

Figure No. **YR-0.5CC-01** Sheet 01 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Yukon River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change**

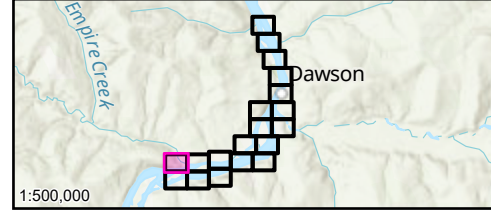
Client/Project:
**Government of Yukon
Department of Environment
Water Resources Branch**

Project: 123222713

Project Location: Dawson, Yukon
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Ground Elevations of Interest
- Cross-Section Number WSE (m) Along Cross-Section
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Limit of Floodplain Mapping
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Ice Jam Scenarios

Map Publication Date: 7/29/2025
0 50 100 150 200 250 m
(At original document size of 11x 17) 1:5,000



- Notes**
1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
 3. Flood hazard extents shown on these maps are based on LIDAR collected in July, 2019 and topographical and bathymetric data that was collected in June and September 2024.
 4. 50% AEP inundation lines are based on the 50% AEP flow estimate simulation in the hydraulic model which has been calibrated for higher AEP flood events and therefore should be considered approximate.
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Figure No. **YR-0.5CC-02** Sheet 02 of 19

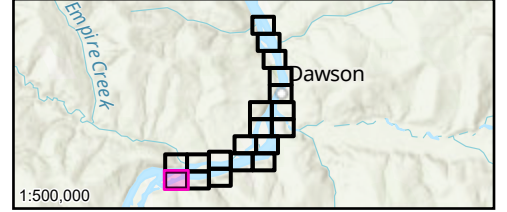
Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Yukon River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change**

Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch
Project: 123222713

Project Location: Dawson, Yukon
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Tr'ondëk Hwëch'in Settlement Land
- Ground Elevations of Interest
- Inundation Under Modelled Open Water Runs
- Cross-Section Number WSE (m) Along Cross-Section
- Inundation Under Modelled Breakup Ice Jam Runs
- Major Contour (5m)
- Approximate 50% AEP Open Water Flood Inundation
- Minor Contour (1m)
- Composite Open Water and Ice Jam Inundation Extent
- Surveyed Cross-Sections Used in Hydraulic Model
- Ice Coverage in Breakup Jam Scenarios
- Limit of Floodplain Mapping

Map Publication Date: 7/29/2025
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(At original document size of 11x 17) 1:5,000



- Notes**
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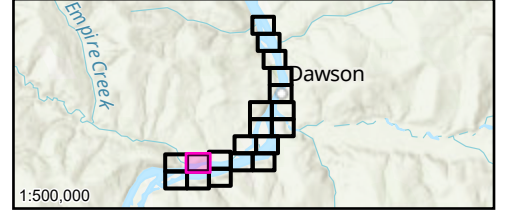
This project is funded in part by the Government of Canada



Figure No. **YR-0.5CC-03** Sheet 03 of 19
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Yukon River 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: **123222713**
 Project Location: **Dawson, Yukon** Prepared by MANDERSON on 2025-07-29 Requested by JMUIRHEAD on 2024-03-30 Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Tr'ondëk Hwëch'in Settlement Land
- Ground Elevations of Interest
- Inundation Under Modelled Open Water Runs
- Cross-Section Number WSE (m) Along Cross-Section
- Inundation Under Modelled Breakup Ice Jam Runs
- Local Road
- Approximate 50% AEP Open Water Flood Inundation
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Jam Scenarios

Map Publication Date: 7/29/2025
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Notes
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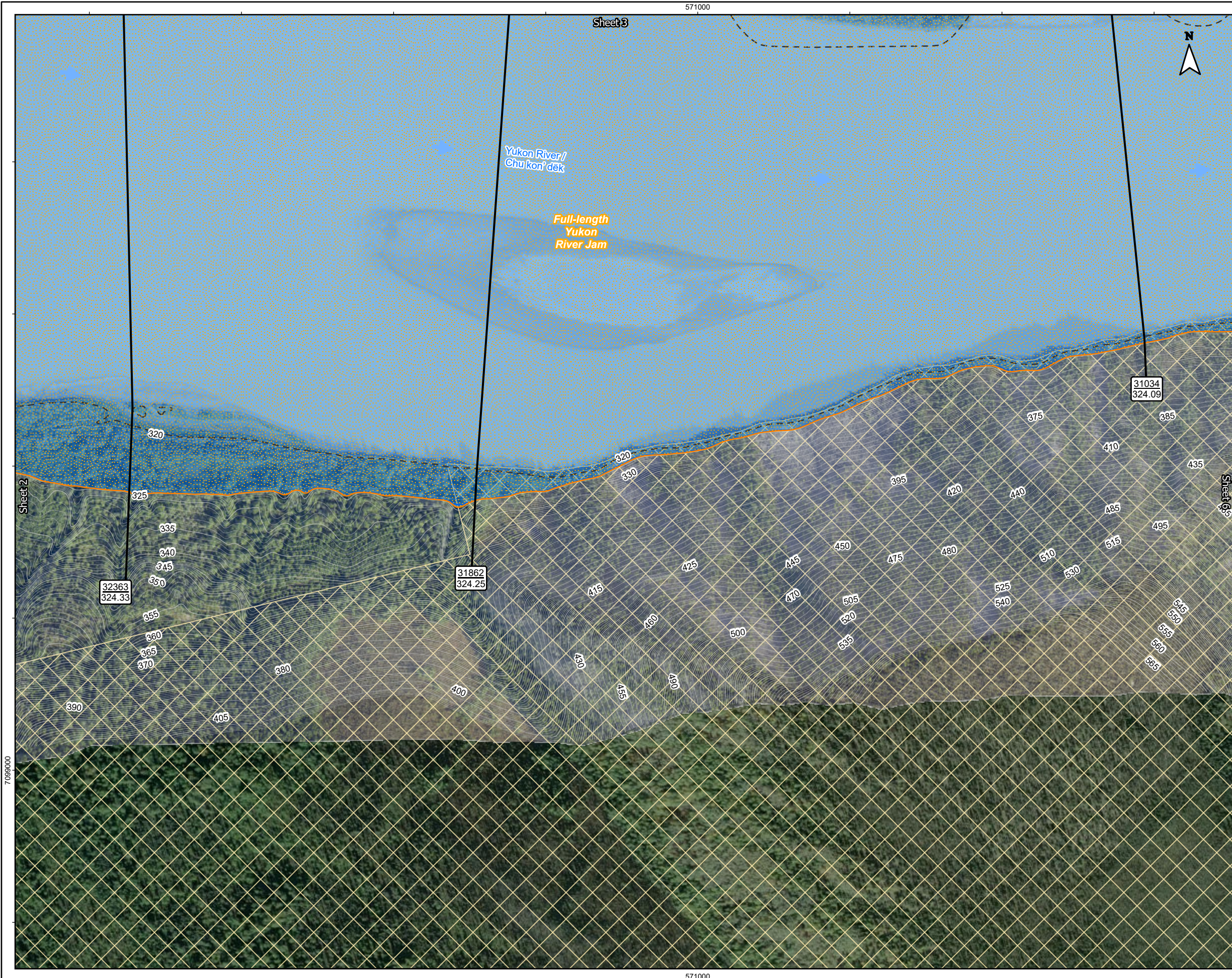


Figure No. **YR-0.5CC-04** Sheet 04 of 19

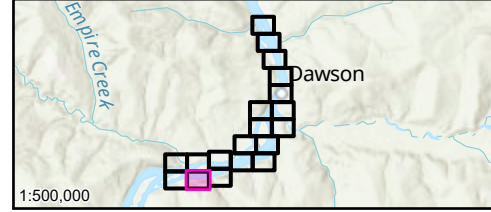
Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Yukon River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change**

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

Project: 123222713
Project Location: Dawson, Yukon
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Ground Elevations of Interest
- Cross-Section Number WSE (m) Along Cross-Section
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Trondék Hwëch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Ice Jam Scenarios

Map Publication Date: 7/29/2025
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(At original document size of 11x 17) 1:5,000



