems with flooding downstream of the wetland.	points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0	0
Total for D 6	Add the points in the boxes above	1

Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the first page

MHM

Wetland name or number D

<b>DEPRESSIONAL AND FLATS WETLANDS</b>		
Water Quality Functions - Indicators that the site functions to improve water quality		
<b>D 1.0. Does the site have the potential to improve water quality?</b>		
<b>D 1.1. Characteristics of surface water outflows from the wetland:</b>		
Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3		
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = <del>2</del>		
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1		2
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1		
<b>D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions). Yes = 4 No = <del>0</del></b>		0
<b>D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):</b>		
Wetland has persistent, ungrazed, plants > 95% of area points = 5		
Wetland has persistent, ungrazed, plants > 1/2 of area points = <del>3</del>		3
Wetland has persistent, ungrazed plants > 1/10 of area points = 1		
Wetland has persistent, ungrazed plants < 1/10 of area points = 0		
<b>D 1.4. Characteristics of seasonal ponding or inundation:</b>		
<i>This is the area that is ponded for at least 2 months. See description in manual.</i>		
Area seasonally ponded is > 1/2 total area of wetland points = <del>4</del>		4
Area seasonally ponded is > 1/4 total area of wetland points = 2		
Area seasonally ponded is < 1/4 total area of wetland points = 0		
<b>Total for D 1</b>	Add the points in the boxes above	<b>9</b>

**Rating of Site Potential** If score is: 12-16 = H  6-11 = M  0-5 = L Record the rating on the first page

<b>D 2.0. Does the landscape have the potential to support the water quality function of the site?</b>		
<b>D 2.1. Does the wetland unit receive stormwater discharges?</b>	Yes = <del>1</del> No = 0	1
<b>D 2.2. Is &gt; 10% of the area within 150 ft of the wetland in land uses that generate pollutants?</b>	Yes = <del>1</del> No = 0	1
<b>D 2.3. Are there septic systems within 250 ft of the wetland?</b>	Yes = 1 No = <del>0</del>	0
<b>D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?</b>	Yes = 1 No = <del>0</del>	0
Source _____		
<b>Total for D 2</b>	Add the points in the boxes above	<b>2</b>

**Rating of Landscape Potential** If score is: 3 or 4 = H  1 or 2 = M  0 = L Record the rating on the first page

<b>D 3.0. Is the water quality improvement provided by the site valuable to society?</b>		
<b>D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?</b>	Yes = 1 No = <del>0</del>	0
<b>D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?</b>	Yes = 1 No = <del>0</del>	0
<b>D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?</b>	Yes = 2 No = <del>0</del>	0
<b>Total for D 3</b>	Add the points in the boxes above	<b>0</b>

**Rating of Value** If score is: 2-4 = H  1 = M  0 = L Record the rating on the first page

MML

Wetland name or number D

**RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS**  
**Water Quality Functions - Indicators that the site functions to improve water quality**

<b>R 1.0. Does the site have the potential to improve water quality?</b>	
<b>R 1.1. Area of surface depressions within the Riverine wetland that can trap sediments during a flooding event:</b>	
Depressions cover > 3/4 area of wetland	points = 8
Depressions cover > 1/2 area of wetland	points = 4
Depressions present but cover < 1/2 area of wetland	points = 2
No depressions present	points = 0
<b>R 1.2. Structure of plants in the wetland (areas with &gt;90% cover at person height, not Cowardin classes)</b>	
Trees or shrubs > 2/3 area of the wetland	points = 8
Trees or shrubs > 1/3 area of the wetland	points = 6
Herbaceous plants (> 6 in high) > 2/3 area of the wetland	points = 6
Herbaceous plants (> 6 in high) > 1/3 area of the wetland	points = 3
Trees, shrubs, and ungrazed herbaceous < 1/3 area of the wetland	points = 0
<b>Total for R 1</b>	<b>Add the points in the boxes above</b>

**Rating of Site Potential** If score is: 12-16 = H 6-11 = M 0-5 = L *Record the rating on the first page*

<b>R 2.0. Does the landscape have the potential to support the water quality function of the site?</b>	
<b>R 2.1. Is the wetland within an incorporated city or within its UGA?</b>	Yes = 2 No = 0
<b>R 2.2. Does the contributing basin to the wetland include a UGA or incorporated area?</b>	Yes = 1 No = 0
<b>R 2.3. Does at least 10% of the contributing basin contain tilled fields, pastures, or forests that have been clearcut within the last 5 years?</b>	Yes = 1 No = 0
<b>R 2.4. Is &gt; 10% of the area within 150 ft of the wetland in land uses that generate pollutants?</b>	Yes = 1 No = 0
<b>R 2.5. Are there other sources of pollutants coming into the wetland that are not listed in questions R 2.1-R 2.4</b> Other sources _____	Yes = 1 No = 0
<b>Total for R 2</b>	<b>Add the points in the boxes above</b>

**Rating of Landscape Potential** If score is: 3-6 = H 1 or 2 = M 0 = L *Record the rating on the first page*

<b>R 3.0. Is the water quality improvement provided by the site valuable to society?</b>	
<b>R 3.1. Is the wetland along a stream or river that is on the 303(d) list or on a tributary that drains to one within 1 mi?</b>	Yes = 1 No = 0
<b>R 3.2. Is the wetland along a stream or river that has TMDL limits for nutrients, toxics, or pathogens?</b>	Yes = 1 No = 0
<b>R 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (answer YES if there is a TMDL for the drainage in which the unit is found)</b>	Yes = 2 No = 0
<b>Total for R 3</b>	<b>Add the points in the boxes above</b>

**Rating of Value** If score is: 2-4 = H 1 = M 0 = L *Record the rating on the first page*

Wetland name or number D

**RIVERINE AND FRESHWATER TIDAL FRINGE WETLANDS**

**Hydrologic Functions - Indicators that site functions to reduce flooding and stream erosion**

R 4.0. Does the site have the potential to reduce flooding and erosion?

R 4.1. Characteristics of the overbank storage the wetland provides:

*Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (average width of wetland)/(average width of stream between banks).*

- If the ratio is more than 20 points = 9
- If the ratio is 10-20 points = 6
- If the ratio is 5-<10 points = 4
- If the ratio is 1-<5 points = 2
- If the ratio is < 1 points = 1

R 4.2. Characteristics of plants that slow down water velocities during floods: *Treat large woody debris as forest or shrub. Choose the points appropriate for the best description (polygons need to have >90% cover at person height. These are NOT Cowardin classes).*

- Forest or shrub for  $> \frac{1}{3}$  area OR emergent plants  $> \frac{2}{3}$  area points = 7
- Forest or shrub for  $> \frac{1}{10}$  area OR emergent plants  $> \frac{1}{3}$  area points = 4
- Plants do not meet above criteria points = 0

Total for R 4 Add the points in the boxes above

Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Record the rating on the first page

R 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

R 5.1. Is the stream or river adjacent to the wetland downcut? Yes = 0 No = 1

R 5.2. Does the up-gradient watershed include a UGA or incorporated area? Yes = 1 No = 0

R 5.3. Is the up-gradient stream or river controlled by dams? Yes = 0 No = 1

Total for R 5 Add the points in the boxes above

Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Record the rating on the first page

R 6.0. Are the hydrologic functions provided by the site valuable to society?

R 6.1. Distance to the nearest areas downstream that have flooding problems?

*Choose the description that best fits the site.*

- The sub-basin immediately down-gradient of the wetland has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2
- Surface flooding problems are in a sub-basin farther down-gradient points = 1
- No flooding problems anywhere downstream points = 0

R 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0

Total for R 6 Add the points in the boxes above

Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the first page

Wetland name or number D

<b>LAKE FRINGE WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
L 1.0. Does the site have the potential to improve water quality?	
L 1.1. Average width of plants along the lakeshore (use polygons of Cowardin classes):	
Plants are more than 33 ft (10 m) wide	points = 6
Plants are more than 16 ft (5 m) wide and <33 ft	points = 3
Plants are more than 6 ft (2 m) wide and <16 ft	points = 1
Plants are less than 6 ft wide	points = 0
L 1.2. Characteristics of the plants in the wetland: Choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. The herbaceous plants can be either the dominant form or as an understory in a shrub or forest community. <i>These are not Cowardin classes. Area of cover is total cover in the unit, but it can be in patches. Herbaceous does not include aquatic bed.</i>	
Cover of herbaceous plants is >90% of the vegetated area	points = 6
Cover of herbaceous plants is > <sup>2</sup> / <sub>3</sub> of the vegetated area	points = 4
Cover of herbaceous plants is > <sup>1</sup> / <sub>3</sub> of the vegetated area	points = 3
Other plants that are not aquatic bed > <sup>2</sup> / <sub>3</sub> unit	points = 3
Other plants that are not aquatic bed in > <sup>1</sup> / <sub>3</sub> vegetated area	points = 1
Aquatic bed plants and open water cover > <sup>2</sup> / <sub>3</sub> of the unit	points = 0
Total for L 1	Add the points in the boxes above

Rating of Site Potential If score is: 8-12 = H 4-7 = M 0-3 = L Record the rating on the first page

L 2.0. Does the landscape have the potential to support the water quality function of the site?	
L 2.1. Is the lake used by power boats?	Yes = 1 No = 0
L 2.2. Is > 10% of the area within 150 ft of wetland unit on the upland side in land uses that generate pollutants?	Yes = 1 No = 0
L 2.3. Does the lake have problems with algal blooms or excessive plant growth such as milfoil?	Yes = 1 No = 0
Total for L 2	Add the points in the boxes above

Rating of Landscape Potential: If score is: 2 or 3 = H 1 = M 0 = L Record the rating on the first page

L 3.0. Is the water quality improvement provided by the site valuable to society?	
L 3.1. Is the lake on the 303(d) list of degraded aquatic resources?	Yes = 1 No = 0
L 3.2. Is the lake in a sub-basin where water quality is an issue (at least one aquatic resource in the basin is on the 303(d) list)?	Yes = 1 No = 0
L 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? Answer YES if there is a TMDL for the lake or basin in which the unit is found.	Yes = 2 No = 0
Total for L 3	Add the points in the boxes above

