

Figure No. **YR-1-01** Sheet 01 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)**

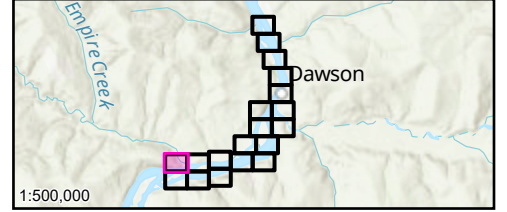
Client/Project:  
**Government of Yukon  
Department of Environment  
Water Resources Branch**

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
- Cross-Section Number WSE (m) Along Cross-Section
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extents
- Ice Coverage in Breakup Ice Jam Scenarios
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Limit of Flood Hazard Mapping

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



- Notes**
- Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
  - Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
  - 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.
  - 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.
  - The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.



Disclaimer: Any unauthorized use or reliance of Draft 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.

**DRAFT - FOR REVIEW ONLY**



Figure No. **YR-1-02** Sheet 02 of 19

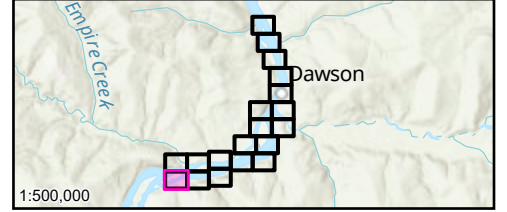
Title: **Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)**

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
- Cross-Section Number WSE (m) Along Cross-Section
- Inundation Under Modelled Open Water Runs
- 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 Extents
- Surveyed Cross-Sections Used in Hydraulic Model
- Ice Coverage in Breakup Jam Scenarios
- Limit of Flood Hazard Mapping

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.  
5. The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.



Disclaimer: Any unauthorized use or reliance of Draft 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.

**DRAFT - FOR REVIEW ONLY**



Figure No. **YR-1-03** Sheet 03 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)**

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

Project: 123222713

Project Location: Dawson, Yukon

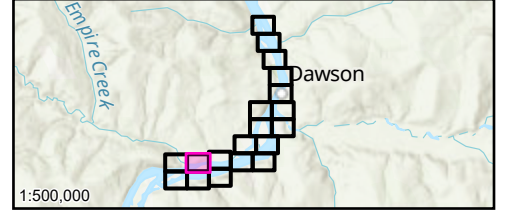
Prepared by MANDERSON on 2025-07-29  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2025-07-29

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

Map Publication Date: 7/29/2025

0 50 100 150 200 250 m

(At original document size of 11x 17) 1:5,000



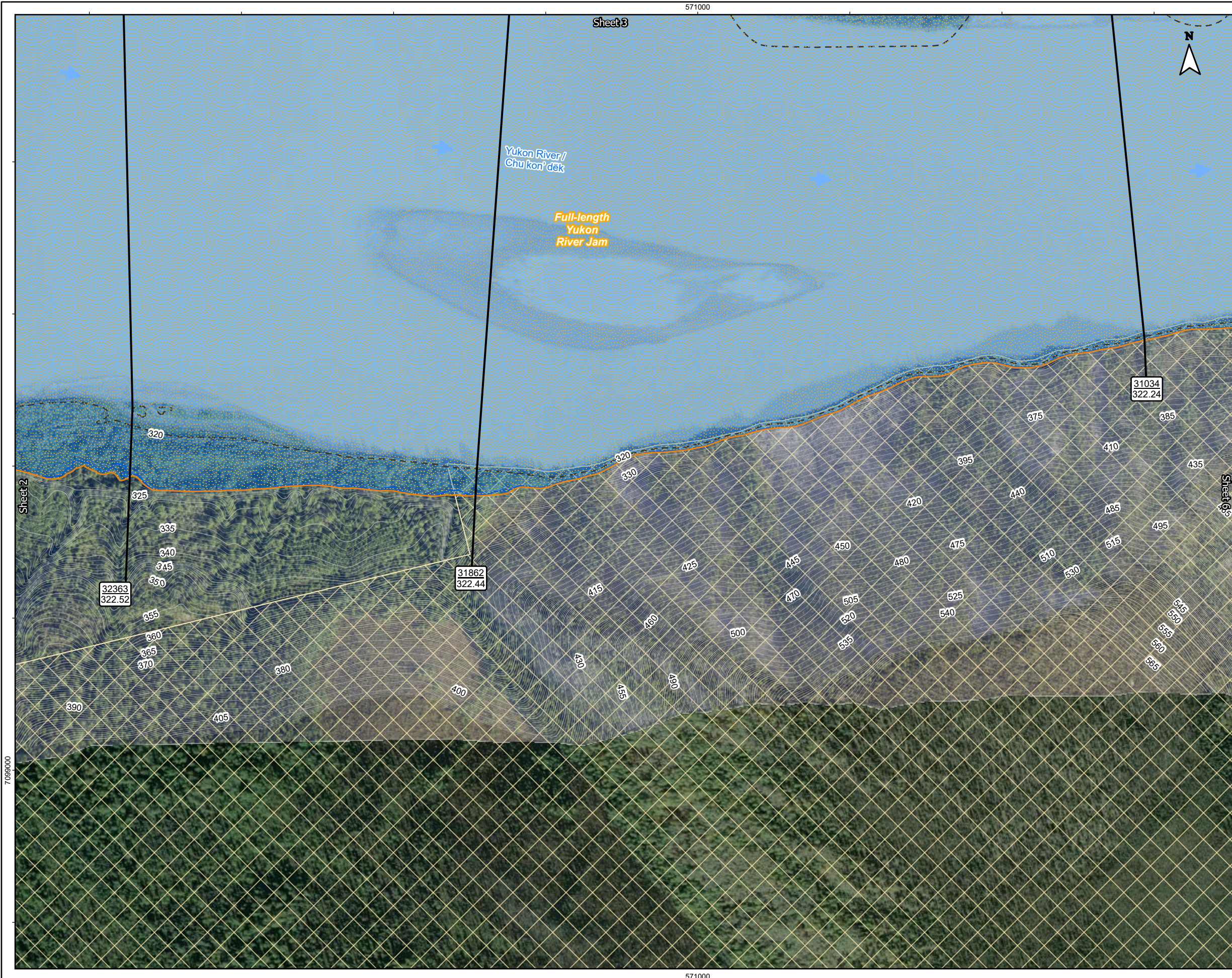
**Notes**

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.
5. The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.



Disclaimer: Any unauthorized use or reliance of Draft 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.

**DRAFT - FOR REVIEW ONLY**



**Title:** Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)

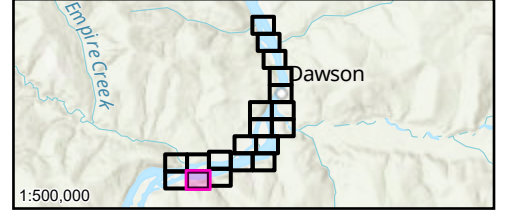
**Client/Project:**  
Government of Yukon  
Department of Environment  
Water Resources Branch

**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
- 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 Extents
- Ice Coverage in Breakup 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.
  5. The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.



Figure No. **YR-1-05** Sheet 05 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)**

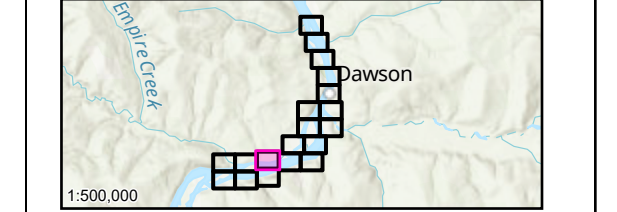
Client/Project:  
Government of Yukon  
Department of Environment  
Water Resources Branch

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
- Local Road
- Approximate 50% AEP Open Water Flood Inundation
- Major Contour (5m)
- Composite Open Water and Ice Jam Inundation Extents
- Minor Contour (1m)
- Ice Coverage in Breakup Ice Jam Scenarios
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondëk Hwëch'in Settlement Land

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.  
5. The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.

