CRITICAL AREAS REPORT

& MITIGATION PLAN

Project:

The Landing at Green Mountain – Phase II

Applicant:

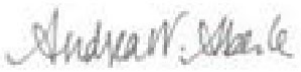
Pacific Lifestyle Homes
11815 NE 99th Street,
Vancouver WA, 98682

Prepared By:

Ash ECO SOLUTIONS, LLC

July 1, 2025

The information in this report was compiled to meet the requirements of the City of Camas Municipal Code (CMC) Sections 16.53 Wetlands and 16.61 Fish and Wildlife Habitat Conservation Areas. This report has been prepared under the supervision and direction of the undersigned, a qualified professional following CMC Section 16.61.020.A.



Andrea W. Aberle, Sr. Biologist
AshEco Solutions, LLC

SITE INFORMATION:

Parcel No(s):	173177000
Acreage:	4.83 acres
Local Jurisdiction:	City of Camas, Washington
Section/Township/Range:	SW¼, S21, T2N, R3E, W.M.
Site Address:	22111 NE 28th Street Camas, WA 98607
Legal Landowner:	Emmert Family III LLC *(Per Current GIS Parcel Info)*

Parcel No(s):	173210000
Acreage:	4.91 acres
Local Jurisdiction:	City of Camas, Washington
Section/Township/Range:	SW¼, S21, T2N, R3E, W.M.
Site Address:	22015 NE 28th Street Camas, WA 98607
Legal Landowner:	Linda Middagh *(Per Current GIS Parcel Info)*

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INTRODUCTION

Project Description

AshEco Solutions, LLC (AES) was contracted by Pacific Lifestyle Homes (PLH) to assess the potential critical areas located within a study area comprised of two subject parcels and areas immediately offsite to the south. This Critical Areas Report and Buffer Plan follows the City of Camas Municipal Code (CMC) Sections 16.53 Wetlands and 16.61 Fish and Wildlife Habitat Conservation Areas. PLH proposes construction of a residential subdivision within two parcels of land totaling 9.74-acres. The existing single-family residences located near NE 28th Avenue will remain and are not part of the proposed project.

Project Location and Background Information

The study area consists of two subject parcels addressed as 22111 NE 28th Street and 22015 NE 28th Street, Camas, Washington (Figure 1). The parcels are under the jurisdiction of the City of Camas and are assigned Parcel Numbers 173177000 and 173210000. East of the subject parcels is The Landing at Green Mountain – Phase I residential subdivision. To the west are large lot residential properties. To the north , north of NE 28th are urban residential lots and south of the property is forest park land owned by Clark County.

EXISTING CONDITIONS

The topography onsite and within the vicinity of the study area, slopes in elevation from the highest point along NE 28th Street in the north to the south/southwest. Seasonal hydrology ultimately flows offsite and southwest to the valley floor to the Lacamas Creek corridor. A maintained overhead BPA powerline easement that is 100 feet in width bisects the study area diagonally east/west.

Since at least the 1970s both subject parcels within the study area have had single-family residential use in the north and agricultural uses in the central and southern areas. The study area is generally dominated by open pasture areas with scattered native and non-native trees. Little native understory exists within the bulk of the study area due to a history of grazing of the open pastures and maintained lawn present surrounding the residences. Trees that are concentrated within the study area are located in the vicinity of the southern parcel boundaries, adjacent to forest land owned by Clark County. It should be noted that a series of trails and a maintained access/logging road is present to the south on the county property with connection ultimately south to Lacamas Lake and Camp Currie park lands.

CRITICAL AREAS MAP RESEARCH

Topography

The localized topography as depicted by Clark County GIS generally depicts a south facing slope on a terrace above the Lacamas Creek valley. The topography elevation contours mapped indicate that elevations drop approximately 50 feet from the highest elevation near NE 28th Street in the north to the lowest elevation in the southwest corner of Parcel 173210000 (Figure 2).

Soil Survey

Soils within the subject parcel are mapped by the NRCS USDA Soil Conservation Service, Soil Survey of Clark County Washington (1972), as Lauren gravelly loam, 0 to 8 percent slopes (LgB), Lauren loam, 0 to 8 percent slopes (LeB), and McBee silt loam, 0 to 3 percent slopes (MIA) (Figure 3).

The Lauren series consists of deep, somewhat excessively drained, nearly level to gently sloping soils on terraces 50 to 300 feet above the Columbia River. In a few places, on terrace fronts, the soils are steep to very steep. These are very gravelly soils that formed in mixed Columbia River alluvium that contained some

volcanic ash. Typically, native vegetation occurring within this soil series is comprised Douglas-fir, grand fir, bigleaf maple, vine maple, salal, and ferns.

Lauren gravelly loam, 0 to 8 percent slopes (LgB) occurs on terraces. The slopes are generally less than 4 percent and approach 8 percent only along the terrace breaks. In a typical profile the surface layer is very dark brown gravelly and very gravelly loam about 20-inches thick. Below the surface layer is friable, dark- brown very gravelly loam about 13-inches thick. The next layer is dark-brown very gravelly coarse sandy loam about 11-inches thick. The underlying material, to a depth of 70-inches, is dark-brown very gravelly loamy coarse sand. Included in mapping were a few small areas where very gravelly loamy coarse sand is within 30-inches of the surface. Permeability generally is moderately rapid, but it is rapid in the substratum. The available water capacity is moderate. Surface runoff is slow, and the erosion hazard is slight. The LgB soil type is not listed on the Washington State Hydric Soils List for Clark County (NRCS 2022).

Lauren loam, 0 to 8 percent slopes (LeB) is similar to Lauren gravelly loam, 0 to 8 percent slopes, except that the surface layer is free of gravel. Surface runoff is slow, and the erosion hazard is slight. Included in mapping were a few small gravelly areas. The LeB soil type is not listed on the Washington State Hydric Soils List for Clark County (NRCS 2022).

The McBee series consists of deep, somewhat poorly drained and moderately well drained, nearly level to gently sloping soils. These are loamy soils in back-bottom positions along streams and rivers. They formed in alluvium derived from quartzite and basalt. Typically, native vegetation is western redcedar, hemlock, vine maple, red alder, Oregon ash, wild rose, spirea, willow, blackberry, grasses, and sedges.

McBee silt loam, 0 to 3 percent slopes (MlA), occurs in drainageways and depressions, and in most places the slope is less than 1 percent. In a typical profile the surface layer is mottled, very dark brown silt loam about 11 inches thick. Below the surface layer is friable, mottled, dark-brown heavy loam about 8 inches thick. The next layer, to a depth of 44 inches, is mottled, very dark grayish-brown gravelly sandy loam. Below this, to a depth of 62 inches, is dark-brown very gravelly loamy sand. Typically, there is no erosion hazard with this soil type. This soil is somewhat poorly drained, surface runoff is very slow, with water standing on the surface much of the winter in undrained areas. The MlA soil type is listed on the Washington State Hydric Soils List for Clark County (NRCS 2022).

Mapped hydric soils do not necessarily mean that the area is a wetland; hydrology and wetland vegetation must be present to classify an area as a wetland. The same is true for soils that are not mapped as hydric. Wetlands can be found in areas without mapped hydric soils.

Wetlands

Clark County GIS Maps Online does not map wetland presence within the study area, nor does the National Wetland Inventory (NWI) (Figure 3). AshEco Solutions (AES) reconnaissance of the subject parcels confirmed that wetlands are not located within the subject parcels as indicated by Clark County GIS and NWI mapping.

WDFW Priority Habitat

Clark County GIS and the Washington Department of Fish and Wildlife (WDFW) map individual Oregon white oak trees within and adjacent to the subject parcels (Figures 4 and 5). AES identified three individual Oregon white oak trees onsite, one within the far northeast corner of the study area and two in the far southeast corner (Figure 6).

WDFW also indicates that “Cave or Cave-rich Areas” occur within the general area surrounding the subject

parcels, though no evidence of caves or rock outcroppings were identified onsite by AES during site reconnaissance.

METHODOLOGY

Wetlands

The study area and immediate offsite vicinity was evaluated for the presence of wetlands using the Routine Determination Method per the U.S. Army Corps of Engineers' (USACE's) *Wetland Delineation Manual* (1987), the *Washington State Wetlands Identification and Delineation Manual* (1997), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region, Version 2.0* (USACE 2010). The Routine Determination Method examines three parameters to determine if wetlands exist in a given area: vegetation, hydrology, and soils. The presence of hydrology is critical in identifying wetlands; however, since hydrologic conditions can change periodically (hourly, daily, or seasonally), it is necessary to determine if hydrophytic vegetation and hydric soils are also present. By definition, wetlands are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are regulated as "Waters of the United States" by the USACE, "Waters of the State" by Washington State Department of Ecology (ECY), and locally by CMC section 16.53 Wetlands.

AES did not identify wetlands within the study area. However, AES did perform reconnaissance offsite from the southern study area limits (for this project and an adjacent project) and identified a forested wetland unit (Potential Wetland #3) offsite to the southwest. Using aerial imagery AES approximated two additional offsite wetlands west of the site (Figure 6). These approximate wetland limits are presented by this report following CMC 16.53.030(B)(2).

WDFW Priority Habitat

The WDFW PHS system maps individual Oregon white oak trees onsite and adjacent to the eastern subject parcel. AES inventoried the Oregon white oaks present onsite.

WDFW defines Oregon white oak Priority Habitat as; Oregon White Oak Woodlands are "*stands of oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%; or where total canopy coverage of the stand is <25%, but oak accounts for at least 50% of the canopy coverage. The latter is often referred to as oak savanna. In non-urbanized areas west of the Cascades, priority oak habitat consists of stands > 0.4 ha (1.0 ac) in size. East of the Cascades, priority oak habitat consists of stands > 2 ha (5 ac) in size. In urban or urbanizing areas, single oaks or stands < 0.4 ha (1 ac) may also be considered a priority when found to be particularly valuable to fish and wildlife (i.e., they contain many cavities, have a large diameter at breast height [dbh]* (generally 20-inches dbh and greater)*, are used by priority species, or have a large canopy). Oak woodlands in western Washington may contain understory plants indicative of Prairie*."

Individual Oregon white oak trees meeting the above definition were identified within or immediately adjacent to the subject parcel (Figure 6). The subject site is within an incorporated city and is urban, therefore the individual Oregon white oak trees are considered Priority Habitat by WDFW. The project does not propose impacts to the onsite oaks, as the project has been designed to retain all onsite oaks (Figure 6).

The WDFW PHS system maps "Cave or Cave-rich Areas" present in areas surrounding the subject parcel (Figure 5).

WDFW defines Caves as, *"A naturally occurring cavity, recess, void, or system of interconnected passages (including associated dendritic tubes, cracks, and fissures) which occurs under the earth in soils, rock, ice, or other geological formations, and is large enough to contain a human. Mine shafts (a human-made excavation in the earth usually used to extract minerals) may mimic caves and abandoned mine shafts with actual or suspected occurrences of priority species should be treated in a manner similar to caves."*

No caves or rock outcroppings meeting the above definition were identified within the study area or immediately offsite.

Habitats of Local Importance
Following CMC Chapter 16.61 - Fish And Wildlife Habitat Conservation Areas, Section: 16.61.010.A.3.a, individual Oregon white oak trees with a twenty-inch diameter at breast height (20-inches dbh), stands of Oregon white oak trees greater than one acre when they are found to be valuable to fish and wildlife (i.e., may include trees with cavities, large diameter breast height, are used by priority species, or have a large canopy), and all Oregon white oak snags unless determined by an arborist to be a hazard, are considered Habitats of Local Importance and therefore are regulated by CMC.