- Notes
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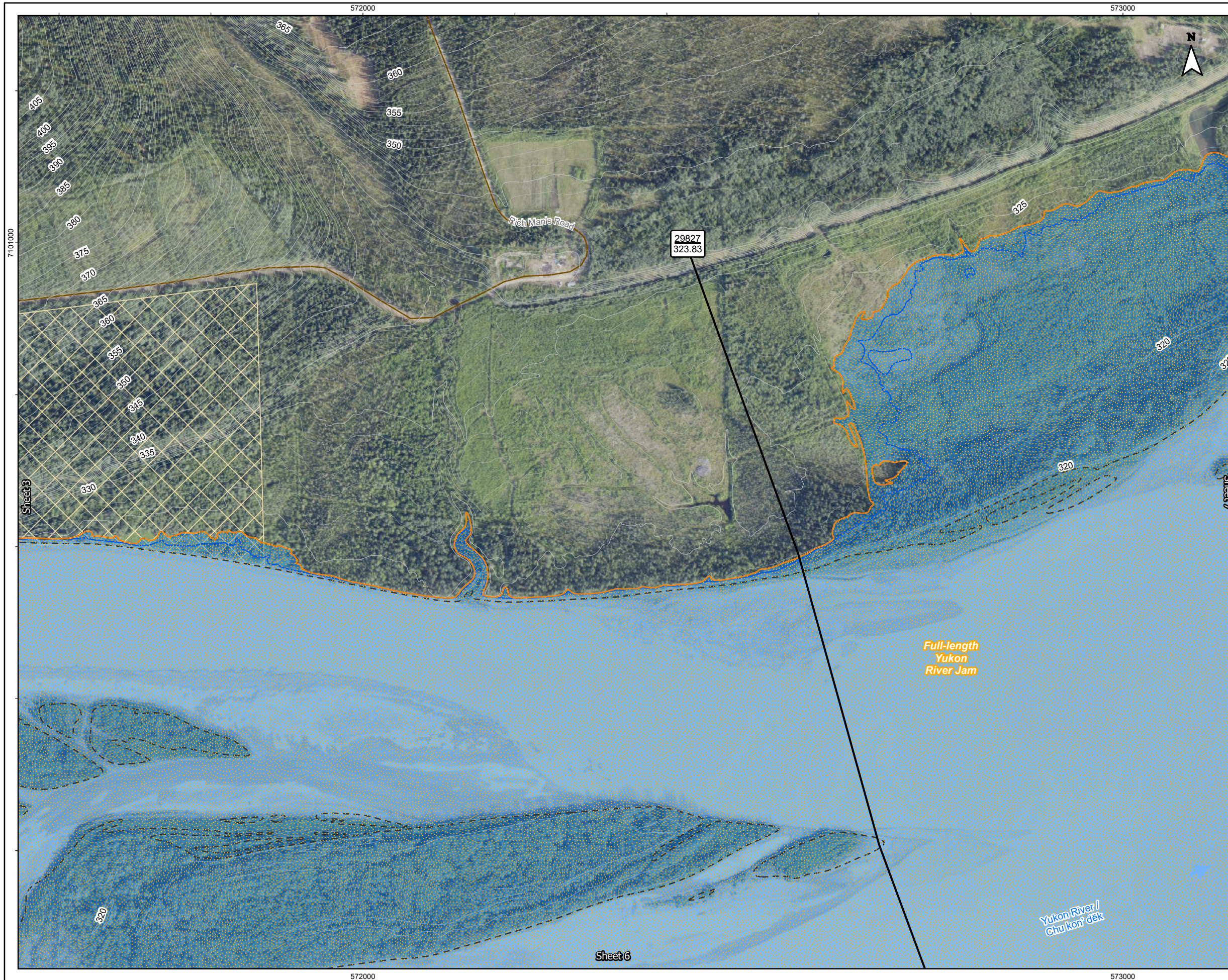


Figure No. **YR-0.5CC-05** Sheet 05 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Yukon River
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: 123222713

Project Location:

Dawson, Yukon

Prepared by MANDERSON on 2025-07-29

Requested by JMUIRHEAD on 2024-03-30

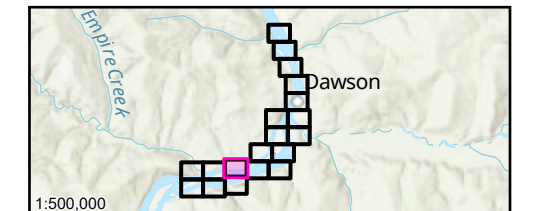
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Tr'ondëk Hwëch'in Settlement Land
- Ground Elevations of Interest
- Inundation Under Modelled Open Water Runs
- Cross-Section Number WSE (m) Along Cross-Section
- Inundation Under Modelled Breakup Ice Jam Runs
- Local Road
- Approximate 50% AEP Open Water Flood Inundation
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Ice Jam Scenarios

Map Publication Date: 7/29/2025

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- Notes**
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 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
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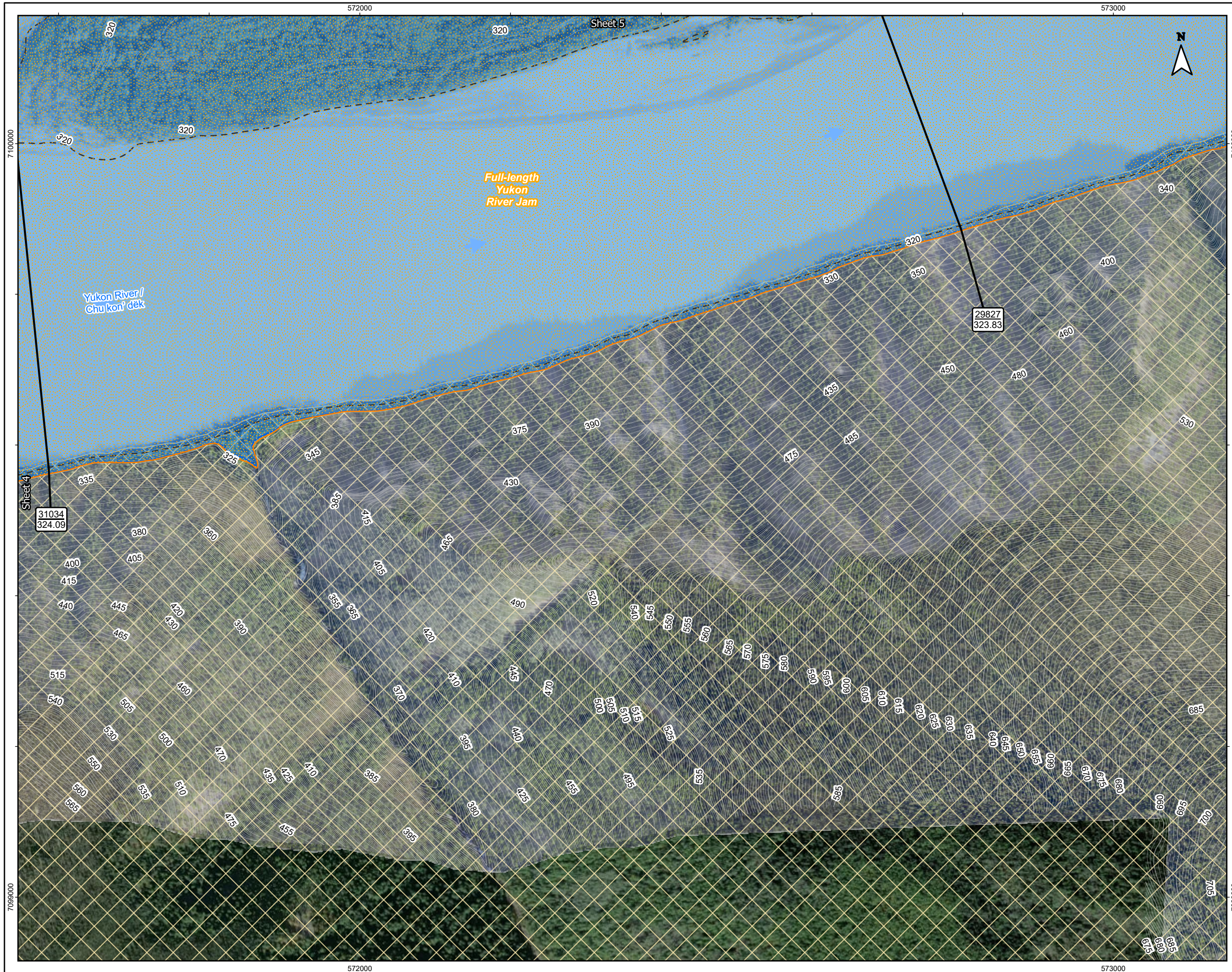
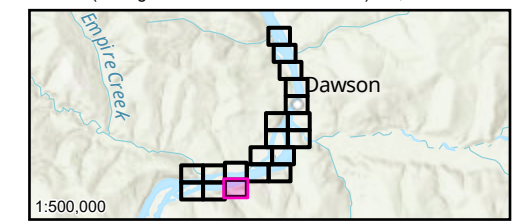


Figure No. **YR-0.5CC-06** Sheet 06 of 19
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Yukon River 0.5% Annual Exceedance Probability (AEP) with Factor of Safety for Climate Change**
 Client/Project: **Government of Yukon Department of Environment Water Resources Branch**
 Project: **123222713**
 Project Location: **Dawson, Yukon** Prepared by MANDERSON on 2025-07-29 Requested by JMUIRHEAD on 2024-03-30 Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Ground Elevations of Interest
- Cross-Section Number WSE (m) Along Cross-Section
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Ice Coverage in Breakup Jam Scenarios
- Trondék Hwëch'in Settlement Land

Map Publication Date: 7/29/2025
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 (At original document size of 11x 17) 1:5,000



