

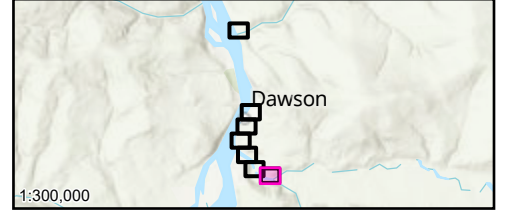
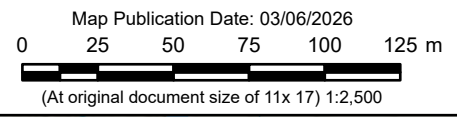
**Title:** Dawson City and Klondike Valley Flood Mapping Study  
Composite Flood Hazard Map - Yukon River  
1% Annual Exceedance Probability (AEP)

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

**Project:** 123222713

**Project Location:** Dawson, Yukon  
Prepared by MANDERSON on 2026-03-06  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2026-03-06

- |   |  |
|---|--|
| WSC Stations  | Minor Contour (1m)                                   |
| HPW Drainage Culverts   | Surveyed Cross-Sections Used in Hydraulic Model      |
| Toe of Ice Jam  | Tr'ondëk Hwëch'in Settlement Land                    |
| Cross-Section Number<br>WSE (m) Along Cross Section                               | Approximate 50% AEP Open Water Flood Inundation      |
| Cross-Section Number<br>WSE (m) Along Cross-Section (WSE in Dike Breach Scenario) | Inundation Under Modelled Open Water Runs            |
| Surveyed Culvert Location   | Inundation Under Modelled Breakup Ice Jam Runs       |
| Bridge  | Composite Open Water and Ice Jam Inundation Extents  |
| Highway   | Inundation Extent from Subsurface Seepage            |
| Local Road  | Potential Presence of Ice Debris During Jam Scenario |
| Major Contour (5m)  | Ice Jamming Extents                                  |



- 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 Composite Flood Hazard Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study produced for Yukon Government. Composite Hazard Maps are 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.