Disclaimer: Any unauthorized use or reliance of Draft 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.

**DRAFT - FOR REVIEW ONLY**

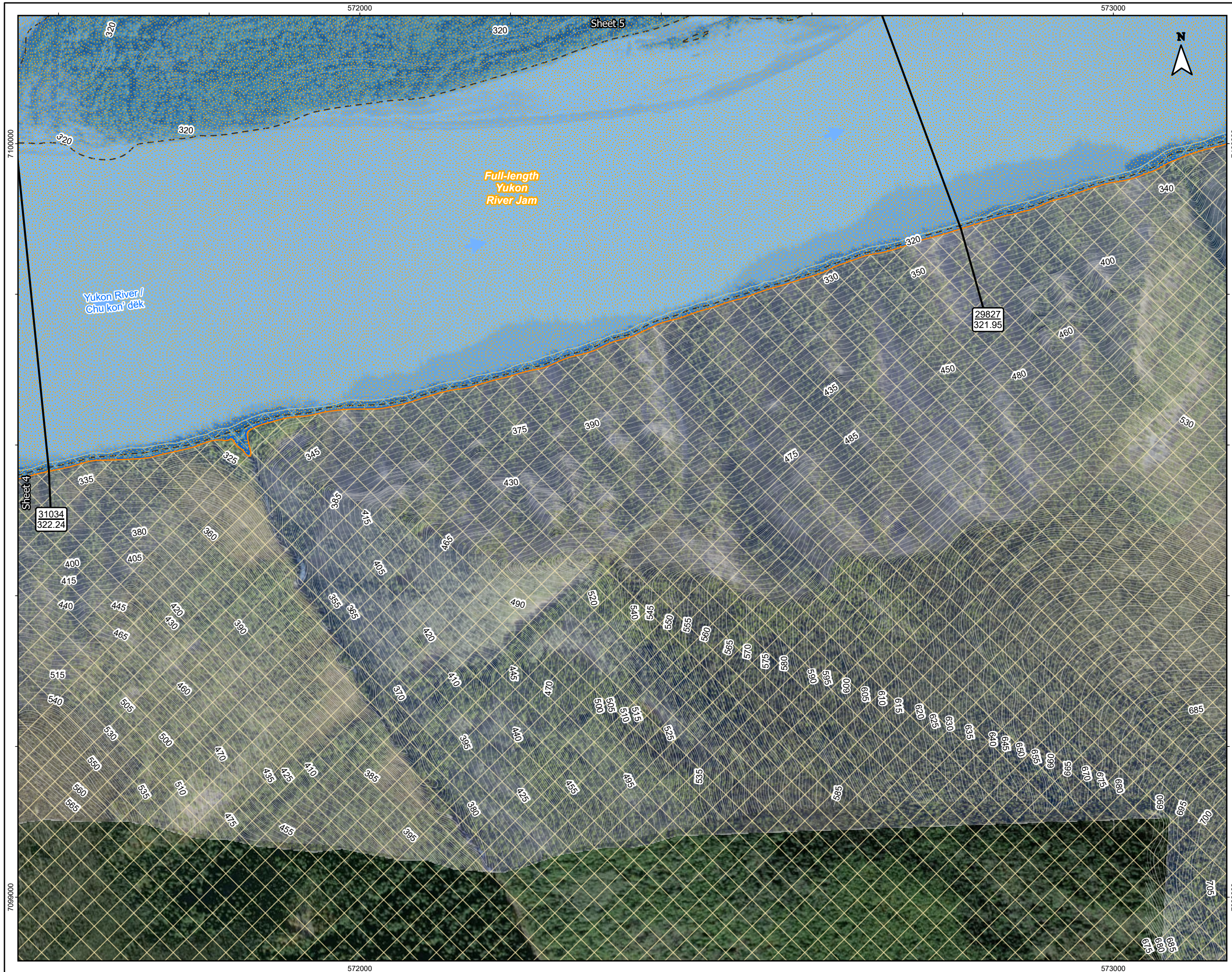


Figure No. **YR-1-06** Sheet 06 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)**

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

Project: 123222713

Project Location: Dawson, Yukon

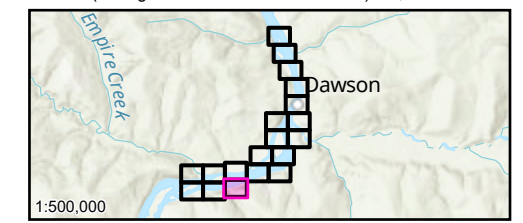
Prepared by MANDERSON on 2025-07-29  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Cross-Section Number WSE (m) Along Cross-Section
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondék Hwéch'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 Extents
- Ice Coverage in Breakup 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**

- Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
- Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
- 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.
- 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.
- The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.

Disclaimer: Any unauthorized use or reliance of Draft 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.

**DRAFT - FOR REVIEW ONLY**



This project is funded in part by the Government of Canada

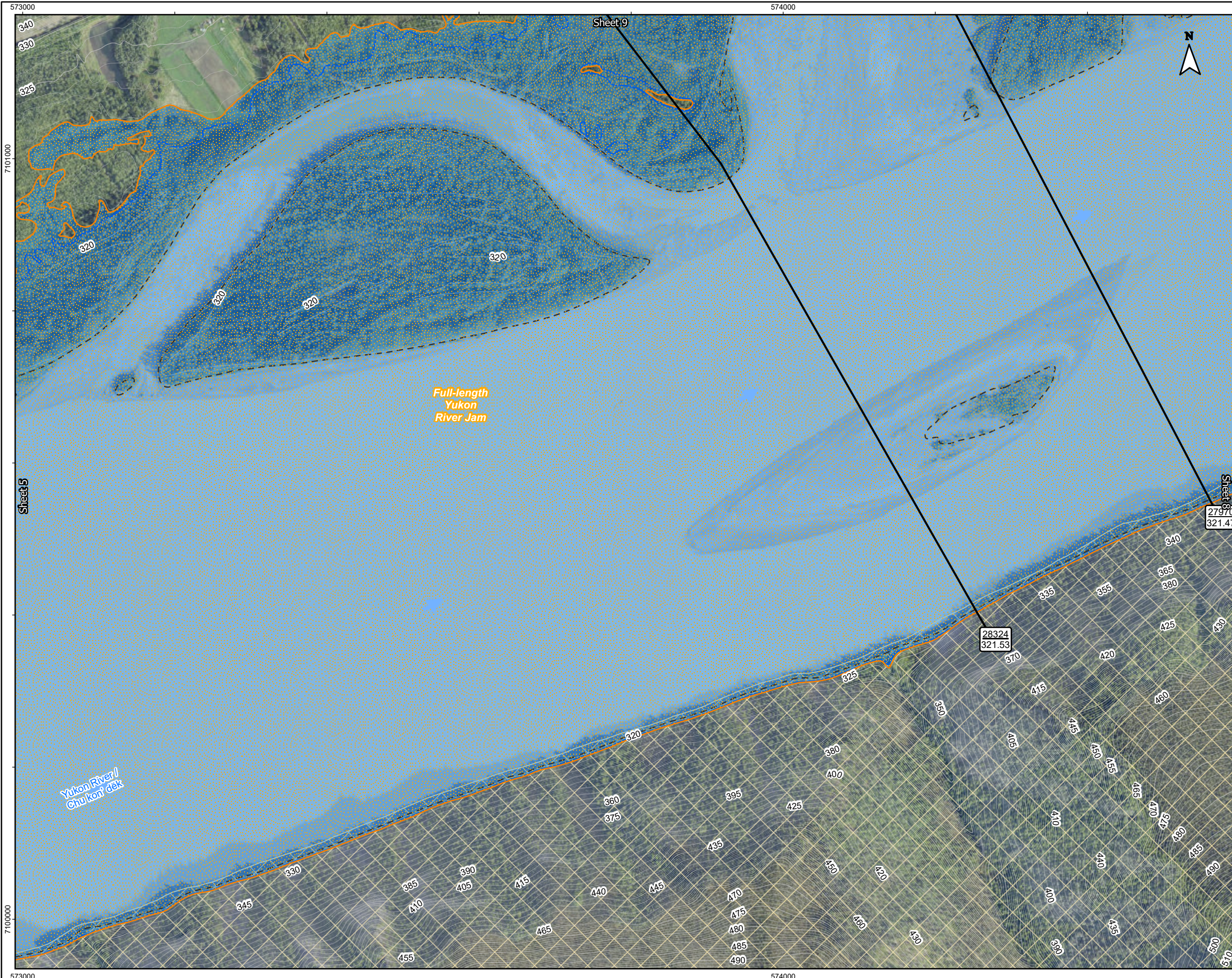


Figure No. **YR-1-07** Sheet 07 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)**

