

## DATA SUMMARY

### Floodplains Map

#### Purpose

This data summary is an initial step in the development of the proposed alternative corridors for the Parks Highway PEL Study. It is intended to confirm data for identifying the characteristics of the existing environment for floodplains in the project study area. The study area boundaries or Probable Limits of the Alternatives (PLA), where the proposed alternative highway corridors will be located, is shown in Figure 1. The PLA is broadly bordered by the Parks Highway to the north (+500-1000 feet), Hyer Road interchange to the east, West Hawk Lane to the west, and Palmer Slough to the south, and includes 43,827 acres.

This data summary includes data collection sources, mapping data, assumptions, and a summary of the key findings for the existing characteristics of the resource.

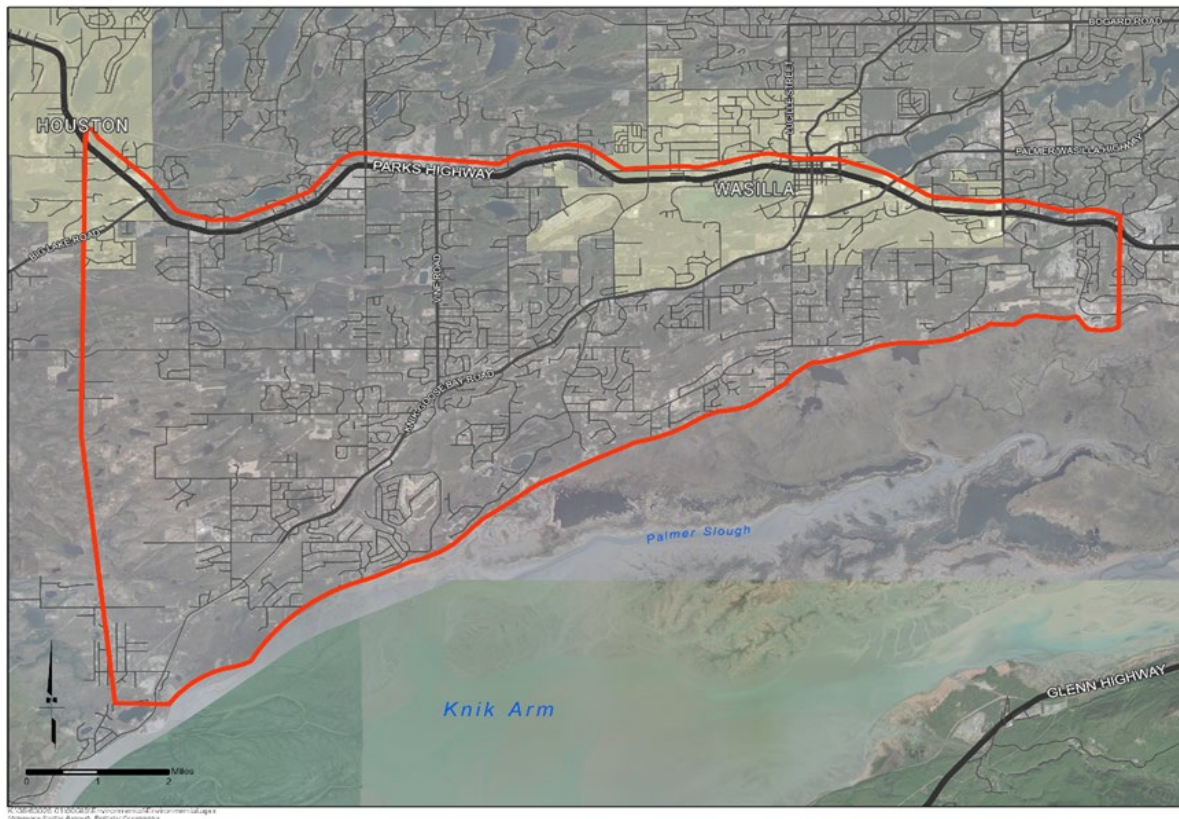


Figure 1: Probable Limits of the Alternatives

## Data Collection Sources

Floodplain data assembled in this memorandum is derived from the following sources.

- Flood Hazard data downloaded from Federal Emergency Management Agency (FEMA)<sup>1</sup>
- Aerial photos – ESRI World Imagery Service Layer<sup>2</sup>

## Mapping Data

- Flood Hazard Areas are defined as follows:
  - Zone X: Areas of minimal flood hazard
  - Zone A: Areas subject to inundation by the one-percent-annual-chance flood event. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations or flood depths are shown.
  - Zone AE: Areas subject to inundation by the one-percent-annual-chance flood event. Because detailed hydraulic analyses have been performed, Base Flood Elevations have been determined and are shown.
- FEMA Flood Insurance Rate Map Panels Intersecting Project Area:
  - 0200050050D (effective date: 9/25/2009)
  - 02170C8010F (effective date: 9/27/2019)
  - 02170C8020F (effective date: 9/27/2019)
  - 02170C8030E (effective date: 3/17/2011) – Not Printed
  - 02170C8035E (effective date: 3/17/2011) – Not Printed
  - 02170C8040F (effective date: 9/27/2019)
  - 02170C8045F (effective date: 9/27/2019)
  - 02170C8055F (effective date: 9/27/2019)
  - 02170C8060F (effective date: 9/27/2019)
  - 02170C8065F (effective date: 9/27/2019)
  - 02170C8070F (effective date: 9/27/2019)
  - 02170C8080F (effective date: 9/27/2019)
  - 02170C8085F (effective date: 9/27/2019)
  - 02170C8090F (effective date: 9/27/2019)
  - 02170C8095E (effective date: 3/17/2011) – Not Printed
  - 02170C8105F (effective date: 9/27/2019)
  - 02170C8110F (effective date: 9/27/2019)