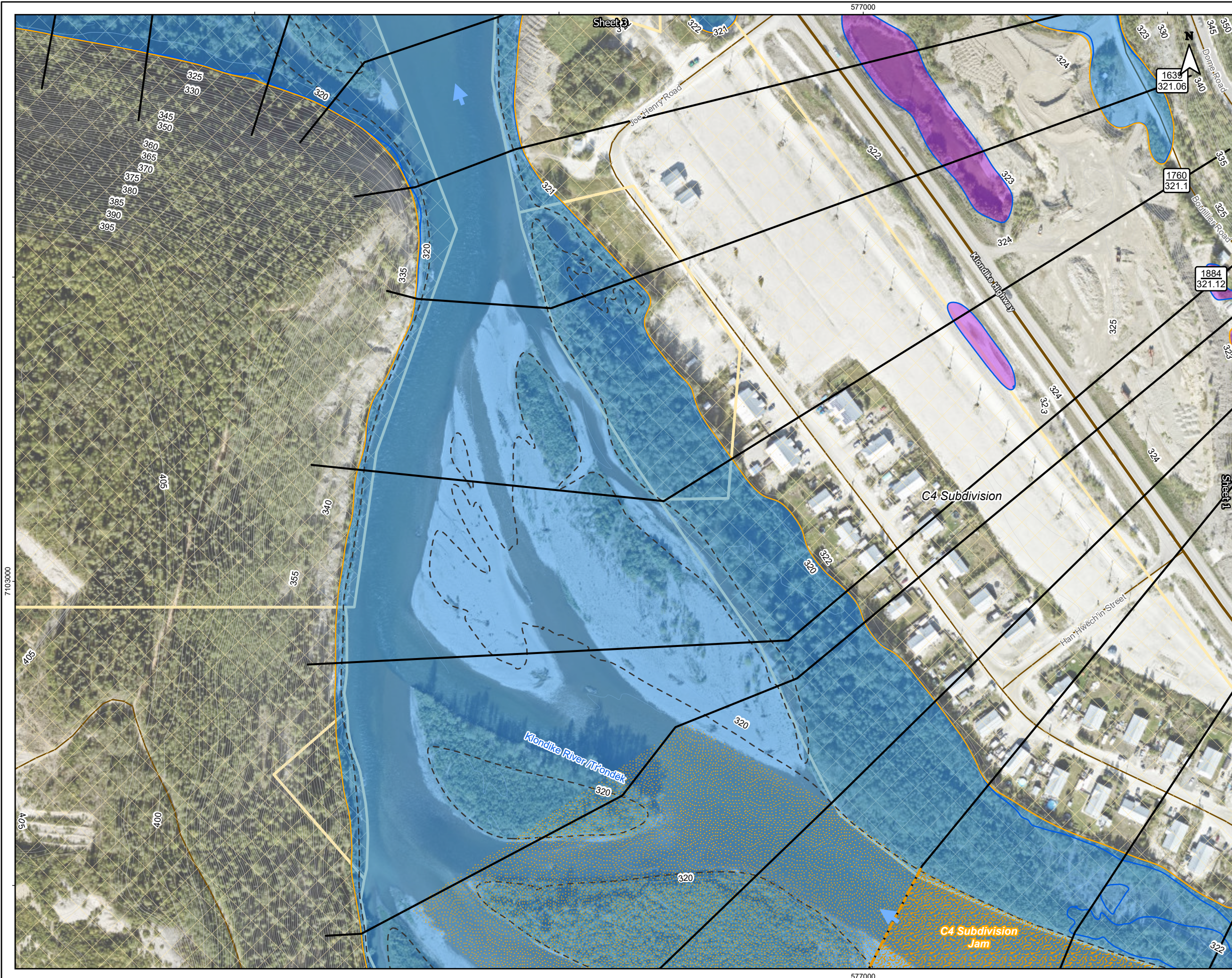


Figure No. **DC-1-02** Sheet 02 of 07

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

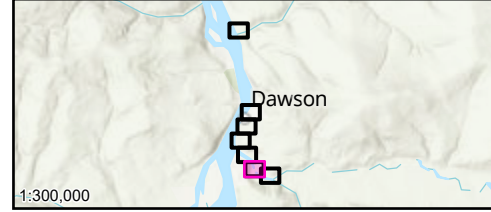
Client/Project:  
Government of Yukon  
Department of Environment  
Water Resources Branch

Project: 123222713

Project Location: Dawson, Yukon  
Prepared by MANDERSON on 2026-03-06  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2026-03-06