Rating of Value If score is: 2-4 = H 1 = M 0 = L Record the rating on the first page

Wetland name or number D

<b>LAKE FRINGE WETLANDS</b>	
<b>Hydrologic Functions - Indicators that the wetland unit functions to reduce shoreline erosion</b>	
<b>L 4.0. Does the site have the potential to reduce shoreline erosion?</b>	
<b>L 4.1. Distance along shore and average width of Cowardin classes along the lakeshore (do not include Aquatic bed):</b> <i>Choose the highest scoring description that matches conditions in the wetland.</i>	
> ¼ of distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 6
> ¼ of distance is Scrub-shrub or Forested at least 6 ft (2 m) wide	points = 4
> ¼ distance is Scrub-shrub or Forested at least 33 ft (10 m) wide	points = 4
Plants are at least 6 ft (2 m) wide (any type except Aquatic bed)	points = 2
Plants are less than 6 ft (2 m) wide (any type except Aquatic bed)	points = 0

Rating of Site Potential: If score is: 6 = M 0-5 = L *Record the rating on the first page*

<b>L 5.0. Does the landscape have the potential to support the hydrologic functions of the site?</b>	
<b>L 5.1. Is the lake used by power boats with more than 10 hp?</b>	Yes = 1 No = 0
<b>L 5.2. Is the fetch on the lake side of the unit at least 1 mile in distance?</b>	Yes = 1 No = 0
<b>Total for L 5</b>	Add the points in the boxes above

Rating of Landscape Potential If score is: 2 = H 1 = M 0 = L *Record the rating on the first page*

<b>L 6.0. Are the hydrologic functions provided by the site valuable to society?</b>	
<b>L 6.1. Are there resources along the shore that can be impacted by erosion? If more than one resource is present, choose the one with the highest score.</b>	
There are human structures or old growth/mature forests within 25 ft of OHWM of the shore in the unit	points = 2
There are nature trails or other paths and recreational activities within 25 ft of OHWM	points = 1
Other resources that could be impacted by erosion	points = 1
There are no resources that can be impacted by erosion along the shores of the unit	points = 0

Rating of Value: If score is: 2 = H 1 = M 0 = L *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number D

<b>SLOPE WETLANDS</b>	
<b>Water Quality Functions - Indicators that the site functions to improve water quality</b>	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: <i>(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)</i>	
Slope is 1% or less	points = 3
Slope is > 1%-2%	points = 2
Slope is > 2%-5%	points = 1
Slope is greater than 5%	points = 0
S 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic <i>(use NRCS definitions)</i> : Yes = 3 No = 0	
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. <i>Dense means you have trouble seeing the soil surface (&gt;75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i>	
Dense, uncut, herbaceous plants > 90% of the wetland area	points = 6
Dense, uncut, herbaceous plants > ½ of area	points = 3
Dense, woody, plants > ½ of area	points = 2
Dense, uncut, herbaceous plants > ¼ of area	points = 1
Does not meet any of the criteria above for plants	points = 0
Total for S 1	Add the points in the boxes above

Rating of Site Potential If score is: 12 = H 6-11 = M 0-5 = L *Record the rating on the first page*

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	
Yes = 1 No = 0	
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	
Other sources _____	Yes = 1 No = 0
Total for S 2	Add the points in the boxes above

Rating of Landscape Potential If score is: 1-2 = M 0 = L *Record the rating on the first page*

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	
Yes = 1 No = 0	
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i>	
Yes = 1 No = 0	
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i>	
Yes = 2 No = 0	
Total for S 3	Add the points in the boxes above

Rating of Value If score is: 2-4 = H 1 = M 0 = L *Record the rating on the first page*

Wetland name or number D

<b>SLOPE WETLANDS</b>	
<b>Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion</b>	
<b>S 4.0. Does the site have the potential to reduce flooding and stream erosion?</b>	
<b>S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. <i>Stems of plants should be thick enough (usually &gt; 1/8 in), or dense enough, to remain erect during surface flows.</i></b> Dense, uncut, rigid plants cover > 90% of the area of the wetland <span style="float: right;">points = 1</span> All other conditions <span style="float: right;">points = 0</span>	
<b>Rating of Site Potential</b> If score is: <u>  </u> 1 = M <u>  </u> 0 = L <span style="float: right;"><i>Record the rating on the first page</i></span>	

<b>S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?</b>	
<b>S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?</b> <span style="float: right;">Yes = 1 No = 0</span>	
<b>Rating of Landscape Potential</b> If score is: <u>  </u> 1 = M <u>  </u> 0 = L <span style="float: right;"><i>Record the rating on the first page</i></span>	

<b>S 6.0. Are the hydrologic functions provided by the site valuable to society?</b>	
<b>S 6.1. Distance to the nearest areas downstream that have flooding problems:</b> The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) <span style="float: right;">points = 2</span> Surface flooding problems are in a sub-basin farther down-gradient <span style="float: right;">points = 1</span> No flooding problems anywhere downstream <span style="float: right;">points = 0</span>	
<b>S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?</b> <span style="float: right;">Yes = 2 No = 0</span>	
<b>Total for S 6</b> <span style="float: right;">Add the points in the boxes above</span>	

**Rating of Value** If score is:    2-4 = H    1 = M    0 = L *Record the rating on the first page*

NOTES and FIELD OBSERVATIONS:

Wetland name or number \_\_\_\_\_

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (&gt; 4 in diameter and 6 ft long).</p> <p><input checked="" type="checkbox"/> Standing snags (dbh &gt; 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt; 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>		2
Total for H 1	Add the points in the boxes above	8

Rating of Site Potential If score is: 15-18 = H  7-14 = M  0-6 = L Record the rating on the first page

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>		
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p>Calculate: % undisturbed habitat <u>0</u> + [(% moderate and low intensity land uses)/2] <u>0</u> = <u>0</u> %</p> <p>If total accessible habitat is:</p> <p>&gt; 1/3 (33.3%) of 1 km Polygon <span style="float: right;">points = 3</span></p> <p>20-33% of 1 km Polygon <span style="float: right;">points = 2</span></p> <p>10-19% of 1 km Polygon <span style="float: right;">points = 1</span></p> <p>&lt; 10% of 1 km Polygon <span style="float: right;">points = <u>0</u></span></p>		1
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat <u>24</u> + [(% moderate and low intensity land uses)/2] <u>24</u> = <u>68</u> %</p> <p>Undisturbed habitat &gt; 50% of Polygon <span style="float: right;">points = 3</span></p> <p>Undisturbed habitat 10-50% and in 1-3 patches <span style="float: right;">points = <u>2</u></span></p> <p>Undisturbed habitat 10-50% and &gt; 3 patches <span style="float: right;">points = 1</span></p> <p>Undisturbed habitat &lt; 10% of 1 km Polygon <span style="float: right;">points = 0</span></p>		2
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>&gt; 50% of 1 km Polygon is high intensity land use <span style="float: right;">points = (-2)</span></p> <p>≤ 50% of 1 km Polygon is high intensity <span style="float: right;">points = <u>0</u></span></p>		0
Total for H 2	Add the points in the boxes above	3

Rating of Landscape Potential If score is: 4-6 = H  1-3 = M  < 1 = L Record the rating on the first page

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>		
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria: <span style="float: right;">points = 2</span></p> <p><input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</p> <p><input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input checked="" type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><input checked="" type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan</p> <p>Site has 1 or 2 priority habitats (listed on next page) within 100 m <span style="float: right;">points = <u>1</u></span></p> <p>Site does not meet any of the criteria above <span style="float: right;">points = 0</span></p>		1

Rating of Value If score is: 2 = H  1 = M  0 = L Record the rating on the first page

M M M

Wetland name or number \_\_\_\_\_

<p><b>SC 4.0. Forested Wetlands</b></p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> <li>— <b>Old-growth forests</b> (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.</li> <li>— <b>Mature forests</b> (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).</li> </ul> <p style="text-align: center;">Yes = <b>Category I</b>    No = <b>Not a forested wetland for this section</b></p>	<p><b>Cat. I</b></p>
<p><b>SC 5.0. Wetlands in Coastal Lagoons</b></p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> <li>----- The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks</li> <li>— The lagoon in which the wetland is located contains ponded water that is saline or brackish (&gt; 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>)</li> </ul> <p style="text-align: center;">Yes – Go to <b>SC 5.1</b>    No = <b>Not a wetland in a coastal lagoon</b></p> <p><b>SC 5.1. Does the wetland meet all of the following three conditions?</b></p> <ul style="list-style-type: none"> <li>— The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).</li> <li>— At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.</li> <li>— The wetland is larger than 1/10 ac (4350 ft<sup>2</sup>)</li> </ul> <p style="text-align: center;">Yes = <b>Category I</b>    No = <b>Category II</b></p>	<p style="text-align: center; vertical-align: middle;"><b>Cat. I</b></p> <p style="text-align: center; vertical-align: middle;"><b>Cat. II</b></p>
<p><b>SC 6.0. Interdunal Wetlands</b></p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> <li>— Long Beach Peninsula: Lands west of SR 103</li> <li>— Grayland-Westport: Lands west of SR 105</li> <li>— Ocean Shores-Copalis: Lands west of SR 115 and SR 109</li> </ul> <p style="text-align: center;">Yes – Go to <b>SC 6.1</b>    No = <b>not an Interdunal wetland for rating</b></p> <p><b>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</b>  <span style="float: right;">Yes = <b>Category I</b>    No – Go to <b>SC 6.2</b></span></p> <p><b>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?</b>  <span style="float: right;">Yes = <b>Category II</b>    No – Go to <b>SC 6.3</b></span></p> <p><b>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</b>  <span style="float: right;">Yes = <b>Category III</b>    No = <b>Category IV</b></span></p>	<p style="text-align: center; vertical-align: middle;"><b>Cat I</b></p> <p style="text-align: center; vertical-align: middle;"><b>Cat. II</b></p> <p style="text-align: center; vertical-align: middle;"><b>Cat. III</b></p> <p style="text-align: center; vertical-align: middle;"><b>Cat. IV</b></p>
<p><b>Category of wetland based on Special Characteristics</b></p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	

