

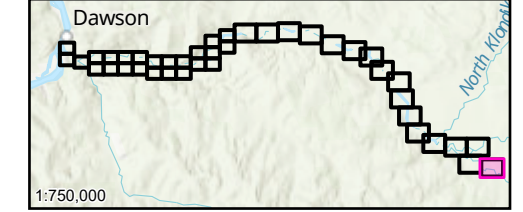
Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change**

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

- HPW Drainage Culverts
- Surveyed Cross-Sections Used in Hydraulic Model
- Cross-Section Number WSE (m) Along Cross-Section
- Bridge
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Limit of Floodplain Mapping
- Tr'ondëk Hwëch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Composite Open Water and Ice Jam Inundation Extent

Map Publication Date: 7/29/2025
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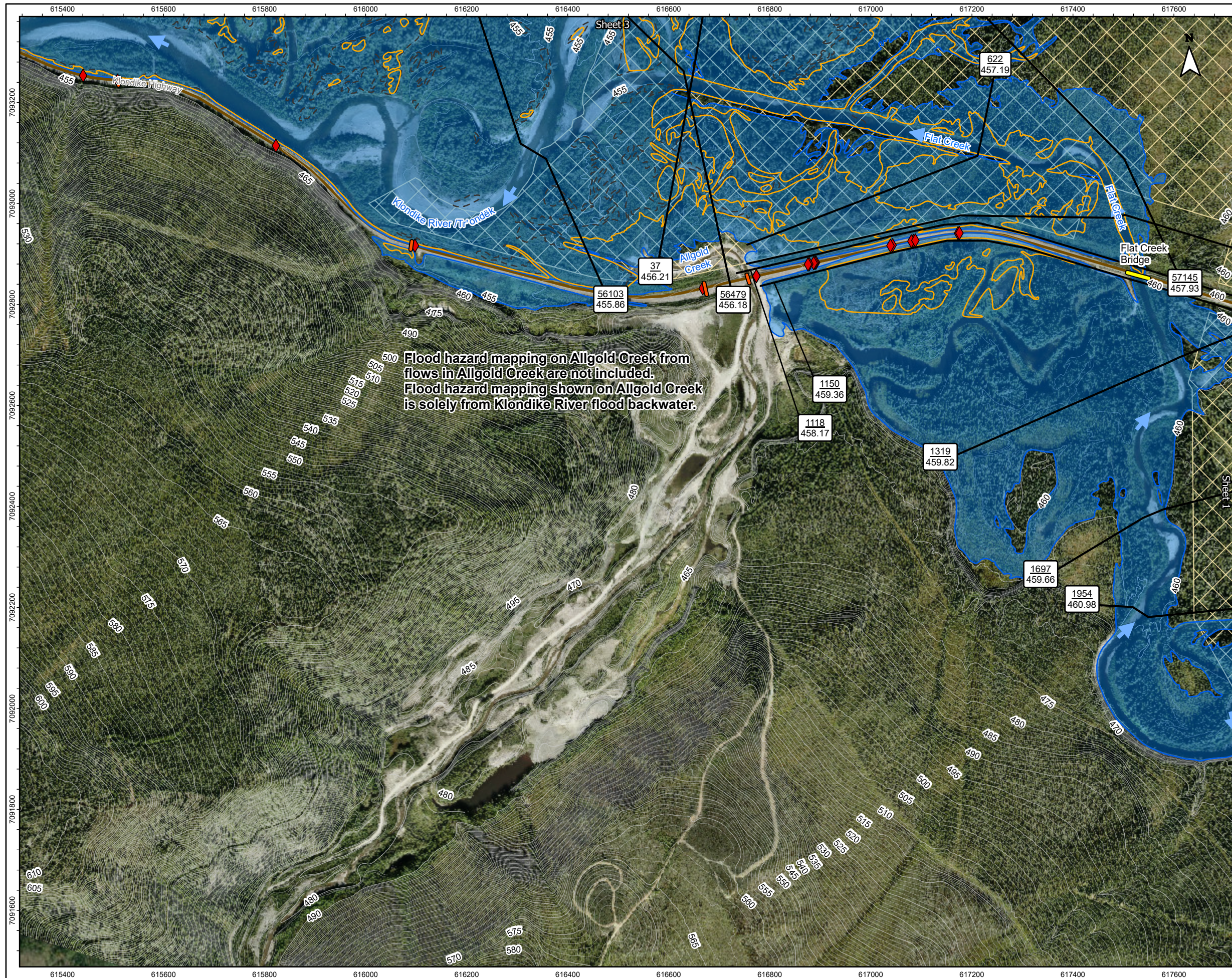


