

Figure No. **E.5.8** Sheet 8 of 17

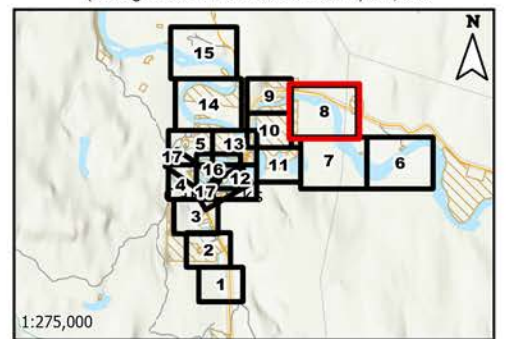
Title: **Carmacks Flood Mapping Study  
Composite Flood Hazard Extents  
0.5% Annual Exceedance Probability (AEP) with Factor of  
Safety for Climate Change**

Client/Project:  
Government of Yukon  
Department of Environment  
Water Resources Branch  
Project: 123222320

Project Location: Carmacks, Yukon  
Prepared by MANDERSON on 2024-05-27  
Requested by JMUIRHEAD on 2024-01-07  
Review by JMUIRHEAD on 2024-05-27

- |   |   |
|---|---|
| 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<br>WSE (m) in Main Channel<br>of Cross-Section |
| Study Area  |   |

Map Publication Date: May 27, 2024  
0 70 140 210 280 350  
m  
(At original document size of 11x 17) 1:8,000



- Notes**
1. Coordinate System: NAD 1983 UTM Zone 8N  
Vertical Datum: CGVD2013, Geoid: CGG2013a
  2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, Carvec.
  3. 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
  4. 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
  5. 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.



Disclaimer: The content of these Maps is based on the methods, assumptions, limitations, and analysis documented in the Carmacks Flood Mapping Study Final Report (Stantec 2024). Any unauthorized use or reliance of Maps is at the User's own risk. Stantec disclaims any legal duty based upon warranty, reliance or any other theory to any User, and will not be liable to any User for any damages or losses of any kind that may result.