Wetland name or number \_\_\_\_\_

**CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS**

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<b>SC 1.0. Estuarine wetlands</b> Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to SC 1.1    No = Not an estuarine wetland	
<b>SC 1.1.</b> Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I    No - Go to SC 1.2	Cat. I
<b>SC 1.2.</b> Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I    No = Category II	Cat. I  Cat. II
<b>SC 2.0. Wetlands of High Conservation Value (WHCV)</b> <b>SC 2.1.</b> Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes – Go to SC 2.2    No – Go to SC 2.3 <b>SC 2.2.</b> Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I    No = Not a WHCV <b>SC 2.3.</b> Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? <a href="http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf">http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf</a> Yes – Contact WNHP/WDNR and go to SC 2.4    No = Not a WHCV <b>SC 2.4.</b> Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? Yes = Category I    No = Not a WHCV	Cat. I
<b>SC 3.0. Bogs</b> Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> <b>SC 3.1.</b> Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3    No – Go to SC 3.2 <b>SC 3.2.</b> Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3    No = Is not a bog <b>SC 3.3.</b> Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog    No – Go to SC 3.4 <b>NOTE:</b> If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. <b>SC 3.4.</b> Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog    No = Is not a bog	Cat. I

Wetland name or number \_\_\_\_\_

## WDFW Priority Habitats

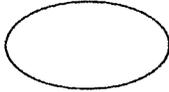
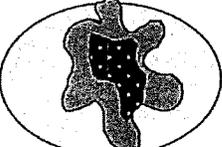
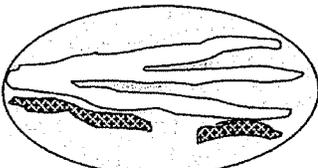
Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: **NOTE: This question is independent of the land use between the wetland unit and the priority habitat.**

- **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **Old-growth/Mature forests:** Old-growth west of Cascade crest - Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests - Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 - see web link above*).
- **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 - see web link above*).
- **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report - see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

**Note:** All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.

Wetland name or number \_\_\_\_\_

<b>These questions apply to wetlands of all HGM classes.</b>	
<b>HABITAT FUNCTIONS - Indicators that site functions to provide important habitat</b>	
<b>H 1.0. Does the site have the potential to provide habitat?</b>	
<p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i></p> <p> <input type="checkbox"/> Aquatic bed <span style="float: right;">4 structures or more: points = 4</span>  <input checked="" type="checkbox"/> Emergent <span style="float: right;">3 structures: points = <u>2</u></span>  <input type="checkbox"/> Scrub-shrub (areas where shrubs have &gt; 30% cover) <span style="float: right;">2 structures: points = 1</span>  <input checked="" type="checkbox"/> Forested (areas where trees have &gt; 30% cover) <span style="float: right;">1 structure: points = 0</span> </p> <p><i>If the unit has a Forested class, check if:</i></p> <p> <input checked="" type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon         </p>	2
<p>H 1.2. Hydroperiods</p> <p>Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).</p> <p> <input type="checkbox"/> Permanently flooded or inundated <span style="float: right;">4 or more types present: points = 3</span>  <input checked="" type="checkbox"/> Seasonally flooded or inundated <span style="float: right;"><u>3</u> types present: points = 2</span>  <input type="checkbox"/> Occasionally flooded or inundated <span style="float: right;">2 types present: points = 1</span>  <input checked="" type="checkbox"/> Saturated only <span style="float: right;">1 type present: points = 0</span> </p> <p> <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland  <input checked="" type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland         </p> <p> <input type="checkbox"/> Lake Fringe wetland <span style="float: right;"><b>2 points</b></span>  <input type="checkbox"/> Freshwater tidal wetland <span style="float: right;"><b>2 points</b></span> </p>	2
<p>H 1.3. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>.  <i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i></p> <p>If you counted: &gt; 19 species <span style="float: right;">points = 2</span>            5 - 19 species <span style="float: right;">points = <u>1</u></span>            &lt; 5 species <span style="float: right;">points = 0</span></p>	1
<p>H 1.4. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = <u>1</u> point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p>All three diagrams in this row are HIGH = 3points</p>	1

Wetland name or number \_\_\_\_\_

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Scale 1" = 500'

EMERGENT =   
 FORESTED = 

PURPOSE: Orcas Island Airport Improvements Project  
 To improve airport facility, operations and to comply with FAA requirements.  
 DATUM: NAVD88

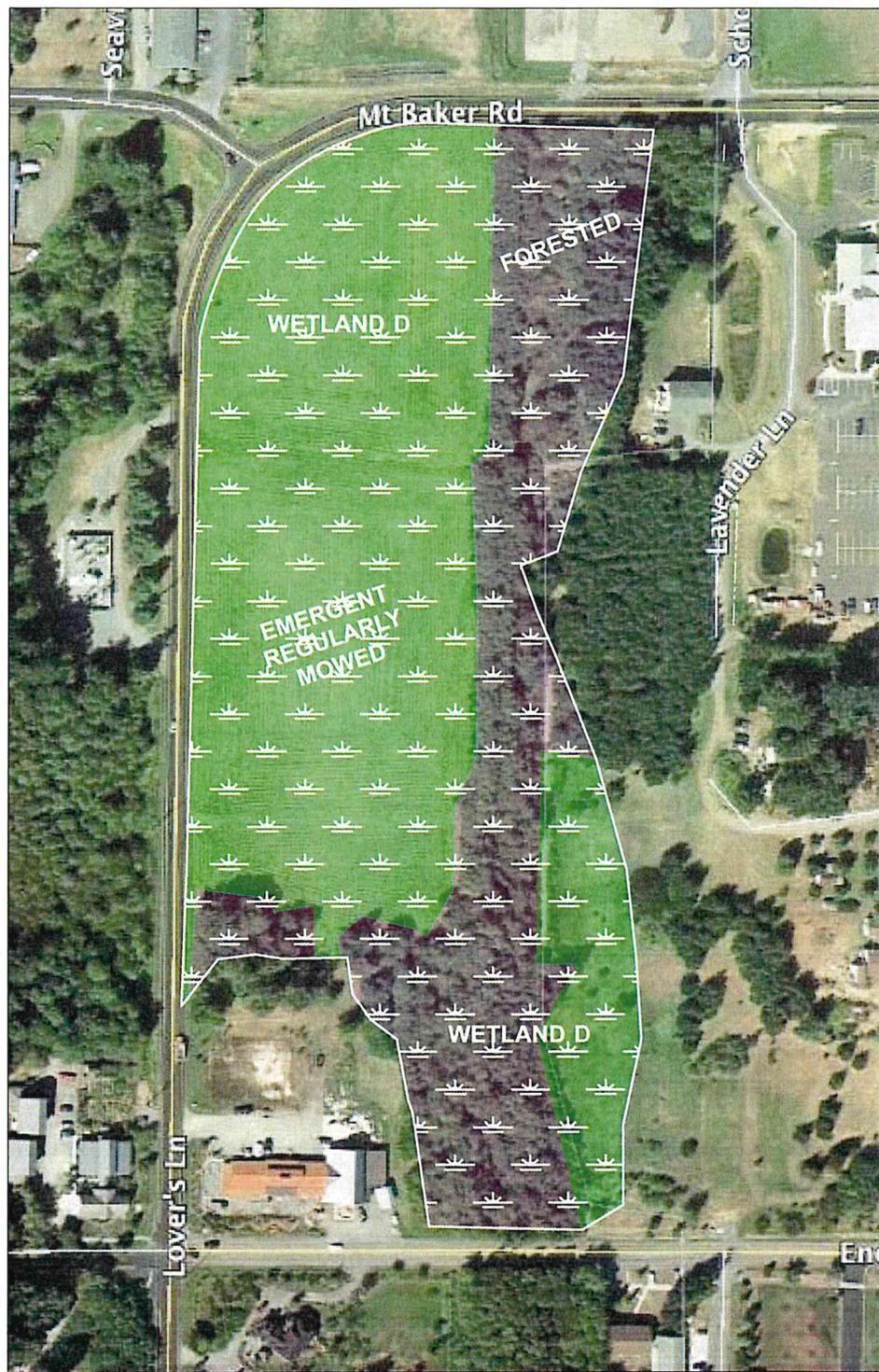
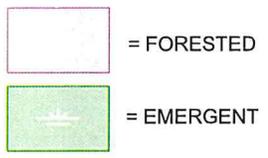
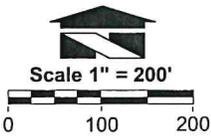
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 60 WH Pacific  
 Attn: Flamen Tam  
 12100 NE 195th St., #300  
 Bothell, WA 98011

IN: WRIA 2  
 AT: 147 Schoen Ln, Eastsound, WA 98245  
 COUNTY: San Juan  
 STATE: Washington  
 DATE: May 2015  
 Figure A1



FIGURE A1: Cowardin Plant Classes & Plant Cover - Airport Site  
 ORCAS ISLAND AIRPORT  
 Section 11, Township 37N, Range 2W, W.M.  
 Latitude: 48.706192  
 Longitude: -122.907186

FIGURE A2: Cowardin Plant Classes & Plant Cover - South Site  
 ORCAS ISLAND AIRPORT  
 Section 11, Township 37N, Range 2W, W.M.  
 Latitude: 48.706192  
 Longitude: -122.907186



