

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

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 19-Nov-2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Alaska District, POA-2012-00711-JD1

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State : AK - Alaska
County/parish/borough: Anchorage
City: Eagle River
Lat: 61.36155
Long: -149.55082
Universal Transverse Mercator: Folder UTM List
UTM list determined by folder location
• NAD83 / UTM zone 6N
Waters UTM List
UTM list determined by waters location
• NAD83 / UTM zone 6N

Name of nearest waterbody: Fire Creek
Name of nearest Traditional Navigable Water (TNW): Fire Creek Estuary
Name of watershed or Hydrologic Unit Code (HUC):

☐ 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 the action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION:

☒ Office Determination Date: 19-Nov-2012☒ Field Determination Date(s): ☐ 09-Oct-2012

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION

There "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 "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area.

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area:¹

Water Name	Water Type(s) Present
POA-2012-711, Fire Creek	Relatively Permanent Waters (RPWs) that flow directly or indirectly into TNWs

b. Identify (estimate) size of waters of the U.S. in the review area:

Area: 1066.8 (m²)

Linear: (m)

c. Limits (boundaries) of jurisdiction:

based on: Established by OHWM.

OHWM Elevation: (if known)

2. Non-regulated waters/wetlands:³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

1. TNW

Not Applicable.

2. Wetland Adjacent to TNW

Not Applicable.

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

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: 4583.05 acres
Drainage area: 100 acres
Average annual rainfall: 16 inches
Average annual snowfall: 74 inches

(ii) Physical Characteristics

(a) Relationship with TNW:

- ☐ Tributary flows directly into TNW.
☒ Tributary flows through [] tributaries before entering TNW.

:Number of tributaries

Project waters are 5-10 river miles from TNW.

Project waters are 2-5 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:
n/a

Identify flow route to TNW:⁵

This is a seasonal and intermittent tributary to Fire Creek (T5 in approved JD of POA-2012-603) (see below) .

Tributary Stream Order, if known:

Order	Tributary Name
1	POA-2012-711, Fire Creek

(b) General Tributary Characteristics:

Tributary Name	Natural	Artificial	Explain	Manipulated	Explain
POA-2012-711, Fire Creek	X	-	-	X	Lower reach is a 930-foot ditch made during construction of Railroad

Tributary properties with respect to top of bank (estimate):

Tributary Name	Width (ft)	Depth (ft)	Side Slopes
POA-2012-711, Fire Creek	4	4.5	2:1

Primary tributary substrate composition:

Tributary Name	Silt	Sands	Concrete	Cobble	Gravel	Muck	Bedrock	Vegetation	Other
POA-2012-711, Fire Creek	X	X	-	-	-	X	-	X	-

Vegetation Explained:

Tributary Name	Percent Cover	Vegetation Explained
POA-2012-711, Fire Creek	40	Grasses

Tributary (conditions, stability, presence, geometry, gradient):

Tributary Name	Condition\Stability	Run\Riffle\Pool Complexes	Geometry	Gradient (%)
POA-2012-711, Fire Creek	This tributary has an Upstream Reach which has a bed channel that ranges from 6 to 1 foot with stable and vegetated banks and bottom. A discontinuous OHWM segment, no jurisdictional, and a 930-foot ditch with steeper and denuded slopes, but no sloughing banks.	No.	Relatively straight	5

(c) Flow:

Tributary Name	Provides for	Events Per Year	Flow Regime	Duration & Volume
POA-2012-711, Fire Creek	Seasonal flow	2-5	Seasonal flows occur during spring break up to the end of June for at least 2.5 months, plus fall flows depending on rainfall events and water over spills from up gradient wetlands.	-Reports on file from Municipality of Anchorage, Watershed Managmeent Services. -Personal accounts from Mr. Alex Moss and Ms. Jill Flanders-Crosby.

Surface Flow is:

Tributary Name	Surface Flow	Characteristics
POA-2012-711, Fire Creek	Confined	-

Subsurface Flow:

Tributary Name	Subsurface Flow	Explain Findings	Dye (or other) Test
POA-2012-711, Fire Creek	Yes	-	-

Tributary has:

Tributary Name	Bed & Banks	OHWM	Discontinuous OHWM ⁷	Explain
POA-2012-711, Fire Creek	X	X	X	Wetland #7 (14.74 acres) outflows into T5 and water moves on a seasonal basis through approximately 2,570 linear feet (several private properties) until it infiltrates in a large and broad paleo-channel or gravel outwashed. Flows resurface as springs or seepages along a man-made ditch associated with the Railroad. The area of discontinuous OHWM is approximately 2,890 linear feet.