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

Project: 123222713

Project Location: Dawson, Yukon

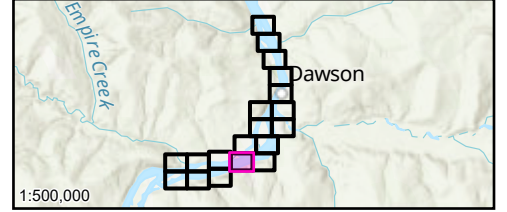
Prepared by MANDERSON on 2025-07-29  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Cross-Section Number WSE (m) Along Cross-Section
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondék 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 Extents
- Ice Coverage in Breakup 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**

- Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
- Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
- 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.
- 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.
- The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.

Disclaimer: Any unauthorized use or reliance of Draft 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.

**DRAFT - FOR REVIEW ONLY**





Figure No. **YR-1-08** Sheet 08 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)**

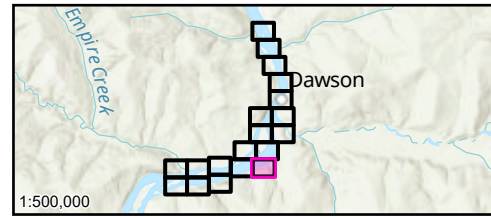
Client/Project:  
**Government of Yukon  
Department of Environment  
Water Resources Branch**

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
- 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 Extents
- Ice Coverage in Breakup 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



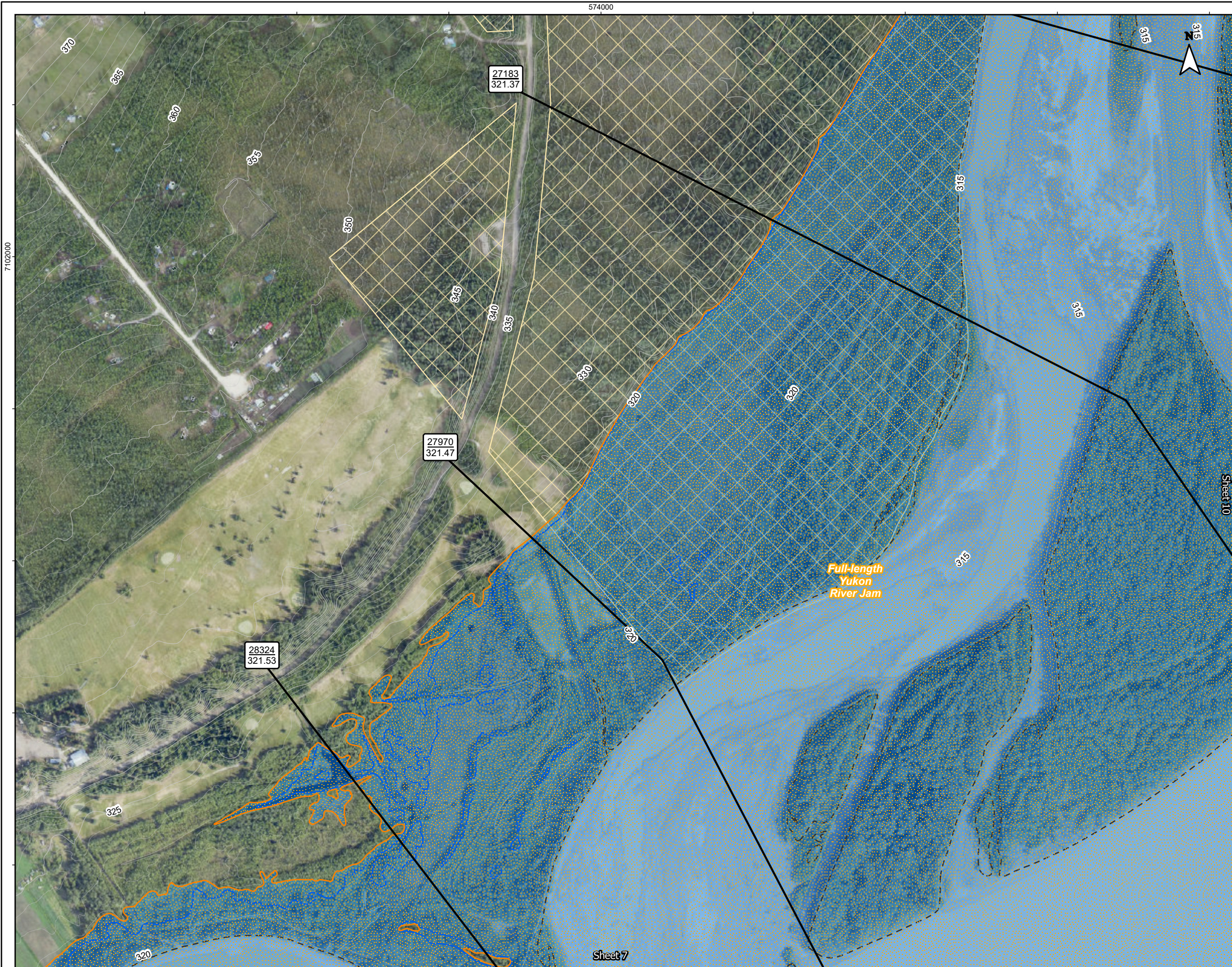
**Notes**

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.
5. The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.

Disclaimer: Any unauthorized use or reliance of Draft 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.

**DRAFT - FOR REVIEW ONLY**





**Title:** Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)

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

**Project:** 123222713

**Project Location:** Dawson, Yukon

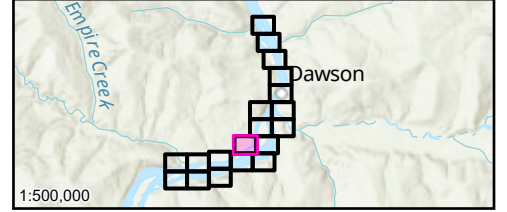
Prepared by MANDERSON on 2025-07-29  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2025-07-29

- 57  
517.2 Cross-Section Number WSE (m) Along Cross-Section
- 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 Extents
- Ice Coverage in Breakup 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.
  5. The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.