Notes
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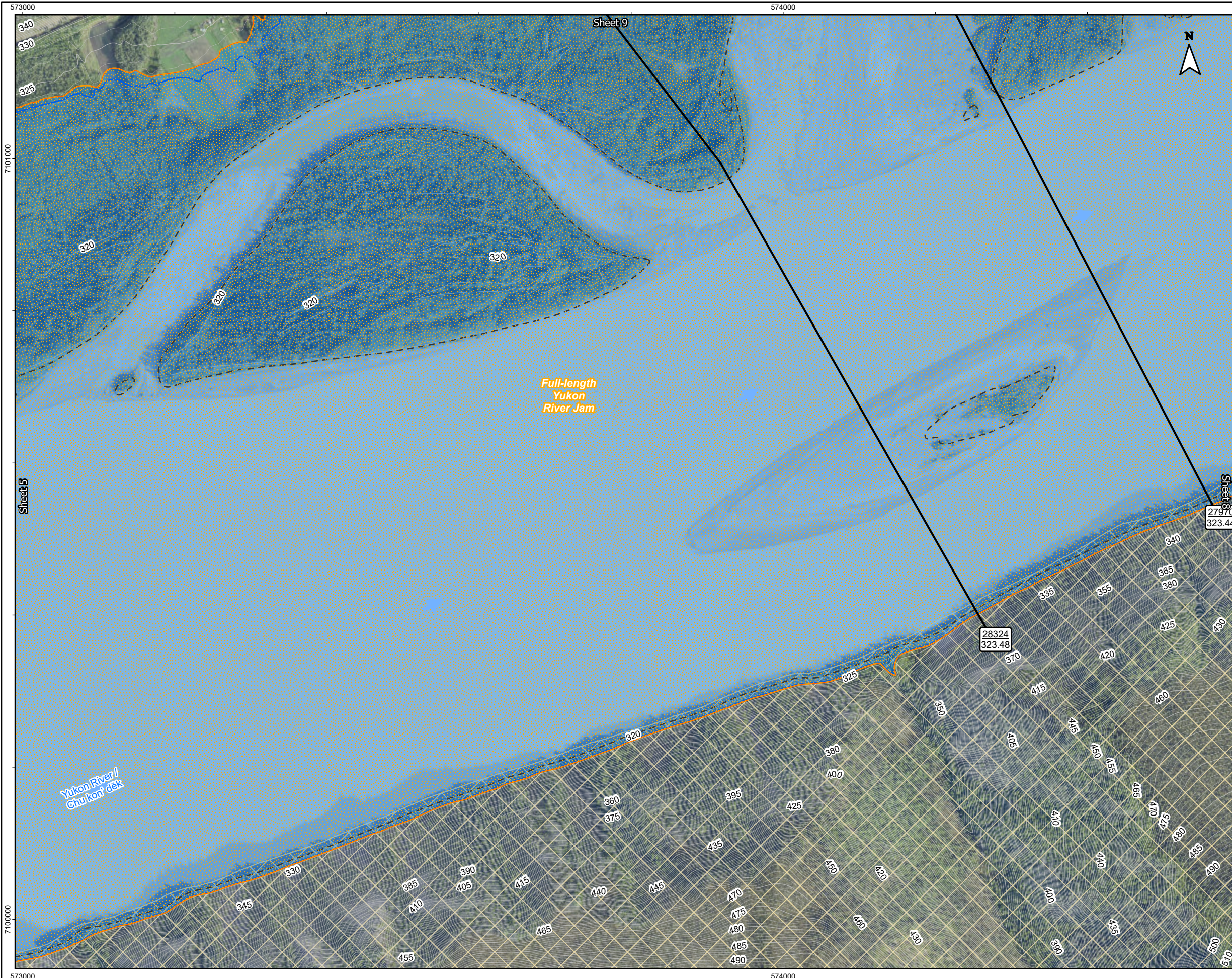


Figure No. **YR-0.5CC-07** Sheet 07 of 19

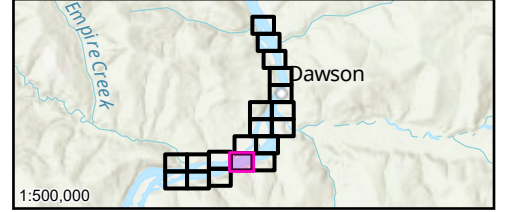
Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Yukon River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change**

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

Project: 123222713
Project Location: Dawson, Yukon
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Ground Elevations of Interest
- Cross-Section Number WSE (m) Along Cross-Section
- Approximate 50% AEP Open Water Flood Inundation
- Major Contour (5m)
- Minor Contour (1m)
- Composite Open Water and Ice Jam Inundation Extent
- Surveyed Cross-Sections Used in Hydraulic Model
- Ice Coverage in Breakup Jam Scenarios
- Trondëk Hwëch'in Settlement Land

Map Publication Date: 7/29/2025
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(At original document size of 11x 17) 1:5,000



- Notes**
- Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
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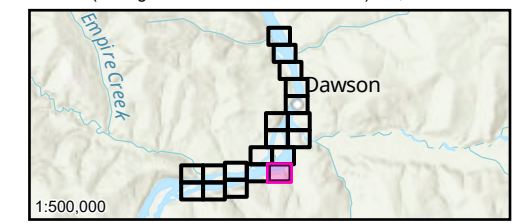
This project is funded in part by the Government of Canada



Figure No. **YR-0.5CC-08** Sheet 08 of 19
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Yukon River 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: **123222713**
 Project Location: **Dawson, Yukon** Prepared by MANDERSON on 2025-07-29 Requested by JMUIRHEAD on 2024-03-30 Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Ground Elevations of Interest
- Cross-Section Number WSE (m) Along Cross-Section
- Approximate 50% AEP Open Water Flood Inundation
- Major Contour (5m)
- Minor Contour (1m)
- Composite Open Water and Ice Jam Inundation Extent
- Surveyed Cross-Sections Used in Hydraulic Model
- Ice Coverage in Breakup Ice Jam Scenarios
- Trondék Hwëch'in Settlement Land

Map Publication Date: 7/29/2025
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Notes
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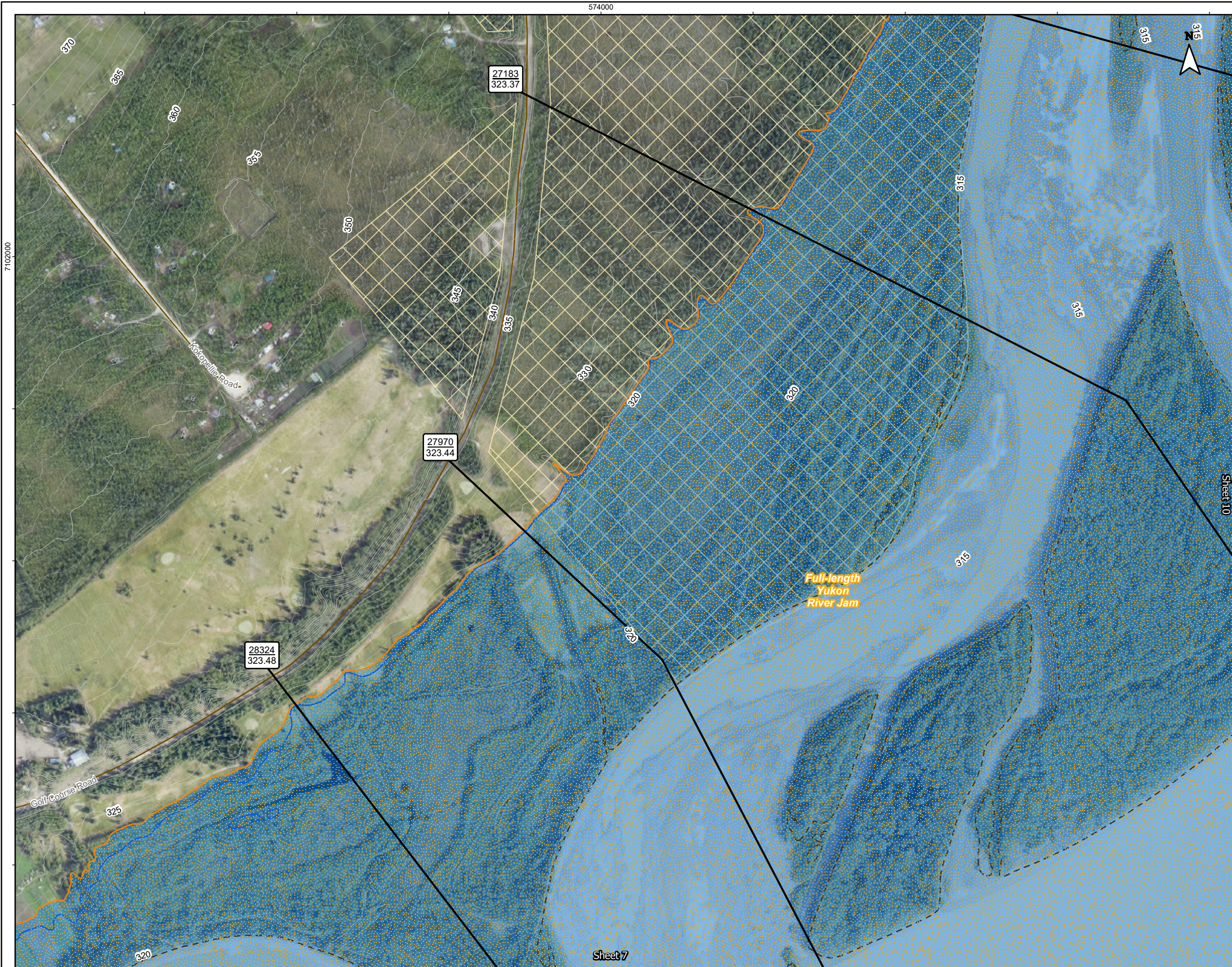