Tributaries with OHWM⁶ - (as indicated above)

Tributary Name	OHWM	Clear	Litter	Changes in Soil	Destruction Vegetation	Shelving	Wrack Line	Matted\Absent Vegetation	Sediment Sorting	Leaf Litter	Scour	Sediment Deposition	Flow Events	Water Staining	Changes Plant	Other
POA-2012-711, Fire Creek	X	X	X	-	-	-	-	X	-	X	-	X	-	X	-	-

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction:

High Tide Line indicated by:
Not Applicable.

Mean High Water Mark indicated by:
Not Applicable.

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Tributary Name	Explain	Identify specific pollutants, if known
POA-2012-711, Fire Creek	Clear, well-oxygened waters, with not large inputs of biological and little, if any, chemical pollution.	Waste from pets, wild animals, runoff from driveways along the Upstream Segment.

(iv) Biological Characteristics. Channel supports:

Tributary Name	Riparian Corridor	Characteristics	Wetland Fringe	Characteristics	Habitat
POA-2012-711, Fire Creek	X	-	-	-	X

Habitat for: (as indicated above)

Tributary Name	Habitat	Federally Listed Species	Explain Findings	Fish\Spawn Areas	Explain Findings	Other Environmentally Sensitive Species	Explain Findings	Aquatic\Wildlife Diversity	Explain Findings
POA-2012-711, Fire Creek	X	-	-	-	-	-	-	X	Moose, bear, small mammals, passerine birds, etc.

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

(i) Physical Characteristics:
(a) General Wetland Characteristics:
Properties:
Not Applicable.

(b) General Flow Relationship with Non-TNW:

Flow is:
Not Applicable.

Surface flow is:
Not Applicable.

Subsurface flow:
Not Applicable.

(c) Wetland Adjacency Determination with Non-TNW:
Not Applicable.

(d) Proximity (Relationship) to TNW:
Not Applicable.

(ii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Not Applicable.

(iii) Biological Characteristics. Wetland supports:
Not Applicable.

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

All wetlands being considered in the cumulative analysis:
Not Applicable.

Summarize overall biological, chemical and physical functions being performed:
Not Applicable.

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.

Findings for: POA-2012-711, Fire Creek
SIGNEX CHARACTERISTICS OF TRIBUTARY #5:

FIRE CREEK----As per 33 CFR 328.3(a), Fire Creek is a tributary to the Knik Arm; therefore, it is jurisdictional (Fire Creek reach of 3rd Order is approximately 6 miles-see Section D below).
____Seasonal tributary #5 is approximately 3,500 linear feet and is a spatially discontinuous RPW which starts at the northeast side outflow of wetland #7 and discharges directly into Fire Creek Lower Pond through a man-made ditch constructed by the Railroad:
____a). From wetland #7, this seasonal tributary crosses a 36-inch culvert at Almdale Street and continues down gradient through parcel #05128319, parcel #05128320, entering a culvert located under a driveway in parcel #052128310's

(property of Mr. William Moss). Then, it discharges onto the bottom of a large and broad ravine or glacial meltwater paleo-channel north of Almdale. This headwater section is approximately 1,535 feet.

___b) Based on photos and video accounts provided by Ms. Jill Flanders-Crosby (owner of #05128319) and Mr. William Moss (#052128310), the Corps have made the determination that this tributary has seasonal surface flows lasting at least during 2.5 months most of the years during early spring and falls. T5 provides sustained water flows from mid April to the end of June for a total of approximately 10 weeks. Fall flows usually begin trickling in early September and stop when the rain turns to snow in early October; this is in average of 4 weeks with the caveat that some years there is almost no fall flows and some years, like this year, they are significant. Fall flows are not as large or long lasting as the spring flows. This fall has been one of the largest flows observed in this drainage in a long time period.

___c) As per Mr. Moss' accounts, this fall the small catch basin before entering his driveway culvert has shown flows reaching 18 inches in depth. In previous years during spring flows the depth of water in this small catch basin has been as much as 3 feet.

___d) During field visits of October 9, 2012, the Corps have observed flows crossing the Almdale Road culvert. Surface flows then moved along Ms. Jill Flanders-Crosby property and reach Mr. Moss' culvert filling it. Flows passed Mr. Moss' culvert and day-lighted on the other side, gushing through the ravine until reaching flat ground. From the outlet of Mr. Moss' culvert, water flows on the surface for approximately 1,035 feet and then infiltrates underground.