DOCUMENTED VEGETATION

The vegetation onsite has been disturbed by equestrian use and historic mowing activities, with non-native and invasive grasses and herbs dominate throughout areas historically grazed within the northern and central sections of the parcel. A few individual scattered trees are present onsite including Douglas-fir (*Pseudotsuga menzisii,* FACU) and Oregon white oak (*Quercus garryana* ,FACU).

South of the subject parcel is a forested wetland mosaic area owned by Clark County. This area is much more biologically diverse and slightly overlaps with onsite areas along the southern parcel boundary and corners. Upland vegetation identified in this area includes Douglas-fir (*Pseudotsuga menzisii* FACU), Oregon white oak (*Quercus garryana* FACU), and Oregon ash (*Fraxinus latifolia* FACW) in the overstory with vine maple (*Acer circinatum* FAC), beaked hazelnut (*Corylus cornuta* FACU), snowberry (*Symphoricarpos albus* FACU), red osier dogwood (*Cornus sericea* FACW), trailing blackberry (*Rubus ursinus* FACU) and salmonberry (*Rubus spectabilis* FAC) in the shrub stratum and sword fern (*Polystichum munitum* FACU), piggy-back plant (*Tolmiea menzisii* FAC), lanceleaf spring beauty (*Claytonia lanceolata* FAC), dovefoot geranium (*Geranium mole* FACU), large leaf avens (*Geum macrophyllum* FACW), and slough sedge (*Carex obnupta* OBL) in the herbaceous stratum.

The indicator categories following the common and scientific name of each vegetation species indicate the likelihood of the species to be found in wetlands. Listed from most-likely to least-likely to be found in wetlands, the indicator categories are:

- **OBL (obligate wetland) –** Occur almost always under natural conditions in wetlands.
- **FACW (facultative wetland) –** Usually occur in wetlands but occasionally found in non-wetlands.
- **FAC (facultative) –** Equally likely to occur in wetlands or non-wetlands.
- **FACU (facultative upland) –** Usually occur in non-wetlands but occasionally found in wetlands.
- **UPL (obligate upland) –** Occur almost always under natural conditions in non-wetlands.
- **NI (no indicator) –** Insufficient data to assign to an indicator category.

CRITICAL AREA CONCLUSIONS

Wetlands

Offsite wetland reconnaissance by AES identified a high-quality forested wetland (potential wetland #3) offsite and southwest of the study area (Figure 6). Potential wetland #3 was rated under the Depressional Hydrogeomorphic Classification (HGM) and is considered a Category II wetland scoring high for habitat functions with a score of 8 (Appendix B). Potential wetland #3 has both slope and depressional HGM features. Under the Washington wetland rating system, wetlands with both slope and depressional features are rated under the depressional HGM classification. This high functioning wetland will require a buffer width that will encroach into the study area, thus it is the focus wetland for this report. See Wetland Buffer information presented below.

Using aerial imagery, AES approximated the boundaries of two potential offsite wetlands located west of the site (Figure 6). The offsite potential wetland (#1) west of the study area western boundary was rated under the Depressional HGM classification as it appears to consist of a shallow depressional area located on a gentle slope. The offsite potential wetland (2) was also rated under the Depressional HGM as it appears to consist of a depressional pond area. Both offsite potential wetlands resulted in Category III wetland ratings with low habitat function scores of 3 (Figure 6 and Appendix B). These wetlands will not require large buffers that will encroach into the study area.

Wetland Buffers

Under the Camas Municipal Code (CMC), wetland buffer widths are established by comparing the wetland rating habitat function score and overall category, and the intensity of proposed land use. Under CMC Table 16.53.040-4 residential use with density higher than 1-unit per acre is considered High Land Use Intensity (LUI). The proposed single family residential subdivision will match the current zoning, Single-Family Residential (R-7.5) of the subject parcels comprising a total of 9.74 acres. The proposed density of the subdivision meets the definition of High LUI under the CMC. Under CMC Table 16.53.040-2, Category II wetlands with a habitat function score of 8 adjacent to proposed High LUI require 260-foot buffers, 195-foot buffers for Moderate LUI, and 130-foot buffers for Low LUI. Under CMC Table 16.53.040-1, Category III wetlands with a habitat function score of 3 adjacent to proposed High LUI require 80-foot buffers.

The 260-foot buffer of the potential offsite wetland #3 encroaches over the southwestern corner of the site. The 80-foot buffer for the Category III wetlands offsite to the west (#1 and #2) will not encroach over the western boundary of the subject parcel (Figure 6).

WDFW Priority Habitat

A total of five individual Oregon white trees were identified onsite, four of them meeting the jurisdictional criteria (Figure 6, Table 3). Oregon white oaks are protected by WDFW and also jurisdictional under the local CMC habitat code. The understory and herbaceous layer associated with the onsite oak habitat is highly disturbed due to cattle grazing, mowing and areas dominated by Himalayan blackberry. The project has been designed to avoid and retain three of the four jurisdictional Oregon white oaks onsite (Figure 6).

Table 1. Critical Areas Summary.

Critical Area	Buffer Width
Offsite Wetland #3 Category II Wetland (Habitat Score: 8)	260 ft = High LUI Buffer
Individual Oregon White Oak Habitat	N/A *(See Table 3 for Oak Habitat Summary)*

WETLAND BUFFER MITIGATION PLAN

The buffer mitigation plan was developed following Camas Municipal Code CMC) Sections 16.53 Wetlands to offset the project impacts proposed and allow for no net loss of habitat functions onsite. The construction of this residential subdivision within the appropriate zoning location will provide housing for the southwest Washington market, specifically high density residential within the City of Camas where the market demand is high. The project avoids direct impacts to the highest functioning buffer habitat and oak trees while utilizing the historically impacted areas of the subject site for development (existing building footprints, parking and driveway areas, maintained yard areas, and historic agriculture fields that have been highly managed over the history of the site due to livestock use).

Avoidance & Minimization

The proposed single-family residence subdivision has been designed to avoid onsite critical areas to the extent possible while still providing a residential subdivision meeting the density and design requirements required by the City of Camas. The proposed residential lots, roadways and stormwater facility required for the subdivision have been designed to avoid onsite critical areas. Although the stormwater facility has been designed to avoid onsite critical areas, the facility requires a flow spreader outfall that will result in minor encroachment into the wetland buffer in the far southern portion of the study area. The flow spreader outfall has been designed to the minimum required for the structure, avoids direct impacts to mature vegetation, and can be mitigated for onsite for no net loss of habitat function or area for (Figure 6). Additionally, impacts from the flow spreader pipe avoid impacts to mature vegetation and are temporary.

Wetland Buffer Impacts & Mitigation

A small area of buffer impact will be unavoidable to construct the required flow spreader outfall from the stormwater facility within an adjacent area of lower elevation. To allow for the flow spreader outfall within the outer limits of the Category II wetland buffer, mitigation to offset the buffer impact is proposed. Although the offsite portions of the wetland unit provide higher buffer functions, this onsite buffer area where the flow spreader outfall is proposed is degraded and consists of monotypic pasture grasses with no significant vegetation to be impacted. The area of buffer impact imposed by the flow spreader outfall has been kept to the minimum size required and quantified to be 58 sf (Figure 6). The project proposes to offset this buffer impact area at a 1:1 ratio by buffer averaging nearby (and north of the standard 260-foot base buffer width otherwise held by the project along the southern parcel boundaries) over an area totaling 58 sf in size (Figure 6).

Temporary buffer impacts will be associated with the installation of the underground pipe that is required to connect the stormwater facility to the flow spreader outfall. A trench will be excavated within the pipe corridor and will avoid impacts to mature vegetation. The pipe trench will be back-filled with the native soils temporarily removed during construction of the pipe trench. All exposed soils from the trench and pipe installation activities will be re-vegetated using native seed mix appropriate for upland wetland buffer habitat – “Native Riparian seed mix” from Sunmark Seeds (or similar product) is recommended at the standard seeding rate of one pound per 1,000 sf.

Under CMC 16.53.050.2, wetland buffer averaging is allowed to achieve no net loss of functions when the total area contained in the buffer after averaging is no less than that contained within the buffer prior to averaging. The proposed mitigation ensures that the construction of the flow spreader outfall within a portion of the Category II buffer will results in no net loss of buffer area or functions.

Table 2. Wetland Buffer Impacts & Mitigation Summary.

Critical Area	Impact	Mitigation (Area)
260-ft Buffer Potential Offsite Wetland #3	Flow Spreader Outfall Impacts to Outer Limits of 260' Buffer **(58 sf)**	Buffer Averaging @ 1:1 Ratio **(58 sf)**

Wetland Conclusions

The above sections outline how the proposed project will meet the CMC 16.53 Wetlands. The proposed residential subdivision has been designed to avoid onsite critical areas to the full extent possible while still providing a residential subdivision meeting the density and design requirements required by the City of Camas. The proposed mitigation ensures that the construction of the flow spreader outfall within a small portion of the outer 260-foot buffer will result in no net loss of buffer area or functions.

WDFW PRIORITY HABITAT

The tree survey identified a total of five individual Oregon white oak trees onsite. These oaks were numbered and mapped by the Tree Plan (Appendix C - Arbor Science Tree Care, June 2025) and depicted on Figure 6. Four of the five oaks were found to have 20-inch diameter at breast height (dbh) trunk measurements (Oak #2, 45, 47, and 54). The fifth oak tree consists of a single tree with a 6-inch dbh trunk measurement located along the eastern parcel boundary (Oak # 28). See Figure 6 and Appendix C for the oak tree locations. The four oak trees inventoried by the tree survey with dbh measurements of 20-inches or larger are considered jurisdictional as they meet the WDFW criteria for "individual oak" Priority Habitat. Oregon white oak Priority Habitat is protected by WDFW and also jurisdictional under the local CMC habitat code. The understory and herbaceous layer associated with the onsite oak habitat is highly disturbed due to grazing or dominated by Himalayan blackberry.

Habitats of Local Importance

As stated above, four of the five individual Oregon white oak trees identified as onsite are over 20-inches dbh and therefore meet the criteria listed under CMC 16.61.010.A.3.a that defines Oregon white oak habitat of local importance:

i. Individual Oregon White Oak trees with a twenty-inch diameter at breast height (twenty inches dbh).
ii. Stands of Oregon White Oak trees greater than one acre, when they are found to be valuable to fish and wildlife (i.e., may include trees with cavities, large diameter breast height (twelve inches dbh), are used by priority species, or have a large canopy.
iii. All Oregon White Oak snags unless determined by an arborist to be a hazard.

The project proposes the removal of one of these jurisdictional Oregon white oak tree (Oak#47). Mitigation to offset the removal of this jurisdictional oak tree is proposed to meet CMC Section 16.61 Fish and Wildlife Habitat Conservation Areas code. The following mitigation plan section details the mitigation measures proposed.

Table 3. Oregon White Oak Summary.

Oak Tree #	DBH	Jurisdictional per WDFW PHS &/or CMC Local Habitats of Importance Criteria *(Individual oak tree >20" dbh)*	Proposed for Removal	Requires Mitigation
2	62"	YES	NO	NO
28	**6"**	**NO**	YES	NO
45	32"	YES	NO	NO
47	**28"**	YES	YES	**YES**
54	20"	YES	NO	NO

Note: Oak #47 will be repurposed as a woody habitat enhancement element within the onsite oak mitigation area.

