## APPROVED JURISDICTIONAL DETERMINATION FORM **U.S. Army Corps of Engineers**

Form 1 of 1: Wetlands H, I, J, K, and L

# **SECTION I: BACKGROUND INFORMATION**

| Α. | REPORT COMPLETION DATE FOR | R APPROVED JURISDICTIONAL | L DETERMINATION (JD): 31 August 2022 |
|----|----------------------------|---------------------------|--------------------------------------|
|    |                            |                           |                                      |

| B.   | DISTRICT OFFICE, FILE NAME, AND NUMBER: <u>Seattle District</u> , Pacific Ridge Homes, <u>NWS-2021-669</u> . Name of water being evaluated on this JD form: <u>Wetlands H, I, J, K, and L</u>   |  |  |  |
|--|---|--|--|--|
| C.   | PROJECT LOCATION AND BACKGROUND INFORMATION:  State: Washington   |  |  |  |
| D.   | REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):  Office (Desk) Determination. Date: 31 August 2022.  Field Determination. Date(s):   |  |  |  |
| SEC  | CTION II: SUMMARY OF FINDINGS   |  |  |  |
| Α.   | RHA SECTION 10 DETERMINATION OF JURISDICTION.   |  |  |  |
| There <b>Are no</b> "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]  Waters subject to the ebb and flow of the tide.  Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: |   |  |  |  |
| В.   | CWA SECTION 404 DETERMINATION OF JURISDICTION.  |  |  |  |
| The  | re Are no "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]   |  |  |  |
|  | 1. Waters of the U.S.  a. Indicate presence of waters of U.S. in review area (check all that apply):  TNWs, including territorial seas  Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands |  |  |  |
|  | b. Identify (estimate) size of waters of the U.S. in the review area:  Non-wetland waters: linear feet width (ft) and/or acres.  Wetlands: acres.   |  |  |  |
| c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual. and 1987 Delineation Manual and Regional Supplement  Elevation of established OHWM (if known):   |   |  |  |  |
|  | <ul> <li>Non-regulated waters/wetlands (check if applicable):<sup>3</sup></li> <li>Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: Wetlands H, I, J, K, and L do not have a surface water or shallow subsurface connection or ecological connectivity to other navigable or interstate waters of the U. S. or tributaries of waters of the U. S. The subject</li> </ul>  |  |  |  |

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<sup>&</sup>lt;sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.
<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
<sup>3</sup> Supporting documentation is presented in Section III.F.

wetlands are not used by interstate or foreign travelers for recreational purposes, have no habitat or resources of special significance which would attract interstate or foreign travelers, lacks bird and wildlife species of special significance which would attract interstate or foreign travelers, supports no fish or shellfish which could be taken or sold in interstate or foreign commerce, and are not used for industrial, agricultural, or silvicultural activities involving interstate or foreign commerce. See Section B for additional information.

| SE    | CTIC  | )N II   | I: CWA ANALYSIS   |  |  |
|-------|---|---|---|--|--|
| If th |   | Ws AND WETLANDS ADJACENT TO TNWs he aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland acent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below. |   |  |  |
|       | 1.  |   | W ntify TNW: nmarize rationale supporting determination:  |  |  |
|       | 2.  |   | tland adjacent to TNW  marize rationale supporting conclusion that wetland is "adjacent":   |  |  |
| B.    | СН  | ARA   | CTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):   |  |  |
|       | (pe   | renni   | nd that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round al) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, ection III.D.4.   |  |  |
|       | A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. If the waterbody <sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. |   |   |  |  |
|       | wet   | land  | O covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite s, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a nt nexus exists is determined in Section III.C below.  |  |  |
|       | 1. Characteristics of non-TNWs that flow directly or indirectly into TNW  |   |   |  |  |
|       |   | (i)   | General Area Conditions:  Watershed size: Pick List  Drainage area: Pick List  Average annual rainfall: inches  Average annual snowfall: inches   |  |  |
|       |   | (ii)  | Physical Characteristics:  (a) Relationship with TNW:  ☐ Tributary flows directly into TNW.  ☐ Tributary flows through Pick List tributaries before entering TNW.  Project waters are P |  |  |
|       |   |   | Tributary stream order, if known:  (b) General Tributary Characteristics (check all that apply):  |  |  |

Tributary is:

☐ Natural

<sup>&</sup>lt;sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

<sup>&</sup>lt;sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW. Version 2-8-08

|     | ☐ Artificial (man-made). Explain: ☐ Manipulated (man-altered). Explain:   |
|-----|---|
|     | Tributary properties with respect to top of bank (estimate):  Average width: feet  Average depth: feet  Average side slopes: Pick List.   |
|     | Primary tributary substrate composition (check all that apply):  Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:   |
|     | Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:  Presence of run/riffle/pool complexes. Explain:  Tributary geometry: Pick List  Tributary gradient (approximate average slope):%   |
| (c) | Flow: Tributary provides for: Pick List Estimate average number of flow events in review area/year: Pick List Describe flow regime: Other information on duration and volume:   |
|     | Surface flow is: Pick List. Characteristics:  |
|     | Subsurface flow: Pick List. Explain findings:  Dye (or other) test performed:   |
|     | Tributary has (check all that apply):  Bed and banks OHWM <sup>6</sup> (check all indicators that apply):  clear, natural line impressed on the bank changes in the character of soil shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining other (list):  Discontinuous OHWM. Explain:  |
|     | If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):    High Tide Line indicated by:  |
| Cha | emical Characteristics:  aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.)  Explain:  https://example.com/restriction/problem/restriction-restrictio |
| Bio | logical Characteristics. Channel supports (check all that apply):  Riparian corridor. Characteristics (type, average width):  Wetland fringe. Characteristics:  Habitat for:  Federally Listed species. Explain findings:   |

(iii)

(iv)

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<sup>&</sup>lt;sup>6</sup>A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup>Ibid.

|    |   |       | ☐ Fish/spawn areas. Expl.☐ Other environmentally.☐ Aquatic/wildlife divers   | sensitive species. Explain   |                                 |                 |
|----|---|-------|--|--|---------------------------------|-----------------|
| 2. | Cha   | aract | eristics of wetlands adjace  | nt to non-TNW that flow  | directly or indirectly into TNW | <i>i</i>        |
|    | (i)   |       | Asical Characteristics:  General Wetland Character Properties:  Wetland size:  Wetland type. Explain  Wetland quality. Expla Project wetlands cross or s           | res<br>:<br>iin:   | xplain:                         |                 |
|    |   | (b)   | General Flow Relationship<br>Flow is: <b>Pick List</b> . Explain   |  |                                 |                 |
|    |   |       | Surface flow is: Pick List Characteristics:  |  |                                 |                 |
|    |   |       | Subsurface flow: Pick List  Dye (or other) test p  |  |                                 |                 |
|    |   | (c)   | ☐ Ecological connect   | ydrologic connection. Exp  | olain:                          |                 |
|    |   | (d)   | Proximity (Relationship) to Project wetlands are Pick I Project waters are Pick List. Estimate approximate local   | List river miles from TNW st aerial (straight) miles fr  | om TNW.                         |                 |
|    | (ii) Chemical Characteristics:  Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:  Identify specific pollutants, if known: |       |  |  |                                 |                 |
|    | (iii)   |       | Riparian buffer. Character Vegetation type/percent co Habitat for:  Federally Listed specie Fish/spawn areas. Expl. Other environmentally- Aquatic/wildlife divers | istics (type, average width ver. Explain:  s. Explain findings: ain findings: sensitive species. Explain | ): findings:                    |                 |
| 3. | Cha   | All   | eristics of all wetlands adja<br>wetland(s) being considered<br>proximately () acres in  | in the cumulative analysis   |                                 |                 |
|    |   | For   | each wetland, specify the fo<br><u>Directly abuts? (Y/N)</u>   | llowing: <u>Size (in acres)</u>  | Directly abuts? (Y/N)           | Size (in acres) |
|    |   |       |  |  |                                 |                 |

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Summarize overall biological, chemical and physical functions being performed: \_\_\_\_\_.

| C. SIGNIFICANT NEAUS DETERMINATION | C. | SIGNIFICANT NEXUS DETERMINATION |
|------------------------------------|----|---------------------------------|
|------------------------------------|----|---------------------------------|

|    | 1. | Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:   |  |  |  |
|----|----|---|--|--|--|
|    | 2. | Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:  |  |  |  |
|    | 3. | <b>Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.</b> Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:   |  |  |  |
| D. |    | TERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL AT APPLY):  |  |  |  |
|    | 1. | TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:  TNWs: linear feet width (ft), or acres.  Wetlands adjacent to TNWs: acres.   |  |  |  |
|    | 2. | RPWs that flow directly or indirectly into TNWs.  Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide rationale indicating that tributary flows perennial:  Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: |  |  |  |
|    |    | Provide estimates for jurisdictional waters in the review area (check all that apply):  Tributary waters: linear feetwidth (ft).  Other non-wetland waters: acres.  Identify type(s) of waters:   |  |  |  |
|    | 3. | Non-RPWs <sup>8</sup> that flow directly or indirectly into TNWs.  Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.   |  |  |  |
|    |    | Provide estimates for jurisdictional waters within the review area (check all that apply):  Tributary waters: linear feet width (ft).  Other non-wetland waters: acres.  Identify type(s) of waters:  |  |  |  |
|    | 4. | Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.  Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.  Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:   |  |  |  |
|    |    | Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:  |  |  |  |
|    |    | Provide acreage estimates for jurisdictional wetlands in the review area: acres.  |  |  |  |
|    | 5. | Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.  Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.  |  |  |  |
|    |    | Provide acreage estimates for jurisdictional wetlands in the review area: acres.  |  |  |  |
|    | 6. | Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.  Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.   |  |  |  |