Figure No. **YR-0.5CC-09** Sheet 09 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Yukon River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change**

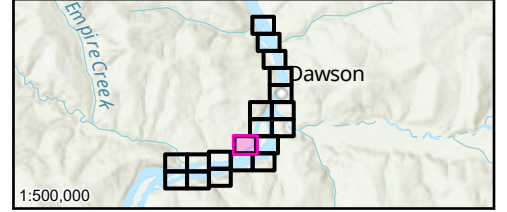
Client/Project:
**Government of Yukon
Department of Environment
Water Resources Branch**

Project: 123222713

Project Location: Dawson, Yukon
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- ▲ Ground Elevations of Interest
- Inundation Under Modelled Open Water Runs
- 57 / 517.2 Cross-Section Number WSE (m) Along Cross-Section
- Inundation Under Modelled Breakup Ice Jam Runs
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveied Cross-Sections Used in Hydraulic Model
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- Approximate 50% AEP Open Water Flood Inundation
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Map Publication Date: 7/29/2025
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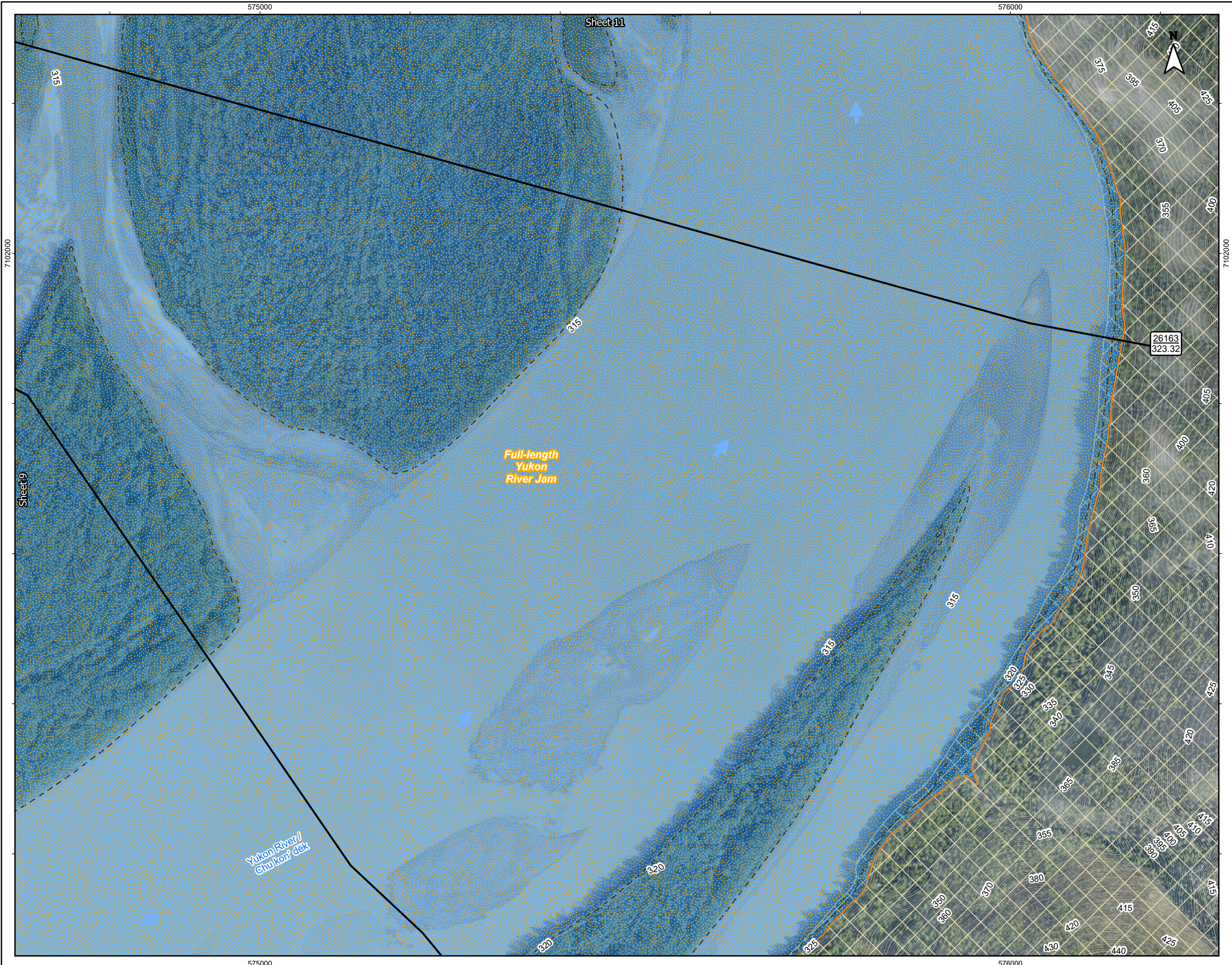


Figure No. **YR-0.5CC-10** Sheet 10 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Yukon River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change**

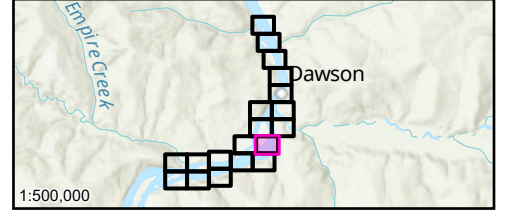
Client/Project:
**Government of Yukon
Department of Environment
Water Resources Branch**

Project: 123222713

Project Location: Dawson, Yukon
Prepared by MANDERSON on 2025-07-29
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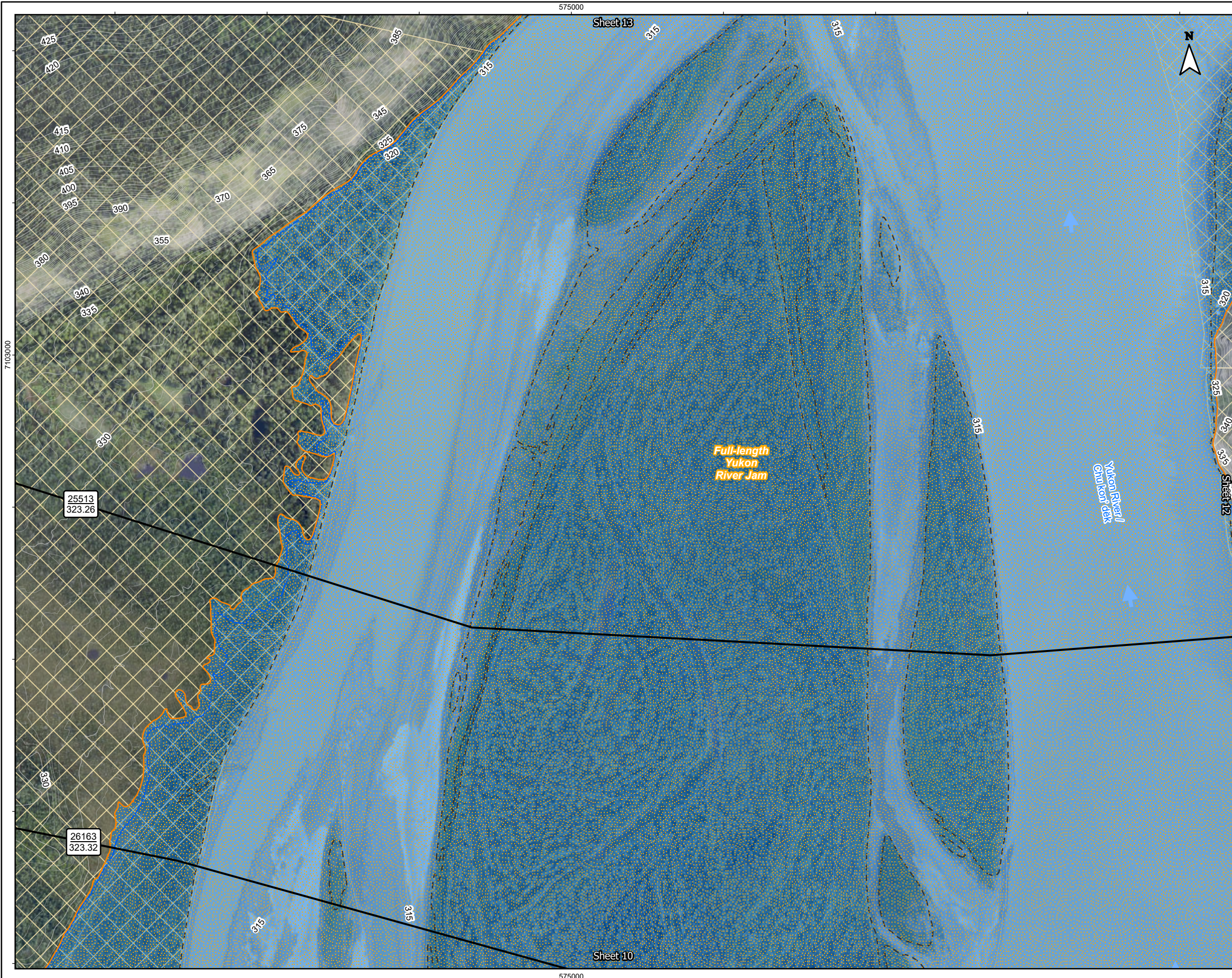
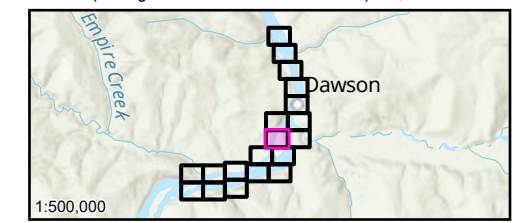


