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

Form 1 of 2 - Wetland K, L, M-P, and Q; Ditches D, E, and F

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): March 26, 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Seattle District – Spire, LLC, NWS-2016-683
Name of water being evaluated on this form: Wetlands K, L, M-P, and Q; Ditches D, E, and F

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: WA County/parish/borough: Skagit City: Mount Vernon
Center coordinates of site (lat/long in degree decimal format Lat: 48.025º Long: -122.108889º
Universal Transverse Mercator: Zone
Name of nearest waterbody: Indian Slough
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Indian Slough
Name of watershed or Hydrologic Unit Code (HUC): 17110002 (Strait of Georgia)
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: March 26, 2018
☒ Field Determination. Date(s): 21 April 2017

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.
There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area.
☐ 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: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.
There **Are** *"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): [1]
☐ TNWs, including territorial seas
☐ Wetlands adjacent to TNWs
☒ Relatively permanent waters[2] (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: 9,720 linear feet: average width 2.5 ft.
Wetlands: 2.41 acres

c. Limits (boundaries) of jurisdiction based on:
Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):[3]
☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: **See Form 2 of 2**

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] 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).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:
Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation**.** Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] 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. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant 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: 17110002 (Strait of Georgia) 955 **square miles**
Drainage area: 235 **acres**
Average annual rainfall: 32 inches
Average annual snowfall: 16 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.
☒ Tributary flows through 3 tributaries before entering TNW.

Project waters are **1 (or less)** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **1 (or less)** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: Water from Ditches D, E, and F flow into Indian Slough, a tributary of Padilla Bay, a tidal waterbody used for interstate and foreign commerce.
Tributary stream order, if known: 1.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☒ Artificial (man-made). Explain: Ditch system has replaced natural tributaries in the area.
☐ Manipulated (man-altered). Explain:

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] 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.

Tributary properties with respect to top of bank (estimate):
Average width: 2-3 feet
Average depth: 1.5 feet
Average side slopes: **3:1 .**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Herbaceous (grasses) 20/% cover	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stable and vegetated; periodically cleaned out.
Presence of run/riffle/pool complexes. Explain: none.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 2%

(c) Flow:
Tributary provides for: Ditch E - seasonal flow; Ditches D and F - ephemeral flow
Estimate average number of flow events in review area/year: **6-10**
Describe flow regime: Flow in response to rain events in Ditches D and F; Flow for greater than 3 months (November through March) in Ditch E.
Other information on duration and volume: Consultant provided Ditch Hydrology Study. Provides flow and duration information for Ditch D.

Surface flow is: **Confined.** Characteristics: See additional information below.

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☒ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☒ destruction of terrestrial vegetation
☒ shelving	☐ the presence of wrack line
☒ vegetation matted down, bent, or absent	☒ sediment sorting
☒ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☒ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] 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:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: Water conveyed by ditch system is generally clear with moderate organic debris, general water quality is good over total length of ditch system, watershed has been extensively developed for agricultural and industrial uses; downstream waters of Indian Slough arc listed on the WA State 303(d) list for temperature and fecal coliform.
Identify specific pollutants, if known: Herbicides, fertilizers, petrochemicals (road runoff0.

(iv) Biological Characteristics. Channel supports (check all that apply):
☒ Riparian corridor. Characteristics (type, average width): Primarily shrub and herbaceous cover 100' to 10' wide..

[6]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.
[7]Ibid.

☐ Wetland fringe. Characteristics:
☐ Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW - Wetland K, L, M-P, and Q

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: 2.41 acres (4 wetlands)
Wetland type. Explain: PFO depressional
Wetland quality. Explain: wetland K – Category III; Wetlands L, M-P, and Q - Category IV (per the Washington State wetland rating System based on a scale of I to IV, I being the highest functioning)

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Ephemeral flow**. Explain: Wetlands outflow into RPW and non-RPW tributaries during rain events.

Surface flow is**: Overland sheetflow**
Characteristics: Micro-channels observed braiding around trees, etc..

