

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

JD 2 of 2: Wetland J adjacent to Ditch 43
Sig Nex determination

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 9/21/12.

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Seattle District, BNSF Railway Co., NWS-2011-325.
Name of water being evaluated on this JD form: Wetland J and adjacent Ditch 43

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Washington County: Whatcom City: Custer

Center coordinates of site (lat/long in degree decimal format): Lat: 48.882877 **N**, Long: -122.710764 **W**

Universal Transverse Mercator: _____

Name of nearest waterbody: California Creek, Terrell Creek.

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Birch Bay/Puget Sound.

Name of watershed or Hydrologic Unit Code (HUC): 17110002.

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. List other JDs: refer to other JD for abutting wetlands

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: 6/8/12.

Field Determination. Date(s): 9/28-9/29, 2011.

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. [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: _____.

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 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: 2.6 miles linear feet 2-8 width (ft) and/or _____ acres.

Wetlands: 1.2 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, and Established by OHWM.

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: _____.

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

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):

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. If the waterbody⁴ 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: 955 square miles

Drainage area: 1800 acres

Average annual rainfall: 41 inches

Average annual snowfall: 8 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 4 tributaries before entering TNW.

Project waters are 2-5 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 1-2 aerial (straight) miles from TNW.

Project waters are 1-2 aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: _____.

Identify flow route to TNW⁵: Ditch 43 flows south along railroad tracks to Aldergrove Road, then flows west along the north side of Aldergrove Road for about 1 mile, then flows into unnamed ditch where it continues to flow west to Birch Bay.

Tributary stream order, if known: _____.

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

Tributary is: Natural

Artificial (man-made). Explain: _____.

Manipulated (man-altered). Explain: Ditch 43 is adjacent to railroad tracks, the tracks have altered the natural flow path in some areas.

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: 3 feet
Average depth: .5 feet
Average side slopes: **Vertical (1:1 or less).**

Primary tributary substrate composition (check all that apply):

Silts Sands Concrete
 Cobbles Gravel Muck
 Bedrock Vegetation. Type/% cover: 30, grasses
 Other. Explain: _____.

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: _____.

Presence of run/riffle/pool complexes. Explain: _____.

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 3 %

(c) **Flow:**

Tributary provides for: **Intermittent but not seasonal flow**

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: _____.

Other information on duration and volume: _____.

Surface flow is: **Discrete and confined.** Characteristics: _____.

Subsurface flow: **Unknown.** Explain findings: _____.

Dye (or other) test performed: _____.

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (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: The water is usually clear and water quality fair; the ditch conveys water from natural sources and runoff from agriculture/residential/and industrial lands and roads.

Identify specific pollutants, if known: _____.

(iv) Biological Characteristics. Channel supports (check all that apply):

Riparian corridor. Characteristics (type, average width): The corridor is limited by development (roads, tracks, pastures) primarily grasses with some shrubs and few trees.

Wetland fringe. Characteristics: Wetland fringe is primarily PEM dominated by grass species; PSS/PFO in scattered spots.

Habitat for:

Federally Listed species. Explain findings: _____.

⁶A 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.

⁷Ibid.

- Fish/spawn areas. Explain findings: _____.
- Other environmentally-sensitive species. Explain findings: _____.
- Aquatic/wildlife diversity. Explain findings: Diversity of aquatic species rated as moderate by Wa Dept of Fish and

Wildlife.

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: 1.2 acres

Wetland type. Explain: PEM, dominated by grasses.

Wetland quality. Explain: CatIV, with moderate opportunity for flood control, habitat diversity, and water quality

improvement.

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: _____.

Surface flow is: **Discrete**

Characteristics: _____.

Subsurface flow: **Unknown**. Explain findings: _____.

Dye (or other) test performed: _____.

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: _____.

Ecological connection. Explain: _____.

Separated by berm/barrier. Explain: Wetland J is separated from Ditch 43 by a gravelly berm.

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **50 - 100-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: The water is usually clear and water quality fair; the ditch conveys water from natural sources and runoff from agriculture/residential/and industrial lands and roads.

Identify specific pollutants, if known: _____.

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

Riparian buffer. Characteristics (type, average width): the corridor is limited by development (roads, tracks, pastures) primarily grasses with some shrubs and few trees.