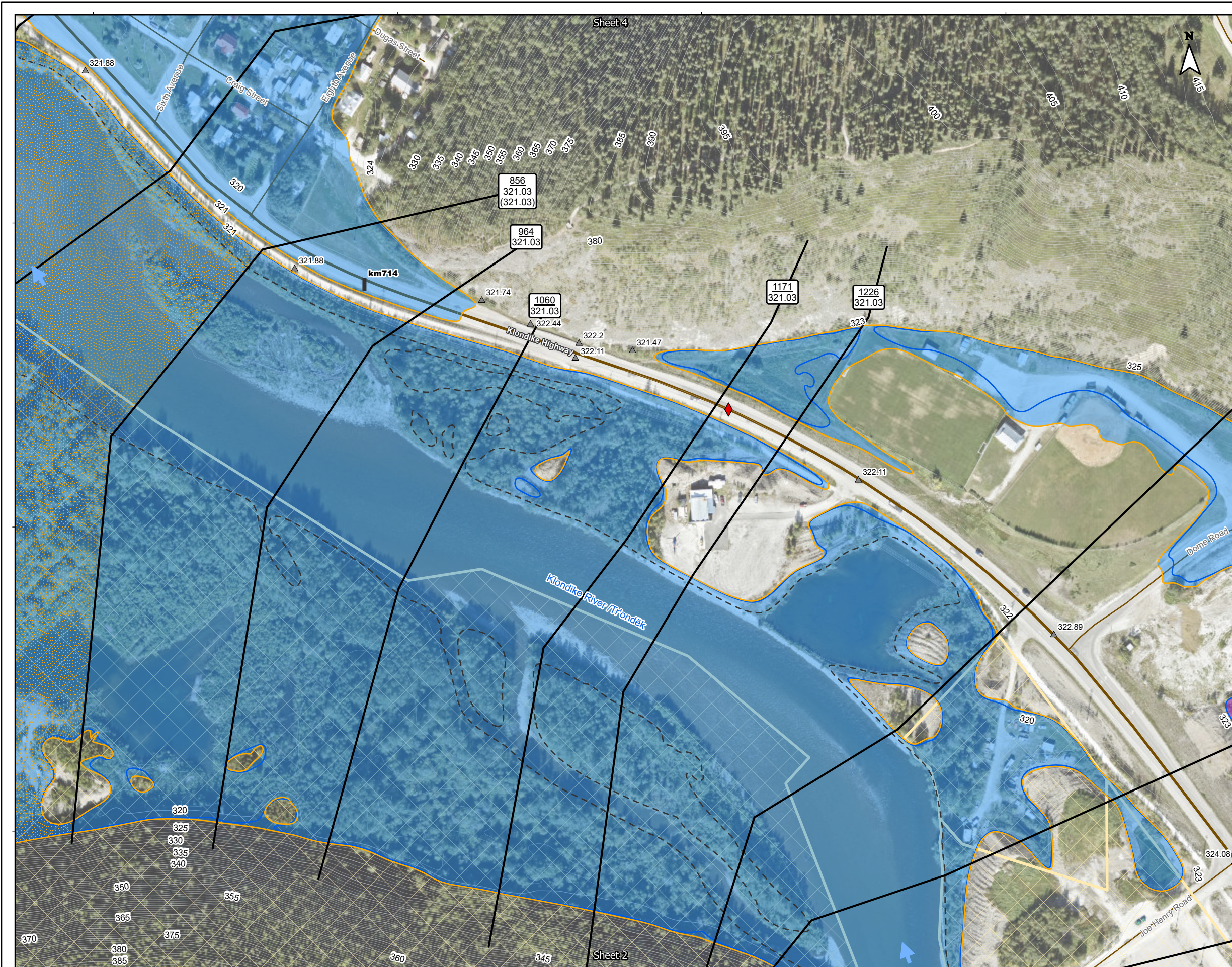
- |  |  |  |  |
|--|--|--|--|
|  | Toe of Ice Jam   |  | Tr'ondëk Hw'ech'in Settlement Land                   |
|  | Cross-Section Number<br>WSE (m) Along Cross Section                                  |  | Approximate 50% AEP Open Water Flood Inundation      |
|  | Cross-Section Number<br>WSE (m) Along Cross-Section<br>(WSE in Dike Breach Scenario) |  | Inundation Under Modelled Open Water Runs            |
|  | Highway  |  | Inundation Under Modelled Breakup Ice Jam Runs       |
|  | Local Road   |  | Composite Open Water and Ice Jam Inundation Extents  |
|  | Major Contour (5m)   |  | Inundation Extent from Subsurface Seepage            |
|  | Minor Contour (1m)   |  | Potential Presence of Ice Debris During Jam Scenario |
|  | Surveyed Cross-Sections Used in Hydraulic Model                                      |  | Ice Jamming Extents                                  |

Map Publication Date: 03/06/2026  
0 25 50 75 100 125 m  
(At original document size of 11x 17) 1:2,500



- 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 Composite Flood Hazard Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study produced for Yukon Government. Composite Hazard Maps are 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.