Subsurface flow: **Yes**. Explain findings: Assumed based on soil characteristics.
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☐ Directly abutting
☒ Not directly abutting
☒ Discrete wetland hydrologic connection. Explain: Wetlands arc upslope from, and in close proximity to, the on-site non-RPWs and RPW to conclude surface and shallow subsurface flow from wetlands into these drainages.
☐ Ecological connection. Explain: .
☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW
Project wetlands are **1 (or less)** river miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from TNW.
Flow is from: **Wetland to navigable waters.**
Estimate approximate location of wetland as within the **100 - 500-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Water flowing from wetlands is clear, general water quality is good, watershed has been moderately developed for agricultural and industrial uses, downstream waters of Indian Slough arc on the WA State 303(d) list for temperature and fecal coliform.
Identify specific pollutants, if known: herbicides, fertilizers.

(iii) Biological Characteristics. Wetland supports (check all that apply):

☒ Riparian buffer. Characteristics (type, average width): Herbaceous, 5-10 feet.
☒ Vegetation type/percent cover. Explain: Forested/scrub-shrub, 10-60 feet..
☐ Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **10**
All wetlands (2.61 acres in total) in the drainage basin arc being considered in the cumulative analysis.

For each wetland, specify the following:

From 2015 Delineation (Corps Ref# NWS-2016-683)

	Directly Abuts (Y/N)	Size (acres)
Wetland L	Y	0.69
Wetland M-P	N	1.68
Wetland Q	Y	0.04
Wetland K	N	0.005

From 2008 Delineation (Corps Ref# NWS-2008-631)

	Directly Abuts (Y/N)	Size (acres)
Wetland A	N	0.005
Wetland B	N	0.01
Wetland C	Y	0.03
Wetland D	N	0.005
Wetland E	N	0.01
Wetland F	Y	0.03
Wetland H	N	0.11

Summarize overall biological, chemical and physical functions being performed: see Section C below for summary.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

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: .

   Subject wetlands K, L, M-P, and Q and tributaries (ditches) E and F have a significant nexus to a downstream TNW.

   Subject reach includes the on-site tributaries (Ditch E and F), offsite tributaries (Ditch A, B, C, and D), and associated wetlands in the immediate drainage basin both on and off the subject site. Wetlands in the subject area are adjacent to and/or abutting these tributaries and drain into them during wet season overflow periods via overland sheet flow, shallow subsurface flow, and flow through discernable microchannels. Ditch A flows into Ditch B, which flows into Ditch C. Ditch F flows east toward McFarland Road before draining into a stormwater system, which flows south before entering a stormwater pond and outfalling into Ditch C. Both Ditch C and D flow into a culvert that continues south into Indian Slough. Indian Slough then flows 2.85 miles west before entering Padilla Bay.

   The watershed has been extensively developed for agricultural and industrial uses. Essential Fish Habitat for Pacific Salmon (coho) designated under the Magnuson-Stevens Fishery Conservation and Management Act extends from the TNW (Padilla Bay) upstream through Indian Slough. Fish species listed under the Endangered Species Act utilize the waters of Indian Slough; designated critical habitat for chinook salmon and bull trout exists in Padilla Bay.

   Wetland functions arc moderate wildlife habitat and habitat diversity, moderate enhanced food web support, moderate floodwater storage/attenuation, and moderate sediment input reduction and toxin removal.

   The wetlands create and transfer organic carbon which supports the downstream food web of the TNW. Wetlands improve downstream water quality in TNW through sediment and toxin interception. The lengthy vegetated tributary/wetland complexes

have the capacity to capture pollutants (primarily agricultural herbicides/pesticides and sediments) to reduce the amount of pollutants, sediments or flood waters from reaching the TNW. Wetlands attenuates downstream flooding by reducing peak flow in the watershed during major storm events and attenuates erosion by detaining high flows during storms and reduce the duration of erosive flows, thus decreasing downstream erosion in streams. Wetlands and ditch system contribute significant support to habitat for ESA listed species and Essential Fisheries Habitat

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** 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. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT 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 seasonally: .
   - ☒ 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: Tributaries identified as having continuous flow for 3-6 months. See additional information for details.