<sup>8</sup>See Footnote # 3. Version 2-8-08

|     | Provide estimates for jurisdictional wetlands in the review area: acres.  |
|-----|---|
|     | 7. Impoundments of jurisdictional waters.  As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.  Demonstrate that impoundment was created from "waters of the U.S.," or  Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  Demonstrate that water is isolated with a nexus to commerce (see E below).  |
| E.  | ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY): 10  which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:   |
|     | Identify water body and summarize rationale supporting determination:   |
|     | Provide estimates for jurisdictional waters in the review area (check all that apply):  Tributary waters: linear feet width (ft).  Other non-wetland waters: acres.  Identify type(s) of waters:  Wetlands: acres.  |
| F.  | NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):  If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.  Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.  Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).  Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:  Other: (explain, if not covered above): |
|     | Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):  Non-wetland waters (i.e., rivers, streams): linear feet width (ft).  Lakes/ponds: acres.  Other non-wetland waters: acres. List type of aquatic resource:  Wetlands: 0.29 acres.   |
|     | Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):  Non-wetland waters (i.e., rivers, streams): linear feet width (ft).  Lakes/ponds: acres.  Other non-wetland waters: acres. List type of aquatic resource:  Wetlands: acres.  |
| SEC | CTION IV: DATA SOURCES.   |
|     | SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):  Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Wetland delineation report dated 22 February 2008  Data sheets prepared/submitted by or on behalf of the applicant/consultant.  Office concurs with data sheets/delineation report.  Office does not concur with data sheets/delineation report.  |

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook. <sup>10</sup> Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

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| Data sheets prepared by the Corps:  |
|---|
| Corps navigable waters' study: The waterbody is on the Section 10 Navigable Waterway List for Seattle District. |
| U.S. Geological Survey Hydrologic Atlas:  |
| USGS NHD data.  |
| ☐ USGS 8 and 12 digit HUC maps.   |
| U.S. Geological Survey map(s). Cite scale & quad name:  |
| USDA Natural Resources Conservation Service Soil Survey. Citation:  |
| National wetlands inventory map(s). Cite name:  |
| State/Local wetland inventory map(s): Snohomish County  |
| FEMA/FIRM maps:   |
| 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)                                   |
| Photographs: Aerial (Name & Date): Google Earth, 2018   |
| or Other (Name & Date):   |
| Previous determination(s). File no. and date of response letter:  |
| Applicable/supporting case law:   |
| Applicable/supporting scientific literature:  |
| Other information (please specify):   |
|   |

## B. ADDITIONAL COMMENTS TO SUPPORT JD:

Existing Conditions: The 16.6-acre site consists of four tax parcels. The site is rectangular in shape and topography is undulating and slopes gently to the northeast. The site is bounded by Cathcart Way to the north, Woodinville Snohomish Road to the east, single family residential developments to the south, and undeveloped land to the west. Surrounding vicinity has been developed with low density residential development, high density residential development, and sparse commercial development.

A wetland delineation dated 18 June 2021 was provided for the site. Sampling for the report occurred between summer 2020 with an additional site visit in October 2020. The report identified eight total potentially regulated wetlands on the subject property (Wetlands B, C, G, H, I, J, K, and L) as well as an additional stream (Garden Creek) and four wetlands located offsite to the west (Offsite Wetlands I-CSII, K-CSII, L-CSII, and A). Onsite Wetlands B, C, G, and offsite Wetlands A, I-CSII, and K-CSII are not included in this jurisdictional determination.

Subject Waters: Wetlands H, I, J, K, and L.