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

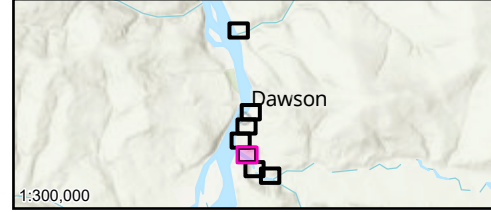
Prepared by MANDERSON on 2026-03-06  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2026-03-06

- ▲ Ground Elevations of Interest
- ◆ HPW Drainage Culverts
- Highway Kilometer Post
- Toe of Ice Jam
- 57  
517.2  
Cross-Section Number  
WSE (m) Along Cross Section
- 22140  
320.26  
320.04  
Cross-Section Number  
WSE (m) Along Cross-Section  
(WSE in Dike Breach Scenario)
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveved Cross-Sections  
Used in Hydraulic Model
- Trondëk Hwëch'in Settlement  
Land
- - - Approximate 50% AEP Open  
Water Flood Inundation
- Inundation Under Modelled  
Open Water Runs
- Inundation Under Dike  
Breach Scenario
- Inundation Under Modelled  
Breakup Ice Jam Runs
- Composite Open Water and  
Ice Jam Inundation Extents
- Inundation Extent from  
Subsurface Seepage
- Potential Presence of Ice  
Debris During Jam Scenario

Map Publication Date: 03/06/2026

0 25 50 75 100 125 m

(At original document size of 11x 17) 1:2,500



- 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 Composite Flood Hazard Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study produced for Yukon Government. Composite Hazard Maps are 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.