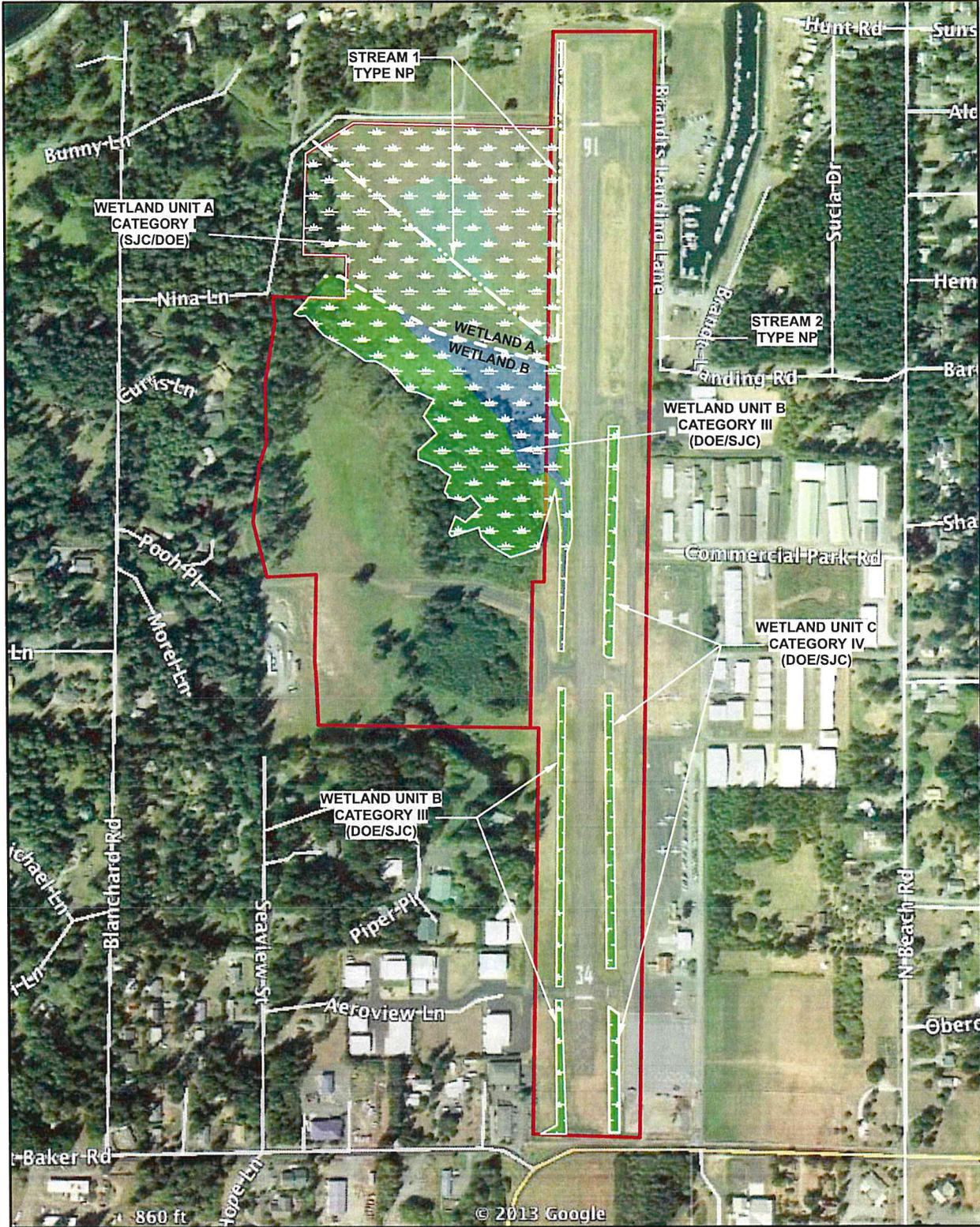
**PURPOSE:**  
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 Bothell, WA 98011

**IN:** WRIA 2  
 AT: 147 Schoen Ln, Eastsound, WA 98245  
**COUNTY:** San Juan  
**STATE:** Washington  
 Figure A2  
**DATE:** May 2015

FIGURE B1: Hydroperiods & Ponded Depressions - Airport Site  
 ORCAS ISLAND AIRPORT  
 Section 11, Township 37N, Range 2W, W.M.  
 Latitude: 48.706192  
 Longitude: -122.907186



Scale 1" = 500'

-  = Ponded Depressions
-  = Saturated only
-  = Seasonally/Occasionally ponded

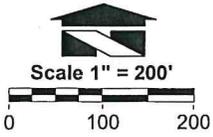
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DATUM: NAVD88

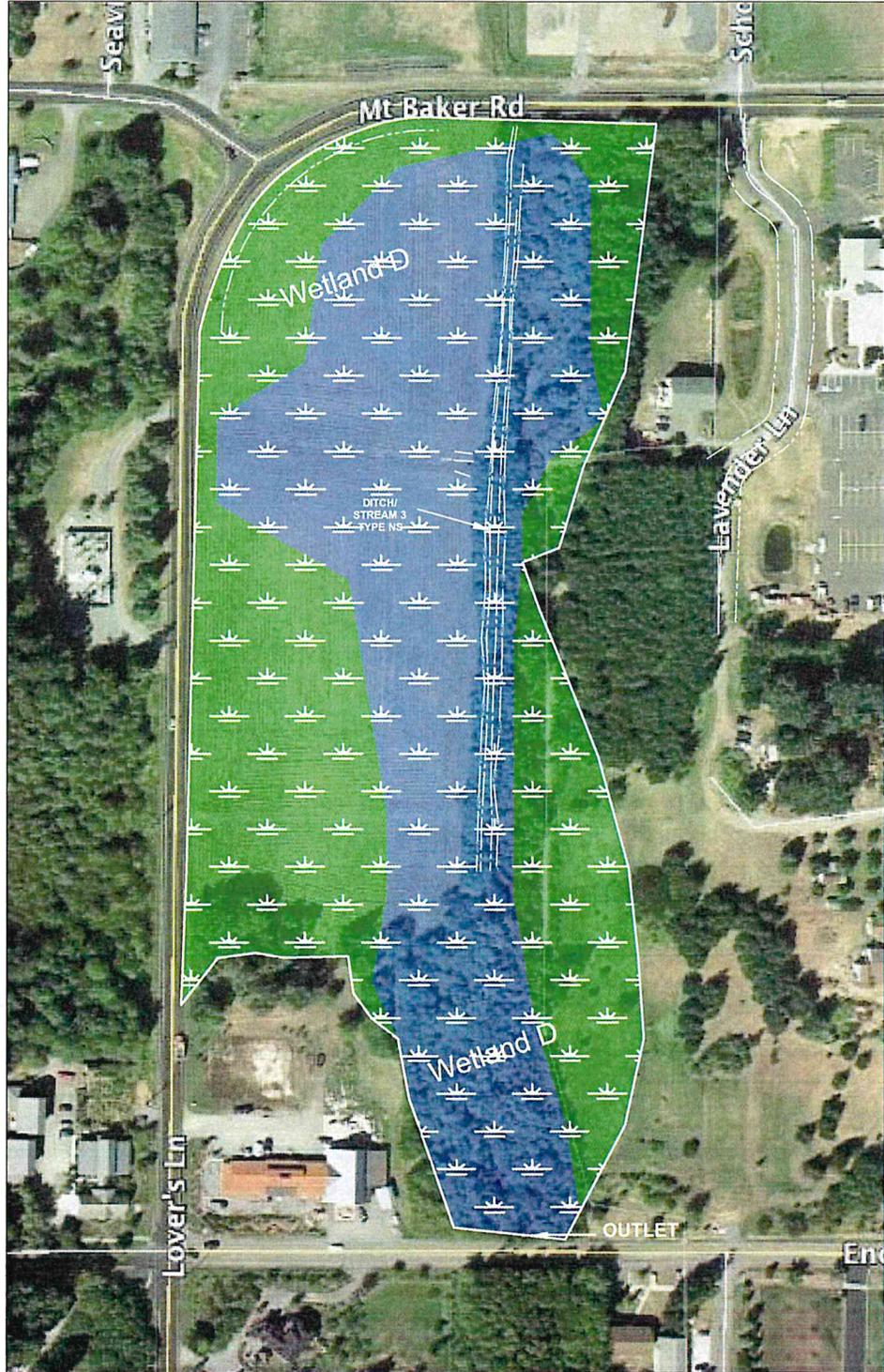
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 Bothell, WA 98011

IN: WRIA 2  
 AT: 147 Schoen Ln, Eastsound, WA 98245  
 COUNTY: San Juan  
 STATE: Washington  
 Figure B1  
 DATE: May 2015

FIGURE B2: Hydroperiods & Ponded Depressions - South Site  
 ORCAS ISLAND AIRPORT  
 Section 11, Township 37N, Range 2W, W.M.  
 Latitude: 48.706192  
 Longitude: -122.907186



