

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

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): September 17, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Alaska District, POA- 2015 - 352

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Alaska Borough: Matanuska-Susitna City: Wasilla
Center coordinates of site (lat/long in degree decimal format): Lat. 61.6342 ° N, Long. 149.2832 °W
Universal Transverse Mercator: 6V
Name of nearest waterbody: Neklason Lake
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Cook Inlet
Name of watershed or Hydrologic Unit Code (HUC): 19020402

- 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: September 11, 2015
- Field Determination. Date(s): August 14, 2013, July 29, 2013

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.

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters (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: 724 linear feet: # width (ft) and/or # acres. (length of tributary)
Wetlands: 3.14 acres.

c. Limits (boundaries) of jurisdiction based on: Not Applicable

Elevation of established OHWM (if known): N/A

2. Non-regulated waters/wetlands (check if applicable):

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: *Click here to enter text.*

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 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: # Choose an item.

Drainage area: # Choose an item.

Average annual rainfall: # inches

Average annual snowfall: # inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through Choose an item. tributaries before entering TNW.

Project waters are Choose an item. river miles from TNW.

Project waters are Choose an item. river miles from RPW.

Project waters are Choose an item. aerial (straight) miles from TNW.

Project waters are Choose an item. aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: Click here to enter text.

Identify flow route to TNW: Click here to enter text.

Tributary stream order, if known: Click here to enter text.

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

Tributary is: Natural

Artificial (man-made). Explain: Click here to enter text.

Manipulated (man-altered). Explain: Click here to enter text.

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

Average width: # feet

Average depth: # feet

Average side slopes:

Primary tributary substrate composition (check all that apply):

- | | | |
|--|---|-----------------------------------|
| <input type="checkbox"/> Silts | <input type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: <i>Click here to enter text.</i> | |
| <input type="checkbox"/> Other. Explain: | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: *Click here to enter text.*

Presence of run/riffle/pool complexes. Explain:

Tributary geometry:

Tributary gradient (approximate average slope): #%

(c) Flow:

Tributary provides for: *Choose an item.*

Estimate average number of flow events in review area/year: *Choose an item.*

Describe flow regime: *Click here to enter text.*

Other information on duration and volume:

Surface flow is: *Choose an item.* Characteristics:

Subsurface flow: *Choose an item.* Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply)

Bed and banks

OHWM (check all indicators that apply):

- | | |
|--|---|
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input type="checkbox"/> scour |
| <input 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): | |

Discontinuous OHWM. Explain:

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

High Tide Line indicated by:

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

Explain:

Identify specific pollutants, if known:

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

- Riparian corridor. Characteristics (type, average width):
- 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**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics: Two small wetlands with histosol soils connected to RPW through subsurface flow and a first-order drainage

Properties:

- Wetland size: 3.14 acres total
- Wetland type. Explain: Freshwater Emergent wetland
- Wetland quality. Explain: n/a
- Project wetlands cross or serve as state boundaries. Explain: n/a

(b) General Flow Relationship with Non-TNW:

Flow is: Perennial Flow Explain: wetlands have subsurface flow into first-order drainage, first-order drainage flows into Neklason Lake, Neklason Lake flows into Cottonwood Creek and onto the Cook Inlet

Surface flow is: Discrete and Confined

Characteristics: RPW flow is permanent flow into TNW

Subsurface flow: Yes Explain findings: Based on NRCS Ksat data calculating subsurface flow

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

- Directly abutting
- Not directly abutting
 - Discrete wetland hydrologic connection. Explain: Subsurface flow
 - Ecological connection. Explain: Connected through use by waterfowl and fish
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are 15-20 river miles from TNW.

Project waters are 10-15 aerial (straight) miles from TNW.

Flow is from: Wetland to Navigable Waters

Estimate approximate location of wetland as within the 500-year or greater floodplain. Flood insurance rate map panel # 7245

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain: wetland vegetation (see Wetland Determination Forms prepared by Army Corps, site visit 8/14/2015)
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings: supports sockeye salmon and spawning and rearing site for coho salmon
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings: waterfowl

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

All wetland(s) being considered in the cumulative analysis: 2

Approximately (3.14) 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>
No	2.8	Y/N	#
No	0.34	Y/N	#
Y/N	#	Y/N	#
Y/N	#	Y/N	#

Summarize overall biological, chemical and physical functions being performed: The wetlands on the Roelfs property contribute to the chemical, hydrological, and physical integrity of the relevant reach. Chemically, these wetlands provide nutrient removal and chemical detoxification for water flowing into the creeks and larger water bodies in Wasilla. The wetlands contribute to the hydrological and physical integrity of the relevant reach by filtering storm water runoff, creating a buffer to prevent flooding, and creating habitat for water fowl and other animals. The Alaska Department of Environmental Conservation considers seven miles of Cottonwood Creek to be a Category 5/Section 303(d) listed water body due to fecal coliform bacteria from urban runoff and urban development. Wetlands in the relevant reach mitigate the impacts of urban development leading to the current impairment of the creek, and therefore the role of the Roelfs wetlands is significant.