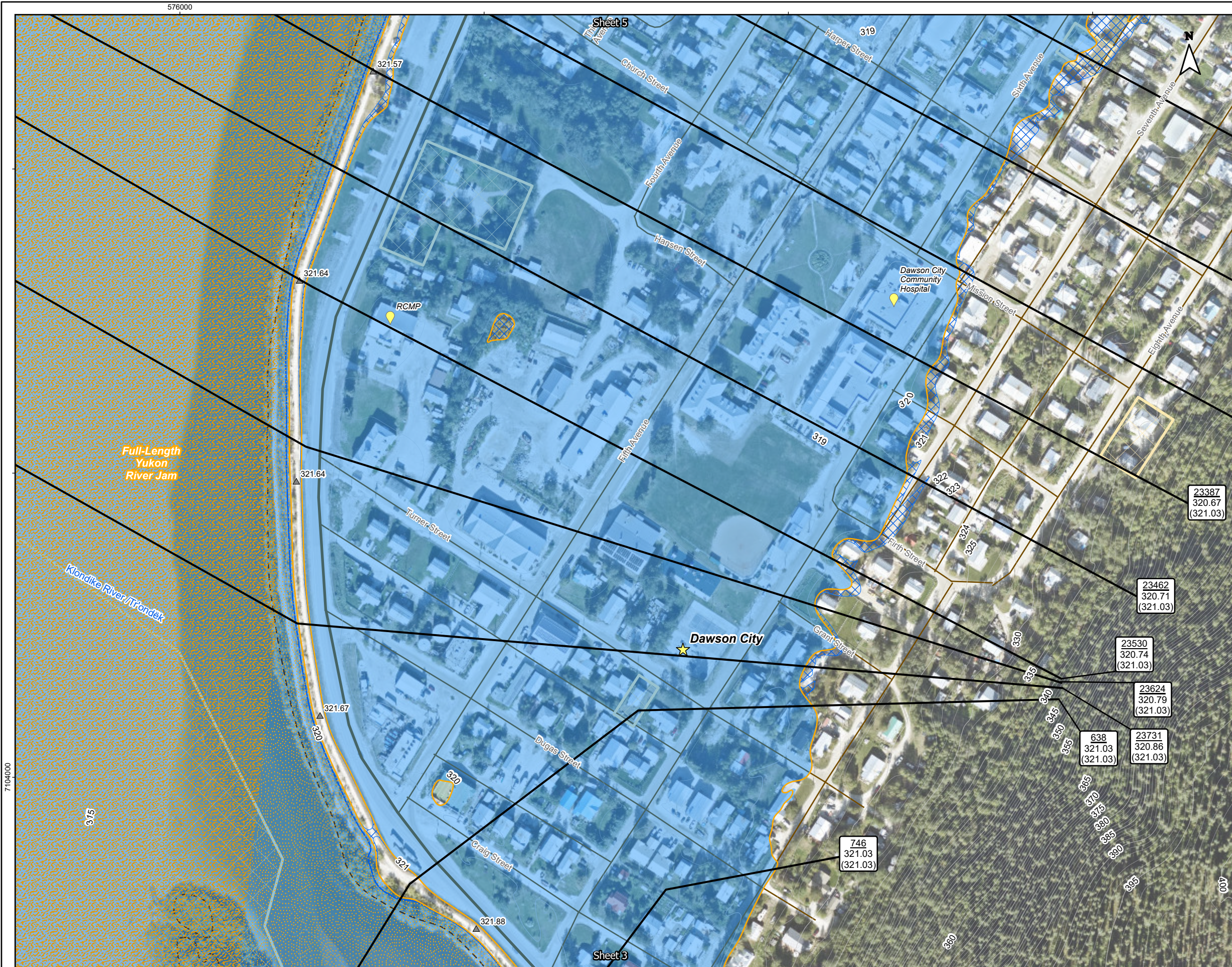


Figure No. **DC-1-04** Sheet 04 of 07

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

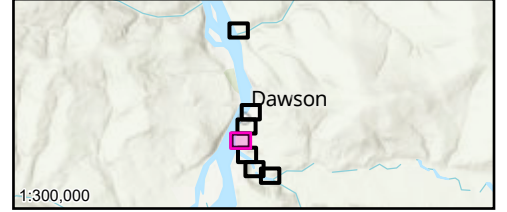
Client/Project: **Government of Yukon  
Department of Environment  
Water Resources Branch**

Project: 123222713

Project Location: Dawson, Yukon  
Prepared by MANDERSON on 2026-03-06  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2026-03-06

- Point of Interest
- Ground Elevations of Interest
- Toe of Ice Jam
- Cross-Section Number  
WSE (m) Along Cross Section
- Cross-Section Number  
WSE (m) Along Cross-Section  
(WSE in Dike Breach Scenario)
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondëk Hwëch'in Settlement Land
- Approximate 50% AEP Open Water Flood Inundation
- Inundation Under Modelled Open Water Runs
- Inundation Under Dike Breach Scenario
- Inundation Under Modelled Breakup Ice Jam Runs
- Composite Open Water and Ice Jam Inundation Extents
- Potential Presence of Ice Debris During Jam Scenario
- Ice Jamming Extents

Map Publication Date: 03/06/2026  
0 25 50 75 100 125 m  
(At original document size of 11x 17) 1:2,500



**Notes**  
 1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013a, 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 Composite Flood Hazard Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study produced for Yukon Government. Composite Hazard Maps are 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.