-  = Saturated only
-  = Seasonally ponded



**PURPOSE:**  
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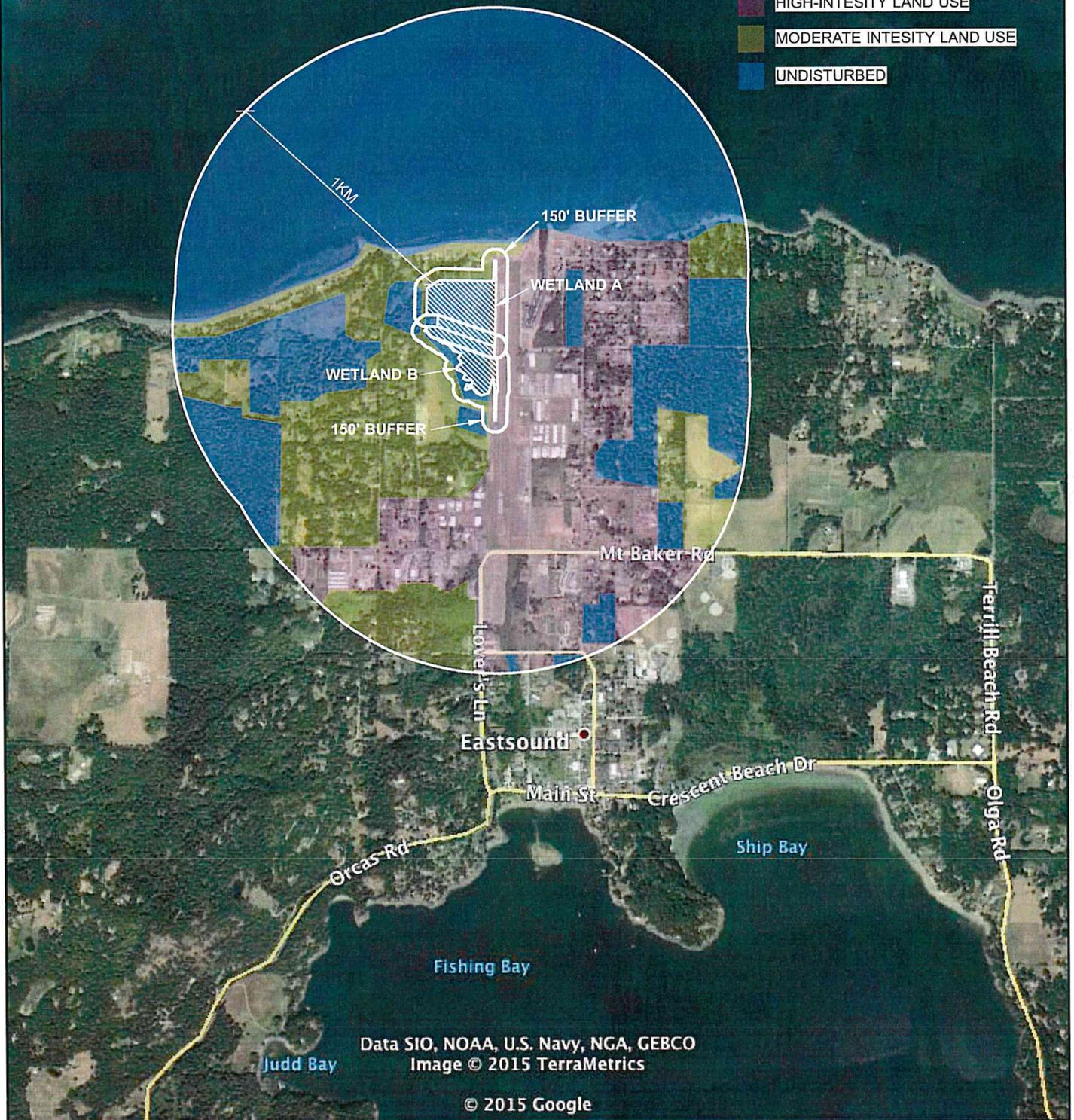
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COUNTY: San Juan  
 STATE: Washington  
 Figure 2  
 DATE: May 2015

FIGURE C1: 1KM POLYGON OF EXISTING LAND USES - WETLANDS A & B  
 ORCAS ISLAND AIRPORT  
 Section 11, Township 37N, Range 2W, W.M.  
 Latitude: 48.706192  
 Longitude: -122.907186

-  WETLAND
-  HIGH-INTENSITY LAND USE
-  MODERATE INTENSITY LAND USE
-  UNDISTURBED



**PURPOSE:**  
 Orcas Island Airport Improvements Project:  
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**DATUM:** NAVD88

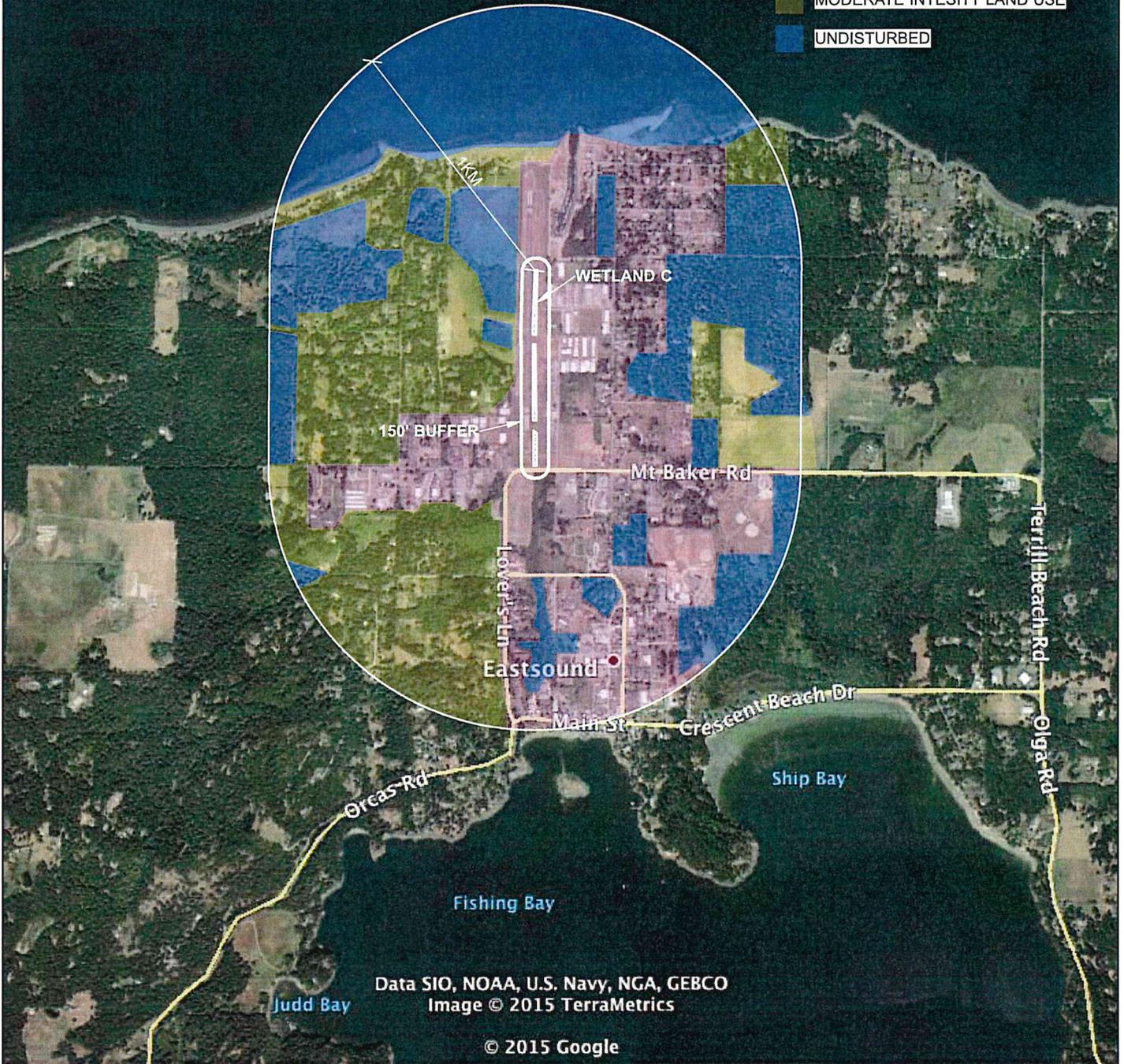
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 12100 NE 195th St., #300  
 Bothell, WA 98011

**IN:** WRIA 2  
 AT: 147 Schoen Ln, Eastsound, WA 98245

**COUNTY:** San Juan  
**STATE:** Washington  
**Figure C1**  
**DATE:** May 2015

FIGURE C2: 1KM POLYGON OF EXISTING LAND USES - WETLAND C  
 ORCAS ISLAND AIRPORT  
 Section 11, Township 37N, Range 2W, W.M.  
 Latitude: 48.706192  
 Longitude: -122.907186

-  WETLAND
-  HIGH-INTENSITY LAND USE
-  MODERATE INTENSITY LAND USE
-  UNDISTURBED



**PURPOSE:**  
 Orcas Island Airport Improvements Project.  
 To improve airport facility, operations and to  
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**DATUM:** NAVD88

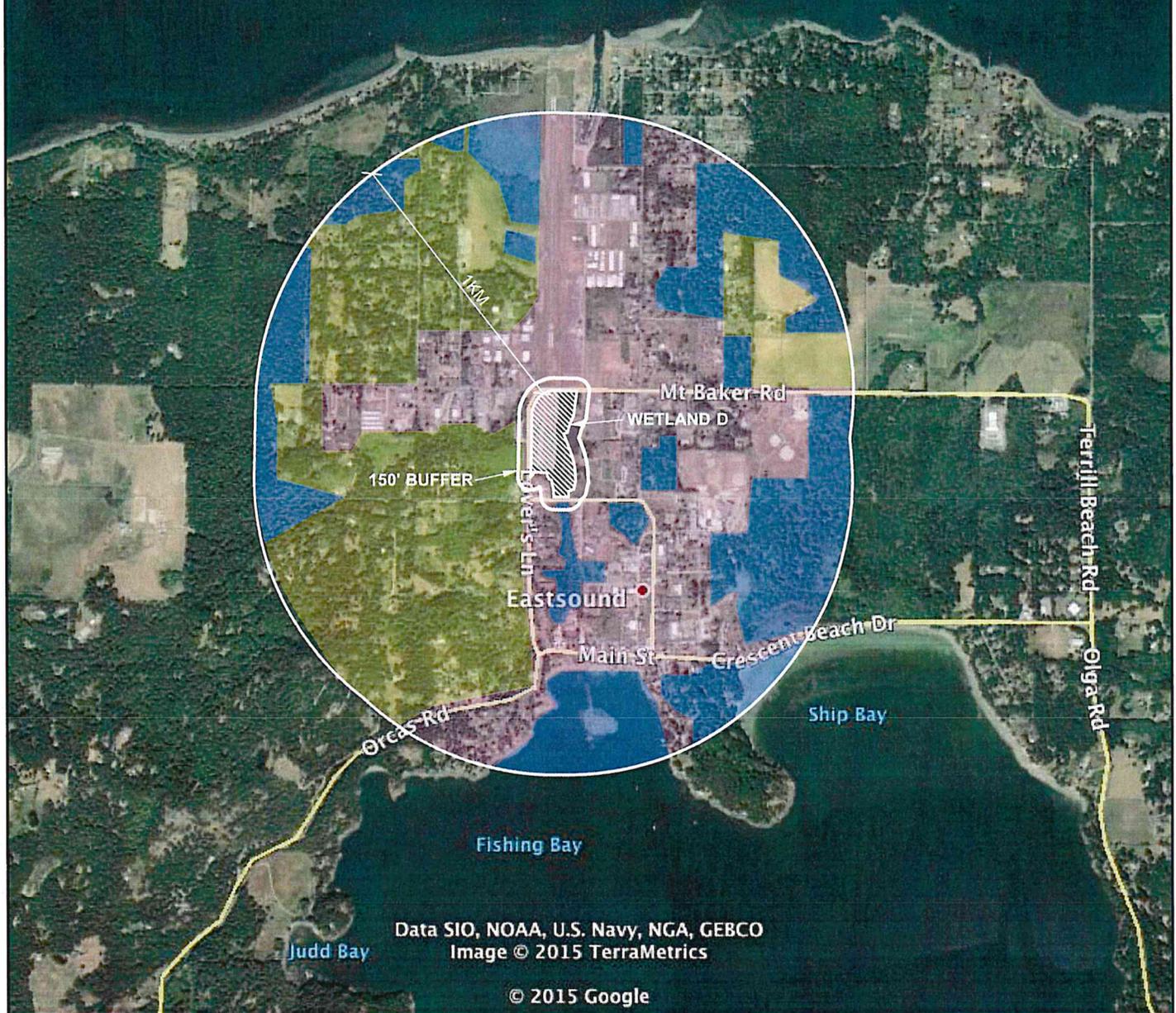
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**IN:** WRIA 2  
 AT: 147 Schoen Ln, Eastsound, WA 98245