___e) The Upstream Segment starts at wetland #7 and ends where flows infiltrate under the ground surface for a total distance of 2,570 feet (1,035 feet + 1,535 feet).

___f) From the infiltration point, water moves in shallow subsurface gravels deposits (paleo-channel or gravel outwash) for a distance of approximately than 2,890 feet before it is intercepted by a ditch constructed along the Alaska Railroad right-of-way.

___g) On October 9, 2012, the Corps and Mr. Moss walked the 2,890-foot outwash segment and did not observe a defined stream channel, however, there exist some short and discontinuous, shallow swales or depressions of approximately 1-foot deep. In the shallow swales and at approximately 12-16 inches, soils were dried and dominated by apple-size gravels and boulders that made impossible to dig deeper.

___h) During the October 9, 2012, field visit, the Corps observed seepages day-lighting along the Railroad ditch at approximately 1 foot above the ditch's Ordinary High Water Mark (OHWM), at the downstream end of the gravel outwash. The ditch displayed well-defined bed and banks and surface water flows that directly discharge into Fire Creek.

___i) According to MOA WMS field observations of January 2008 (February 19, 2008, Preliminary Watercourses Mapping in file) seepages and water springs in the Railroad ditch were not frozen despite the low temperatures of the month.

___j) The seepages captured along the Railroad ditch are the main source of water to the ditch through the year and allow for a continuous surface flow that directly discharge into the 'Lower Pond' (impoundment at the intersection of the Railroad tracks and Fire Creek) [6/21/2005 Memorandum to the File (MTF), Municipality of Anchorage (MOA) Watershed Management Services (WMS) updated 9/3/2012]]. Based on the unfrozen surface water along the ditch and flowing seepages and springs above OHWM during mid-winter, it is inferred this 930-foot Railroad ditch is a perennial or at least a seasonal reach.

___k) As per the Clean Water Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States, December 2, 2008, (Guidance) a non-navigable tributary with seasonal flows is a relatively permanent water body or RPW. For the purpose of the Guidance, a tributary includes natural, man-altered, or man-made water bodies that carry flow directly or indirectly into a TNW, and the term applies to the entire reach of the same order. A natural or man-made discontinuity in the OHWM, such as segments where a stream temporarily flows underground, does not sever jurisdiction. Thus, in this case, the tributary starts at the point where wetland #7 discharges into the headwater drainage and ends at the point where the ditch enters Fire Creek (higher order stream).

___l) As per Guidance, the flow regime generally will be evaluated at the downstream end of the tributary unless that flow is not representative of the majority of the tributary that best characterized the entire tributary. The entire tributary includes an upstream segment with seasonal flows (2,570 feet) and a downstream segment with at least seasonal flows (930-foot ditch) with a discontinuity in OHWM along the outwash segment (2,890 feet). The total flow length is 6,390 feet, with 2,570 feet of seasonal flow, 930 feet of seasonal to perennial flow, and 2,890 feet of shallow subsurface flows. The relative length of the upstream seasonal segment represents 73% of the surface flow, indicating the tributary should be described as a seasonal RPW. In this case, the upstream segment is considered to best characterize the flow regime of the entire tributary.

___m) Concisely, T5 (3,500 feet) is a water of the U. S. where jurisdiction is only asserted on the segments with surface flows, this includes the Upstream Segment and the lower seasonal to perennial segment(Railroad ditch). The outwash area, characterized by a discontinuous OHWM, is not jurisdictional.

___SIGNEX: As per Justice Kenney, the significant nexus standard is met by tributaries and wetlands that either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, or biological integrity of other covered water more readily understood as `navigable.' Accordingly, such adjacent wetlands must be considered jurisdictional and thereby regulated under Section 4040 of the Clean Water Act. For the purpose of the significant nexus evaluation, the `Relevant Reach' (RR) has been determined to be the 3rd Order Reach of Fire Creek which goes upstream from the mouth of Parks Creek to where the headwaters comes together (due east of where Stephanie hits the Glenn Hwy). The relevant reach is approximately 6 miles and includes all adjacent abutting and non-abutting jurisdictional wetlands. The total length of Fire Creek is approximately 9.5 miles; the relevant reach represents approximately 63% of the total Fire Creek length. The relevant reach is an important part of Fire Creek because it connects Fire Creek headwaters to the brackish estuary at the mouth of the stream. It also sustains critical fresh water flows through the year to maintain the estuarine ecosystem; it also contributes in maintaining winter baseflows to support deep pools and overwinter fish habitat. The relevant reach also provides substrate for spawning and rearing habitat for Coho and passage for King salmon.