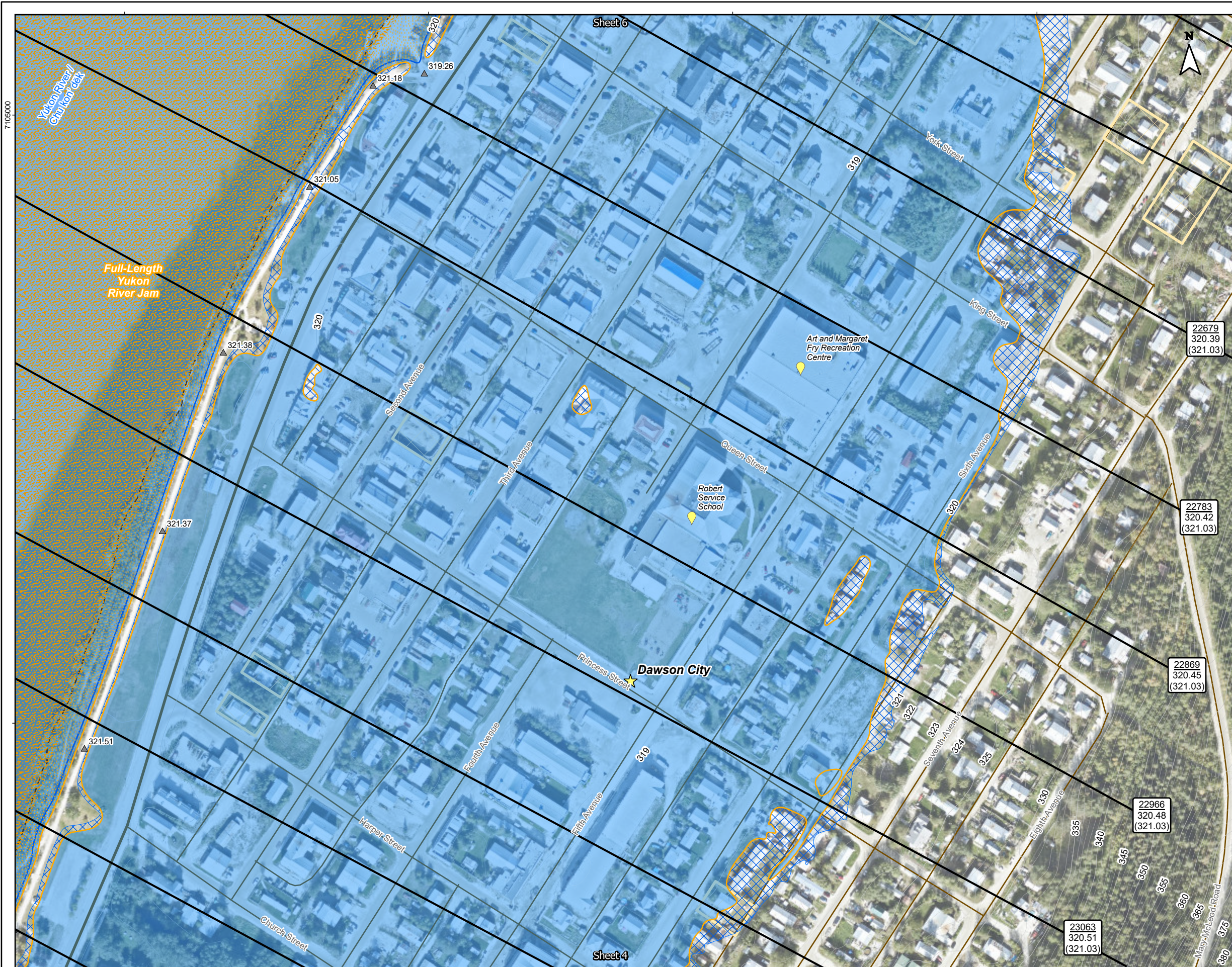


Figure No. **DC-1-05** Sheet 05 of 07

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

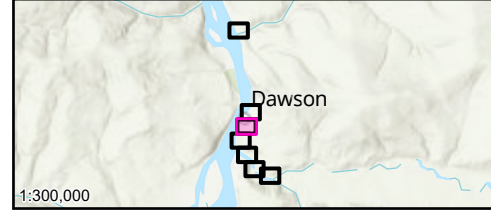
Client/Project:  
Government of Yukon  
Department of Environment  
Water Resources Branch

Project: 123222713

Project Location: Dawson, Yukon  
Prepared by MANDERSON on 2026-03-06  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2026-03-06

- River Flow Direction
- Point of Interest
- Ground Elevations of Interest
- Toe of Ice Jam
- Cross-Section Number  
WSE (m) Along Cross Section
- Cross-Section Number  
WSE (m) Along Cross-Section  
(WSE in Dike Breach Scenario)
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections  
Used in Hydraulic Model
- Tr'ondëk Hwëch'in Settlement  
Land
- Approximate 50% AEP Open  
Water Flood Inundation
- Inundation Under Modelled  
Open Water Runs
- Inundation Under Dike  
Breach Scenario
- Inundation Under Modelled  
Breakup Ice Jam Runs
- Composite Open Water and  
Ice Jam Inundation Extents
- Potential Presence of Ice  
Debris During Jam Scenario
- Ice Jamming Extents

