

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

Form 1 of 2 – Significant Nexus

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 1/9/17

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Seattle District – Mount Vernon School District, NWS-2010-507

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: 48.423368° Long: -122.274293°
Universal Transverse Mercator: Zone 10 N E

Name of nearest waterbody: East Fork Thunderbird Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Skagit River
Name of watershed or Hydrologic Unit Code (HUC): 17110007

- 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. See form 2 of 2

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

- Office (Desk) Determination. Date: 29 December 2016
- Field Determination. Date(s): 18 October 2010

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 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: 0.46 linear miles.
Wetlands: 6.376+ acres (wetland A/AA extends offsite)

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

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

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 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: 447 square miles (lower Skagit River)

Drainage area: 271 acres

Average annual rainfall: 35.40 inches

Average annual snowfall: 16.1 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Water from the unnamed tributary flow through 4 tributaries before entering a TNW.

Project waters are **5-10** river miles from TNW.

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

Project waters are **2-5** 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 TNW⁵: The on-site unnamed tributary flows into East Fork Thunderbird Creek, a tributary of Thunderbird Creek, which flows into Trumpeter Creek, a tributary of Nookachamps Creek, which flows into the Skagit River, a designated section 10 waterway used for interstate and foreign commerce.

Tributary stream order, if known: 1st

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

Tributary is:

Natural

Artificial (man-made). Explain:

Manipulated (man-altered). Explain: Lower portions of tributary have been channelized (ditched). Artificial features have replaced historic natural drainages in the project vicinity.

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: 2.5 feet
Average depth: 2 feet
Average side slopes: **3:1**.

Primary tributary substrate composition (check all that apply):

- | | | |
|--|--|-----------------------------------|
| <input checked="" type="checkbox"/> Silts | <input checked="" type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input checked="" type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input checked="" type="checkbox"/> Vegetation. Grass species, ditches have 75% cover: | |
| <input type="checkbox"/> Other. Explain: . | | |

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

Presence of run/riffle/pool complexes. Explain: None.

Tributary geometry: **Meandering** for upper reaches; **Relatively straight** for lower reaches

Tributary gradient (approximate average slope): 2 %

(c) **Flow:**

Tributaries provides for: **Seasonal flow**;

Estimate average number of flow events in review area/year: **6-10**

Describe flow regime: Tributary has continuous flow for approximately 4 - 6 months with additional periodic flow in response to precipitation.

Other information on duration and volume: .

Surface flow is: **Pick List**. Characteristics: Surface flows contained within stream and ditch channels.

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

Dye (or other) test performed: .

Tributaries have (check all that apply):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Bed and banks | |
| <input checked="" type="checkbox"/> OHWM ⁶ (check all indicators that apply): | |
| <input checked="" type="checkbox"/> clear, natural line impressed on the bank | <input checked="" type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> changes in the character of soil | <input checked="" type="checkbox"/> destruction of terrestrial vegetation |
| <input checked="" type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input checked="" type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input checked="" type="checkbox"/> scour |
| <input checked="" type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
| <input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: . | |

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

- | | |
|--|--|
| <input type="checkbox"/> High Tide Line indicated by: | <input type="checkbox"/> Mean High Water Mark indicated by: |
| <input type="checkbox"/> oil or scum line along shore objects | <input type="checkbox"/> survey to available datum; |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings; |
| <input type="checkbox"/> physical markings/characteristics | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges | |
| <input type="checkbox"/> other (list): | |

(iii) Chemical Characteristics:

Characterize tributaries (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: Water is usually clear and water quality is good. Tributary conveys water from natural sources and road runoff (downstream ends).

Identify specific pollutants, if known: herbicides/pesticides, petrochemicals (oil from roads).

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

Riparian corridor. Characteristics (type, average width): Forested corridor for upstream end of tributary; Corridor for downstream end limited by development (roads, housing, etc.); primarily herbaceous with scattered shrub cover.

Wetland fringe. Characteristics: wetland fringes of tributaries are primarily PSS/PFO.

Habitat for:

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.

- 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 in on-site tributary rated minimal by WA Department of Fish & Wildlife..

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

Wetlands B, C, G, H, L are adjacent to a seasonal RPW (Wetland A/AA abuts a seasonal RPW).

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: 5 wetlands totaling 0.876 acres

Wetland type. Explain: Depressional PSS/PFO

Wetland quality. Explain: Per WA State Wetland Rating System (based on a scale of I to IV, I being the highest functioning), Wetland C and G rated as Category II; Wetlands B, H, and L rated as Category III.