**COUNTY:** San Juan  
**STATE:** Washington  
**Figure C2**  
**DATE:** May 2015

FIGURE C3: 1KM POLYGON OF EXISTING LAND USES - WETLAND D  
 ORCAS ISLAND AIRPORT  
 Section 11, Township 37N, Range 2W, W.M.  
 Latitude: 48.706192  
 Longitude: -122.907186

-  WETLAND
-  HIGH-INTENSITY LAND USE
-  MODERATE INTENSITY LAND USE
-  UNDISTURBED



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**IN: WRIA 2**

AT: 147 Schoen Ln, Eastsound, WA 98245

COUNTY: San Juan

STATE: Washington

Figure C3

DATE: May 2015

FIGURE D: Screen Captures of 303(d) Listed Waters & TDMLs  
 ORCAS ISLAND AIRPORT  
 Section 11, Township 37N, Range 2W, W.M.  
 Latitude: 48.706192  
 Longitude: -122.907186

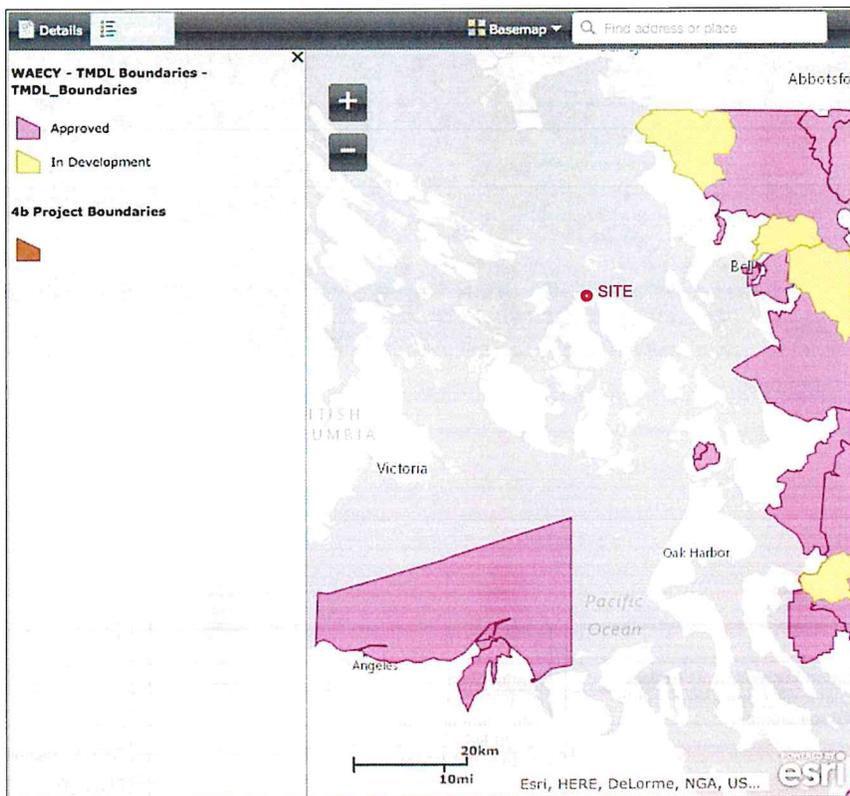
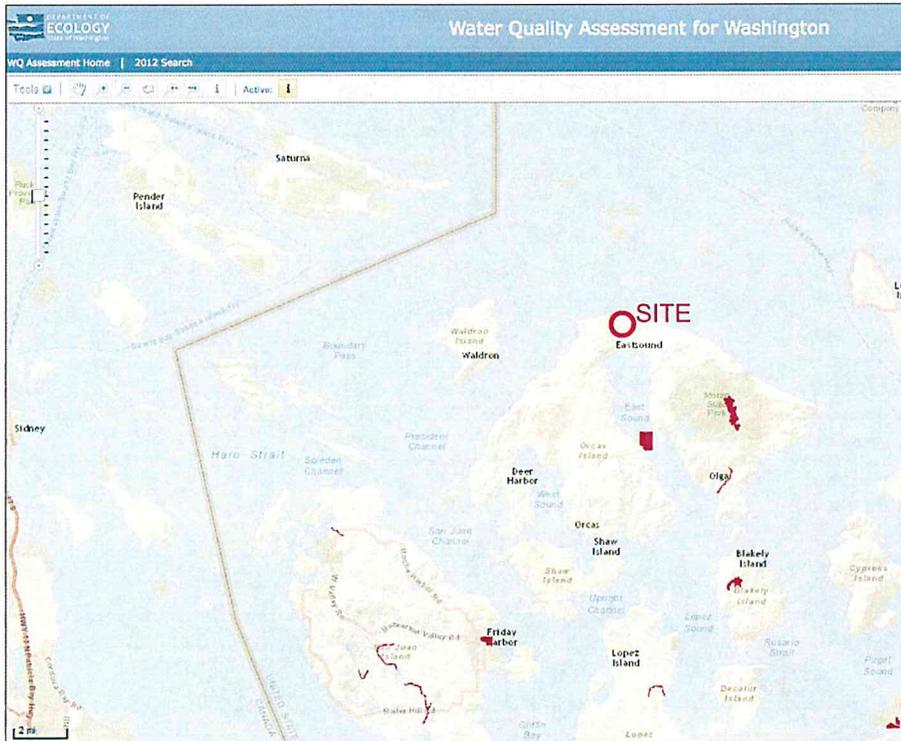
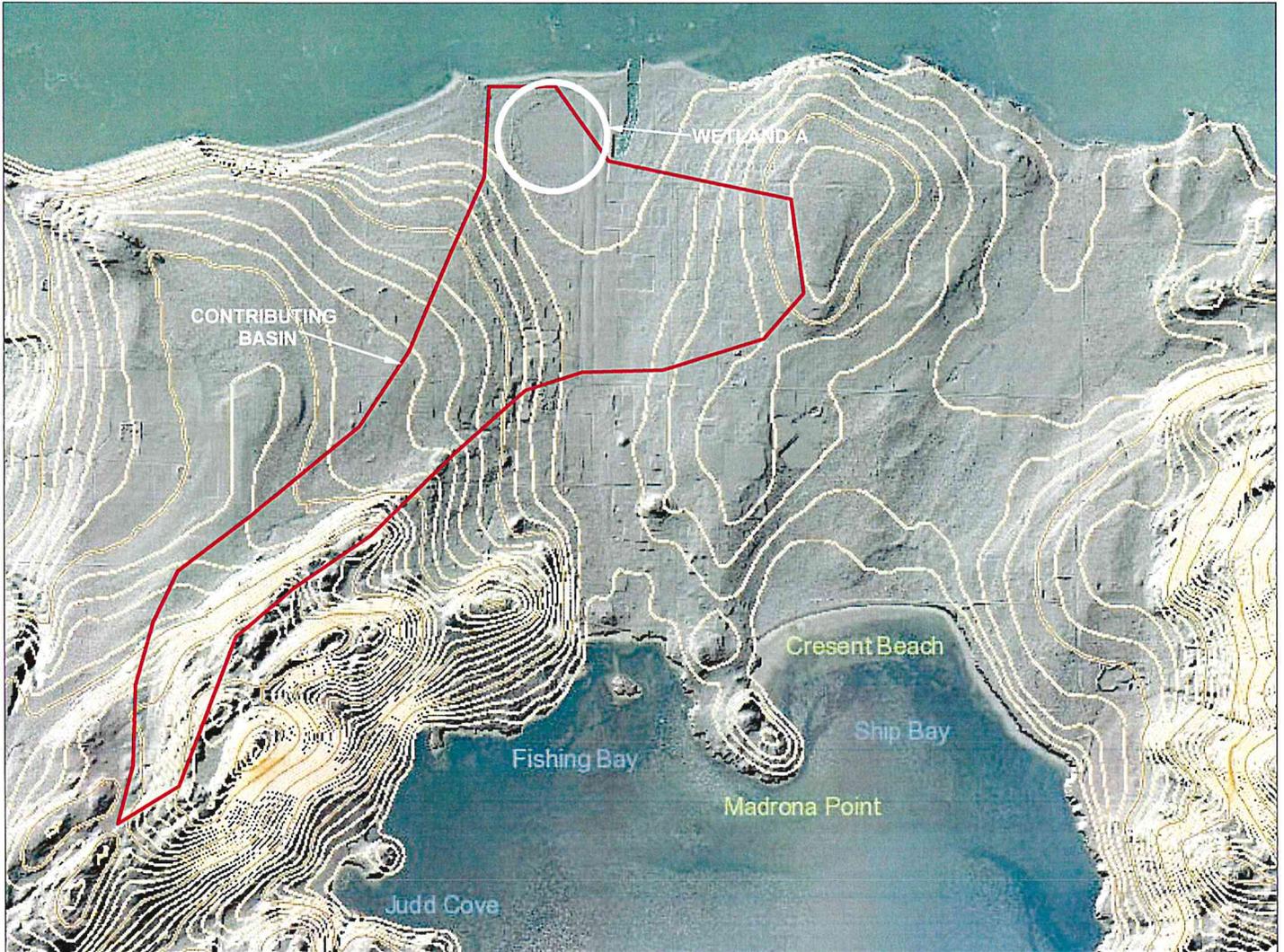