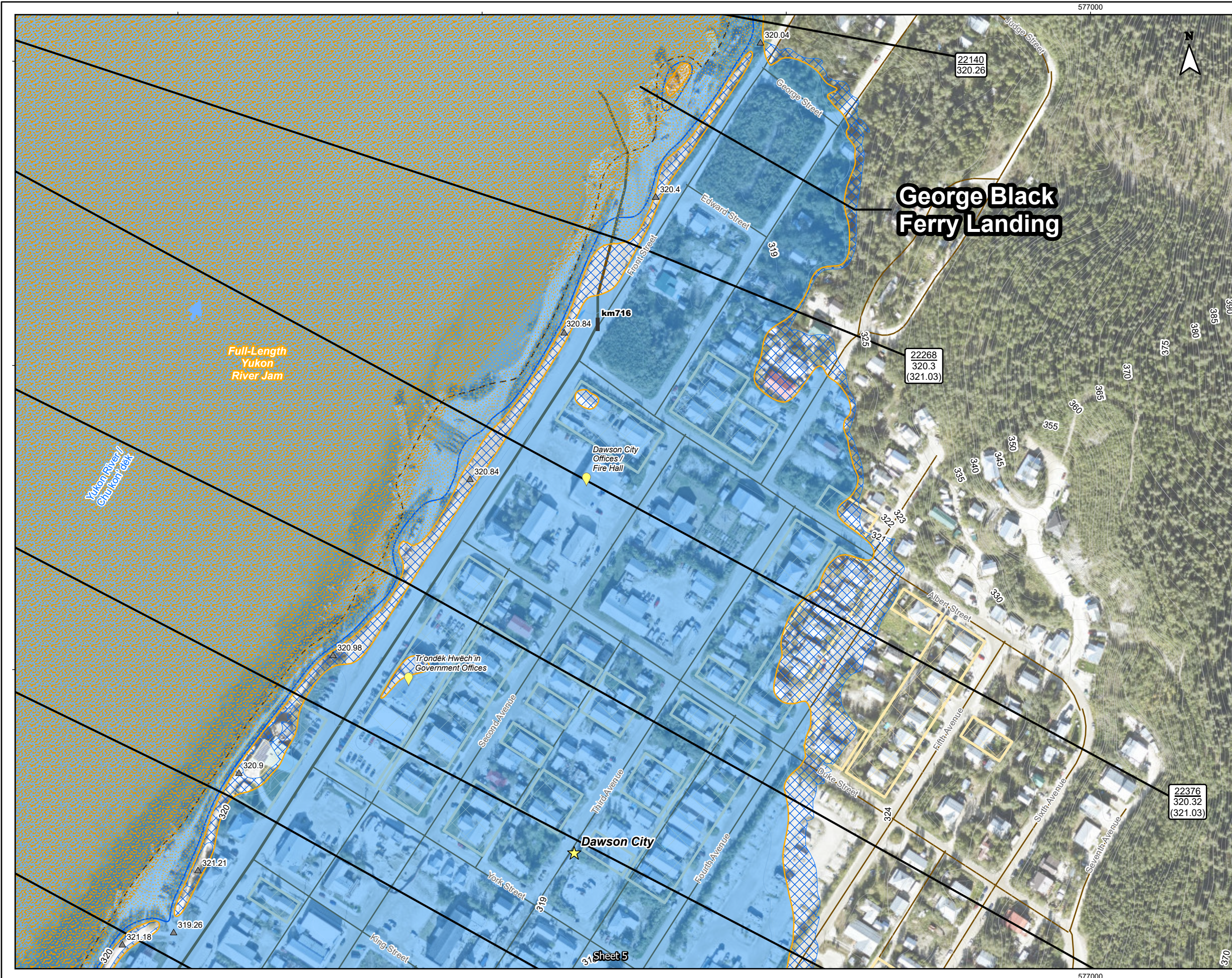
Map Publication Date: 03/06/2026  
0 25 50 75 100 125 m  
(At original document size of 11x 17) 1:2,500



Notes:  
1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013a, 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 Composite Flood Hazard Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study produced for Yukon Government. Composite Hazard Maps are 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.