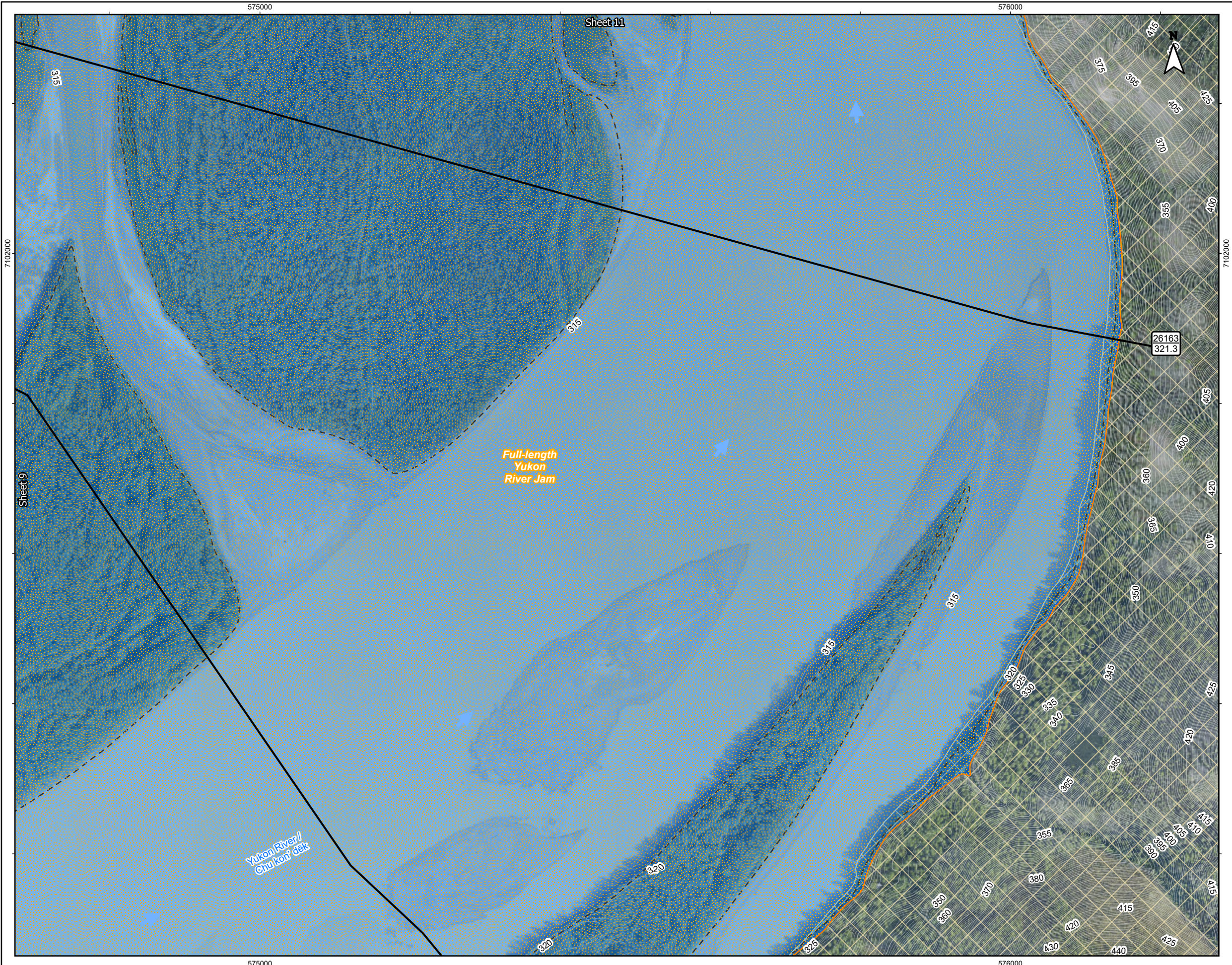


Figure No. **YR-1-10** Sheet 10 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)**

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

Project: 123222713

Project Location: Dawson, Yukon

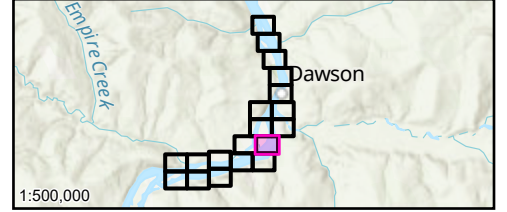
Prepared by MANDERSON on 2025-07-29  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- Cross-Section Number WSE (m) Along Cross-Section
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Trondék Hwéché'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 Extents
- Ice Coverage in Breakup 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 data 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.
5. The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.

Disclaimer: Any unauthorized use or reliance of Draft 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.

**DRAFT - FOR REVIEW ONLY**



This project is funded in part by the Government of Canada

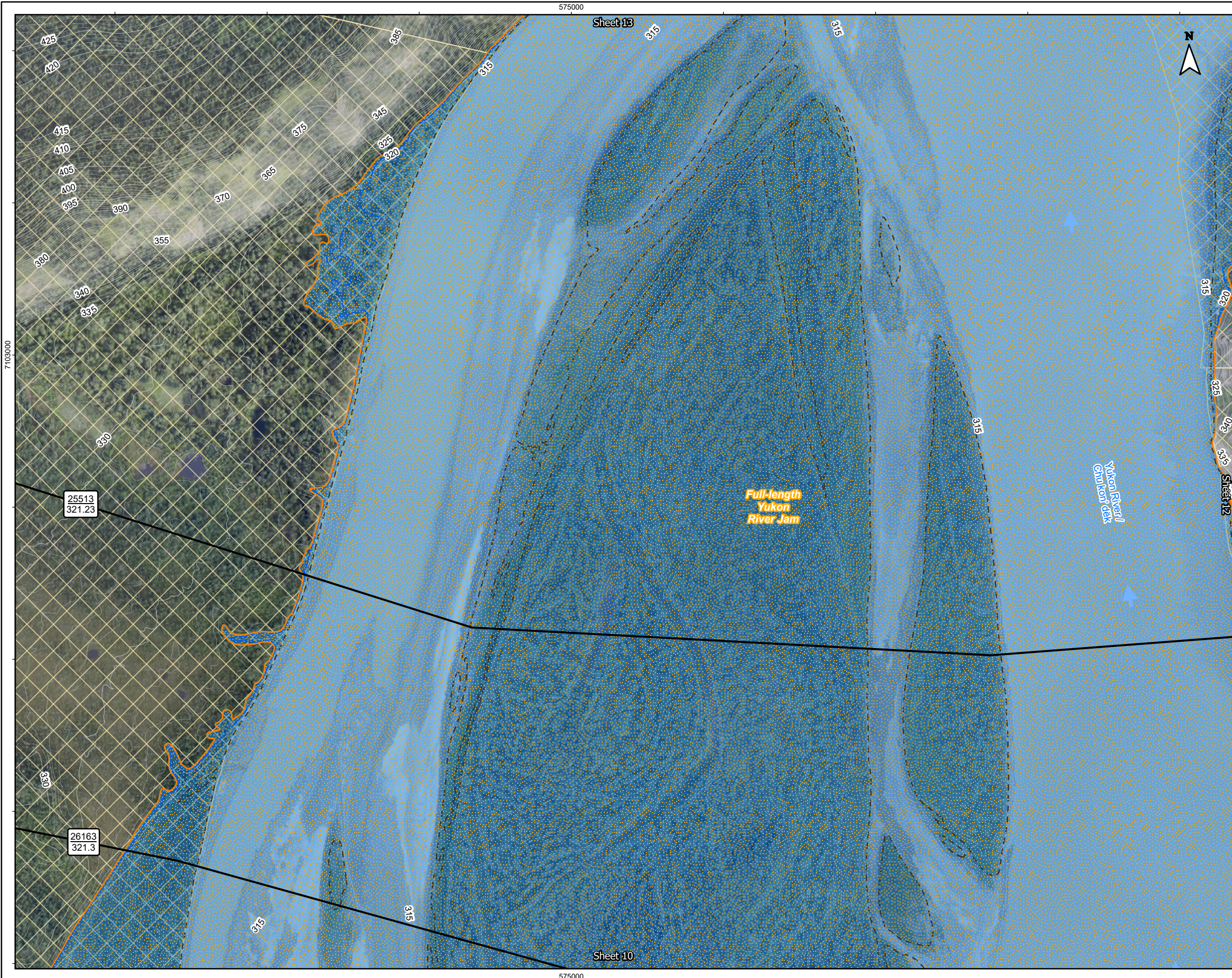


Figure No. **YR-1-11** Sheet 11 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)**