OREGON WHITE OAK MITIGATION PLAN

The below mitigation plan was developed following Camas Municipal Code (CMC) Section 16.61 Fish and Wildlife Habitat Conservation Areas. The project proposes the removal of one individual oak tree (Oak #47, 28" dbh) as it is intertwined with the adjacent Oregon ash trees which are within the path of the proposed access road to the stormwater facility. The single oak tree impacts will offset onsite with oak mitigation to allow for no net loss of habitat functions onsite.

The onsite oak mitigation will consist of Oregon white oak tree and native shrub enhancement within the southern portion of the site to offset the removal of the single oak tree. The mitigation plan will also incorporate oak mitigation and native enhancement within the wetland buffer also located in the far southern extent of the project and will allow for an extension of the existing treeline in this area. The perimeter of the stormwater facility will also be planted with oak mitigation plantings, as well as the understory of the adjacent large oaks to be preserved in this area (Oak #s 45 and 54). See Figure 6.

Avoidance and Minimization

Following the mitigation sequencing requirements outlined under CMC 16.51.170, the project has avoided and minimized impacts to the full extent practicable while still meeting the required design elements for a subdivision of this size within the city limits of Camas. The unavoidable impacts have been quantified, and appropriate mitigation proposed onsite for no net loss of habitat area or function onsite.

The project has been designed to avoid direct impacts to and retain the three other jurisdictional Oregon white oak trees present onsite, two of these consisting of the largest oak trees inventoried (Oak #2, 62" dbh and Oak #45, 32" dbh), with the third Oak tree to be retained (Oak #54, 20").

Oak #2 is located in the far northeast corner of the project, Oak #45 is located in the far south/central portion of the project just north of the stormwater facility, and Oak #54 is near the eastern property boundary east of the stormwater facility. The dripline of each of these oak trees will be located, staked, and fenced prior to construction to protect the critical root mass of the tree during grading and site construction. Native shrubs will be added as understory plants within the driplines of the retained oaks in the south allowing for a vegetated habitat connection between the onsite and offsite mix oak habitat to the south.

Avoidance of the Oak tree #47 was originally attempted by the project, however it was determined that there was no reasonable location for the access road for the stormwater detention facility access road with less oak impacts. The project arborist also determined that since this oak root system and canopy of this tree are

intertwined with the adjacent Oregon ash trees (Tree #s 48, 49 & 50) that if the ash were removed, that the oak would also need to be removed as its vitality would be compromised and it would ultimately be directly impacted.

The unavoidable impact to Oak #47 is required to meet the stormwater engineering design requirements and its removal was recommended by the arborist. There is sufficient space to mitigate for this tree onsite by providing a habitat corridor extension between the on and off site oak habitat. The existing forested treeline present in the south will be extended with new oak tree installation and the historically impacted understory of the retained oak will be enhanced. Oak #47 will also be repurposed as a woody habitat element within the onsite oak mitigation area, Figure 6.

The majority of the subject parcel is historically disturbed due to cattle grazing with little to no native scrub-shrub understory habitat present onsite. There is no native understory present within the area of the jurisdictional oaks present onsite including the understory of the oak proposed for removal.

Oregon White Oak Impacts and Mitigation

The removal of the single jurisdictional Oregon white oak (Oak # 47) is unavoidable by the project to meet the City development code requirements. The oak habitat impacts were calculated by quantifying the total oak canopy habitat and function to be removed from the site.

The oak habitat mitigation was designed to follow the requirements of CMC 16.51.180 and will sufficiently offset the loss of this specific oak habitat lost onsite. The mitigation has further been designed to offset the temporal loss of the oak habitat onsite, enhance the functions of the oak habitat to be retained on site, provide greater connectivity to the oak habitat present directly offsite, and will be managed by the HOA for perpetuity to ensure maintenance and survival of the habitat into the future. Previously the onsite oak habitat was grazed by horses, which led to a decline in the overall habitat present. The oak habitat to be impacted has no native understory shrub component and the oak habitat present along the perimeter of the site is dominated by Himalayan blackberry. By removing the grazing impacts from the horses, creating, enhancing and restoring areas of the onsite habitat, the proposed mitigation will provide a higher functioning Oregon white oak habitat as the area matures than that present onsite today. Additionally, the single Oregon white oak to be removed will be repurposed within the onsite mitigation areas to provide additional enhancement by the addition of oak habitat woody elements. The total oak habitat canopy loss is 875 square feet, with 9,900 square feet of onsite mitigation proposed, providing an approximate 11:1 mitigation offset ratio, see Figure 6. This mitigation ratio is considered sufficient as it exceeds the WDFW guidance for a 10:1 mitigation ratio and the habitat provided by Oak #47 is of low habitat quality. Additionally, it should be noted that the unavoidable impacts permitted for much larger oaks at the Landing at Green Mountain – Phase I (directly to the east) were mitigated for at a mitigation ratio of 5:1.

The proposed Oregon white oak mitigation area is open and will offer plenty of sunlight and adequate canopy area for the oak trees and native shrub growth post project completion. The mitigation location will also help to provide greater connectivity for wildlife habitat, by providing shade, shelter, and food sources within the extended contiguous habitat corridor connection provided to the offsite forested and mixed oak canopy than currently present. Protection will be put in place around the perimeter of the mitigation areas during site grading and construction activities and after. Compensatory measures will need to be implemented if during construction the critical root mass of the retained oak trees are inadvertently impacted.

The mitigation proposed will offset the Oregon white oak Priority Habitat impacts onsite for no net loss of priority function or area following the CMC guidelines.

Table 4. Oak Impacts & Mitigation Summary.

Oak Label	Impact	Mitigation
Oak #47	Oregon White Oak (28-inch dbh) 875 sf Canopy Loss	Oregon white oak mitigation areas at a 11:1 Ratio (Oak tree and native shrub enhancement onsite) 9,900 sf

OAK MITIGATION PLANTING PLAN

Site Preparation

1. Demarcate the on-site "Protected Oak Habitat" (Oregon white oak retention and mitigation area boundaries) and install tree protection fencing along the proposed planting areas and the perimeter of the existing oak canopy dripline, See Figure 4.
2. Maintain this tree protective fencing for the full duration of the project construction.
3. Mow grasses, herbaceous vegetation and invasive species present within mitigation areas prior to tree installation.

Note: Excavation, fill or compaction of the native soils is not to take place within the protected oak habitat. No lawn or ornamental landscaping is to be located within the protected oak habitat.

Planting Methods

Plant in fall through early spring (October-April) at specified spacing following the planting plan.
Container/Ball and Burlap Stock

1. Dig hole using a tree shovel/auger/mini-excavator or comparable tool 16-inches wide and 4-inches deeper than the root system, scarify sides of hole to 4-inches. Remove plant from container and loosen roots with hand or score vertically on sides and bottom with knife. Set plant upright and plumb in hole so the crown is just above the finish grade. Ensure that roots are extended down entirely and do not bend upward.
2. Replace loose soil around plant and firmly compact the soil around the plant to eliminate air spaces. Do not use frozen soil for backfilling.
3. Firmly compact the soil around the planted species to eliminate air spaces.
4. Install woody mulch around the base of planted and retained Oregon white oak trees to insulate plantings, maintain moisture content of soil and reduce invasive plant competition.
5. Irrigate according to performance standards for the first three summers after planting or as site and weather conditions warrant.

Planting Specifications

Planting will begin in Winter of 2025/Spring of 2026 while onsite soils are more saturated (and stock is dormant). The following tables summarize the native plant selection, spacing, size, and quantity for the on-site mitigation area:

Table 5. Oak Mitigation Planting Plan.

Common Name	*Scientific Name*	*Stock*	*Spacing*	*Quantity*
TREES (9,900 sq. ft.)				
Oregon white oak, FACU	*Quercus garryana*	2-inch caliper	14 ft.	25
Oregon white oak, FACU	*Quercus garryana*	1-gallon container	14 ft.	25
			Total =	50
SHRUBS **(9,900 sq. ft.)**				
Tall Oregon grape, FACU	*Mahonia aquifolium*	1-gallon or 24-36" bare-root	6 ft.	50
Nootka rose, FAC	*Rosa nutkana*	1-gallon or 24-36" bare-root	6 ft.	50
Snowberry, FACU	*Symphorica rpos albus*	1-gallon or 24-36" bare-root	6 ft.	50
Ocean spray, FACU	*Holodiscus discolor*	1-gallon or 24-36" bare-root	6 ft.	50
			Total =	**200**
			Grand Total of Native Shrubs =	**250**

Protective Signage

Post construction, install permanent signs along the boundary of a "Protected Oak Habitat" meeting city standards or conditions outlined under the permit. See Objective 2, Performance Standard 2b below.

Maintenance Plan

Maintenance at the on-site mitigation area covers a minimum of 5-years and will involve removing persisting invasive plant species in addition to watering and re-installing failed species as necessary. The maintenance will include the following activities when necessary:

1. Remove and control non-native/noxious vegetation around all newly installed plants. During years 1 through 5 invasive species will be removed and suppressed as often as necessary to meet a performance standard of no greater than 20 percent cover by invasive species, measured by monitoring plots.
2. Irrigate planted species as necessary during the dry season, approximately July 1 through October 15. Irrigation is recommended to occur on a two-week cycle (minimum) during the dry season for the first three years. Water will be provided by a temporary above-ground irrigation system or a water truck.
3. Replace dead or failed Oregon white oak trees as described for the original installation to meet the minimum annual performance standard of 100% survival over the 5-year monitoring period. See Objective 1 for the full performance standards outlined by year.

Monitoring Plan

The mitigation site will be monitored for a 5-year period following project construction; monitoring will take place in years 1, 2, 3 and 5. Monitoring reports will be submitted to the City of Camas by the end of each monitored year. The goal of monitoring is to determine if the previously stated performance standards are being met. The mitigation area will be monitored once during the growing season, preferably during the same two-week period each year to better compare the data.

During the first annual monitoring event, representative monitoring plot locations and photo points will be selected within the mitigation areas and permanently marked with metal T-posts (or similar). Monitoring plot

and photo point locations will be labeled on the As-built Map and included in the annual monitoring reports.

Monitoring Report Contents

The annual monitoring reports will contain at least the following:

- Location map and as-built drawing of Oregon white oak mitigation and retention areas as depicted on Figure 5 of this mitigation plan.
- Photographs from permanent photo points (10 minimum).
- Historic description of project, including dates of Oregon white oak tree installation, current year of monitoring, and restatement of mitigation goal.
- Documentation of plant survival, cover, and overall development of the plant community from the ten established monitoring plot locations.
- Photo evidence that the protective oak habitat signage is in place and legible along the outer perimeter of the mitigation areas onsite.
- Assessment of non-native, invasive plant species and recommendations for management.
- Summary of maintenance and contingency measures proposed for the next season and those completed over the past season.

Contingency Plan

If the performance standards are not met by the fifth year following project completion, a contingency plan will be developed and implemented. All contingency actions will be undertaken only after consulting and gaining approval from the City of Camas. The applicant will be required to complete a contingency plan that describes (1) the causes of failure, (2) proposed corrective actions, (3) a schedule for completing corrective actions, and (4) whether additional maintenance and monitoring are necessary.