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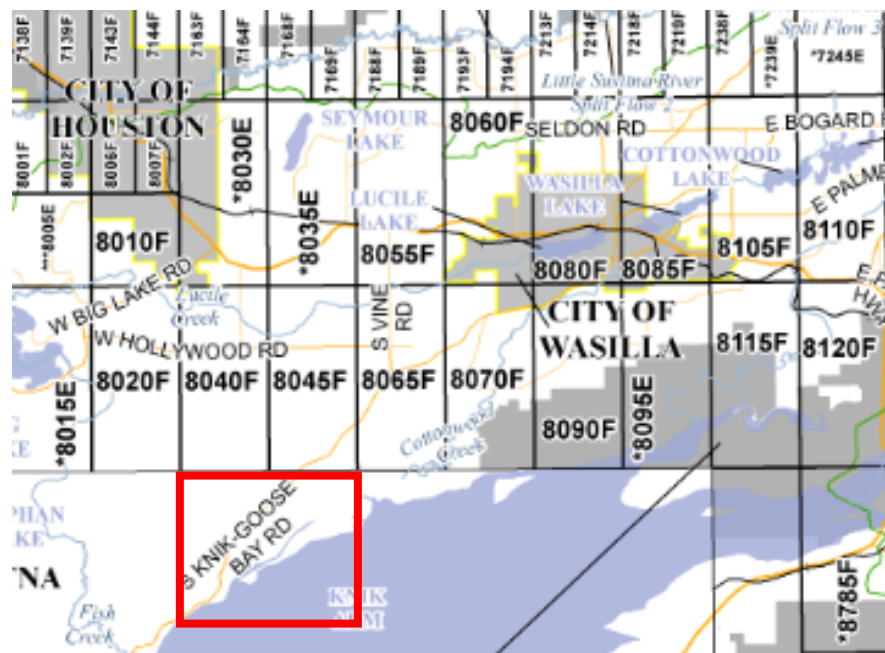
<sup>1</sup> FEMA Flood Map Data: <https://msc.fema.gov/portal/advanceSearch> (downloaded 9/30/2021)

<sup>2</sup> ESRI World Imagery Wayback: <https://livingatlas.arcgis.com/wayback/> (imagery dated 2019)

- 02170C8115F (effective date: 9/27/2019)
- 02170C8120F (effective date: 9/27/2019)

## Assumptions

- No field verification or assessment of locational reliability was performed for mapped areas.
- Flood mapping was downloaded from FEMA on 9/30/2021. It is assumed to be accurate and has not been updated since 9/27/2019, except for the following panels:
  - 02170C8030E in the downloaded data was erroneously referenced as 02170C8040E
  - 02170C8035E in the downloaded data was erroneously referenced as 02170C8045E
  - 02170CIND3B printed copy used as reference for above exceptions and to identify areas without a panel to identify flood hazards within the PLA (red outline)



- Letters of Map Change are not included in the mapping and only effect the following panels:
  - 02170C8085F [6-Letter of Map Amendment<sup>3</sup> (LOMA)]
  - 02170C8110F (3-LOMA)
  - 02170C8120F (1-LOMA)
- Any flood zone data potentially available through the Matanuska Susitna Borough is the same as the downloaded FEMA flood zone data.

<sup>3</sup> Number of Letter of Map Amendments identified since the Flood Insurance Rate Map panel updates in 2019

## Summary of Key Findings

- Flood hazard zones are shown on the attached Figure 2.
- The majority of the project has been determined to be within flood hazard Zone X<sup>4</sup>.
- Areas within flood hazard Zone A<sup>5</sup> include:
  - Cottonwood Creek
  - Lake Lucille
  - Lucille Creek
  - Wasilla Lake
- Areas located within flood hazard Zone AE<sup>6</sup> include:
  - Wasilla Creek with Base Flood Elevations ranging from 63-foot elevation to 149-foot elevation
- The southwest corner of the project does not have a FEMA Flood Insurance Rate Map Panel created.

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<sup>4</sup> Areas of minimal flood hazard (no screening on panel).

<sup>5</sup> Areas subject to inundation by the 1-percent-annual-chance flood event. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations or flood depths are shown (blue screening on panel).

<sup>6</sup> Areas subject to inundation by the 1-percent-annual-chance flood event. Because detailed hydraulic analyses have been performed, Base Flood Elevations have been determined and are shown (blue screening with Base Flood Elevation Line on panel).