     Provide estimates for jurisdictional waters in the review area (check all that apply):
     - ☒ Tributary waters: Ditch E - 0.89 linear miles at 2 foot width (average) for 0.22 acres.
     - ☐ Other non-wetland waters: acres.
       Identify type(s) of waters: .

3. **Non-RPWs[8] 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: Ditches D and F - 0.49 linear miles at 1.5 foot width (average) for 0.09 acres.
   - ☐ 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.
     - ☐ 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: **8.6** 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: 1.68 acres (Wetland M-P).

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.

   Provide estimates for jurisdictional wetlands in the review area: 0.73 acres (Wetlands K, L, and Q).

7. **Impoundments of jurisdictional waters.[9]**

[8]See Footnote # 3.

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: 0.71 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.

SECTION IV: DATA SOURCES.

A. 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 May 2006.
- ☒ 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.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☐ 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: 7.5 minute LaConner Quad
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: .
- ☒ State/Local wetland inventory map(s): WA State Department of Ecology, 2001

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[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[10] 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.*

☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): Google Earth 2015.
☒ Other (Name & Date):Site photos from field visits in 2008 and 2017.
☒ Previous determination(s). File no. and date of response letter: NWS-2008-613 dated 16 December 2008.
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Site Visit
21 April 2017
Partly cloudy; rain during previous 2 weeks.
Randel Perry, Brandon Clinton, Juliana Houghton (Corps)
Kerrie McArthur (wetland consultant)

Site Description: The subject site is located in the Indian Slough watershed and is divided into 5 contiguous lots previously numbered 14 through 18 (see attached figure). Topography in the vicinity general slopes from northeast to southwest. The parcel is bounded by developed properties to the north, west, and east and by a maintained pipeline right of way along the southern boundary. The immediate vicinity around the site is extensively developed for industrial and agricultural uses. Sierra Pacific Industries has developed the property to the south and east of the subject sites as a log mill and wood treatment facility. The lots are forested with a mosaic pattern of wetlands occurring in topographical depressions. The area contains a number of drainage ditches constructed to replace natural tributaries and facilitate historic agricultural activities and current industrial uses of the applicant's property to the south. There is an existing mitigation wetland along the eastern edge of the site.

Delineation: A wetland delineation was conducted by Geomatrix in April of 2008 and 2012. Six separate wetlands were identified by the consultant on the subject parcel – wetlands K, L, M-P, N, O, and Q (see Form 2 of 2 for Wetlands N and O). Additional information on site topography (one foot contours) was provided on 12 December 2017.

Soils: Mapped soils are: Mapped soils are – Bow gravelly loam 0% - 3% slopes (listed as hydric)

Observed soil colors are:
Wetlands - 7.5Y 4/2 silty clay loam overlying 2.5Y 5/3 silt loam with redoximorphic features.
Uplands - 10YR 2/2 clay loam and 10YR 4/2 silt loam (no redoximorphic features).

Hydrology: Wetlands are supported by shallow groundwater seepage and precipitation.

Vegetation:

Wetland	Red alder (Alnus rubra) FACW
	Slough Sedge (Carex obnupta) OBL
	Black cottonwood (Populus balsamifera) FAC
	Western red cedar (Thuja plicata) FAC
	Piggyback plant (Tolmiea menziesii) FAC
	Salmonberry (Rubus spectabilis) FAC
	Trailing blackberry (Rubus ursinus) FACU
Uplands	Trailing blackberry (Rubus ursinus) FACU
	Red alder (Alnus rubra) FACW
	Piggyback plant (Tolmiea menziesii) FAC
	Himalayan blackberry (Rubus armenicus) FACU
	Salmonberry (Rubus spectabilius) FAC
	Stinging nettle (Urtica dioica) FAC
	Sword fern (Polystichum munitum) FACU
	Bitter cherry (Populus emarginata) FACU
	Snowberry (Symphoricarpos albus) FACU
	Indian plum (Oemleria cerasiformis) FACU