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

Project: 123222713

Project Location: Dawson, Yukon

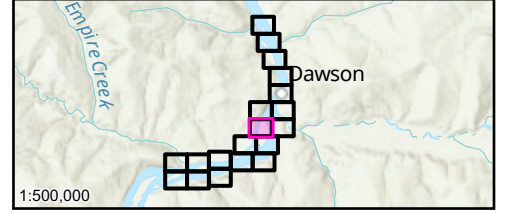
Prepared by MANDERSON on 2025-07-29  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- 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 Extents
- Ice Coverage in Breakup 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



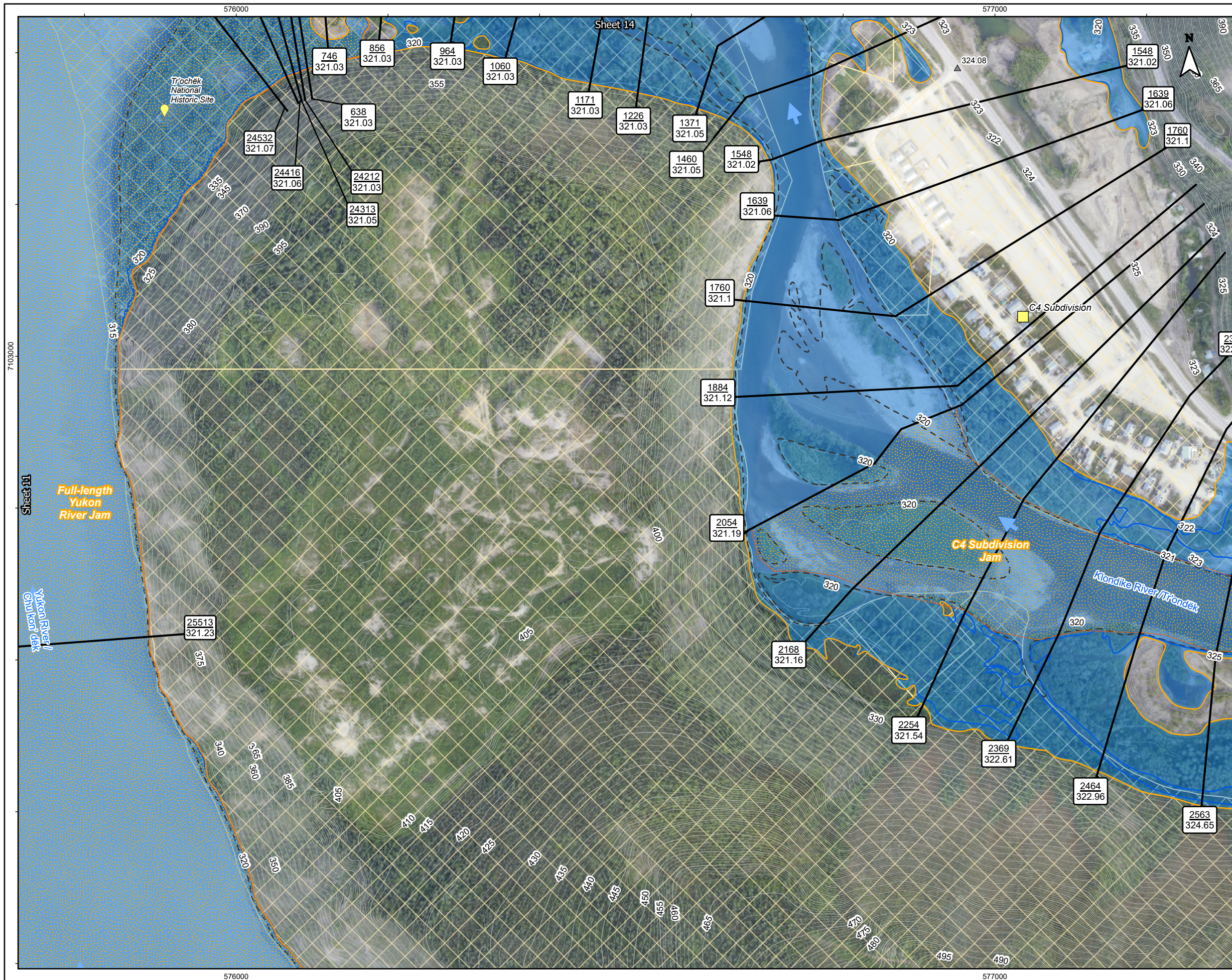
**Notes**

- Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
- Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
- 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.
- 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.
- The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.



Disclaimer: Any unauthorized use or reliance of Draft 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.

**DRAFT - FOR REVIEW ONLY**



**Title:** Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)

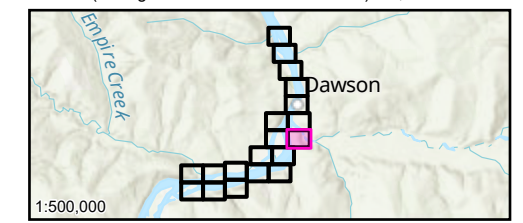
**Client/Project:**  
Government of Yukon  
Department of Environment  
Water Resources Branch

**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
- 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'ond'ek Hw'ech'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 Extents
- Ice Coverage in Breakup 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**

- Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
- Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
- 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.
- 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.
- The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.





**Title:** Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)

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

**Project:** 123222713

**Project Location:** Dawson, Yukon

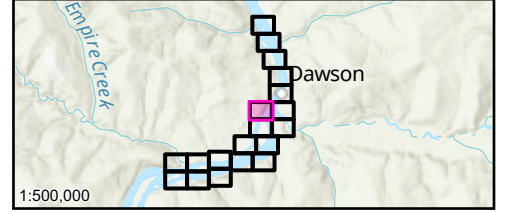
Prepared by MANDERSON on 2025-07-29  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2025-07-29

- River Flow Direction
- 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 Extents
- Ice Coverage in Breakup Jam Scenarios