Figure No. **YR-0.5CC-11** Sheet 11 of 19
 Title: **Dawson City and Klondike Valley Flood Mapping Study
 Composite Flood Hazard Map - Yukon River
 0.5% Annual Exceedance Probability (AEP) with Factor of Safety
 for Climate Change**
 Client/Project:
 Government of Yukon
 Department of Environment
 Water Resources Branch
 Project: 123222713
 Project Location: Dawson, Yukon
 Prepared by MANDERSON on 2025-07-29
 Requested by JMUIRHEAD on 2024-03-30
 Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Ground Elevations of Interest
- Cross-Section Number WSE (m) Along Cross-Section
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Trondék Hwëch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Ice Jam Scenarios

Map Publication Date: 7/29/2025
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 (At original document size of 11x 17) 1:5,000

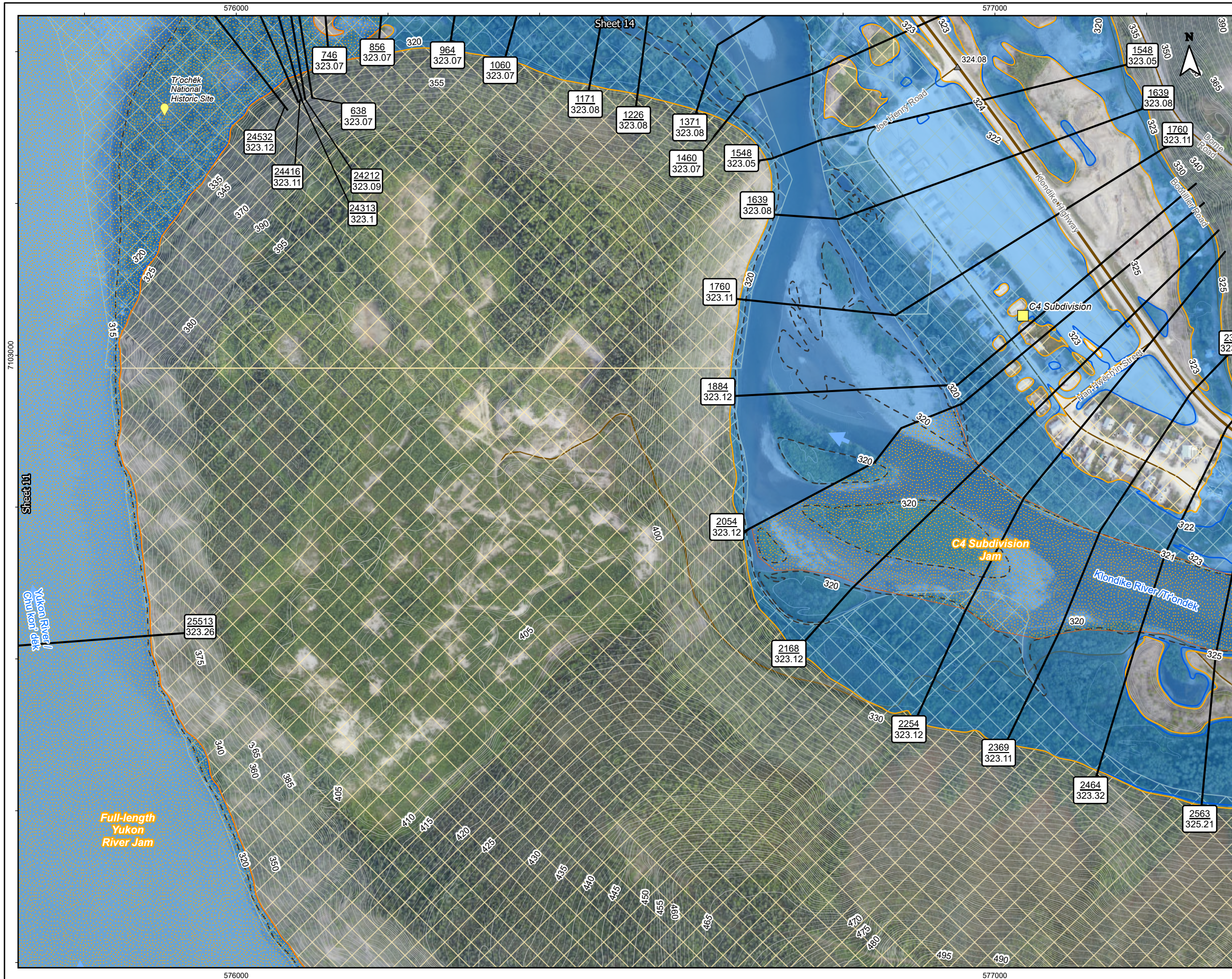


Notes
 1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
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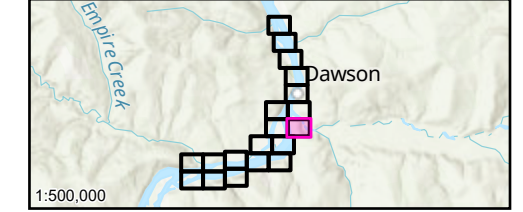
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- River Flow Direction
- Surveyed Cross-Sections Used in Hydraulic Model
- Ground Elevations of Interest
- Community Developments
- Point of Interest
- Cross-Section Number WSE (m) Along Cross-Section
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Tr'ondëk Hwëch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Jam Scenarios

Map Publication Date: 7/29/2025
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(At original document size of 11x 17) 1:5,000



- Notes
1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
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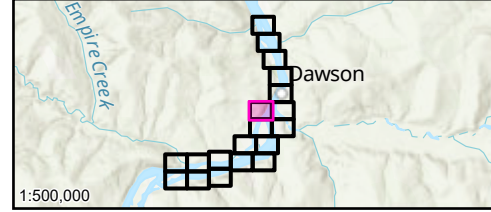
Figure No. **YR-0.5CC-13** Sheet 13 of 19
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Yukon River 0.5% Annual Exceedance Probability (AEP) with Factor of Safety for Climate Change**

Client/Project: **Government of Yukon Department of Environment Water Resources Branch**
 Project: 123222713

Project Location: Dawson, Yukon
 Prepared by MANDERSON on 2025-07-29
 Requested by JMUIRHEAD on 2024-03-30
 Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Surveyed Cross-Sections Used in Hydraulic Model
- Ground Elevations of Interest
- Tr'ondëk Hwëch'in Settlement Land
- HPW Drainage Culverts
- Inundation Under Modelled Open Water Runs
- Cross-Section Number WSE (m) Along Cross-Section
- Inundation Under Modelled Breakup Ice Jam Runs
- Highway
- Local Road
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Major Contour (5m)
- Minor Contour (1m)
- Ice Coverage in Breakup Jam Scenarios

Map Publication Date: 7/29/2025
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 (At original document size of 11x 17) 1:5,000



Notes
 1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
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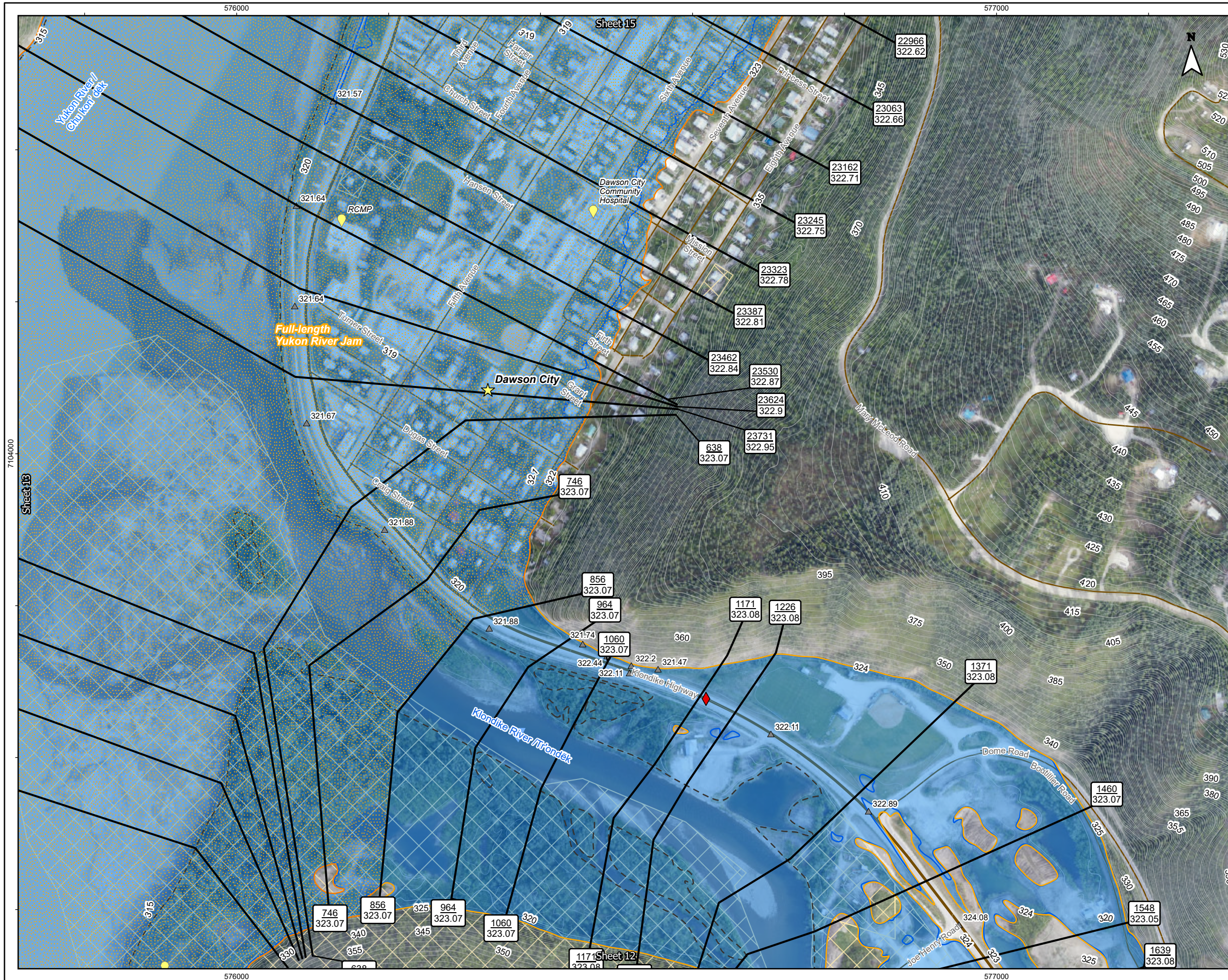