Site Protection

The on-site mitigation area will be owned and managed by the future Homeowners Association (HOA) Associated with the subdivision. The HOA will be responsible for managing and contracting out the annual monitoring of the on-site mitigation area (to AshEco Solutions, LLC or similar entity) for the initial 5-year monitoring period. Additionally, the HOA will be responsible for managing and contracting out the seasonal maintenance required to maintain the onsite mitigation areas in perpetuity, to ensure the onsite Oregon white oak habitat is allowed to thrive. The applicant will establish and record a permanent and irrevocable conservation covenant over the onsite mitigation areas to protect the established habitat in the future.

MITIGATION GOALS, OBJECTIVES AND PERFORMANCE STANDARDS

The mitigation goal of protecting the onsite Oregon white oak habitat for no net loss of functional habitat onsite will be met when the below objectives and performance standards are met.

Objective 1: Mitigate for 875 sf of Oregon white oak habitat with onsite oak mitigation over 9,900 sf.

Performance Standard 1a. Document the removal of invasive species within the mitigation area and install boundary protection fencing around the dripline of the retained oak trees prior to grading activities. Submit photos within the As-built to document the completion of this mitigation site preparation.

Performance Standard 1b. Document the installation of the native Oregon white oak trees, native shrub enhancement and repurposing of oak woody element (Oak #47) as specified by Figure 6 within the defined mitigation area onsite. Within 60 days of project completion, submit As-built Map and documentation to show that the mitigation plan has been implemented according to this plan, or as conditioned by permit. As-built documentation is to include; planting locations on an As-built Map, native nursery receipt showing plant species and quantities, representative photos of the mitigation area from a minimum of ten (4) established

photo point locations.

Performance Standard 1c. In Years 1-5, the Oregon white oak mitigation trees are to achieve 100-percent (100%) survival. (If dead trees are replaced to achieve the 100 percent survival rate, this performance standard will be met).

Performance Standard 1d. By Year 2, native woody shrub species within the onsite mitigation areas are to achieve ninety-percent (90%) survival of. (Native volunteer growth will count towards this cover requirement, as will the installation of new plants to offset mortality.)

Performance Standard 1e. By Year 3, native woody shrub species within the onsite mitigation areas are to achieve eighty-percent (80%) survival of native woody shrub species. (Native volunteer growth will count towards this cover requirement, as will the installation of new plants to offset mortality.)

Performance Standard 1f. By Year 5, native woody shrub species within the onsite mitigation areas are to achieve thirty percent (30%) aerial cover of native woody shrub species, or eighty percent (80%) survival. (Native volunteer growth will count towards this cover requirement, as will the installation of new plants to offset mortality.)

Performance Standard 1g. In All Years, non-native/invasive plant species will not exceed 20-percent (20%) aerial cover across the onsite mitigation area.

Objective 2: <u>Provide long-term protection for the onsite mitigation area.</u>

Performance Standard 2a. Record a conservation covenant with the City of Camas. This performance standard will be met when a copy is submitted with the As-built documentation (or prior as conditioned by the approved permit) .

Performance Standard 2b. Post permanent signage along the outer boundaries of the "Protected Oak Habitat" (oak mitigation and retention areas) . Signs are to read:

"Critical Area– Please Retain in a Natural State"

or as otherwise determined by the City of Camas permit conditions.

Signage will remain in legible condition; if they are missing or illegible, they will be replaced. This performance standard will be met when signs are documented to be in place and of good condition within the final monitoring report.

DISCLAIMER

This report documents the investigation, best professional judgment, and conclusions of the investigator. It is correct and complete to the best of our knowledge. It should be considered a preliminary mitigation plan and used at your own risk until it has been reviewed and approved in writing by the local agency with jurisdiction over the site. AES personnel base the above listed conclusions on standard scientific methodology and best professional judgment.

REFERENCES

City of Camas Municipal Code. 2008 (Amended). Section 16.53 Wetlands.

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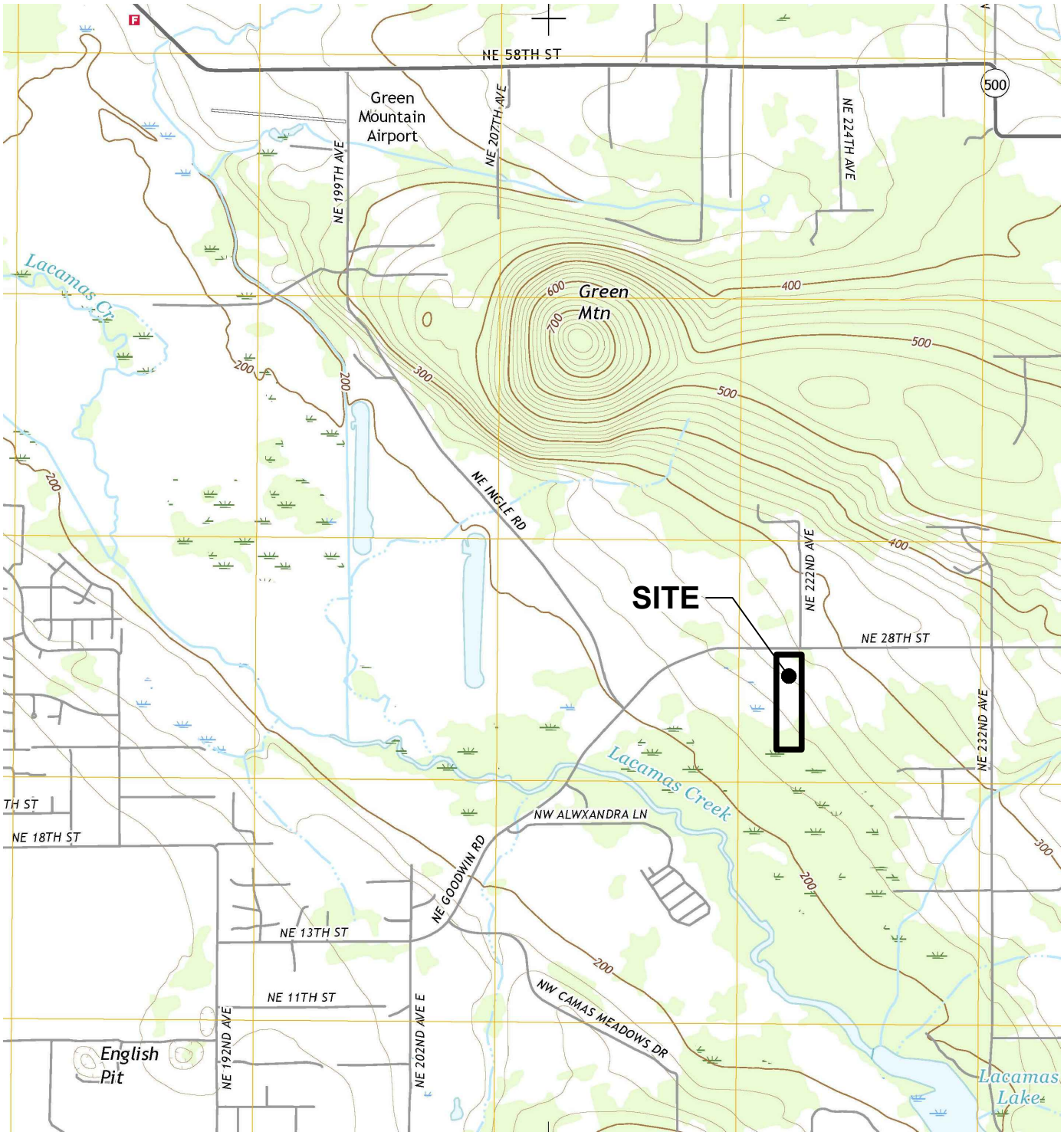

NOTE(S):
USGS, LACAMAS CREEK QUADRANGLE
WASHINGTON-CLARK CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

Ash ECO SOLUTIONS, LLC

PARCEL(S): 173210000, 173177000 **DATUM:** NAVD 88 **ADJACENT PROPERTY OWNERS:** Adj 1 Adj 2	VICINITY MAP **APPLICANT:** Pacific Lifestyle Homes **PROJECT NAME:** Landing at Green Mountain Ph II **SITE LOCATION ADDRESS:** Parcels East of 2625 NE Goodwin Rd.	**PROPOSED:** XX Add 2 **IN:** Camas **NEAR:** XX **COUNTY:** Clark **STATE:** WA **FIGURE:** 1 **DATE:** 5-27-25

I:\Autocad Files\AshECO Autocad\PLH Landing at Green Mtn\PLH-LAGM_BM-062625.dwg

Legend

- Taxlots
- Contours Lines - 2 ft
- Contour Lines - 10 ft
- Contour Lines - 100 ft

N

0 250 500

SCALE IN FEET
1" = 250'

Ash ECO SOLUTIONS, LLC

PARCEL(S):
173210000, 173177000

DATUM: NAVD 88
ADJACENT PROPERTY OWNERS:
Adj 1
Adj 2

AERIAL PHOTO & TOPO MAP

APPLICANT: Pacific Lifestyle Homes
PROJECT NAME: Landing at Green Mountain
SITE LOCATION ADDRESS:
Parcels East of 2625 NE Goodwin Rd.

PROPOSED: XX
Add 2
IN: Camas
NEAR: XX
COUNTY: Clark **STATE:** WA
FIGURE: 2
DATE: 5-27-25

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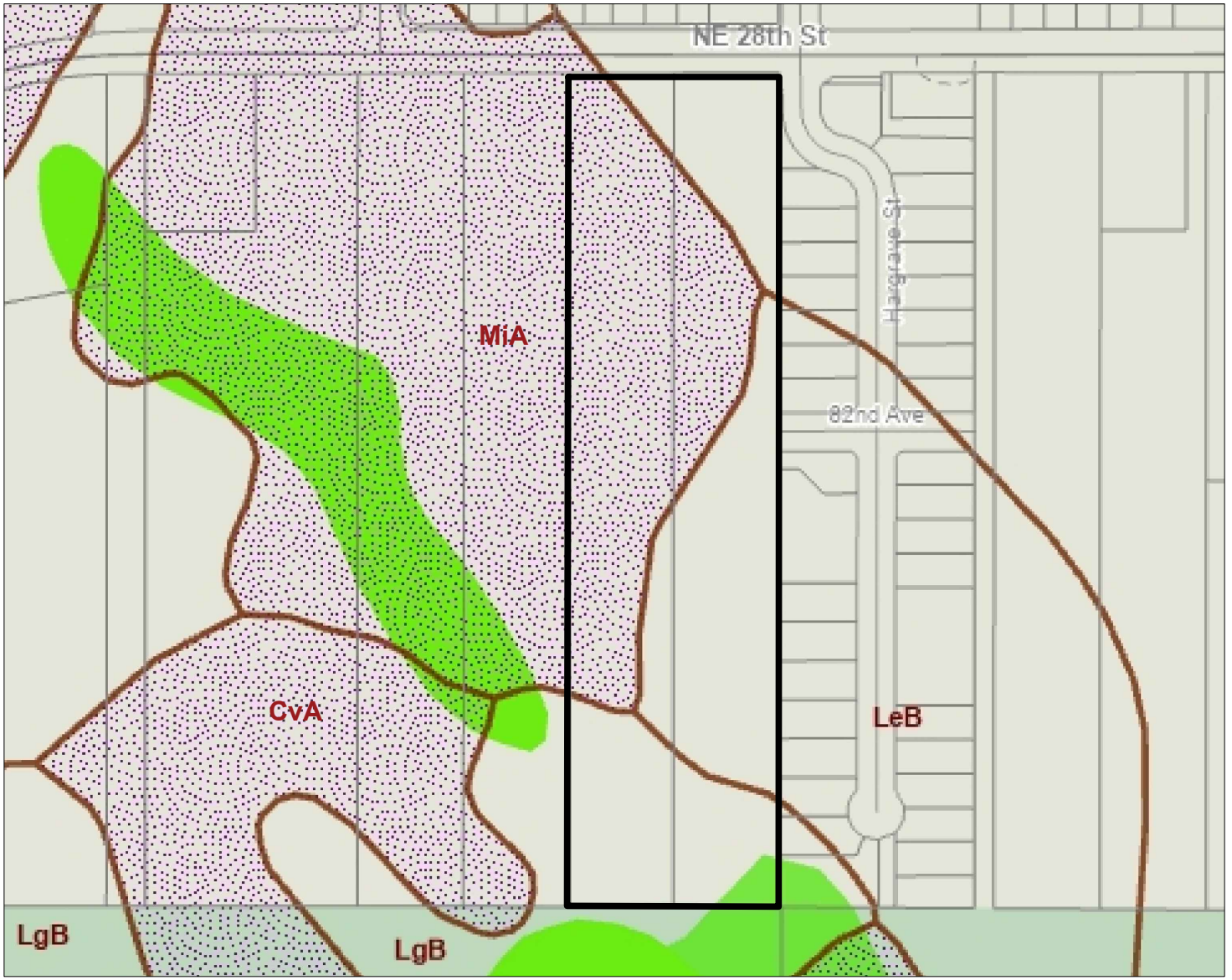

