

**Carmacks Flood Mapping Study
Composite Flood Hazard Extents
5% Annual Exceedance Probability (AEP) with Factor of
Safety for Climate Change**

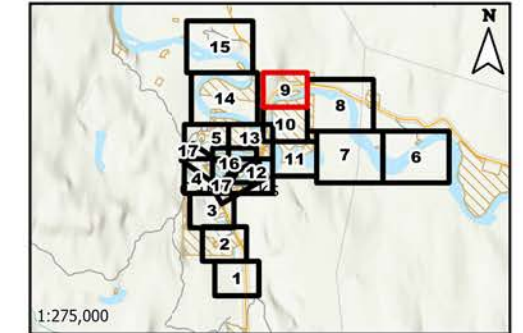
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

Project: 123222320

Project Location: Carmacks, Yukon
Prepared by MANDERSON on 2024-05-21
Requested by JMUIRHEAD on 2024-01-07
Review by JMUIRHEAD on 2024-05-21

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|---|---|
| Flow Direction | Hydraulic Model Cross-Sections |
| Point of Interest | Inundation under Modelled Ice Jam Runs |
| Bridge | Inundation under Modelled Open Water Runs |
| Highway | Composite Flood Hazard Extent |
| Local Road | Ice Jam Location (toe of jam) |
| Little Salmon / Carmacks First Nation Settlement Land | 50 % AEP Extent |
| Land Parcels | Hydraulic Model Cross-Sections |
| Municipal Boundary | Cross-Section Number |
| Study Area | WSE (m) in Main Channel of Cross-Section |

Map Publication Date: May 21, 2024
0 40 80 120 160 200 m
(At original document size of 11x 17) 1:5,000



- Notes**
- Coordinate System: NAD 1983 UTM Zone 8N
Vertical Datum: CGVD2013, Geoid: CGG2013a
 - Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, Canvec.
 - Background: World Topographic Map: Northwest Territories, State of Alaska, Esri Canada, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, NRCAN, Parks Canada
World Hillshade: Esri, USGS
 - Nordenskiöld River Climate Change Factor of Safety = 1.2 and Yukon River Climate Change Factor of Safety = 1.1 as identified during meetings with YG, NRCAN, ECCO on September 8, 2023 and November 6, 2023
 - Flood hazard extents shown on these maps are based on LIDAR collected on June 8 - 10 of 2019, and bathymetric/topographic survey collected in July and August of 2023.