Map Publication Date: 7/29/2025

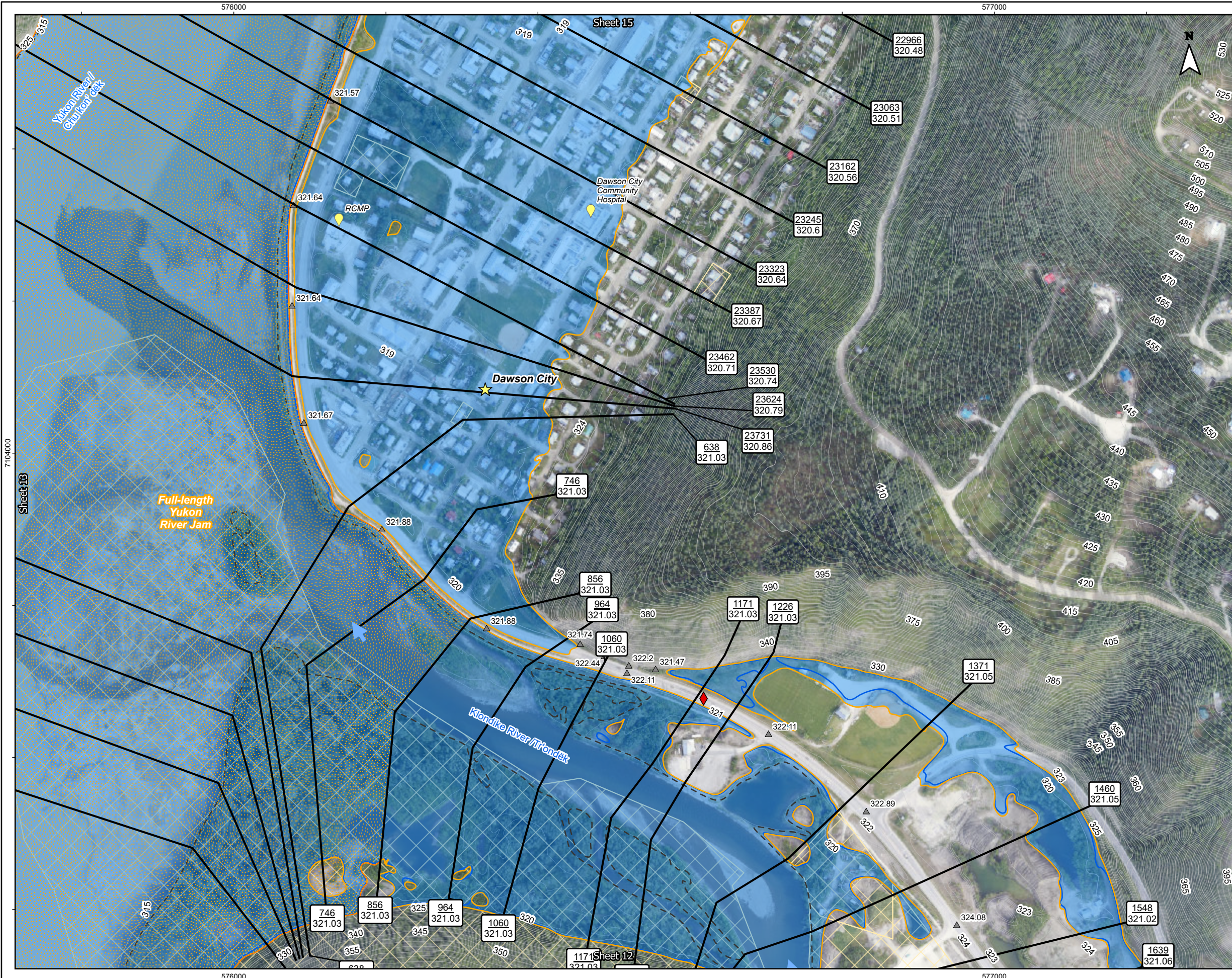
0 50 100 150 200 250 m

(At original document size of 11x 17) 1:5,000



- Notes**
- Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
  - Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
  - 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.
  - 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.
  - The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.





**Title:** Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)

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

**Project:** 123222713

**Project Location:** Dawson, Yukon

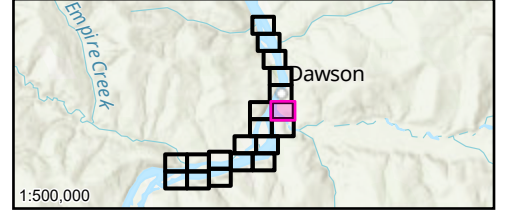
Prepared by MANDERSON on 2025-07-29  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2025-07-29

- 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 Extents
- Ice Coverage in Breakup 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.
5. The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.

Disclaimer: Any unauthorized use or reliance of Draft 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.

**DRAFT - FOR REVIEW ONLY**



Title: **Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)**

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

Project: 123222713

Project Location: Dawson, Yukon

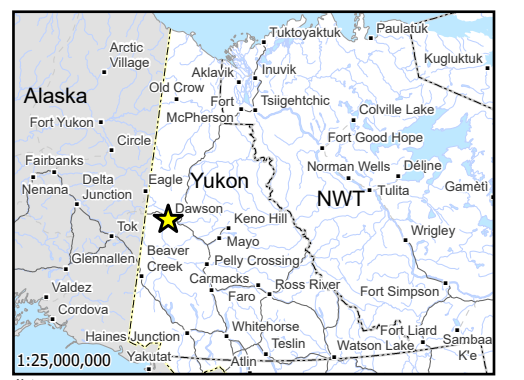
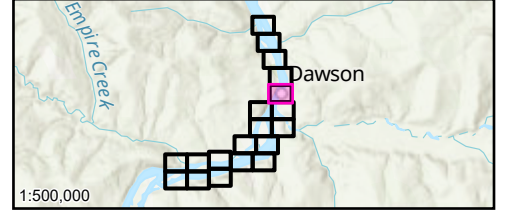
Prepared by MANDERSON on 2025-07-29  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2025-07-29

- 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 Extents
- Ice Coverage in Breakup Jam Scenarios

Map Publication Date: 7/29/2025

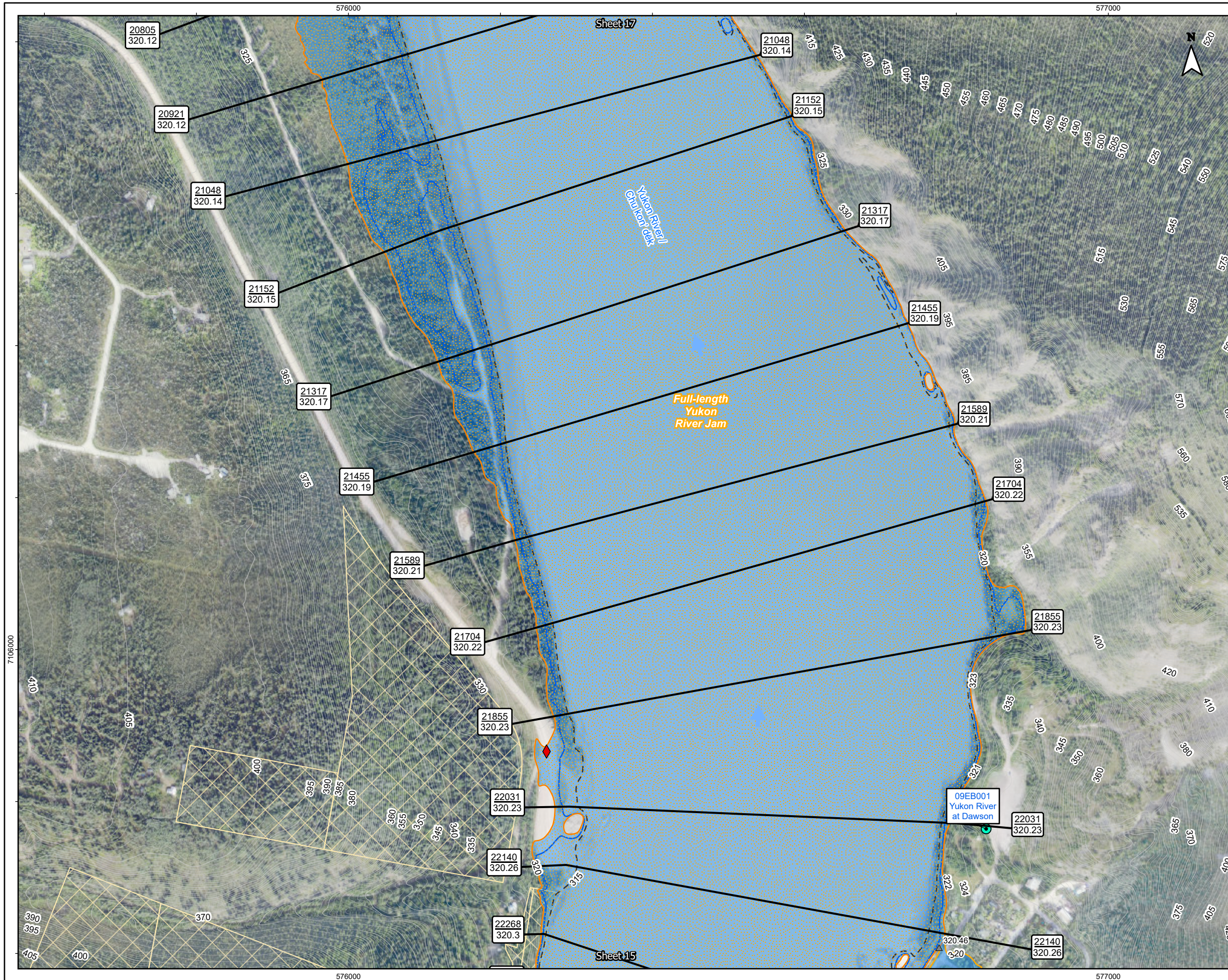
0 50 100 150 200 250 m

(At original document size of 11x 17) 1:5,000



Notes

- Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
- Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
- 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.
- 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.
- The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.