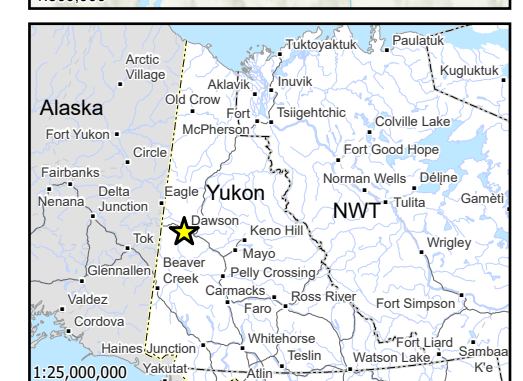
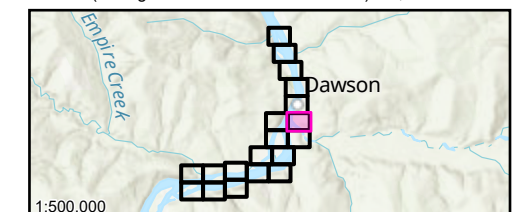
Figure No. **YR-0.5CC-14** Sheet 14 of 19
 Title: **Dawson City and Klondike Valley Flood Mapping Study
 Composite Flood Hazard Map - Yukon River
 0.5% Annual Exceedance Probability (AEP) with Factor of Safety
 for Climate Change**

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

Project: 123222713
 Project Location: Dawson, Yukon
 Prepared by MANDERSON on 2025-07-29
 Requested by JMUIRHEAD on 2024-03-30
 Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Ground Elevations of Interest
- HPW Drainage Culverts
- Municipality
- Point of Interest
- Cross-Section Number WSE (m) Along Cross-Section
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondëk Hwëch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Jam Scenarios

Map Publication Date: 7/29/2025
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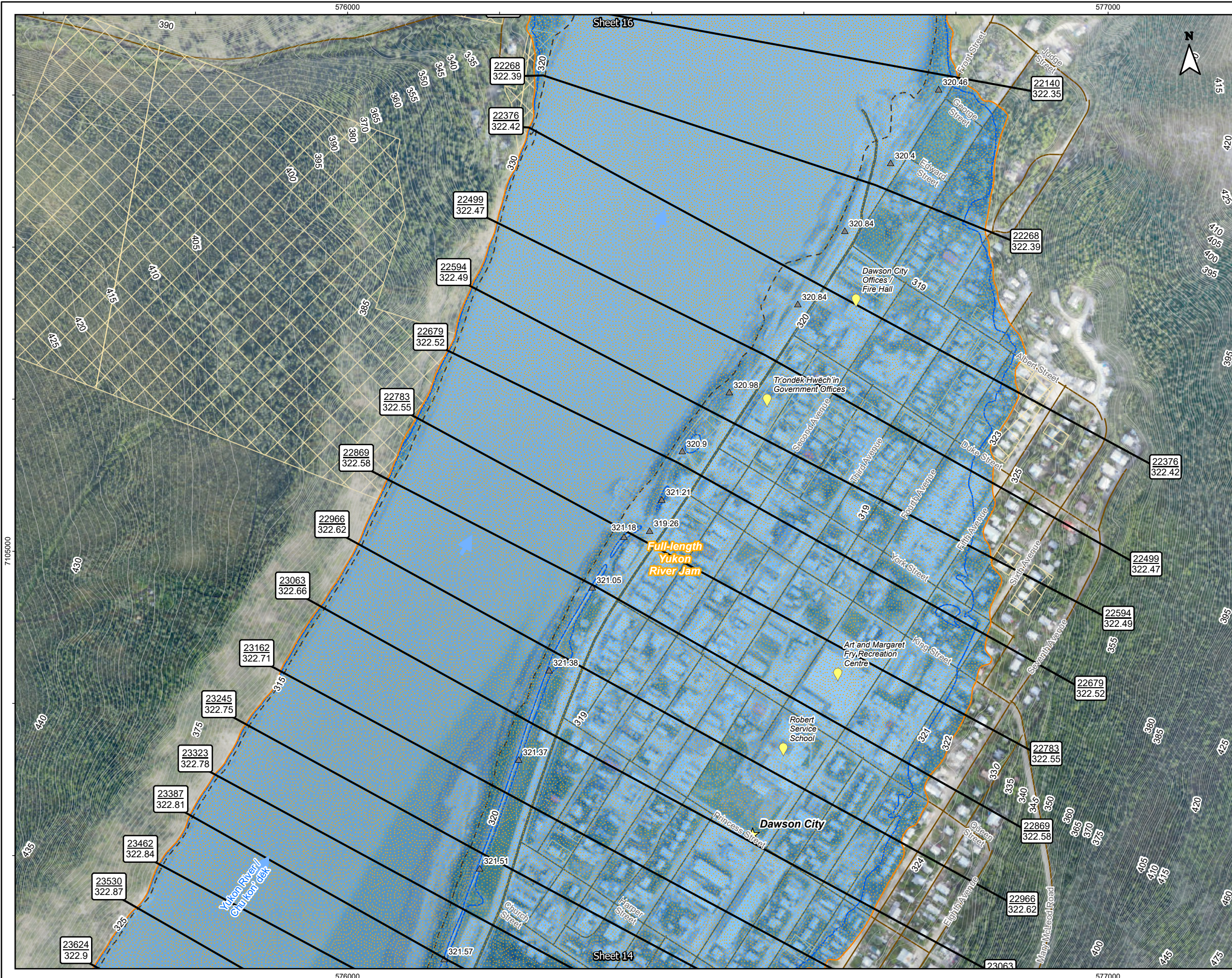


Notes
 1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
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**Title: Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Yukon River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change**

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

Project: 123222713

Project Location: Dawson, Yukon

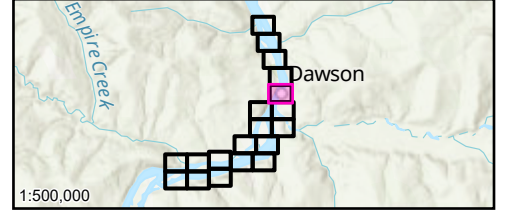
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Surveyed Cross-Sections Used in Hydraulic Model
- Ground Elevations of Interest
- Municipality
- Point of Interest
- Cross-Section Number WSE (m) Along Cross-Section
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Trondëk Hwëch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Jam Scenarios