Legend

- Taxlots
- Soil Type
- Hydric Soils
- Potential Wetlands Presence
- Permitted Wetland
- NWI Wetland

CvA -

MiA -

LeB -

LgB -

N

0 250 500

SCALE IN FEET
1" = 250'

Ash ECO SOLUTIONS, LLC

PARCEL(S):
173210000, 173177000

DATUM: NAVD 88
ADJACENT PROPERTY OWNERS:
Adj 1
Adj 2

SOIL SURVEY &
NATIONAL WETLANDS INVENTORY MAP

APPLICANT: Pacific Lifestyle Homes
PROJECT NAME: Landing at Green Mountain
SITE LOCATION ADDRESS:
Parcels East of 2625 NE Goodwin Rd.

PROPOSED: XX
Add 2
IN: Camas
NEAR: XX
COUNTY: Clark **STATE:** WA
FIGURE: 3
DATE: 5-27-25

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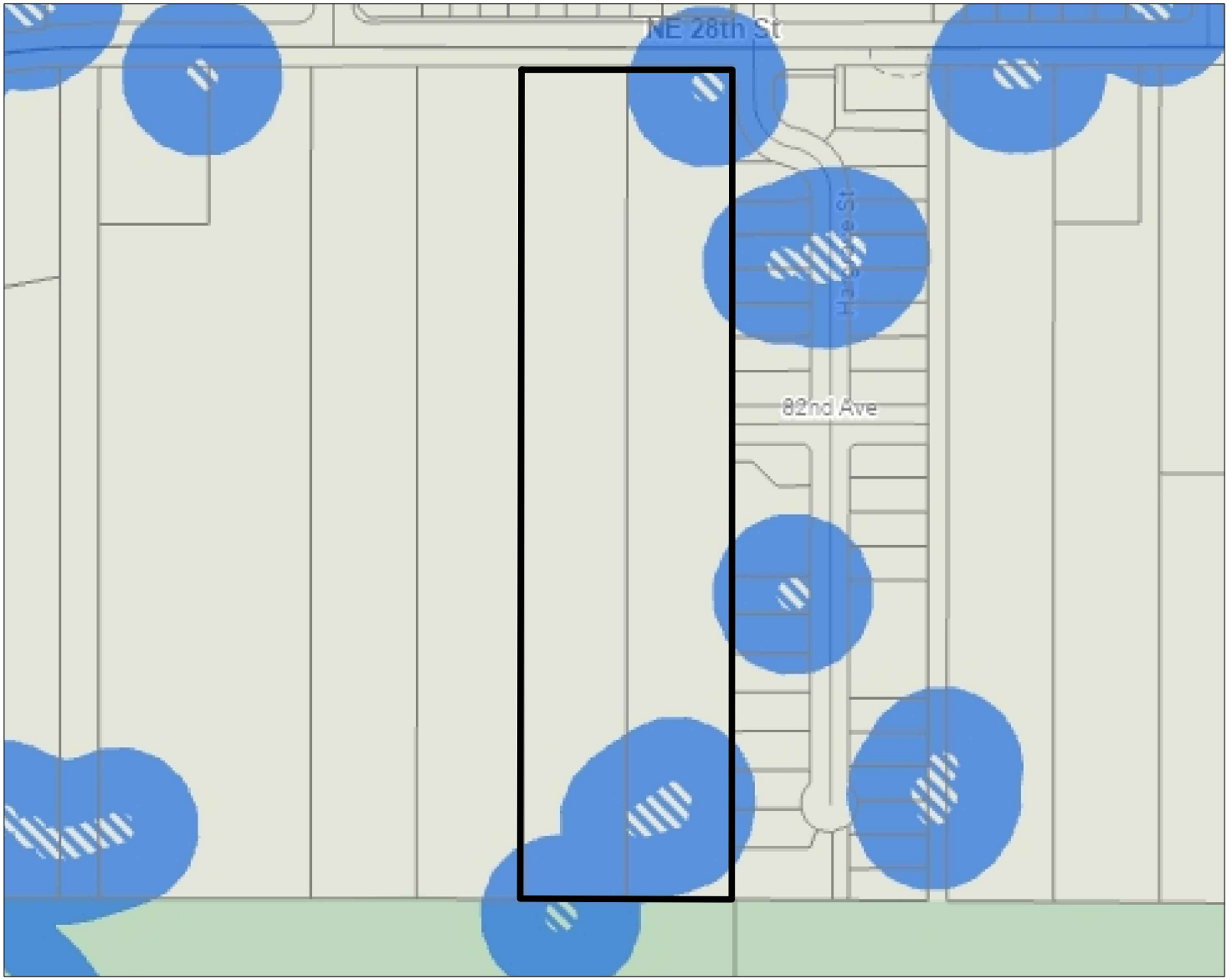

Legend

- Taxlots
- Species
  - Species Area
  - Adjacent to Species Area
- Habitat
  - Habitat Area
  - Adjacent to Habitat Area
- Riparian Habitat Site Class
- Stream
- Lake

N

0 250 500

SCALE IN FEET
1" = 250'

Ash ECO SOLUTIONS, LLC	**PARCEL(S):** 173210000, 173177000 **DATUM:** NAVD 88 **ADJACENT PROPERTY OWNERS:** Adj 1 Adj 2	RIPARIAN HABITAT & SPECIES MAP **APPLICANT:** Pacific Lifestyle Homes **PROJECT NAME:** Landing at Green Mountain **SITE LOCATION ADDRESS:** Parcels East of 2625 NE Goodwin Rd.	**PROPOSED:** XX Add 2 **IN:** Camas **NEAR:** XX **COUNTY:** Clark **STATE:** WA **FIGURE:** 4 **DATE:** 5-27-25

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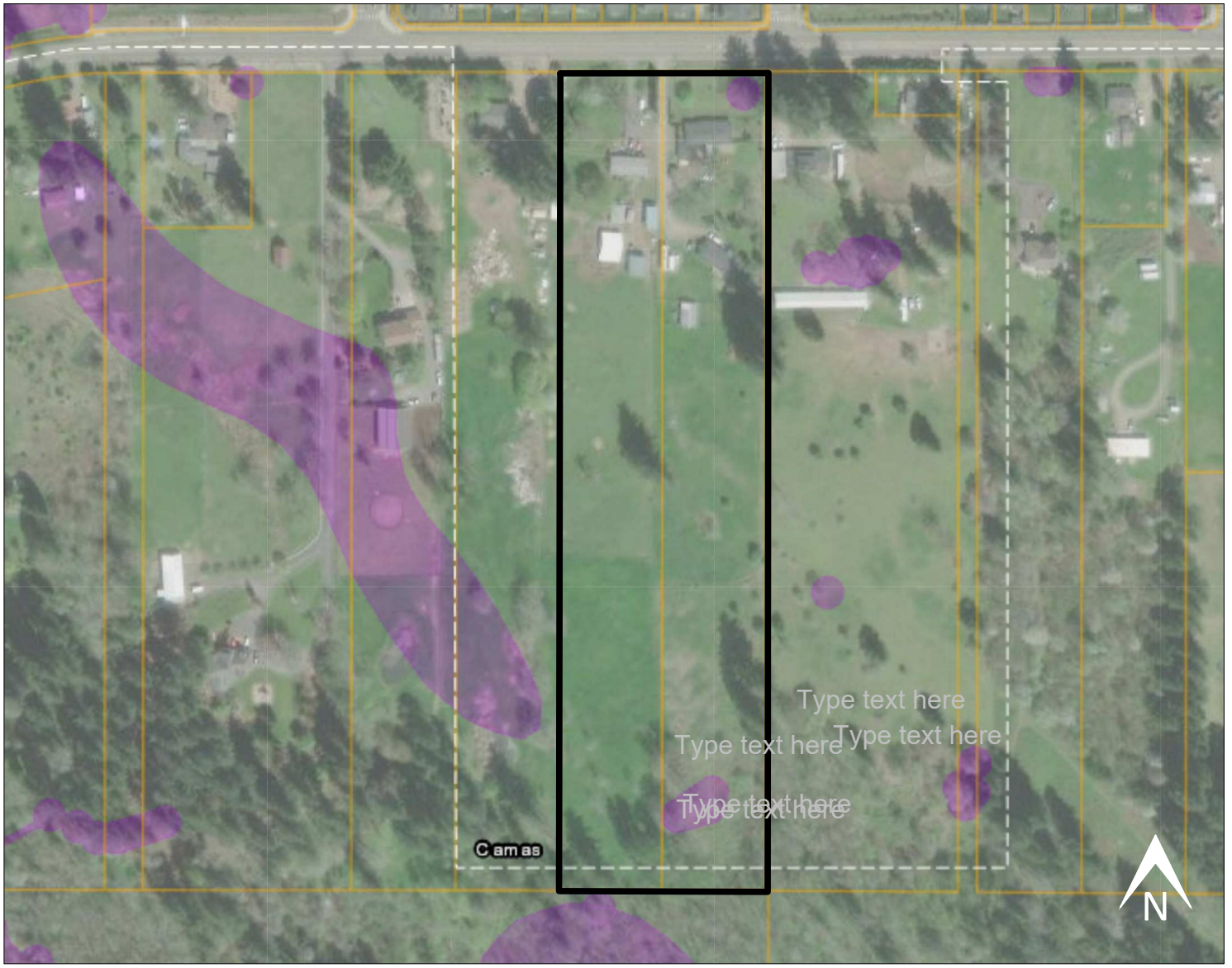

Legend

Parcels

Parcels

PHS on the Web

PHS Public Points

PHS Public Lines

PHS Public Polygon Outlines

AS MAPPED

Masked

PHS Public Polygons

AS MAPPED

SECTION

QTR-TWP

TOWNSHIP

0 250 500

SCALE IN FEET

1" = 250'

Ash ECO SOLUTIONS, LLC

PARCEL(S):
173210000, 173177000

DATUM: NAVD 88
ADJACENT PROPERTY OWNERS:
Adj 1
Adj 2

WDFW PHS MAP

APPLICANT: Pacific Lifestyle Homes
PROJECT NAME: Landing at Green Mountain Ph II
SITE LOCATION ADDRESS:
Parcels East of 2625 NE Goodwin Rd.