**Title:** Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)

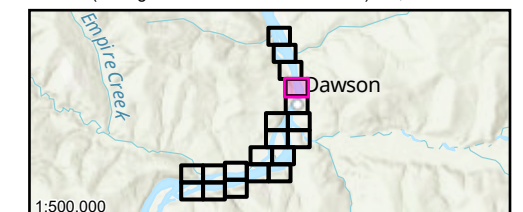
**Client/Project:**  
Government of Yukon  
Department of Environment  
Water Resources Branch

**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

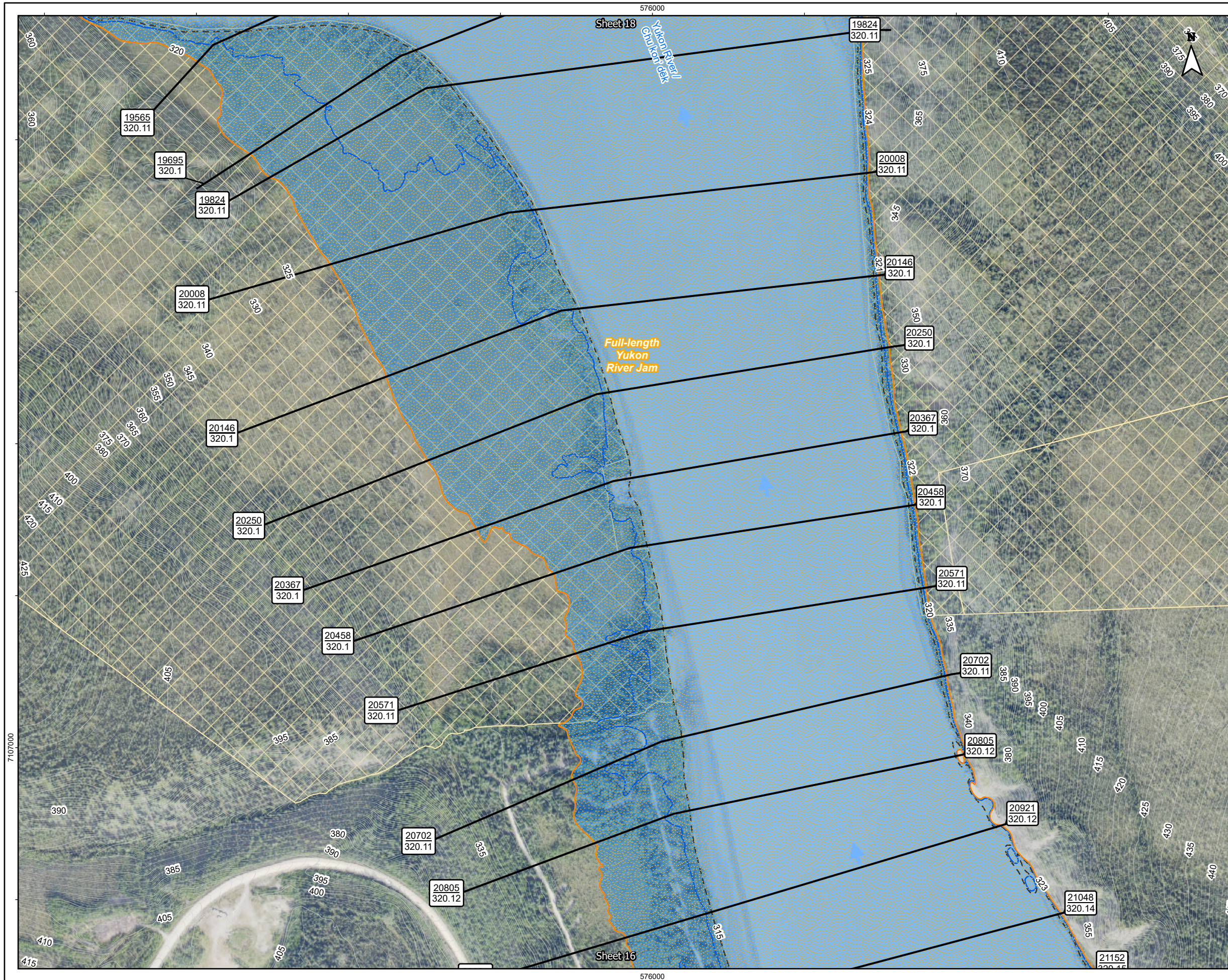
- River Flow Direction
- WSC Stations
- Ground Elevations of Interest
- HPW Drainage Culverts
- Cross-Section Number WSE (m) Along Cross-Section
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Trondëk Hwëch'in Settlement Land
- Inundation 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 Extents
- Ice Coverage in Breakup 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.  
5. The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.





**Title: Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)**

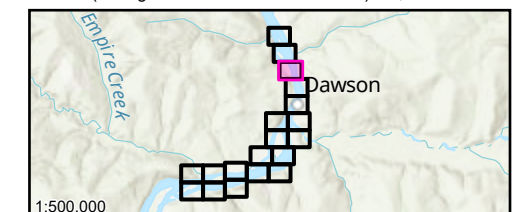
**Client/Project:**  
Government of Yukon  
Department of Environment  
Water Resources Branch

**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

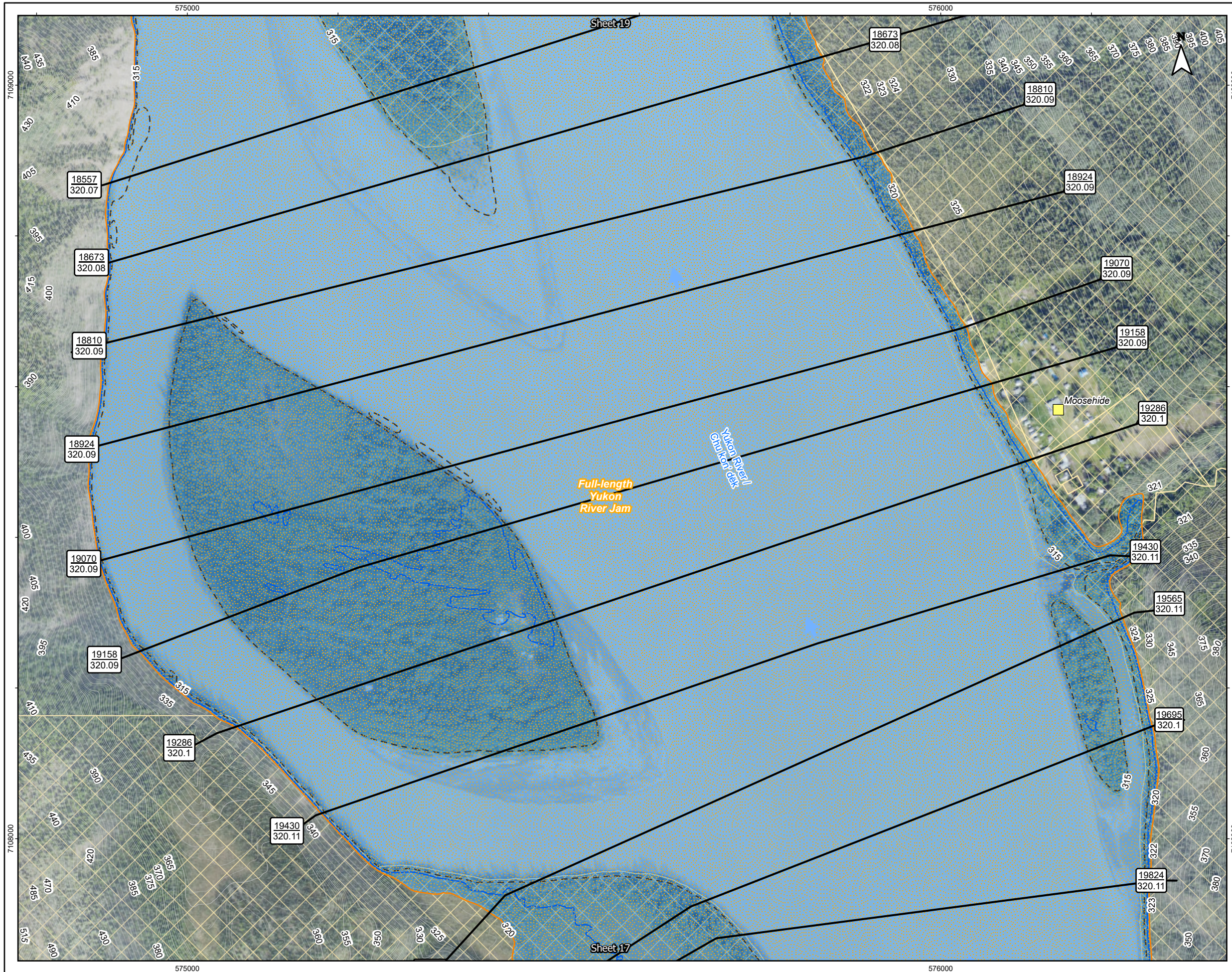
- River Flow Direction
- Tr'ondëk Hwëch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Highway
- Approximate 50% AEP Open Water Flood Inundation
- Local Road
- Composite Open Water and Ice Jam Inundation Extents
- Major Contour (5m)
-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