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow for all wetlands**. Explain: Water flows from wetlands to the tributary during times of high spring/seep flow and overflow during significant rain events.

Surface flow is: **Pick List**

Characteristics: For adjacent Wetlands B, C, G, H, and L, water flows from wetlands to tributaries via discreet flow Paths (braided microchannels).

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: water flows from wetlands to tributaries via discreet surface flow paths.

Ecological connection. Explain: .

Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **5-10** river miles from TNW.

Project waters are **5-10** 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 is clear with some organic material load.

Identify specific pollutants, if known:

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

Riparian buffer. Characteristics (type, average width): Widths vary, herbaceous and shrub/forested cover

Vegetation type/percent cover. Explain: PSS/PFO - Shrub species 75%, tree species 15%, herbaceous 10%

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: **8**

6.676 acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Wetland	Directly abuts? (Y/N)	Size (in acres)
A/AA	Y	5.50*
B	N	0.006
C	N	0.51
H	N	0.13
G	N	0.15
L	N	0.08

South wetland 1	N	0.15**
South Wetland 2	N	0.15**

*On-site acreage. Wetland extends offsite.

** Wetlands to south of project site - acreage estimated. See Section IV.B for additional information.

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

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:
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:

Subject wetlands have a significant nexus to downstream TNW.

Subject reaches includes the unnamed tributary to its confluence with East Fork Thunderbird Creek. Watershed has been significantly developed for residential uses. Essential Fish Habitat for Pacific salmon (designated under the Magnuson-Stevens Fishery Conservation and Management Act) extends from the TNW (Skagit River) upstream into East Fork Thunderbird. Fish species listed under the Endangered Species Act (Chinook salmon, steelhead, and bull trout) utilize the downstream waters of Nookachamps Creek; designated critical habitat for Chinook salmon and bull trout exists in the downstream waters of the Skagit River and Nookachamps Creek, respectively.

Wetland functions are moderate to high wildlife habitat and habitat diversity, moderate to high enhanced food web support, moderate floodwater storage/attenuation, and low for sediment input reduction and toxin removal.

The tributary in combination with its adjacent wetlands provide downstream habitat and lifecycle support functions for fish. The wetlands create and transfer organic carbon which supports the downstream food web of the TNW. The lengthy vegetated tributary with wetland complexes has the capacity to capture pollutants (herbicides/pesticides, road runoff, and sediments) to reduce the amount of pollutants, sediments and 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.

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 .
- Wetlands adjacent to TNWs:.

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: Per information provided by the consultant, on-site tributary has a continuous flow for at least 4 months out of the year.

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

- Tributary waters: 0.46 linear miles.
 - 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:
 - 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: The document titled “*Wetland Delineation Report for the East Division Street Assemblage*,” dated February 2, 2010 identifies wetland A/AA boundaries extending to the edge of the onsite tributary with no intervening uplands, berms, etc. Site visit to the subject property confirmed the connections.

Provide acreage estimates for jurisdictional wetlands in the review area: 5.5 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: 0.876 acres (Wetlands B, C, G, H, L)

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:

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

⁸See Footnote # 3.

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

¹⁰Prior 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.

- 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:

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 22 February 2008; supplemental information dated 1 September 2016 was also reviewed.
 - 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 Mount Vernon 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
 - FEMA/FIRM maps: .
 - 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
 - Photographs: Aerial (Name & Date): WA State Department of Ecology, 2005.
 - 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:

Site Visit

18 October 2010

13:00 – 15:00

Weather – Overcast, rainy, cool. Significant rainfall during preceding 2 days.

Randel Perry (Corps)

Paul Anderson (Ecology)

Lynden Lee (City of Mt. Vernon consultant)

Jennifer Eldred (consultant)

Site Description: The 58 acre subject site is located in the Thunderbird Creek watershed, in the southeast portion of Mount Vernon, Skagit County, WA. There are no structures on the site. The site is undeveloped and forested. Logging activity occurred on the site approximately 50 years ago; remnants of skid roads and yarding pits are still present. The site straddles the divide between the two watersheds; topography of the site generally slopes north in the western 1/3 of the site and southeast in the eastern 2/3's. The site contains a tributary of East Fork Thunderbird Creek in the western 1/3 of the site. The tributary flows north starting at the southern end of Wetland A/AA. Surficial geology of the site is dominated by glacial till deposits with inclusions of peat and bedrock. The site is bounded by a residential development to the north and west, East Division Street to the south, and a privately owned property with a single family residence to the east. The immediate vicinity around the site is moderately developed for residential uses.