Vegetation type/percent cover. Explain: Dominated by grasses with some shrubs and few trees.

Habitat for:

Federally Listed species. Explain findings: _____.

Fish/spawn areas. Explain findings: _____.

Other environmentally-sensitive species. Explain findings: _____.

Aquatic/wildlife diversity. Explain findings: Diversity of aquatic species rated as moderate by Wa Dept of Fish and

Wildlife.

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

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately (9±) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Wetland J (N)	1.2		
Wetland H (Y)	1.1		

Wetland I (Y) 1.7
 Numerous wetlands (Y) 5+

Summarize overall biological, chemical and physical functions being performed: See Section C below.

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. **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: Wetland J has a significant nexus to the downstream TNW. The subject reach includes Wetland J, Ditch 43, its tributaries and associated wetlands. The watershed has been moderately developed for agricultural, industrial and residential uses. Wetland functions are moderate for wildlife habitat and diversity, moderate food web support, moderate flood water storage/attenuation, and moderate sediment input reduction and toxin removal. The tributaries in combination with their adjacent and abutting wetlands provide downstream habitat and life cycle support functions for ESA species in Birch Bay (TNW). The wetlands create and transfer organic carbon which supports the downstream food web of the TNW. Wetlands improve downstream water quality in the TNW through sediment and toxin interception. The lengthy vegetated tributaries and wetland complexes have the capacity to capture pollutants (agriculture herbicides and pesticides, road runoff, and sediments) to reduce the amount of pollutants, sediments and flood waters from reaching the TNW. Wetlands attenuate downstream flooding by reducing peak flow in the watershed during major storm events and attenuate erosion by detaining high flows during storms and reduce the duration of erosive flows, thus decreasing downstream erosion in streams. Therefore, Wetland J and Ditch 43 has a significant nexus to Birch Bay, a navigable water of the US..

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 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: The tributaries that flow from Wetland J to Birch Bay receive approximately 41 inches of precipitation annually, water has been observed flowing through the tributaries and ditches between 7 and 12 months per year.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: 13,800 linear feet 2-8 width (ft).
 - Other non-wetland waters: _____ acres.
- Identify type(s) of waters: _____.

3. **Non-RPWs⁸ 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: _____

⁸See Footnote # 3.
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- 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 jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **1.2** 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.

Provide estimates for jurisdictional wetlands in the review area: _____ acres.

7. Impoundments of jurisdictional waters.⁹

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: _____ acres.

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.

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: JLP Environmental.
- 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: 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: 7.5 Quad "Lummi Bay" and "Blaine"
- USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey of Whatcom County Area, 1985.
- National wetlands inventory map(s). Cite name: USFWS, NWI Quads, 'Lummi Bay' and 'Blaine'.
- State/Local wetland inventory map(s): _____
- FEMA/FIRM maps: FEMA Online/Firmette' Database, Whatcom County, WA; Panels 53073C0675D and 53073C1155E.
- 100-year Floodplain Elevation is: _____ (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): _____
or Other (Name & Date): Ditch Conveyance Overview Maps with USGS National Hydrograph Dataset Overlay, prepared by JLP Environmental November 2011.
- 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: Hydrology from Wetland J flows south along the west side of the BNSF railroad tracks and connects approximately 150 feet through a gravelly berm to Ditch 43. Ditch 43 flows southwest through Wetland I along the BNSF tracks until it reaches the intersection at Aldergrove Road. The hydrology continues to flow west along the north side of Aldergrove Road for approximately 1 mile, where the hydrology flows south through a culvert at Gulf Road, then continues to flow south along the east side of the roadside ditch for approximately 1.4 miles, then flows northwest through a culvert under Gulf Road, then flows into an unnamed stream that flows directly into Birch Bay. The total distance from Wetland J to Birch Bay is approximately 2.6 miles. More than 40 acres of wetlands contribute to the hydrologic flow along the path to Birch Bay. On 9/28/11 and 9/29/11 Corps personnel visited the site and performed extensive sampling to verify the methods used and data collected by the consultant. A separate jurisdictional determination that includes a portion of this JD (hydrology from Aldergrove Road to Birch Bay) has previously been approved by the EPA (Pacific International Terminal - NWS-2008-260).

On August 30, 2012, the Environmental Protection Agency (EPA) concurred with the Corps' jurisdictional determination.