PROPOSED: XX
Add 2
IN: Camas
NEAR: XX
COUNTY: Clark **STATE:** WA
FIGURE: 5
DATE: 5-27-25

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LEGEND:

- Site Boundary
- Wetland Boundary
- Wetland Buffer
- Oak (Oak #s Reference Tree Plan Provided by Arbor Science Tree Care)
- Re-purposed Woody Habitat Element (Oak #47)

NE 28th St.

N

#173210000

#173177000

Oak #2 (62" dbh)

Note:
The northern portion of this parcel that contains the existing residence and barns/outbuildings will be retained by the landowner

Potential #1
Cat. III Wetland
Habitat Score = 3
High LUI Buffer = 80'
Mod Lui Buffer = 60'

80'

BPA Utility Easement

Approx. Critical Areas w/in 300'

The Landing at Green Mtn.
Phase 1

Potential #2
Cat. III Wetland
Habitat Score = 3
High LUI Buffer = 80'
Mod Lui Buffer = 60'

80'

Oak #28 (6"dbh)
Not Jurisdictional

Oak (To be removed)
(875 sf,)

Oak #47
(28" dbh)

Ash #48

Ash #49

Ash #50

Oak #45
(32" dbh)

Oak Mitigation Area
(9,900 sf,)

Wetland Buffer
Averaging Area (58 sf.)

Oak #54
(20" dbh)

Wetland Buffer Impact -
Due to Outfall Spreader
(58 sf.)

Pedestrian Trail

Potential #3
Cat. II Wetland
(260' Wetland Buffer Offset
from Offsite Wetland)

Temporary Buffer Impact -
Installation of Outfall Pipe

0 100 200

SCALE IN FEET
1" = 100'

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AshECO SOLUTIONS, LLC

PARCEL(S):
173210000, 173177000

DATUM: NAVD 88
ADJACENT PROPERTY OWNERS:
Adj 1
Adj 2

EXISTING CONDITIONS &
PROPOSED SITE PLAN

APPLICANT: Pacific Lifestyle Homes
PROJECT NAME: Landing at Green Mountain - II
SITE LOCATION ADDRESS:
Parcels East of 2625 NE Goodwin Rd.

PROPOSED: XX
Add 2
IN: Camas
NEAR: XX
COUNTY: Clark **STATE:** WA
FIGURE: 6
DATE: 6-16-25

Appendix A

Site Photos

The Landing at Green Mountain - Site Photos

Photo 1.
View of the open pasture area located in the central portion of the study area. This area has historically been used to graze cattle.

Photo 2.
The Oregon white oak located in the far southeast corner of the study area is visible in center of photos (dark green canopy). This tree will be retained. The understory has historically been grazed and mowed.

Photo 3.
View south down the far eastern property line of the study area. The bulk of the area consists of open pasture grasses. The large Douglas-fir tree visible at left of photo is located near the east property line. The forested area visible in back of photo represents the offsite undeveloped park property owned by Clark County.

Appendix B

Wetland Rating Forms

Wetland name or number Offsite Wetland #1

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Offsite Wetland #1 Date of site visit: 6/13/2024

Rated by Andrea Aberle Trained by Ecology? ✓ Yes ___No Date of training 10/16

HGM Class used for rating Depressional Wetland has multiple HGM classes? ✓ Y ____N

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

OVERALL WETLAND CATEGORY ___✓___ (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			
					Circle the appropriate ratings					
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	8			6			3			17

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 Offsite Wetland #1

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 (*can be added to map of hydroperiods)*	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	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 total 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 *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	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 total 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 *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total 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 (*can be added to figure above)*	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total 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 Offsite Wetland #1

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?
   X___The wetland is on a slope (slope can be very gradual),
   X___The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheet flow, or in a swale without distinct banks,
   ____The water leaves the wetland **without being impounded**. Note: Water is impounded at south

   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).

Wetland name or number Offsite Wetland #1 Type text here

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.

   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 Offsite Wetland #1

DEPRESSIONAL AND FLATS WETLANDS

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

D 1.0. Does the site have the potential to improve water quality?

D 1.1. Characteristics of surface water outflows from the wetland: 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	2
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	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): 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 Wetland located within horse pasture that is regularly grazed. points = 0	0
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* 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	4
Total for D 1 Add the points in the boxes above	6

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

D 2.0. Does the landscape have the potential to support the water quality function of the site?

D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	1
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? Source Wetland located within horse pasture that is regularly grazed. Yes = 1 No = 0	1
Total for D 2 Add the points in the boxes above	3

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

D 3.0. Is the water quality improvement provided by the site valuable to society?

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? Yes = 1 No = 0	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
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 in development or in effect for the basin in which the unit is found.) Yes = 2 No = 0	1
Total for D 3 Add the points in the boxes above	3

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

Wetland name or number Offsite Wetland #1

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/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	2
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	3
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 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	3
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	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	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	2

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. Is the unit 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 downgradient 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 downgradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther downgradient. 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	1
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*

Wetland name or number Offsite Wetland #1

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 if the unit is at least 2.5 ac, or more than 10% of the unit if it is smaller than 2.5 ac. **1**

____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/groundcover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods **1**

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 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	
____Intermittently or seasonally flowing stream in, or adjacent to, the wetland	
____**Lake Fringe wetland**	**2 points**
____**Freshwater tidal wetland**	**2 points**

H 1.3. Richness of plant species **1**

Count the number of plant species in the wetland that cover at least 10 ft^2.

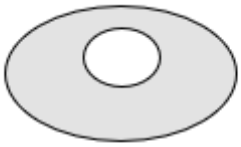
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. **Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canada thistle**

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

H 1.4. Interspersion of habitats **0**

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.

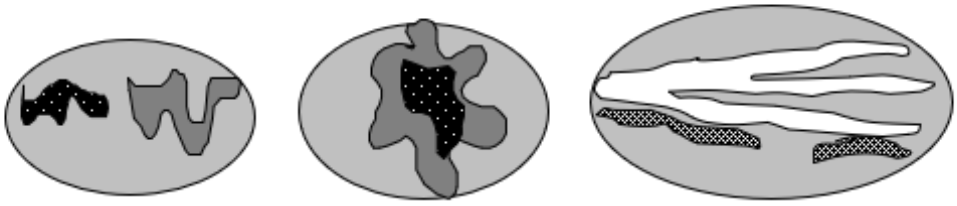
None = 0 points



Low = 1 point

Moderate = 2 points

All three diagrams in this row are **High** = 3 points



Wetland name or number Offsite Wetland #1

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. The number of checks is the number of points. ____Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long). ____Standing snags (dbh > 4 in.) within the wetland ____Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ____Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed) __✓__At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) ____Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)	1
Total for H 1 Add the points in the boxes above	4

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland. *Calculate:* % relatively undisturbed habitat 0% **+** [(18% moderate and low intensity land uses)/2] = 9 % Total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	0
H 2.2. Total habitat in 1 km Polygon around the wetland. *Calculate:* % relatively undisturbed habitat 26% **+** [(18% moderate and low intensity land uses)/2] = 22 % Total habitat > 50% of Polygon points = 3 Total habitat 10-50% and in 1-3 patches points = 2 Total habitat 10-50% and > 3 patches points = 1 Total habitat < 10% of 1 km Polygon points = 0	1
H 2.3. Land use intensity in 1 km Polygon: > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	-1

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

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.* Site meets ANY of the following criteria: points = 2 — It has 3 or more Priority Habitats within 100 m (see next page) — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) — It is mapped as a location for an individual WDFW Priority Species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources data — 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 Site has 1 or 2 Priority Habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above points = 0	0

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

Wetland name or number Offsite Wetland #1

WDFW Priority Habitats

See complete descriptions of Priority Habitats listed by WDFW, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008 (current year, as revised). Priority Habitat and Species List.[133] This list was updated for consistency with guidance from WDFW.

This question is independent of the land use between the wetland unit and the Priority Habitat. All vegetated wetlands are by definition a Priority Habitat but are not included in this list because they are addressed by this rating system.

Count how many of the following Priority Habitats are within 330 ft (100 m) of the wetland unit:

— **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. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.

— **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.

— **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

— **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. Do not select if Fresh Deepwater habitat is also present.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.

— **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) diameter at breast height (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.

[133] http://wdfw.wa.gov/publications/00165/wdfw00165.pdf

Wetland A

Wetland name or number _____

- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak[134] provides more detail for determining if they are Priority Habitats
- **Riparian:** The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **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.
- **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.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

Water

[134] https://wdfw.wa.gov/publications/00030/wdfw00030.pdf

Wetland name or number _____

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands 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 *Spartina*, see chapter 4.8 in the manual. — 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**
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?[135] Yes = **Category I** No – Go to **SC 2.2** SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements. Yes – Submit data to WA Natural Heritage Program for determination,[136] Go to **SC 2.3** No = **Not a WHCV** SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria? Yes = **Category I** No = **Not a WHCV**	**Cat. I**
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES, you will still need to rate the wetland based on its functions.*** 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 = **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 = **Category I bog** No – Go to **SC 3.4** **NOTE:** 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 = **Category I bog** No = **Not a bog**	**Cat. I**

[135] https://www.dnr.wa.gov/NHPdata

[136] https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland name or number _____

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? ***If you answer YES, you will still need to rate the wetland based on its functions.*** — **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. — **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). Yes = **Category I** No = **Not a forested wetland for this section**	**Cat. I**
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — 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 — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* — The lagoon retains some of its surface water at low tide during spring tides Yes – Go to **SC 5.1** No = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet all of the following three conditions? — 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 in H 1.5 in the manual). — 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 is larger than $^{1}/_{10}$ ac (4350 ft^2) Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer YES, you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. Yes – Go to **SC 6.1** No = **Not an interdunal wetland for rating** 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)? Yes = **Category I** No – Go to **SC 6.2** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = **Category II** No – Go to **SC 6.3** 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? Yes = **Category III** No = **Category IV**	**Cat I** **Cat. II** **Cat. III** **Cat. IV**
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	

Wetland Rating Form Divider Sheet

Wetland name or number Offsite Wetland #2

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Offsite Wetland #2 Date of site visit: _____

Rated by Andrea Aberle Trained by Ecology? ✓ Yes ___No Date of training 10/16

HGM Class used for rating Depressional Wetland has multiple HGM classes? ✓ Y ____N

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

OVERALL WETLAND CATEGORY ___✓___ (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	
	Circle the appropriate ratings			
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	8	6	3	17

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 Offsite Wetland #2

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 (*can be added to map of hydroperiods)*	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	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 total 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 *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	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 total 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 *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total 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 (*can be added to figure above)*	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total 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 Offsite Wetland #2

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 sheet flow, 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).

Wetland name or number Offsite Wetland #2

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.