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

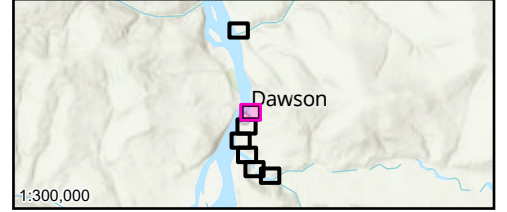
Client/Project:  
Government of Yukon  
Department of Environment  
Water Resources Branch

Project: 123222713

Project Location: Dawson, Yukon  
Prepared by MANDERSON on 2026-03-06  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2026-03-06

- |  |  |
|--|--|
| River Flow Direction   | Minor Contour (1m)                                   |
| Point of Interest  | Surveyed Cross-Sections Used in Hydraulic Model      |
| Ground Elevations of Interest  | Tr'ondëk Hwëch'in Settlement Land                    |
| Highway Kilometer Post   | Approximate 50% AEP Open Water Flood Inundation      |
| Toe of Ice Jam   | Inundation Under Modelled Open Water Runs            |
| Cross-Section Number<br>WSE (m) Along Cross Section                                  | Inundation Under Dike Breach Scenario                |
| Cross-Section Number<br>WSE (m) Along Cross-Section<br>(WSE in Dike Breach Scenario) | Inundation Under Modelled Breakup Ice Jam Runs       |
| Highway  | Composite Open Water and Ice Jam Inundation Extents  |
| Local Road   | Potential Presence of Ice Debris During Jam Scenario |
| Major Contour (5m)   | Ice Jamming Extents                                  |

Map Publication Date: 03/06/2026  
0 25 50 75 100 125 m  
(At original document size of 11x 17) 1:2,500



- 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 Composite Flood Hazard Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study produced for Yukon Government. Composite Hazard Maps are 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. **DC-1-07** Sheet 07 of 07

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

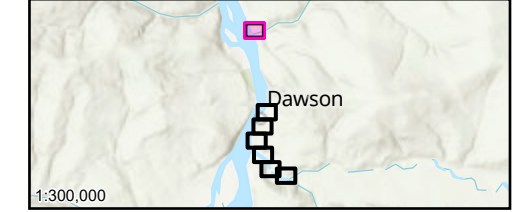
Prepared by MANDERSON on 2026-03-06  
Requested by JMUIRHEAD on 2024-03-30  
Review by JMUIRHEAD on 2026-03-06

- River Flow Direction
- Toe of Ice Jam
- Cross-Section Number  
WSE (m) Along Cross Section
- Cross-Section Number  
WSE (m) Along Cross-Section  
(WSE in Dike Breach Scenario)
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections  
Used in Hydraulic Model
- Tr'ondëk Hwëch'in Settlement  
Land
- Approximate 50% AEP Open  
Water Flood Inundation
- Inundation Under Modelled  
Open Water Runs
- Inundation Under Modelled  
Breakup Ice Jam Runs
- Composite Open Water and  
Ice Jam Inundation Extents
- Potential Presence of Ice  
Debris During Jam Scenario
- Ice Jamming Extents

Map Publication Date: 03/06/2026

0 25 50 75 100 125 m

(At original document size of 11x 17) 1:2,500



**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 Composite Flood Hazard Maps is based on the methods, assumptions, limitations, and analysis documented in the Dawson City and Klondike Valley Flood Mapping Study produced for Yukon Government. Composite Hazard Maps are 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.