- Wetland H: Wetland H is a 0.01-acre size category IV palustrine, forested, seasonally saturated (PFOB) wetland located on the central portion of the property. Hydrology is provided primarily by a seasonally high groundwater table, direct precipitation, and surface sheet flow from surrounding uplands. Vegetation within the wetlands consists of forested canopy dominated by western red cedar (Thuja plicata), with an understory of salmonberry (rubus spectabilis), vine maple (Acer circinatum), and common lady fern (Athyrium cyclosorum).
- Wetland I: Wetland I is a 0.04-acre category III palustrine forested, seasonally flooded (PFOC) wetland located on the south-central portion of the property. Hydrology is provided by a seasonally high groundwater table, direct precipitation, and surface sheet flow from surrounding uplands. Vegetation within the wetlands consists of forested canopy dominated by western red cedar, with an understory of salmonberry, vine maple, and common lady fern.
- Wetland J: Wetland J is a 0.01-acre size category IV palustrine scrub-shrub, seasonally saturated wetland (PSSB) located on the central portion of the property. Hydrology is provided by a seasonally high groundwater table, direct precipitation, and surface sheet flow from surrounding uplands. Vegetation within the wetlands consists of red alder saplings (alnus rubra), Himalayan blackberry (rubus armeniacus), and reed canarygrass (Phalaris arundinacea).
- Wetland K: Wetland K is a 0.44-acre size category III palustrine forested/scrub-shrub, seasonally saturated wetland (PFO/PSB) slope wetland located on the southeast portion of the property. Hydrology is provided by a seasonally high groundwater table, direct precipitation, and surface sheet flow from surrounding uplands. Vegetation within Wetland K consists of western red cedar), vine maple, salmonberry, non-native invasive Himalayan blackberry and common lady fern.
- Wetland L: Wetland L is a 0.76-acre size category IV palustrine forested/emergent, seasonally saturated (PFO/EMB) wetland located on the eastern portion of the property. Hydrology is provided by a seasonally high groundwater table, direct precipitation, and surface sheet flow from surrounding uplands. Vegetation within the wetlands consists of forested canopy dominated by black cottonwood (Populus balsamifera), and red alder with an emergent understory dominated by salmonberry, reed canarygrass, and creeping buttercup (ranunculus repens).

## **Hydrology:**

Garden Creek and its adjacent wetlands (Wetlands B, C, and G) are not included in this jurisdictional determination. Garden Creek flows south to north through the northwest portion of the property where it enters a culvert and outlets north of Cathcart Way into an existing stormwater pond mapped by Snohomish County. Snohomish County maps Garden Creek as originating 0.55-mile southwest of the property is a residentially developed area. Garden creek is a first-order tributary to the Snohomish River. Garden Creek meanders slightly across the site in a well-defined channel with an approximately 6 to 8-foot bankfull width on average. Streambed substrates consist of

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silts and gravels. The riparian buffer consists of dense, native vegetation consisting of a forest canopy with western red cedar, black cottonwood, and red alder with an understory of salmonberry, beaked hazelnut (Corylus cornuta), red elderberry (Sambucus racemosa), and common lady fern.

Hydrology for the site is supplied by a high groundwater table, direct precipitation, and surface sheet flow from surrounding uplands.

Topography of the site is plateaued in the central portion of the site with a northeasterly downslope to the east and northwesterly downslope to the west. A Geotechnical Report was submitted to determine hydrologic flow paths on the property. Wetlands H, I, J are located in small, closed depressions on the topographic plateau at 360 feet in elevation. None of these wetlands were observed to have surface water outlets; no shallow subsurface connection to other waters based on the nature of intervening soils.

## Soils:

The site is mapped by Natural Resources Conservation Service (NRCS) Web Soil Survey as located in Soil Unit 1 – Alderwood gravelly sandy loam, 0 to 8 percent slopes. This soil unit is 85 percent Alderwood (listed as not hydric) and 15 percent minor components (5 percent Mckenna – hydric, 5 percent Everett – not hydric, 3 percent Shalcar – hydric, 2 percent Norma – hydric). The capacity of the most limiting layer to transmit water (Ksat) is very low to moderately low (0.00 to 0.06 in/hr). The easternmost portions of Wetlands K and L are mapped as located in Soil Unit 2 – Alderwood gravelly sandy loam, 8 to 15 percent slopes. This unit is 85 percent Alderwood (listed as not hydric) and 15 percent minor components (5 percent Indianola – not hydric, 5 percent Everett – not hydric, 3 percent Shalcar – hydric, and 2 percent Norma – Hydric). The capacity of the most limiting layer to transmit water (Ksat) is very low to moderately low (0.00 to 0.06 in/hr). Based on the low ability of onsite soils to transmit water, the distance between the subject wetlands and Garden Creek, and the lack of physical indicators of surface water connections, it is unlikely that a surface or subsurface connection between the subject wetlands and Garden Creek exists.

#### Conclusions:

Wetlands K and L are located downslope and east of wetlands H, I, and J at 340 feet in elevation on the eastern portion of the property on a 2-5 percent easterly slope. Topographic variation indicates subsurface conveyance flows to the northeast and is not hydrologically connected to Garden Creek. Wetland K is partially onsite and flows offsite to the south and east of the property. The eastern terminus to Wetland K ends in uplands adjacent to State Route 9. There are no discernable conveyances (artificial swales, or ditches) at this location and no stormwater features are mapped by Snohomish County.

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