Map Publication Date: 7/29/2025

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Notes

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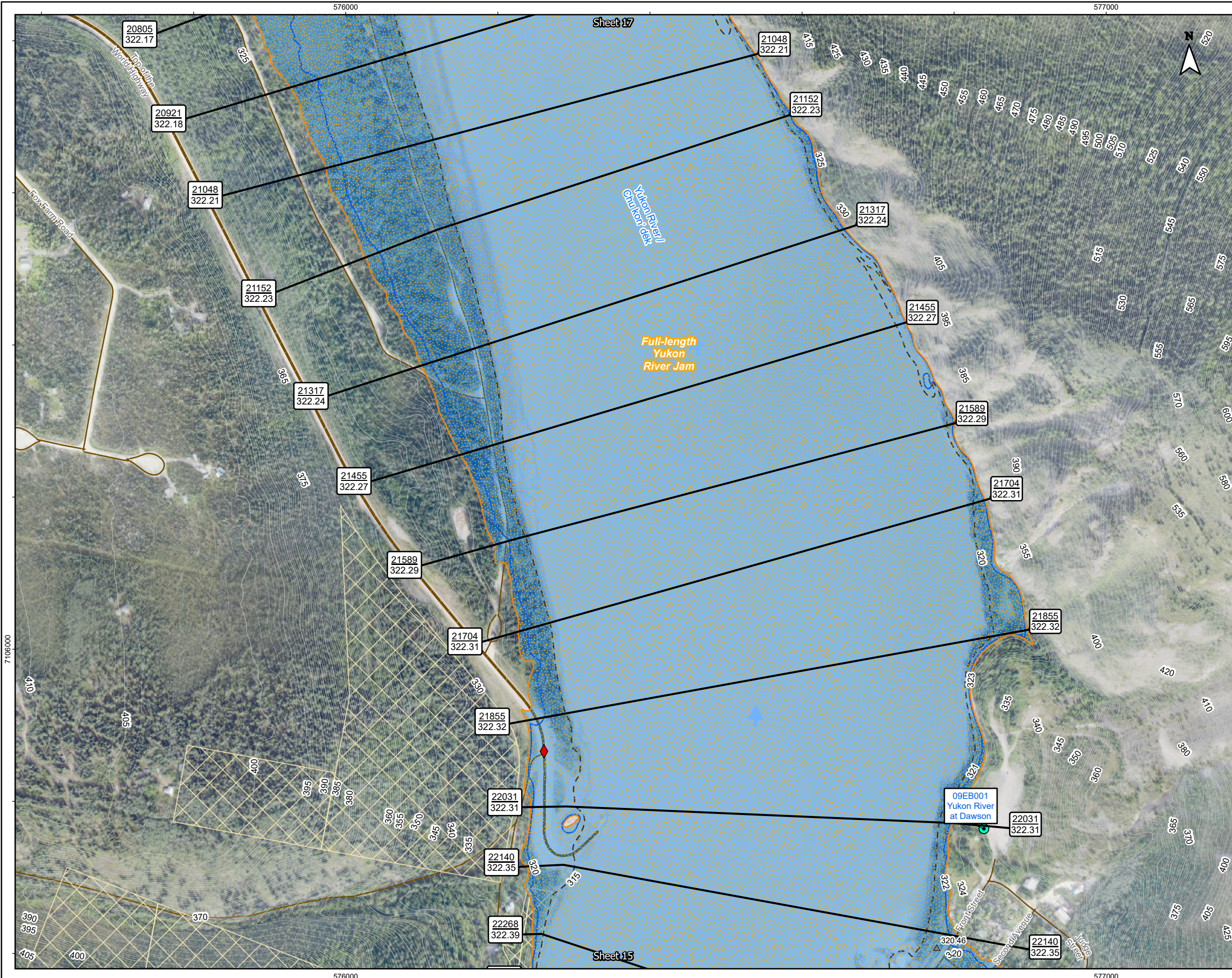


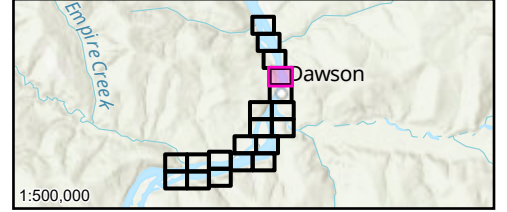
Figure No. **YR-0.5CC-16** Sheet 16 of 19
 Title: **Dawson City and Klondike Valley Flood Mapping Study
 Composite Flood Hazard Map - Yukon River
 0.5% Annual Exceedance Probability (AEP) with Factor of Safety
 for Climate Change**

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

Project: 123222713
 Project Location: Dawson, Yukon
 Prepared by MANDERSON on 2025-07-29
 Requested by JMUIRHEAD on 2024-03-30
 Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- WSC Stations
- Ground Elevations of Interest
- HPW Drainage Culverts
- Cross-Section Number WSE (m) Along Cross-Section
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondëk Hwëch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Jam Scenarios

Map Publication Date: 7/29/2025
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 (At original document size of 11x 17) 1:5,000



Notes
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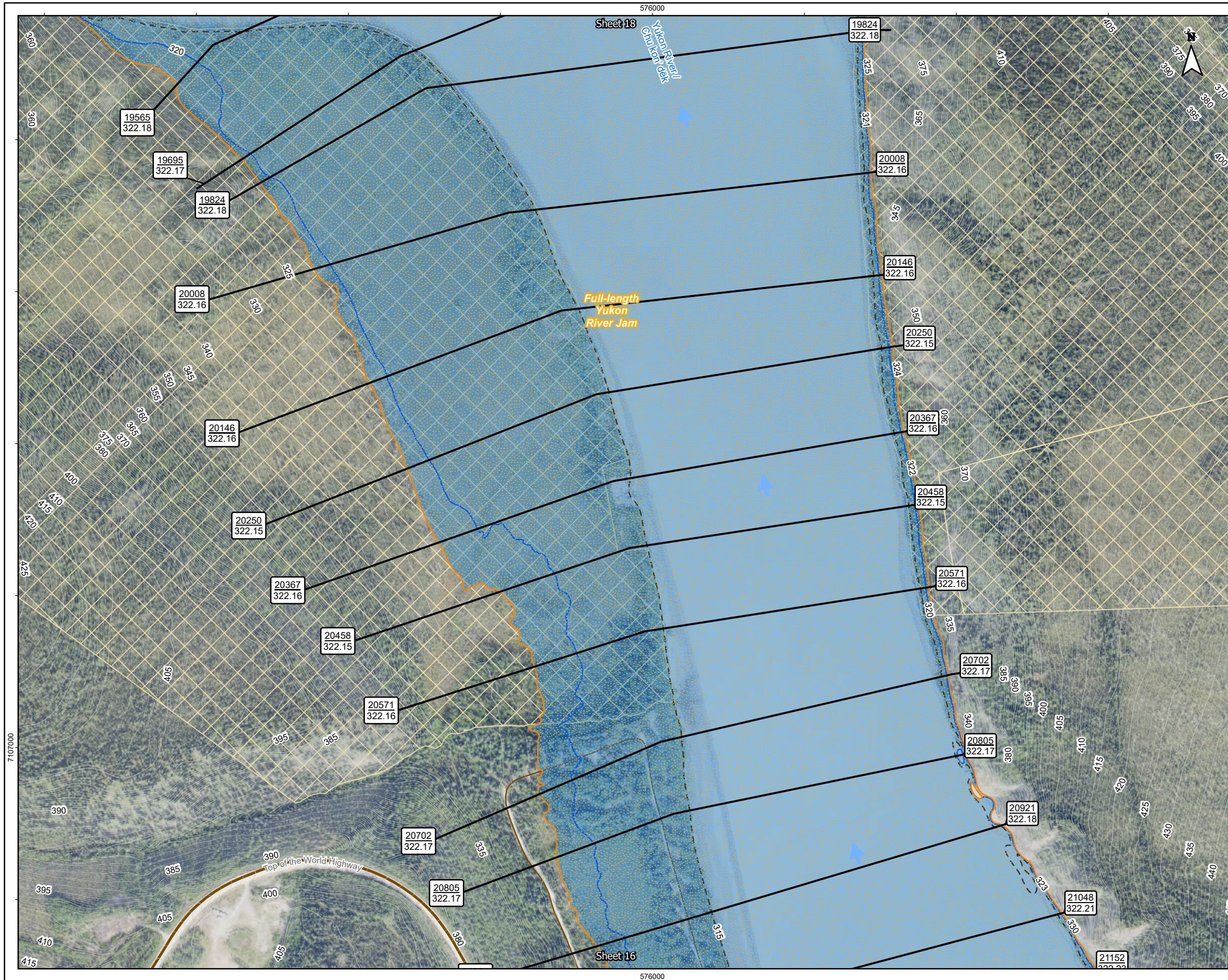


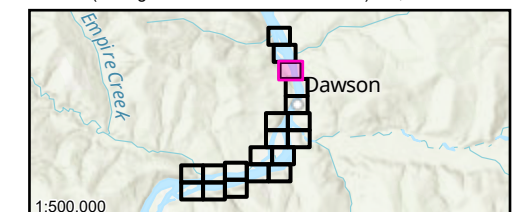
Figure No. **YR-0.5CC-17** Sheet 17 of 19
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Yukon River 0.5% Annual Exceedance Probability (AEP) with Factor of Safety for Climate Change**

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

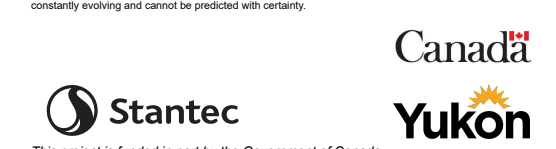
Project: 123222713
 Project Location: Dawson, Yukon
 Prepared by MANDERSON on 2025-07-29
 Requested by JMUIRHEAD on 2024-03-30
 Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Ground Elevations of Interest
- Cross-Section Number WSE (m) Along Cross-Section
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondëk Hwëch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Jam Scenarios