   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 Offsite Wetland #2

DEPRESSIONAL AND FLATS WETLANDS

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

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: 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	2
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	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): 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 Wetland located within horse pasture that is regularly grazed. points = 0	0
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* 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	4
Total for D 1 Add the points in the boxes above	6

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

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	1
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? Source waterfowl Yes = 1 No = 0	1
Total for D 2 Add the points in the boxes above	3

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

D 3.0. Is the water quality improvement provided by the site valuable to society?	
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? Yes = 1 No = 0	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
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 in development or in effect for the basin in which the unit is found.) Yes = 2 No = 0	1
Total for D 3 Add the points in the boxes above	3

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

Wetland name or number Offsite Wetland #2

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/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	2
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	3
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 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	3
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	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	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	2

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. Is the unit 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 downgradient 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 downgradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther downgradient. 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	1
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*

Wetland name or number Offsite Wetland #2

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 if the unit is at least 2.5 ac, or more than 10% of the unit if it is smaller than 2.5 ac. **1**

____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/groundcover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods **1**

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 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	
____Intermittently or seasonally flowing stream in, or adjacent to, the wetland	
____**Lake Fringe wetland**	**2 points**
____**Freshwater tidal wetland**	**2 points**

H 1.3. Richness of plant species **1**

Count the number of plant species in the wetland that cover at least 10 ft^2.

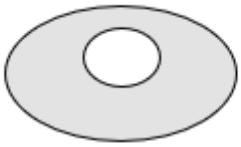
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. **Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canada thistle**

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

H 1.4. Interspersion of habitats **0**

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.

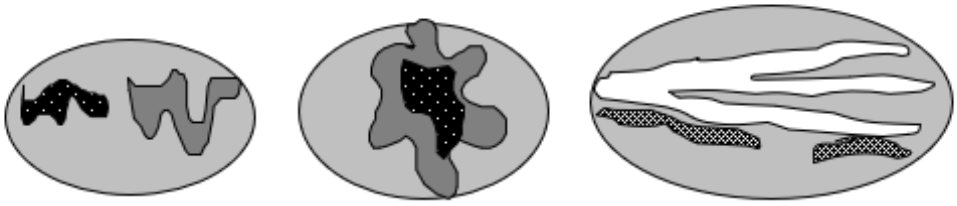
None = 0 points



Low = 1 point

Moderate = 2 points

All three diagrams in this row are **High** = 3 points



Wetland name or number Offsite Wetland #2

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. The number of checks is the number of points. ____Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long). ____Standing snags (dbh > 4 in.) within the wetland ____Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ____Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed) ____At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) ____Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)	1
Total for H 1 Add the points in the boxes above	4

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland. *Calculate:* % relatively undisturbed habitat 0% **+** [(18% moderate and low intensity land uses)/2] = 9 % Total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	0
H 2.2. Total habitat in 1 km Polygon around the wetland. *Calculate:* % relatively undisturbed habitat 26% **+** [(18% moderate and low intensity land uses)/2] = 22 % Total habitat > 50% of Polygon points = 3 Total habitat 10-50% and in 1-3 patches points = 2 Total habitat 10-50% and > 3 patches points = 1 Total habitat < 10% of 1 km Polygon points = 0	1
H 2.3. Land use intensity in 1 km Polygon: > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	-1

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

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated.* Site meets ANY of the following criteria: points = 2 — It has 3 or more Priority Habitats within 100 m (see next page) — It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) — It is mapped as a location for an individual WDFW Priority Species — It is a Wetland of High Conservation Value as determined by the Department of Natural Resources data — 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 Site has 1 or 2 Priority Habitats (listed on next page) within 100 m points = 1 Site does not meet any of the criteria above points = 0	0

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

Wetland name or number Offsite Wetland #2

WDFW Priority Habitats

See complete descriptions of Priority Habitats listed by WDFW, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008 (current year, as revised). Priority Habitat and Species List.[133] This list was updated for consistency with guidance from WDFW.

This question is independent of the land use between the wetland unit and the Priority Habitat. All vegetated wetlands are by definition a Priority Habitat but are not included in this list because they are addressed by this rating system.

Count how many of the following Priority Habitats are within 330 ft (100 m) of the wetland unit:

— **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. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.

— **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.

— **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

— **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. Do not select if Fresh Deepwater habitat is also present.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.

— **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) diameter at breast height (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.

[133] http://wdfw.wa.gov/publications/00165/wdfw00165.pdf

Wetland name or number Offsite Wetland #2

- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak[134] provides more detail for determining if they are Priority Habitats
- **Riparian:** The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **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.
- **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.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

[134] https://wdfw.wa.gov/publications/00030/wdfw00030.pdf

Wetland name or number _____

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands 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 *Spartina*, see chapter 4.8 in the manual. — 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**
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?[135] Yes = **Category I** No – Go to **SC 2.2** SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements. Yes – Submit data to WA Natural Heritage Program for determination,[136] Go to **SC 2.3** No = **Not a WHCV** SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria? Yes = **Category I** No = **Not a WHCV**	**Cat. I**
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES, you will still need to rate the wetland based on its functions.*** 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 = **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 = **Category I bog** No – Go to **SC 3.4** **NOTE:** 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 = **Category I bog** No = **Not a bog**	**Cat. I**

[135] https://www.dnr.wa.gov/NHPdata

[136] https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland name or number _____

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? ***If you answer YES, you will still need to rate the wetland based on its functions.*** — **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. — **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). Yes = **Category I** No = **Not a forested wetland for this section**	**Cat. I**
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — 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 — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* — The lagoon retains some of its surface water at low tide during spring tides Yes – Go to **SC 5.1** No = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet all of the following three conditions? — 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 in H 1.5 in the manual). — 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 is larger than $^{1}/_{10}$ ac (4350 ft^2) Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer YES, you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. Yes – Go to **SC 6.1** No = **Not an interdunal wetland for rating** 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)? Yes = **Category I** No – Go to **SC 6.2** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = **Category II** No – Go to **SC 6.3** 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? Yes = **Category III** No = **Category IV**	**Cat I** **Cat. II** **Cat. III** **Cat. IV**
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	

Wetland Rating Form Divider Sheet

Wetland name or number Offsite Wetland #3

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Offsite Wetland #3 Date of site visit: _____
Rated by Andrea Aberle Trained by Ecology? ✓ Yes ___No Date of training 10/06

HGM Class used for rating Depressional Wetland has multiple HGM classes? ___Y _X_N

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

OVERALL WETLAND CATEGORY ___II___ (based on functions ✓ or special characteristics___)

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	Circle the appropriate ratings			
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	6	8	21

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 Potential Wetland #3 - Offsite to south

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 (*can be added to map of hydroperiods)*	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	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 *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	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 *(can be added to another figure)*	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 (*can be added to figure above)*	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	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 Offsite Wetland #3

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,
   X 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 Offsite Wetland #3

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 Offsite Wetland #3

DEPRESSIONAL AND FLATS WETLANDS

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

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: 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	2
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	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): 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	3
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* 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	4
Total for D 1 Add the points in the boxes above	9

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

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	1
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? Source_____ Yes = 1 No = 0	0
Total for D 2 Add the points in the boxes above	2

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

D 3.0. Is the water quality improvement provided by the site valuable to society?	
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? Yes = 1 No = 0	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
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*)? Yes = 2 No = 0	1
Total for D 3 Add the points in the boxes above	3

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

Wetland name or number Offsite Wetland #3

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	2
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	3
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	3
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	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	0
Total for D 5 Add the points in the boxes above	1

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	1
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*

Wetland name or number Offsite Wetland #3

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.*

X Aquatic bed	4 structures or more: points = 4
X Emergent	3 structures: points = 2
X Scrub-shrub (areas where shrubs have > 30% cover)	2 structures: points = 1
X 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

4

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
X Seasonally flooded or inundated	3 types present: points = 2
____Occasionally flooded or inundated	2 types present: points = 1
X Saturated only	1 type present: points = 0
____Permanently flowing stream or river in, or adjacent to, the wetland	
X Seasonally flowing stream in, or adjacent to, the wetland	
____**Lake Fringe wetland**	**2 points**
____**Freshwater tidal wetland**	**2 points**

2

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft^2.

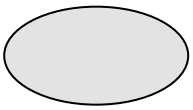
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

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

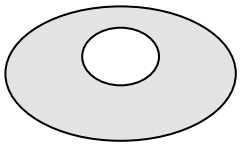
2

H 1.4. Interspersion of habitats

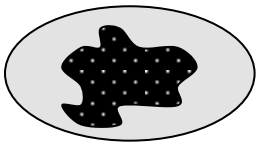
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



None = 0 points

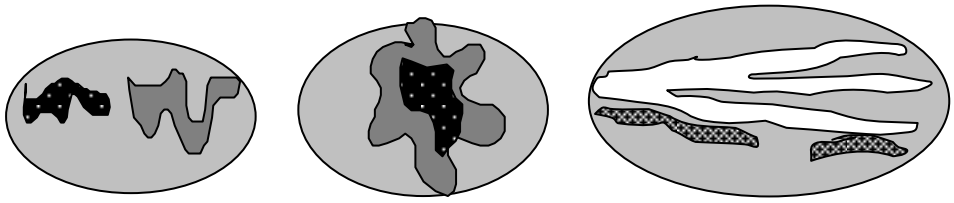


Low = 1 point



Moderate = 2 points

All three diagrams in this row are **HIGH** = 3points



2

Wetland name or number Offsite Wetland #3

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* X Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). X Standing snags (dbh > 4 in) within the wetland X 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) ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet weathered where wood is exposed)* X At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated *(structures for egg-laying by amphibians)* X Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	5
Total for H 1 Add the points in the boxes above	15

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

H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* % undisturbed habitat___ + [(% moderate and low intensity land uses)/2]___ = _____% If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon 9% Accessible + (31/2) 15.5% = 24.5% points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	2
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* % undisturbed habitat___ + [(% moderate and low intensity land uses)/2]___ = _____% Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches 20% Undist + (15.5%) = 35.5 (4 patches) points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	1
H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use High LUI = 40% points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0	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*

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

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

Wetland name or number Offsite Wetland #3

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 _____

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands 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 *Spartina*, 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**
SC 2.0. Wetlands of High Conservation Value (WHCV) 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? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf 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**
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES you will still need to rate the wetland based on its functions.*** 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** **NOTE:** 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 _____

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.*** — **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. — **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). Yes = **Category I** No = **Not a forested wetland for this section**	**Cat. I**
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — 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 — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)* Yes – Go to **SC 5.1** No = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet all of the following three conditions? — 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). — 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 is larger than $^{1}/_{10}$ ac (4350 ft^2) Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 Yes – Go to **SC 6.1** No = **not an interdunal wetland for rating** 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)? Yes = **Category I** No – Go to **SC 6.2** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = **Category II** No – Go to **SC 6.3** 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? Yes = **Category III** No = **Category IV**	**Cat I** **Cat. II** **Cat. III** **Cat. IV**
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	N/A

Wetland name or number _____

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Appendix C

Tree Plan

(Arbor Science Tree Care, June 2025)

ARBOR SCIENCE TREE CARE
SPECIALIZING IN SUSTAINABLE TREE CARE SOLUTIONS
arborsciencetreecare.com
360.521.0249
WA# ARBORST838DT OR CCB# 216351

June 28th 2025

Pacific Lifestyle Homes
1815 NE 99th St Vancouver WA 98682

The Landing At Green Mountain 2
22111 NE 28th St Camas WA 98607
Parcel # 173177000, 173210000

Re: Tree Survey per City of Camas CMC 18.13.045

Tree, Vegetation and Soil Protection During Construction.

During construction. Prior to initiating tree removal on the site, soils, vegetated areas and individual trees to be preserved shall be protected from potentially damaging activities pursuant to the following standards.

A. Placing Materials Near Trees. No person may conduct any activity within the protected area of any tree designated to remain, including, but not limited to, parking equipment, placing solvents, storing building material and soil deposits, dumping concrete washout and locating burn holes.