FIGURE E1: CONTRUBUTING BASIN - WETLAND A  
 ORCAS ISLAND AIRPORT  
 Section 11, Township 37N, Range 2W, W.M.  
 Latitude: 48.706192  
 Longitude: -122.907186



**PURPOSE:**  
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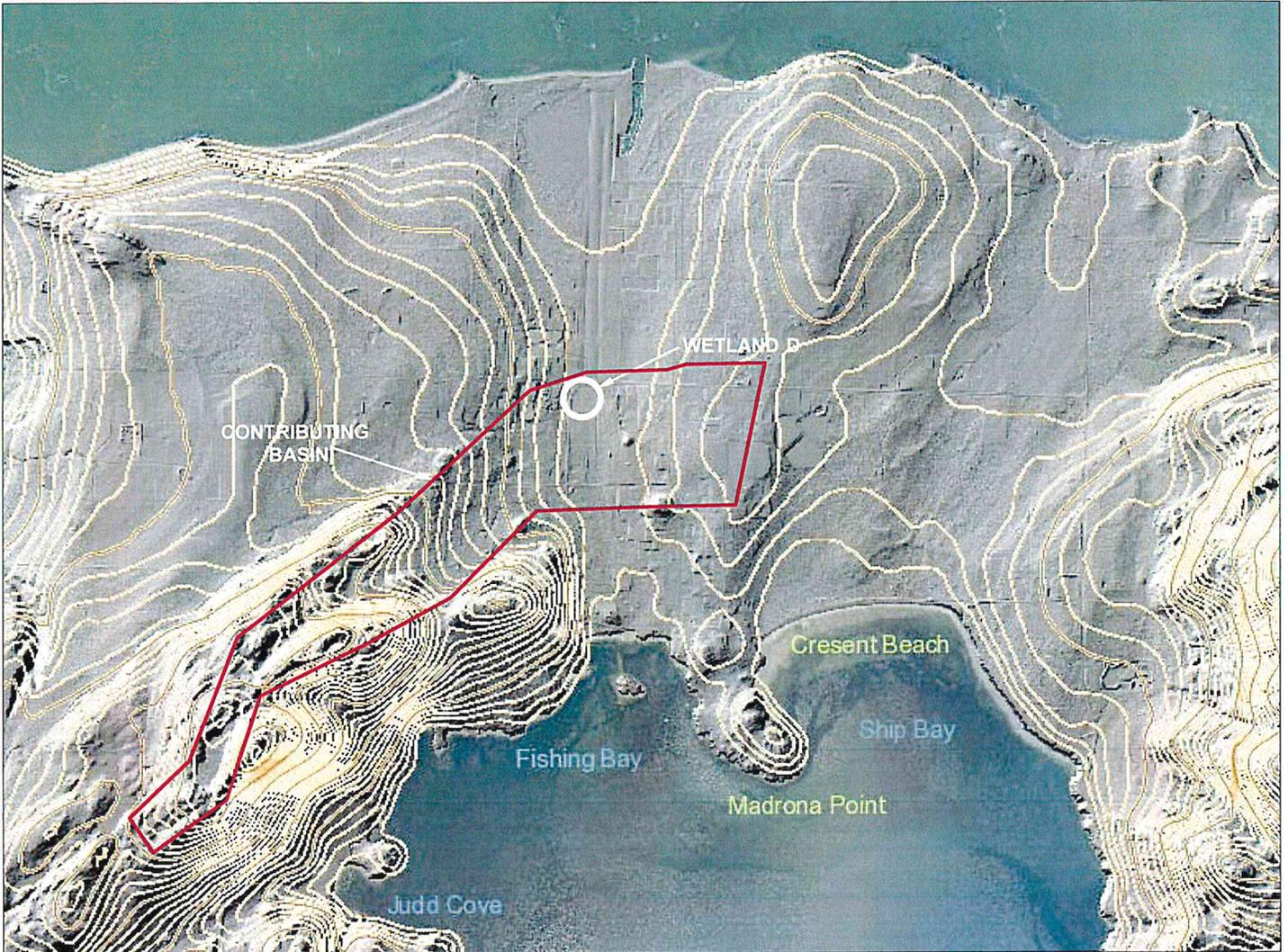
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**IN:** WRIA 2  
 AT: 147 Schoen Ln, Eastsound, WA 98245

**COUNTY:** San Juan  
**STATE:** Washington  
**Figure E1**  
**DATE:** May 2015

FIGURE E2: CONTRUBUTING BASIN - WETLAND A  
ORCAS ISLAND AIRPORT  
Section 11, Township 37N, Range 2W, W.M.  
Latitude: 48.706192  
Longitude: -122.907186



PURPOSE:  
Orcas Island Airport Improvements Project:  
To improve airport facility, operations and to  
comply with FAA requirements.

DATUM: NAVD88

APPLICANT:  
Port of Orcas  
c/o WH Pacific  
Attn: Flannan Tam  
12100 NE 195th St., #300  
Bothell, WA 98011

IN: WRIA 2  
AT: 147 Schoen Ln, Eastsound, WA 98245

COUNTY: San Juan  
STATE: Washington  
Figure E2  
DATE: May 2015



**APPENDIX 3: FIELD DATA SHEETS**

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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 1  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> 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 = _____
_____ = Total Cover				
<b>Sapling/Shrub Stratum</b> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum</b> (Plot size: _____)				
1. <u>Holcus lanatus</u>	<u>95</u>	<u>Y</u>	<u>Fac</u>	
2. <u>Oenanthe sarmentosa</u>	<u>5</u>	<u>N</u>	<u>Obl</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
<b>% Bare Ground in Herb Stratum</b> _____				
Remarks:				

**SOIL**

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	2.5Y 2/1						Salo	Moist
6-8	5Y 4/2		10YR 3/6	5			F. Salo	Moist
8-18+	10YR 3/1						Salo	Moist
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Redox Depressions (F8)					
<b>Restrictive Layer (if present):</b>								
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 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 checked="" 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 checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" 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 checked="" 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)		
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
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: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 2  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> _____
Remarks:	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Holcus lanatus</u>	35	Y	Fac	
2. <u>Trifolium pratense</u>	30	Y	FacU	
3. <u>Poa annua</u>	25	Y	Fac	
4. <u>Agrostis tenuis</u>	10	N	Fac	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100 = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
 Total Number of Dominant Species Across All Strata: 3 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

**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 = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_\_\_ Wetland Non-Vascular Plants<sup>1</sup>  
 \_\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 3  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Juncus effusus</u>	<u>90</u>	<u>Y</u>	<u>FacW</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Holcus lanatus</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	Prevalence Index is ≤3.0 <sup>1</sup>
3. _____	_____	_____	_____	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. _____	_____	_____	_____	_____ Wetland Non-Vascular Plants <sup>1</sup>
5. _____	_____	_____	_____	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 4  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____	

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

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<u>Herb Stratum</u> (Plot size: _____)				
1. <u>Poa annua</u>	70	Y	Fac	
2. <u>Holcus lanatus</u>	10	N	Fac	
3. <u>Trifolium pratense</u>	10	N	FacU	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
90 = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: _____				

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**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 = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Wetland Non-Vascular Plants<sup>1</sup>  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 5  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</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>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Juncus ensifolius</u>	<u>30</u>	<u>Y</u>	<u>FacW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Juncus effusus</u>	<u>30</u>	<u>Y</u>	<u>FacW</u>	
3. <u>Juncus acuminatus</u>	<u>20</u>	<u>Y</u>	<u>Obl</u>	
4. <u>Sisyrinchium californicum</u>	<u>10</u>	<u>N</u>	<u>FacW</u>	
5. <u>Holcus lanatus</u>	<u>10</u>	<u>N</u>	<u>Fac</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 6  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Sisyrinchium californicum</u>	50	Y	FacW	
2. <u>Juncus effusus</u>	20	Y	FacW	
3. <u>Holcus lanatus</u>	15	N	Fac	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
85 = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc. State: WA Sampling Point: 7  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____				
_____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b> 1. <u>Poa annua</u> <u>95</u> <u>Y</u> <u>Fac</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____				
_____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b> 1. _____ 2. _____				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_____ = Total Cover				
<b>% Bare Ground in Herb Stratum</b> _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
Remarks:				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 8  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Holcus lanatus</u>	<u>25</u>	<u>Y</u>	<u>Fac</u>	
2. <u>Poa annua</u>	<u>20</u>	<u>Y</u>	<u>Fac</u>	
3. <u>Juncus effusus</u>	<u>20</u>	<u>Y</u>	<u>FacW</u>	
4. <u>Sisyrinchium californicum</u>	<u>20</u>	<u>Y</u>	<u>FacW</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>85</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 9  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
_____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Holcus lanatus</u>	25	Y	Fac	
2. <u>Poa annua</u>	20	Y	Fac	
3. <u>Juncus effusus</u>	20	Y	FacW	
4. <u>Sisyrinchium californicum</u>	20	Y	FacW	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
85 = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 10  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____ _____ _____	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> 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 = _____
_____ = Total Cover				
<b>Sapling/Shrub Stratum</b> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_____ = Total Cover				
<b>Herb Stratum</b> (Plot size: _____)				
1. <u>Phalaris arundinacea</u>	<u>90</u>	<u>Y</u>	<u>FacW</u>	
2. <u>Carex obnupta</u>	<u>5</u>	<u>N</u>	<u>Obl</u>	
3. <u>Poa annua</u>	<u>5</u>	<u>N</u>	<u>Fac</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
<b>Woody Vine Stratum</b> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
<b>% Bare Ground in Herb Stratum</b> _____				
Remarks: _____ _____ _____				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc. State: WA Sampling Point: 11  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> _____
Remarks: _____ _____ _____	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Poa pratensis</u>	90	Y	Fac	
2. <u>Dactylis glomerata</u>	5	N	FacU	
3. <u>Agrostis tenuis</u>	5	N	Fac	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100 = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: _____				