Wetland acreage identified for this determination: 2.41 acres
Wetland acreage to be filled: 2.41 acres (plus 0.16 acres of non-waters of the U. S. (isolated wetlands) – see Form 2 of 2)

Observations/Discussion: A previous jurisdictional determination site visit for the subject property was conducted on 21 May 2008. A jurisdictional determination (JD) was issued on 16 December 2008 (Corps reference number NWS-2008-631). The JD determined that wetlands K, L, M-P, N, O, and Q were jurisdictional. Additional information was received on 13 July 2016 that included a delineation confirmation report (based on new sampling) and a hydrology study of surface and groundwater flow paths in Ditch D and the site wetlands. No changes were reported to the boundaries of the previously delineated wetlands. The report did substantiate a minimal hydrological

connection between Ditch D and wetlands M-P. The Corps has previously determined that Indian Slough is a Traditional Navigable Water under CWA Section 404 and a Navigable Water subject to R&HA Section 10 (Corps reference number NWS-2008-1459; 26 November 2008).

Most wetland boundaries were identified by changes in topography and noticeable transitions in vegetation communities. Wetlands appear to be a braided system that winds through forested areas with numerous "arms" and channels. Some of the smaller wetlands (K, O, and Q) may have developed in depressions on the landscape likely created during historic logging operations. As no change to boundaries was noted, the site visit did not investigate the complete boundary of each wetland. Corps staff walked around the downslope end of the site wetlands to investigate connectivity between wetlands and downstream tributary features.

A number of tributaries occur in the immediate vicinity. Ditch D flows into Ditch C (a seasonal RPW per the 2008 JD). Ditch F flows east toward McFarland Road before draining into a stormwater system, which flows south before entering a stormwater pond and outfalling into Ditch C, which flows southward and connects to a culvert under the mill site and into Indian Slough. Indian Slough, which flows 2.85 miles west before entering Padilla Bay. Ditches D and F are non-relatively permanent waters; Ditch E is seasonal relatively permanent water that flows south before connecting to the culvert under the mill site and into Indian Slough. Indian Slough.

Wetland K is very small feature that appears to have formed in a depression surrounded by upland soils and vegetation. This feature appears to have formed in an old root hole. There is no apparent surface flow path from Wetland K to Ditch F. Given the topography, soils, and close proximity, it is reasonable to conclude that water from this wetland travels via shallow subsurface flow during the wet season into Ditch F.

Wetlands L and Q are situated approximately 50 feet south of Ditch F which runs along the north side of the site and conveys water east into the stormwater facility described above. In addition, portions of Wetland L drain into Wetland M-N via a natural channel (Channel A). Given the topography, soils, and close proximity, it is reasonable to conclude that water from these wetlands travels via sheetflow and shallow subsurface flow during the wet season into Ditch F and, for Wetland L, into Wetland M-P.

Wetlands M-P is a single complex. The eastern edge of wetland M is separated from a wetland mitigation area at the east edge by upland soils and vegetation. The western edge of Wetland M-P is approximately 125 feet from Ditch E and 190 feet from Ditch D. Intervening soils are mapped as Bow Gravelly Loam, 0 to 3 percent slopes, and are listed as hydric. Given the topography, soils, and close proximity, it is reasonable to conclude that water in the western end of the wetland M-P complex travels via sheetflow and shallow subsurface flow during the wet season into Ditch E and may flow into Ditch D during peak flow events.

Additional wetlands occur on the site. A separate jurisdictional determination has been made for Wetlands N, and O (see Form 2 of 2 - Isolated Wetlands).

Jurisdictional Determination:
Ditch E is a relatively permanent water based on continuous seasonal flow for greater than three months. Ditches D and F are non- relatively permanent waters with a significant nexus to downstream traditional navigable waters. These tributaries are jurisdictional waters of the U. S.

Wetland M-P is adjacent to a relatively permanent water that flows into a downstream TNW; Wetlands K, L, and Q are adjacent to non-relatively permanent waters that flow into downstream traditional navigable waters. These non-RPWs and wetlands have a significant nexus to downstream traditional navigable waters and are jurisdictional waters of the U. S.