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: For the purpose of the significant nexus evaluation, the relevant reach has been determined to be the first-order reach of a drainage flowing from an area adjacent to the Roelfs wetlands into Neklason Lake, HUC 12-19020401803. The relevant reach of Jacobsen Lake includes the water flowing in from Cornelius Lake to the east, the west reach of Neklason Lake, Cottonwood Creek, a small unnamed lake off of Cottonwood Creek, Cottonwood Lake and Cook Inlet. The total distance in the reach is 3.32 miles and encompasses many "similarly situated" abutting and adjacent small freshwater emergent and freshwater forested/shrub wetlands. The two wetlands on the Roelfs property are a part of this hydrologic complex, and have an important influence on the watershed by moderating flood flows and preventing erosion.

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 data and rationale indicating that tributary is 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: [Click here to enter text.](#)

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

Tributary waters: 0 linear feet ± width (ft).

Other non-wetland waters: # acres.

Identify type(s) of waters: [Click here to enter text.](#)

3. **Non-RPWs that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

Tributary waters: # linear feet # width (ft).

Other non-wetland waters: # acres.

Identify type(s) of waters:

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: *Click here to enter text.*

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: 3.14 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.**

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):**

- 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: *Click here to enter text.*

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: *Click here to enter text.*
- Other: (explain, if not covered above): *Click here to enter text.*

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: *Click here to enter text.*
- Wetlands: # 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: *Click here to enter text.*
- 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: Preliminary Wetland Map prepared by VEI Consultants, received May 28, 2015
- 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: MFR for site visits on August 14, 2015 and July 29, 2015 Wetland Determination Forms with photographs, Sites 1-4, August 14, 2015
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- Alaska District's Approved List of Navigable Waters
- U.S. Geological Survey map(s). Cite scale & quad name:
- USDA Natural Resources Conservation Service Soil Survey. Citation: NRCS map displaying saturated hydraulic conductivity (Ksat), Unit 141, Histosols, August 21, 2015
- National wetlands inventory map(s). Cite name: PEM1/SS1B, Freshwater Emergent Wetland, July 2, 2015
- State/Local wetland inventory map(s):
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: *Click here to enter text.* (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Google Earth, Sampling Points, August 19, 2015
 - 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): GIS map of wetland boundaries, created by walking track around wetland #1, August 19, 2015 SimSuite map showing connectivity from Neklason Lake to the Cook Inlet via Section 10 waters, August 21 and 24, 2015 Alaska Fish and Game Fish Resource Monitor, Anadromous Lakes, 9/16/2015

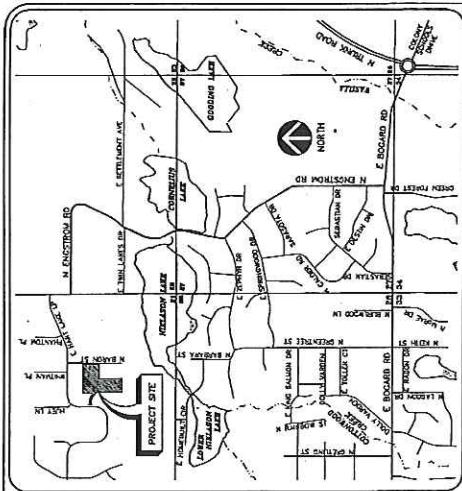
B. ADDITIONAL COMMENTS TO SUPPORT JD:



Julie Ruth
Regulatory Specialist

September 16, 2015

Date



VICINITY MAP
NOT TO SCALE



USACE TEST FAC (wetland delineation 8/14/15)