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**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 = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Wetland Non-Vascular Plants<sup>1</sup>  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 12  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____ _____ _____	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Holcus lanatus</u>	70	Y	Fac	
2. <u>Oenanthe sarmentosa</u>	20	Y	Obl	
3. <u>Juncus effusus</u>	10	N	FacW	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100 = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
 Total Number of Dominant Species Across All Strata: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**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 = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_\_\_ Wetland Non-Vascular Plants<sup>1</sup>  
 \_\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 13  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Poa annua</u>	70	Y	Fac	
2. <u>Trifolium pratense</u>	25	Y	FacU	
3. <u>Taraxacum officinale</u>	5	N	FacU	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
100 = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: _____				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
Remarks: _____				<b>Prevalence Index worksheet:</b> 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 = _____
Remarks: _____				<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Remarks: _____				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 14  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Poa annua</u>	<u>80</u>	<u>Y</u>	<u>Fac</u>	
2. <u>Trifolium pratense</u>	<u>5</u>	<u>N</u>	<u>FacU</u>	
3. <u>Holcus lanatus</u>	<u>5</u>	<u>N</u>	<u>Fac</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>90</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 15  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b> 1. <u>Juncus ensifolius</u> 35 Y FacW 2. <u>Juncus effusus</u> 20 Y FacW 3. <u>Carex obnupta</u> 15 N Obl 4. <u>Holcus lanatus</u> 10 N Fac 5. <u>Sisyrinchium californicum</u> 5 N FacW 6. <u>Poa annua</u> 5 N Fac 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ _____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b> 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 16  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> _____
Remarks: _____ _____ _____	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> 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 = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Poa annua</u>	<u>80</u>	<u>Y</u>	<u>Fac</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Trifolium pratense</u>	<u>5</u>	<u>N</u>	<u>FacU</u>	
3. <u>Holcus lanatus</u>	<u>5</u>	<u>N</u>	<u>Fac</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>90</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: _____ _____ _____				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc. State: WA Sampling Point: 17  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> _____
Remarks: _____ _____ _____	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> 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 = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Poa annua</u>	<u>80</u>	<u>Y</u>	<u>Fac</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Trifolium pratense</u>	<u>5</u>	<u>N</u>	<u>FacU</u>	
3. <u>Holcus lanatus</u>	<u>5</u>	<u>N</u>	<u>Fac</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>90</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: _____ _____ _____				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 18  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____ _____ _____	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Juncus ensifolius</u>	35	Y	FacW	
2. <u>Juncus effusus</u>	20	Y	FacW	
3. <u>Carex obnupta</u>	15	N	Obl	
4. <u>Holcus lanatus</u>	10	N	Fac	
5. <u>Sisyrinchium californicum</u>	5	N	FacW	
6. <u>Poa annua</u>	5	N	Fac	
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
90 = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: _____				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
				<b>Prevalence Index worksheet:</b> 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 = _____
				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 19  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 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 _____ No <input checked="" type="checkbox"/>
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> 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 = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Poa annua</u>	<u>80</u>	<u>Y</u>	<u>Fac</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Trifolium pratense</u>	<u>5</u>	<u>N</u>	<u>FacU</u>	
3. <u>Holcus lanatus</u>	<u>5</u>	<u>N</u>	<u>Fac</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 20  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____ _____ _____	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</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>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> 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				
Herb Stratum (Plot size: _____)	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Juncus ensifolius</u>	<u>30</u>	<u>Y</u>	<u>FacW</u>	
2. <u>Juncus effusus</u>	<u>30</u>	<u>Y</u>	<u>FacW</u>	
3. <u>Juncus acuminatus</u>	<u>20</u>	<u>Y</u>	<u>Obl</u>	
4. <u>Sisyrinchium californicum</u>	<u>10</u>	<u>N</u>	<u>FacW</u>	
5. <u>Holcus lanatus</u>	<u>10</u>	<u>N</u>	<u>Fac</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: _____ _____ _____				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 11/8/13  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 21  
 Investigator(s): A. Bachman & S. Brainard Section, Township, Range: S11, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____ _____ _____	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> 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 = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Poa annua</u>	<u>70</u>	<u>Y</u>	<u>Fac</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Holcus lanatus</u>	<u>10</u>	<u>N</u>	<u>Fac</u>	
3. <u>Trifolium pratense</u>	<u>10</u>	<u>N</u>	<u>FacU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>90</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: _____ _____ _____				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 6/3/14  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 22  
 Investigator(s): A. Bachman Section, Township, Range: S14, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____	

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

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>
1. <u>Pseudotsuga menziesii</u>	25	Y	FacU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>8</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20</u> (A/B)
2. <u>Crataegus douglasii</u>	20	Y	Fac	
3. _____				
4. _____				
	45	= Total Cover		<b>Prevalence Index worksheet:</b> <u>Total % Cover of:</u> _____ <u>Multiply by:</u> _____ 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>Sapling/Shrub Stratum</u> (Plot size: _____)				
1. <u>Cytisus scoparius</u>	10	Y	Upl	
2. <u>Rubus armeniucus</u>	10	Y	FacU	
3. <u>Symphoricarpus albus</u>	10	Y	FacU	
4. <u>Ilex aquifolium</u>	5	N	FacU	
5. _____				
	35	= Total Cover		
<u>Herb Stratum</u> (Plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Wetland Non-Vascular Plants <sup>1</sup> ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Festuca arundinacea</u>	25	Y	FacU	
2. <u>Dactylis glomerata</u>	15	Y	FacU	
3. <u>Holcus lanatus</u>	10	Y	Fac	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	50	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: _____)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
1. _____				
2. _____				
% Bare Ground in Herb Stratum _____				
Remarks: _____				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 6/3/14  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 23  
 Investigator(s): A. Bachman Section, Township, Range: S14, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: _____	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Alnus rubra</u>	<u>30</u>	<u>Y</u>	<u>Fac</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</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>80</u> (A/B)
2. <u>Crataegus douglasii</u>	<u>10</u>	<u>Y</u>	<u>Fac</u>	
3. _____				
4. _____				
	<u>40</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				<b>Prevalence Index worksheet:</b> 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 = _____
1. <u>Rubus armeniacus</u>	<u>5</u>	<u>Y</u>	<u>FacU</u>	
2. _____				
3. _____				
4. _____				
	<u>5</u>	= Total Cover		
Herb Stratum (Plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Wetland Non-Vascular Plants <sup>1</sup> ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Equicetum arvense</u>	<u>30</u>	<u>Y</u>	<u>Fac</u>	
2. <u>Carex obnupta</u>	<u>15</u>	<u>Y</u>	<u>Obl</u>	
3. <u>Agrostis gigantia</u>	<u>10</u>	<u>N</u>	<u>Fac</u>	
4. <u>Juncus effusus</u>	<u>10</u>	<u>N</u>	<u>FacW</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	<u>55</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
1. _____				
2. _____				
% Bare Ground in Herb Stratum _____				
Remarks: _____				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 6/3/14  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 24  
 Investigator(s): A. Bachman Section, Township, Range: S14, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				<b>Prevalence Index worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot size: _____)</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
<b>Herb Stratum (Plot size: _____)</b> 1. <u>Juncus acuminatus</u> 30 Y FacW 2. <u>Alopecurus pratensis</u> 25 Y FacW 3. <u>Agrostis gigantea</u> 15 N Fac 4. <u>Juncus effusus</u> 10 N FacW 5. <u>Carex obnupta</u> 10 N Obl 6. <u>Holcus lanatus</u> 10 N Fac 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ _____ = Total Cover				
<b>Woody Vine Stratum (Plot size: _____)</b> 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				<b>Hydrophytic Vegetation Indicators:</b> ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 <sup>1</sup> ___ Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Wetland Non-Vascular Plants <sup>1</sup> ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 6/3/14  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 25  
 Investigator(s): A. Bachman Section, Township, Range: S14, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Alnus rubra</u>	30	Y	Fac	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. <u>Crataegus douglasii</u>	25	Y	Fac	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				
	55	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. <u>Rosa nutkana</u>	35	Y	Fac	Total % Cover of: _____ Multiply by: _____
2. <u>Rubus armeniacus</u>	10	N	FacU	OBL species _____ x 1 = _____
3. <u>Rubus laciniatus</u>	5	N	FacU	FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
	50	= Total Cover		UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators:
1. <u>Carex obnupta</u>	60	Y	Obl	____ Dominance Test is >50%
2. _____				Prevalence Index is ≤3.0 <sup>1</sup>
3. _____				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. _____				____ Wetland Non-Vascular Plants <sup>1</sup>
5. _____				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present?
1. _____				Yes <input checked="" type="checkbox"/> No _____
2. _____				
% Bare Ground in Herb Stratum _____				
Remarks:				



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

Project/Site: Orcas Island Airport City/County: San Juan County Sampling Date: 6/3/14  
 Applicant/Owner: Orcas Island Airport (c/o WH Pacific, Inc.) State: WA Sampling Point: 26  
 Investigator(s): A. Bachman Section, Township, Range: S14, T37N, R2W  
 Landform (hillslope, terrace, etc.): Drainageways Local relief (concave, convex, none): Concave Slope (%): 0-5  
 Subregion (LRR): LRR-A Lat: 48°42'17.96"N Long: 122°54'33.06"W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Sholander-Spieden complex, 0 to 5 percent slopes 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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: _____	

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Pseudotsuga menziesii</u>	80	Y	FacU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. <u>Crataegus douglasii</u>	10	N	Fac	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				
	90	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. <u>Rubus armeniacus</u>	20	Y	FacU	Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
	20	= Total Cover		UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators:
1. _____				___ Dominance Test is >50%
2. _____				Prevalence Index is ≤3.0 <sup>1</sup>
3. _____				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. _____				___ Wetland Non-Vascular Plants <sup>1</sup>
5. _____				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
6. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present?
1. _____				Yes _____ No <input checked="" type="checkbox"/>
2. _____				
% Bare Ground in Herb Stratum _____				
Remarks: _____				