Map Publication Date: 7/29/2025
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Notes:
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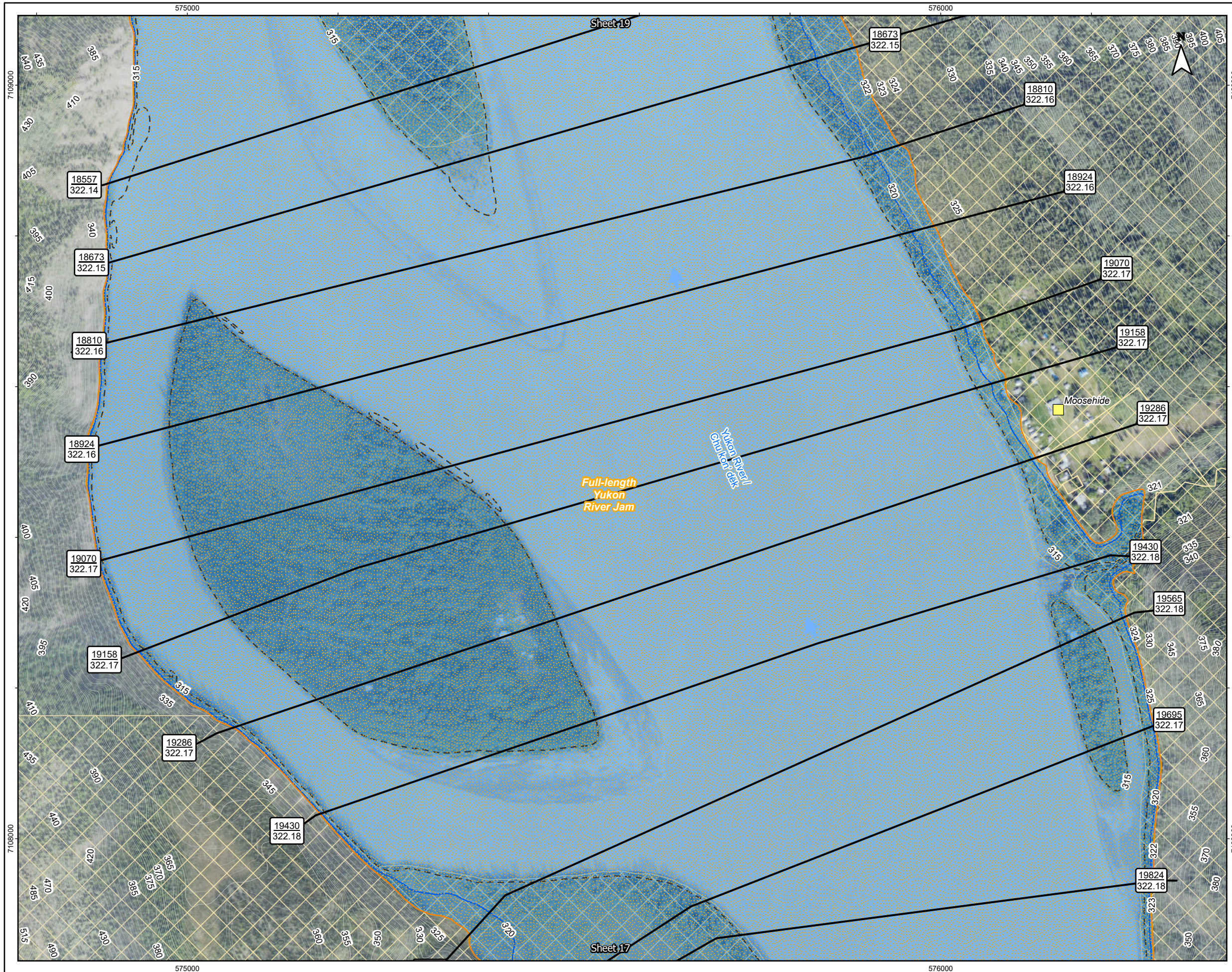


Figure No. **YR-0.5CC-18** Sheet 18 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Yukon River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change**

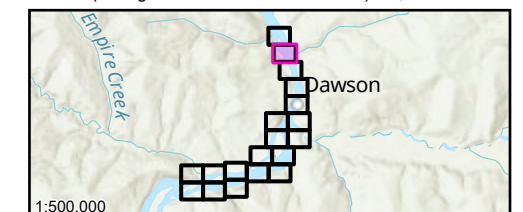
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

Project: 123222713

Project Location: Dawson, Yukon
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Ground Elevations of Interest
- Community Developments
- Cross-Section Number WSE (m) Along Cross-Section
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondëk Hwëch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Jam Scenarios

Map Publication Date: 7/29/2025
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(At original document size of 11x 17) 1:5,000



Notes
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This project is funded in part by the Government of Canada

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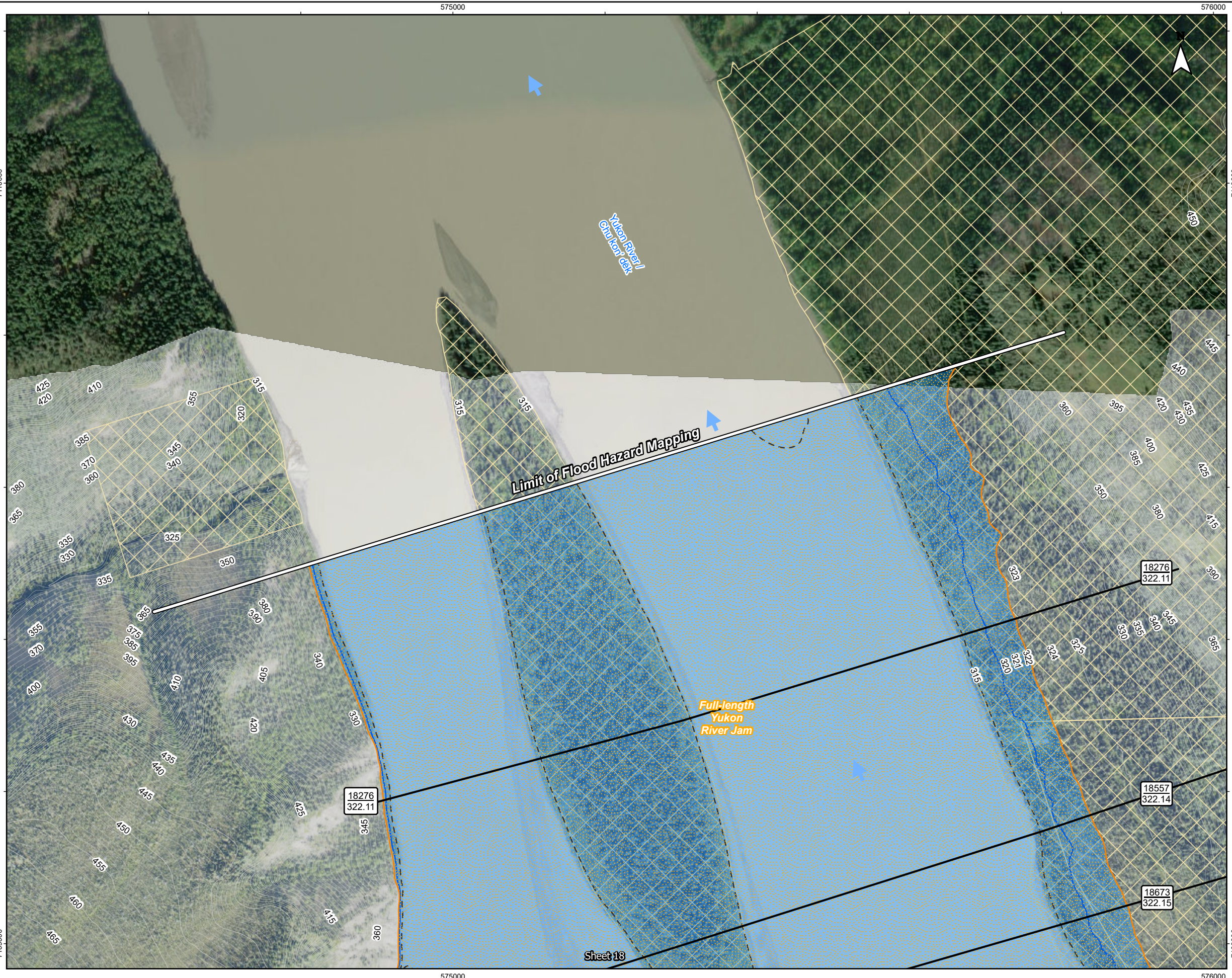
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Sheet 18

Figure No. **YR-0.5CC-19** Sheet 19 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Yukon River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change**

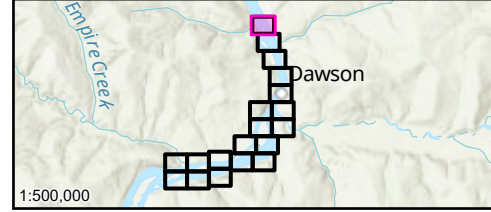
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

Project: 123222713

Project Location: Dawson, Yukon
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Tr'ondëk Hwëch'in Settlement Land
- Ground Elevations of Interest
- Inundation Under Modelled Open Water Runs
- Cross-Section Number WSE (m) Along Cross-Section
- Inundation Under Modelled Breakup Ice Jam Runs
- Major Contour (5m)
- Approximate 50% AEP Open Water Flood Inundation
- Minor Contour (1m)
- Composite Open Water and Ice Jam Inundation Extent
- Surveyed Cross-Sections Used in Hydraulic Model
- Ice Coverage in Breakup Jam Scenarios
- Limit of Floodplain Mapping

Map Publication Date: 7/29/2025
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- Notes**
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