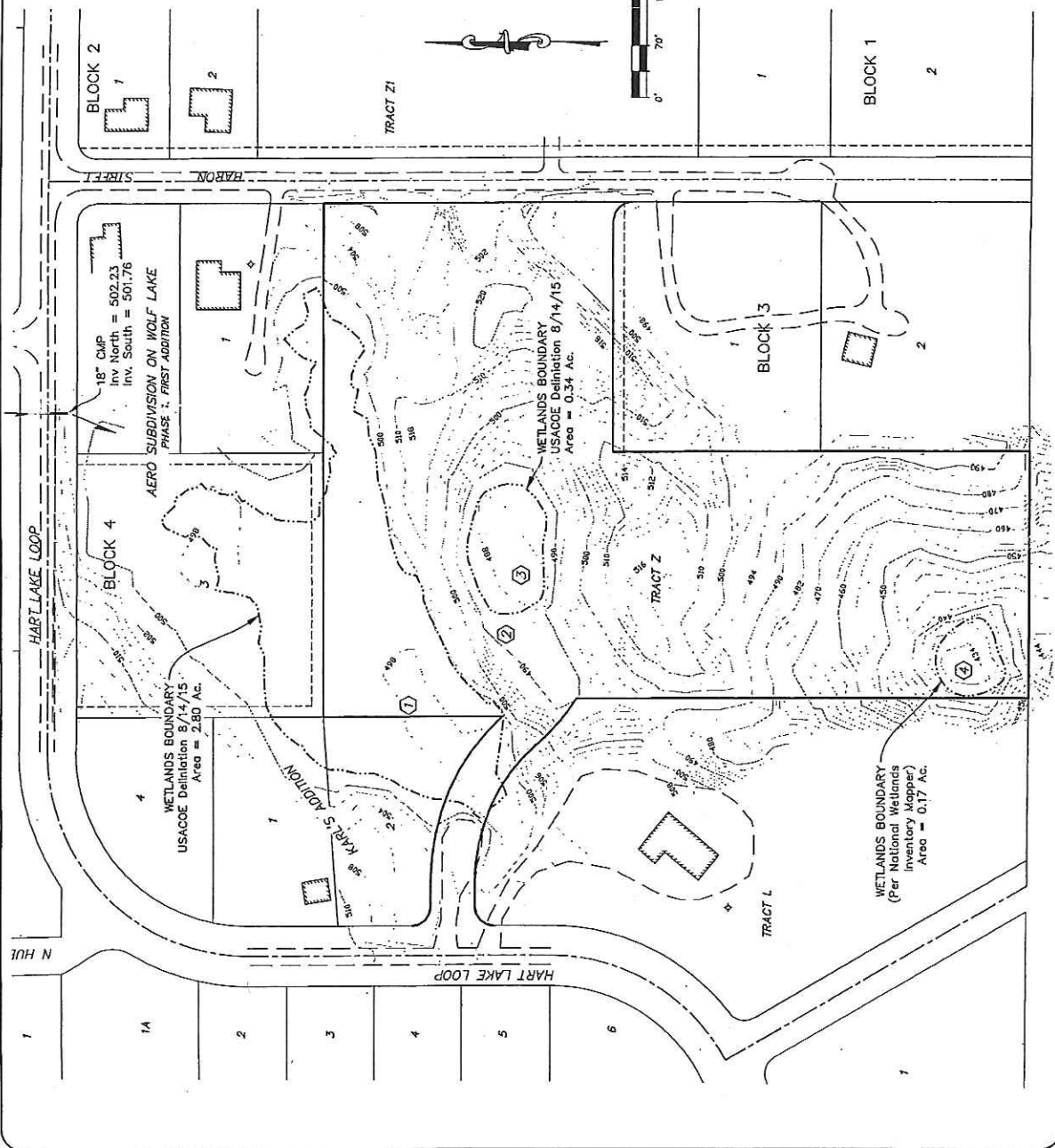
GENERAL NOTES:

1. Elevation contours shown are at 20' intervals based on topographic survey completed 5/13/2015 by VEI Consultants. Contours are based on the North American Vertical Datum (NAVD83 ASPIC ZONE).

Preliminary Wetland Map

Record Property description:
 Tract 2, are 66, subdivision on Wolf Lake First Addition, Phase 1,
 Plot Number 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20,
 Alaska.
 NW 1/4, SE 1/4, Sec. 21, T18N R1E
 Seward Meridian, Pioneer Recording District, Alaska
 Property Location:
 Address: 6460 E. Hart Lake Loop, Healy, AK, 99854
 Lot: 61,82442
 Map: 14-23-006

Prepared By:
VEI Consultants
 CIVIL ENGINEERING & SURVEYING CONSULTANTS
 SERVING ALL OF ALASKA
 PHONE 337-3330
 1345 BUNYON DR., SUITE 301 ANCHORAGE, ALASKA 99508
 Date: 8/25/15
 Scale: 1" = 100'
 Sheet 7 of 7



VEI Map updated w/ ACOE wetland delineations