Delineation: A wetland delineation was conducted by The Jay Group in June of 2009. 12 separate wetlands were identified by the consultant.

Soils: Mapped soils are:

Tokul gravelly loam 0% - 8% and Tokul gravelly loam 8% - 15% slopes (non-hydric)

Tisch silty clay loam (hydric) - SW corner of site

Observed soil colors are:

Wetlands:

10YR 3/1 silty loam from 0"-9"; 2.5Y 3/2 with 2.5Y 5/6 redox features (common, distinct) from 9"-16"

10YR 2/1 silty loam from 0"-7"; 10YR 4/2 with 10YR 4/6 redox features (common, distinct) from 7"-16"

Uplands:

10YR 3/2 silt loam at 0" – 4"; 10YR 3/4 gravelly silt loam (no redox features) from 4" – 16".

Vegetation:

Wetlands Red alder (*Alnus rubra*) FAC

PFO/PSS Creeping buttercup (*Ranunculus repens*) FACW

Soft rush (*Juncus effusus*) FACW

Red alder (*Alnus rubra*) FAC

Reed canary grass (*Phalaris arundinaceae*) FACW

Skunk cabbage (*Lysichiton americanum*) OBL

Salmonberry (*Rubus spectabilis*) FAC+

Western red cedar (*Thuja plicata*) FAC

Slough sedge (*Carex obnupta*) OBL

Black cottonwood (*Populus balsamifera*) FAC

Ninebark

Twinberry

Paper birch

Vine maple (*Acer circinatum*) FAC-

Upland Himalayan blackberry (*Rubus discolor*) FACU

Forest Western red cedar (*Thuja plicata*) FAC

Red alder (*Alnus rubra*) FAC

Sword fern (*Polystichum munitum*) FACU

Western hemlock (*Tsuga heterophylla*) FACU

Salmonberry (*Rubus spectabilis*) FAC+

Vine maple (*Acer circinatum*) FAC-

Snowberry (*Symphoricarpos albus*) FACU

Big leaf maple (*Acer macrophyllum*) FACU

Wetland acreage identified for this determination: 6.3765+ acres (wetland A/AA extends offsite)

Wetland acreage to be filled: Unknown

Observations/Discussion: Corps personnel walked around the perimeter of all wetlands as identified by the consultants at the time of the visit. Most wetland boundaries were easily identified by changes in topography and noticeable transitions in vegetation communities. A number of wetlands appear to have formed in old road tracks and equipment scars (i.e. yarding pits) from historic logging operations. The following are results of site observations and review of available information:

Tributary - Wetland A/AA appears to constitute the headwaters of an unnamed tributary of East Fork Thunderbird Creek. The defined channel of the tributary begins at the northern end of A/AA. This tributary would be considered a seasonal RPW with persistent flows from 4 to 6 months out of the year.

Wetlands:

Wetland A/AA abuts a seasonal RPW - the unnamed tributary of East Fork Thunderbird Creek

Wetlands B, C, G, H, and L are adjacent to the unnamed tributary. Water from these wetlands flows through discrete surface flow paths (braided microchannels) into the tributary.

Wetland A/AA extends offsite to the north and two wetlands south of East Division Street appear to flow into the southern portion of Wetland A/AA via culverts under the road. A small wetland area was spotted immediately offsite from the southeast corner of the project site.

See Form 2 of 2 for Wetlands K, J, M, E, F, C, and D (isolated).

Jurisdictional determination:

The tributary that begins on-site is a seasonal RPW that flows into East Fork Thunderbird Creek, a tributary of Thunderbird Creek, which flows into Trumpeter Creek, a tributary of Nookachamps Creek, which flows into the Skagit River, a designated section 10 waterway used for interstate and foreign commerce

Wetland A/AA abuts a seasonal RPW

Wetlands B, C, G, H, and L are considered adjacent, per the Rapanos guidance definition of adjacent (Criteria 3) because they are in reasonably close proximity to a jurisdictional water and have ecological interconnectivity to the unnamed tributary of East Fork Thunderbird Creek

The waters listed above are jurisdictional waters of the U. S.

The JD was previously approved on 4 March 2011; the applicant has requested new approved JD which EPA approved on 1/3/17 and Corps HQ approved on 1/9/17.