1. During construction, no person shall attach any object to any tree designated for protection.

B. Protective Barrier. Before development, land clearing, filling or any land alteration for which a tree is to be protected. The contractor
1. Shall erect and maintain readily visible protective tree fencing along the outer edge and completely surrounding the protected area of all protected trees or groups of trees that are to remain undisturbed. Fences shall be constructed of chain link and at least four feet high, unless other type of fencing is authorized by the planning official.

2.Shall prohibit excavation or compaction of earth or other potentially damaging activities within the barriers.

3. Shall maintain the protective barriers in place until the planning official authorizes their removal or a final certificate of occupancy is issued, whichever occurs first

4. Shall ensure that any landscaping done in the protected zone subsequent to the removal of the barriers shall be accomplished with light machinery or hand labor. No turf or lawn areas are to be installed within protected area.

5. In addition to the above, the planning official may require the following:

- Cover with mulch to a depth of at least six (6) inches or with plywood or similar material the areas adjoining the critical root zone of a tree in order to protect roots from damage caused by heavy equipment.

- Minimize root damage by excavating a two (2) foot deep trench, at edge of critical root zone, to cleanly sever the roots of trees to be retained.

- Have corrective pruning performed on protected trees in order to avoid damage from machinery or building activity.

- Maintain trees throughout construction period by watering and fertilizing if recommended by Arborist.

C. Grade.

1. The grade shall not be elevated or reduced within the critical root zone of trees to be preserved without the planning official's authorization. The planning official may allow coverage of up to one half of the area of the tree's critical root zone with light soils (no clay) to the minimum depth necessary to carry out grading or landscaping plans, if it will not imperil the survival of the tree. Aeration devices may be required to ensure the tree's survival.

2. If the grade adjacent to a preserved tree is raised such that it could slough or erode into the tree's critical root zone, it shall be permanently stabilized to prevent suffocation of the roots.

3. The applicant shall not install an impervious surface within the critical root zone of any tree to be retained without the authorization of the planning official. The planning official may require specific construction methods and/or use of aeration devices to ensure the tree's survival and to minimize the potential for root induced damage to the impervious surface.

4. To the greatest extent practical, utility trenches shall be located outside of the critical root zone of trees to be retained. The planning official may require that utilities be tunneled under the roots of

trees to be retained if the planning official determines that trenching would significantly reduce the chances of the tree's survival.

5. Trees and other vegetation to be retained shall be protected from erosion and sedimentation. Clearing operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, shrubs, ground cover and stumps shall be maintained on the individual lots, where feasible. Where not feasible appropriate erosion control practices shall be implemented pursuant to best management practices within industry standards.

D. Directional felling. Directional felling of trees shall be used to avoid damage to trees designated for retention and shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, shrubs, ground cover and stumps shall be retained where feasible. Where not feasible, appropriate erosion control practices shall be implemented pursuant to

E. Additional requirements. The planning official or Arborist may require additional tree, vegetation and soil protection measures which are consistent with accepted best management practices.

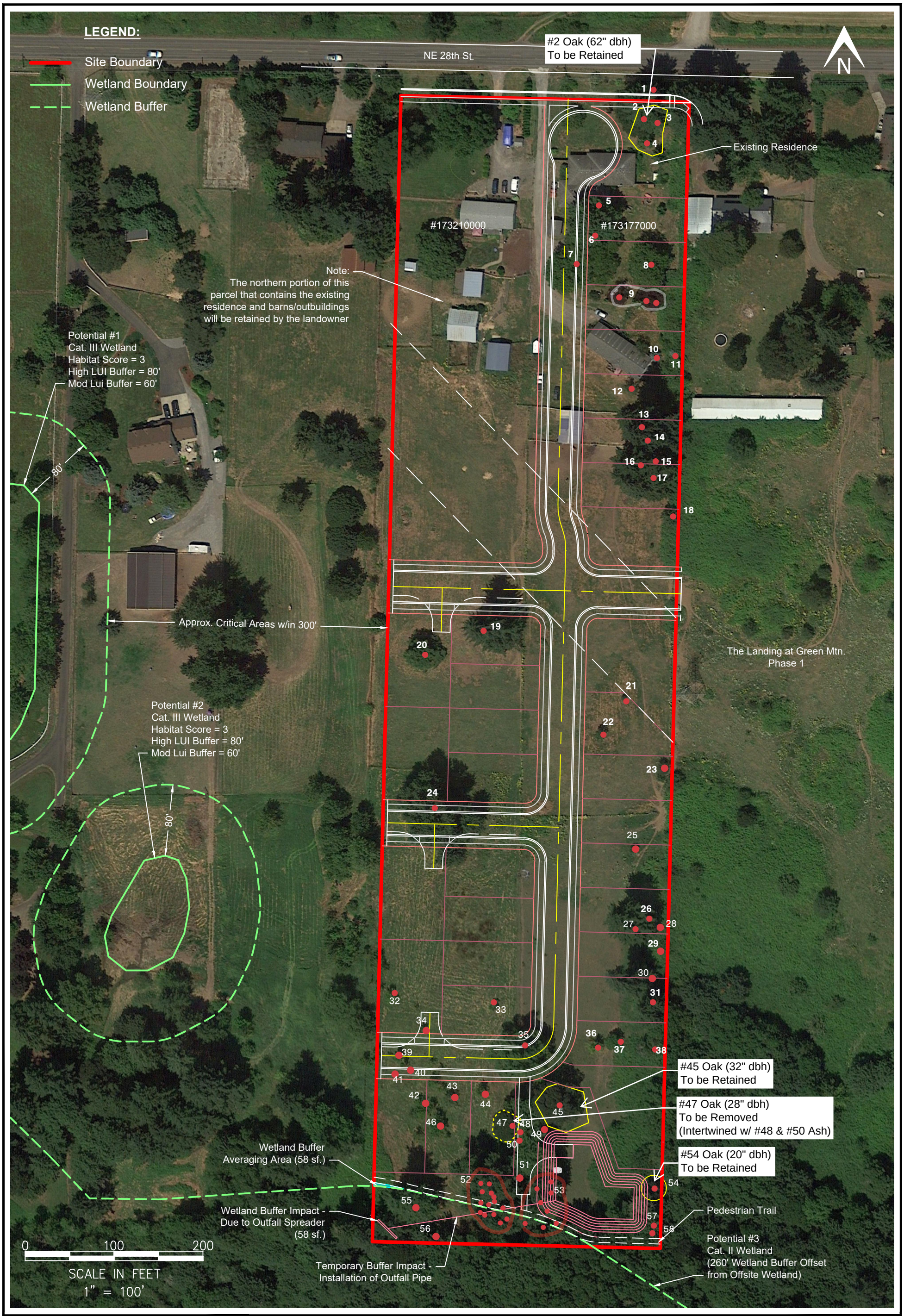
Tree Density Calculations:

Per City of Camas municipal code 18.13.045 this development requires 20 tree units per acre. The existing lot area is 9.59 acres, which has a density requirement of 191.8 tree units per acre. This proposed development retains 206 tree units to be preserved.
See attached map and table for tree detail and locations.

Prepared By Brandon Cheney
ISA Certified Arborist PN #7163A
TRAQ

Tree Number	Species	Common Name	DBH "	Retention Y/N	Condition	Tree Units
1	p. menziesii	Douglas-Fir	8	Y	Satisfactory	2
2	quercus	White Oak (multi stem)	62	Y	Satisfactory	26
3	p. menziesii	Douglas-Fir	52	Y	Satisfactory	22
4	cornus	Dogwood	9	Y	Satisfactory	2
5	acer	Bigleaf Maple	58	N	Fair	25
6	juglands	Black Walnut	31	N	Poor	12
7	juglands	Black Walnut	23	N	Fair	8
8	juglands	Black Walnut	24	N	Fair	8
9	prunus	(3 trees) Purple leaf plum	21	N	Fair	7
10	picea	Blue Spruce	9	N	Satisfactory	2
11	picea	Blue Spruce	9	N	Satisfactory	2
12	betula	(2 trees) Birch	8	N	Poor	2
13	p. menziesii	Douglas-Fir	46	N	Satisfactory	19
14	p. menziesii	Douglas-Fir	50	N	Satisfactory	21
15	p. menziesii	Douglas-Fir	46	N	Satisfactory	19
16	p. menziesii	Douglas-Fir	30	N	Satisfactory	11
17	p. menziesii	Douglas-Fir	41	N	Fair	17
18	acer	Bigleaf Maple (twin stem)	15	N	Poor	4
19	p. menziesii	Douglas-Fir	50	N	Fair	21
20	p. menziesii	Douglas-Fir	30	N	Dead	11
21	crataegus	Hawthorn	8	N	Satisfactory	2
22	fraxinus	Ash	8	N	Satisfactory	2
23	crataegus	Hawthorn	8	N	Satisfactory	2
24	fraxinus	Ash	24	N	Satisfactory	8
25	crataegus	Hawthorn	8	N	Satisfactory	2
26	p. menziesii	Douglas-Fir	46	N	Satisfactory	19
27	crataegus	Hawthorn	6	N	Satisfactory	2
28	quercus	White Oak	6	N	Fair	2
29	crataegus	Hawthorn	6	N	Satisfactory	2
30	p. menziesii	Douglas-Fir	50	N	Satisfactory	21
31	p. menziesii	Douglas-Fir	28	N	Poor	20
32	fraxinus	Ash	6	N	Satisfactory	2
33	fraxinus	Ash	6	N	Satisfactory	2
34	fraxinus	Ash	7	N	Satisfactory	2

Tree Number	Species	Common Name	DBH "	Retention Y/N	Condition	Tree Units
35	fraxinus	Ash (twin stem)	50	N	Satisfactory	21
36	fraxinus	Ash	10	N	Satisfactory	2
37	fraxinus	Ash (twin stem)	19	N	Satisfactory	6
38	salix	Willow	10	N	Poor	2
39	fraxinus	Ash (twin stem)	42	N	Satisfactory	17
40	fraxinus	Ash	7	N	Satisfactory	2
41	fraxinus	Ash	7	N	Satisfactory	2
42	fraxinus	Ash	9	N	Satisfactory	2
43	fraxinus	Ash	8	N	Satisfactory	2
44	fraxinus	Ash	10	N	Satisfactory	2
45	quercus	White Oak	32	Y	Satisfactory	12
46	fraxinus	Ash	7	N	Satisfactory	2
47	quercus	White Oak	28	N	Fair	10
48	fraxinus	Ash (twin stem)	33	N	Satisfactory	13
49	fraxinus	Ash (multi stem)	22	Y	Satisfactory	7
50	fraxinus	Ash (twin stem)	38	N	Fair	15
51	populas	Cottonwood	48	N	Satisfactory	20
52	populas	(14 tree grove) Cottonwood	188	Y	Satisfactory	90
53	populas	(8 tree grove) Cottonwood	116	N	Satisfactory	54
54	quercus	White Oak	20	Y	Fair	6
55	p. menziesii	Douglas-Fir	38	Y	Satisfactory	15
56	p. menziesii	Douglas-Fir	28	Y	Satisfactory	10
57	fraxinus	Ash	18	Y	Fair	5
58	fraxinus	Ash	25	Y	Fair	9



TREE PLAN

EXISTING CONDITIONS &
PROPOSED SITE PLAN

APPLICANT: Pacific Lifestyle Homes
PROJECT NAME: Landing at Green Mountain II
SITE LOCATION: 22015 & 22111 NE Goodwin Rd., Camas, WA

COUNTY: Clark **STATE:** ~~WA~~
FIGURE: 1
DATE: 6-24-25

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