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.
  5. The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.





**Title:** Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)

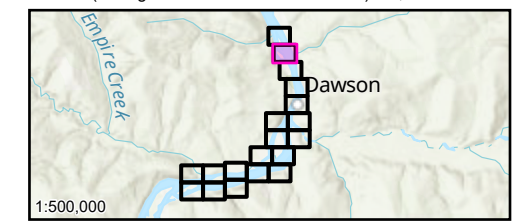
**Client/Project:**  
Government of Yukon  
Department of Environment  
Water Resources Branch

**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
- Community Developments
- Inundation Under Modelled Breakup Ice Jam Runs
- Cross-Section Number WSE (m) Along Cross-Section
- 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 Extents
- Tr'ondëk Hwëch'in Settlement Land
- 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.
5. The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.

575000

576000

7110000

7110000

7109000

7109000

575000

576000

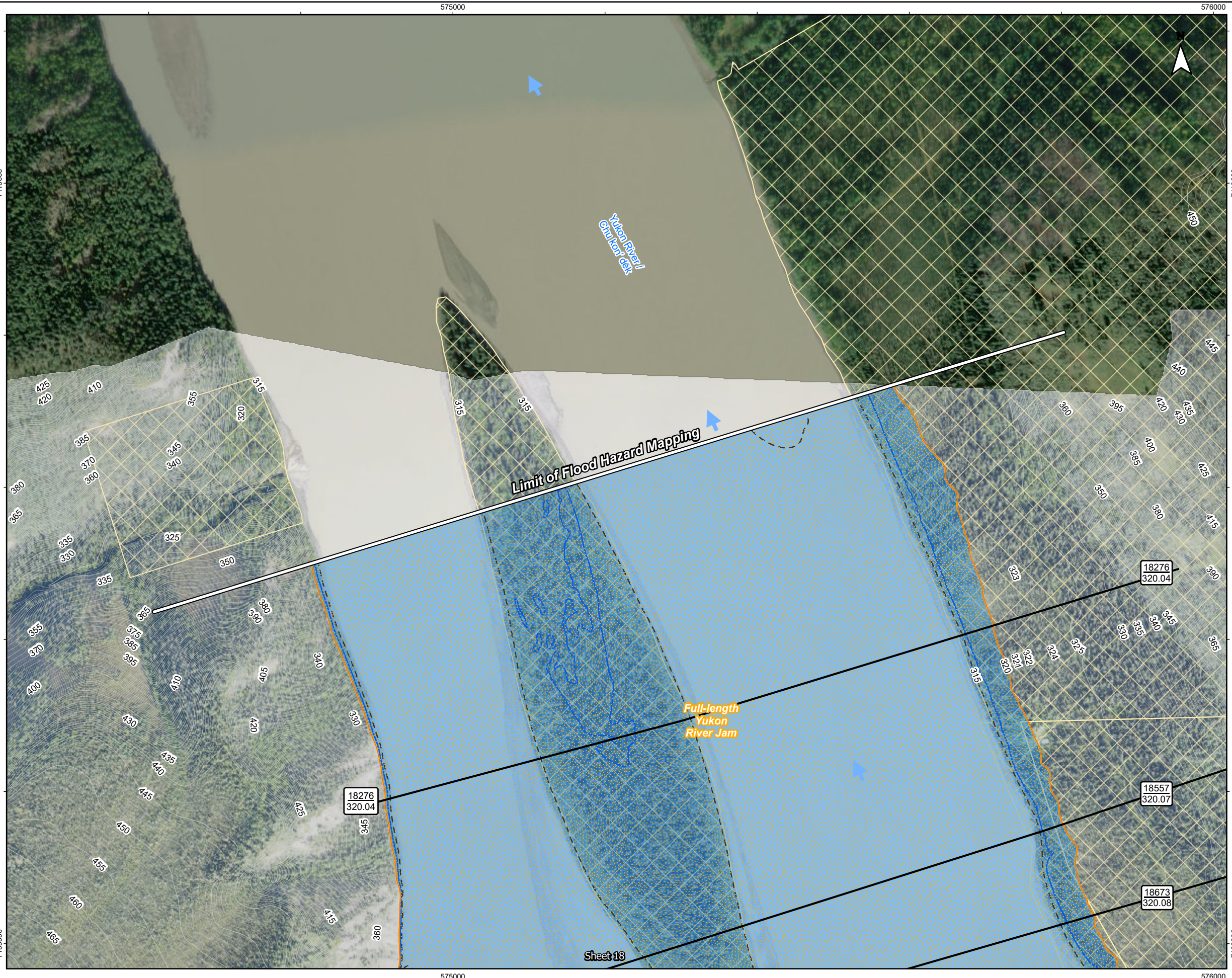


Figure No. **YR-1-19** Sheet 19 of 19

Title: **Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)**

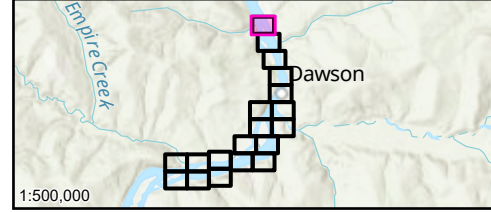
Client/Project:  
Government of Yukon  
Department of Environment  
Water Resources Branch

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
- Cross-Section Number WSE (m) Along Cross-Section
- Inundation Under Modelled Open Water Runs
- Major Contour (5m)
- Inundation Under Modelled Breakup Ice Jam Runs
- Minor Contour (1m)
- Approximate 50% AEP Open Water Flood Inundation
- Surveyed Cross-Sections Used in Hydraulic Model
- Composite Open Water and Ice Jam Inundation Extents
- Limit of Flood Hazard Mapping
- Ice Coverage in Breakup 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**

- Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
- Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
- 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.
- 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.
- The content of these Draft Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study (Stantec 2025) produced for Yukon Government. Composite Hazard Maps are based on the assumptions and analysis presented in Stantec 2025 which were based on the available data which is current to the time the maps were produced. Such data contains inherent limitations given that the climatic conditions and geomorphic conditions are constantly evolving and cannot be predicted with certainty.



Disclaimer: Any unauthorized use or reliance of Draft 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.

**DRAFT - FOR REVIEW ONLY**

Sheet 18