___Seasonal tributary #5 function as water flow conveyance for water stored in up gradient wetlands. It also carries detritus into Fire Creek, an anadromous stream, and support base flows through winter. Where water infiltrates (2,890 feet segment of discontinuous OHWM and shallow subsurface flows) along the outwash it is maintained above freezing temperatures and released through winter as seepages and spring flows along the railroad ditch. These flows contribute in maintaining base flows in Fire Creek's relevant reach.

___Because this tributary crosses several developed parcels, it has an important fuction in maitaining wetland #7 overspills draining through a confined channel, hence minimizing flooding problems in private property.

___As per analysis presented above, this tributary either has an unbroken surface or shallow subsurface connection to Fire Creek and is physically and ecological interconnected to Fire Creek The relevant reach is approximately 6 miles and includes all adjacent abutting and non-abutting jurisdictional wetlands. The total length of Fire Creek is approximately 9.5 miles; the relevant reach represents approximately 63% of the total Fire Creek length. The relevant reach is an important part of Fire Creek because it connects Fire Creek headwaters to the brackish estuary at the mouth of the stream.

___It also sustains critical fresh water flows through the year to maintain estuarine ecosystem; it also contributes in maintaining winter baseflows to support deep pools and overwinter fish habitat. The relevant reach also provides substrate for spawning and rearing habitat. It provides spawning habitat for Coho and passage for King salmon.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE:

1. TNWs and Adjacent Wetlands:
Not Applicable.

2. RPWs that flow directly or indirectly into TNWs:

Wetland Name	Flow	Explain
POA-2012-711, Fire Creek	SEASONAL	Flows last approximately 10 weeks during spring, and 4 weeks during fall depending on rainfall.

Provide estimates for jurisdictional waters in the review area:

Wetland Name	Type	Size (Linear) (m)	Size (Area) (m²)
POA-2012-711, Fire Creek	Relatively Permanent Waters (RPWs) that flow directly or indirectly into TNWs	1066.8	-
Total:		1066.8	0

3. Non-RPWs that flow directly or indirectly into TNWs:⁸
Not Applicable.

Provide estimates for jurisdictional waters in the review area:

Not Applicable.

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.
Not Applicable.

Provide acreage estimates for jurisdictional wetlands in the review area:
Not Applicable.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs:
Not Applicable.

Provide acreage estimates for jurisdictional wetlands in the review area:
Not Applicable.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs:
Not Applicable.

Provide estimates for jurisdictional wetlands in the review area:
Not Applicable.

7. Impoundments of jurisdictional waters:⁹
Not Applicable.

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:¹⁰
Not Applicable.

Identify water body and summarize rationale supporting determination:
Not Applicable.

Provide estimates for jurisdictional waters in the review area:
Not Applicable.

F. NON-JURISDICTIONAL WATERS. INCLUDING WETLANDS

- ☐ 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):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (ie., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment:
Not Applicable.

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.
Not Applicable.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD

(listed items shall be included in case file and, where checked and requested, appropriately reference below):

Data Reviewed	Source Label	Source Description
--Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant	Wetland Determination Letter of August 18, 2012.	-
--Data sheets prepared/submitted by or on behalf of the applicant/consultant	-	-
----Office concurs with data sheets/delineation report	Wetland Determination Letter of August 18, 2012.	The Corps concurs that parcel 02128319 does not contain wetlands. However as per field visit of September 18, 2012, and followup shapefile provided by Pat Athey on September 19, 2012, email, the Corps included the later findings as part of the Wetland Delineation determination analysis.
--USDA Natural Resources Conservation Service Soil Survey.	-	-
--State/Local wetland inventory map (s):	-	-
--100-year Floodplain Elevation is:	-	-
--Photographs	-	-
----Aerial	-	-
--Previous determination(s).	-	-
--Other information	Municipality of Anchorage, Watershed Management Services Assessment Reports on files	-
--Other information	Municipality of Anchorage (MOA) 4-foot contour lines available at http://munimaps.muni.org/mox52/advanced.cfm?action=mox52_if_frameset	-
--Other information	POA-2012-603 MFR of November 19, 2012.	-
--Other information	Personal accounts, videos, and photos provided by Ms. Jill Flanders-Crosby and Mr. William Moss	-

B. ADDITIONAL COMMENTS TO SUPPORT JD:
Not Applicable.

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.
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.
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.
⁸-See Footnote #3.
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.