- Notes
1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
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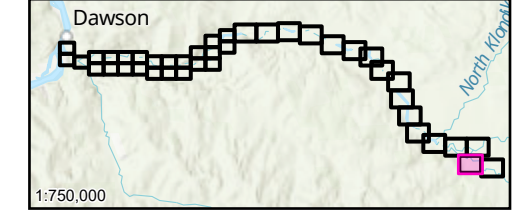
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- ◆ HPW Drainage Culverts
- 57
517.2 Cross-Section Number WSE (m) Along Cross-Section
- Surveyed Culvert Location
- Bridge
- Highway
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondëk Hwëch'in Settlement 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

Map Publication Date: 7/29/2025
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 (At original document size of 11x 17) 1:7,500



- Notes**
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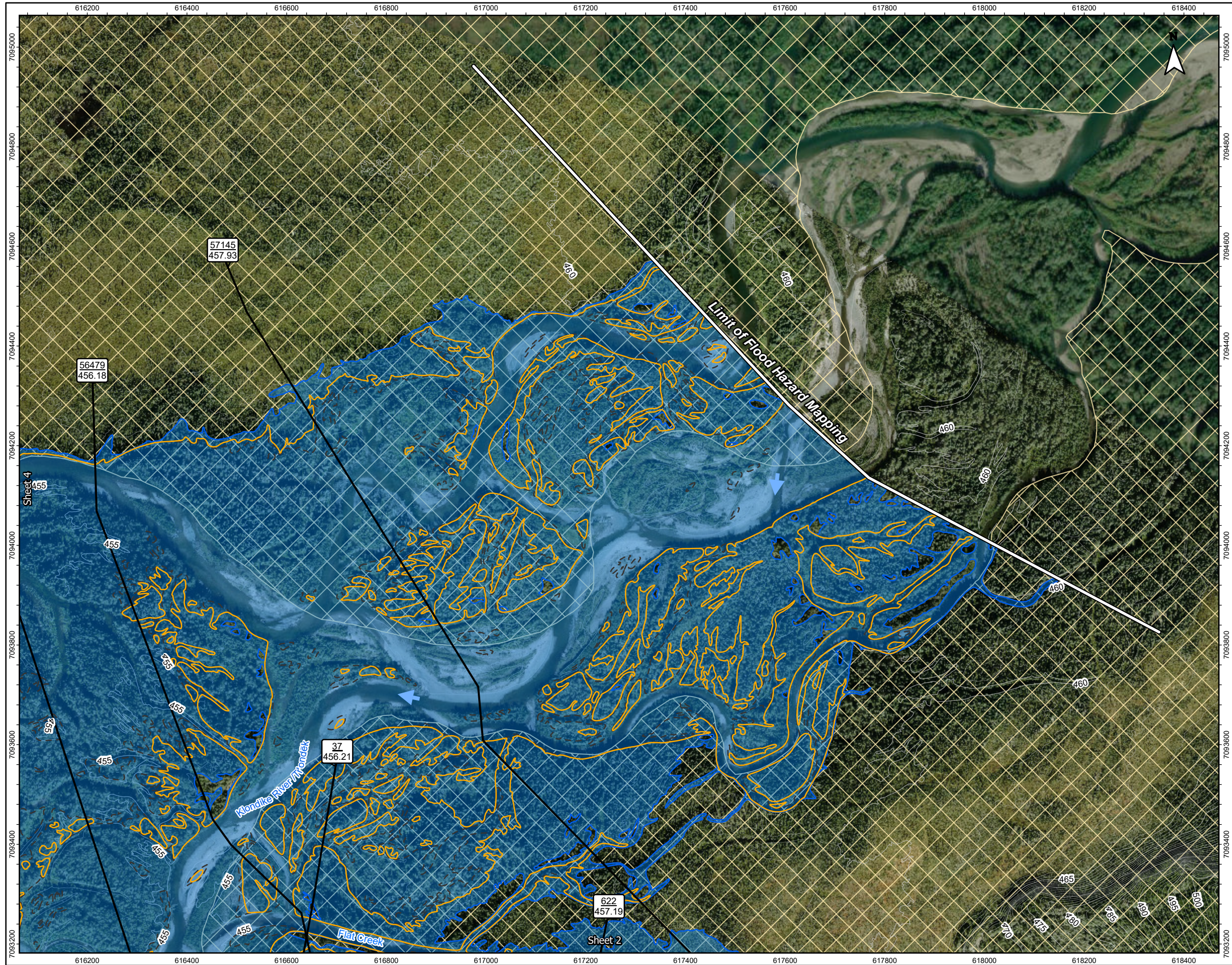


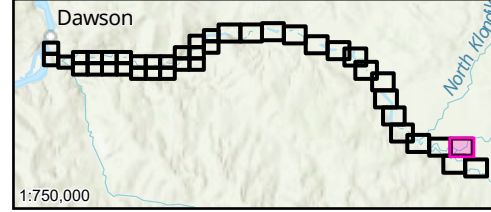
Figure No. **KR-0.5CC-03** Sheet 03 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study
 Composite Flood Hazard Map - Klondike River
 0.5% Annual Exceedance Probability (AEP) with Factor of Safety
 for Climate Change**

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

- 57
517.2 Cross-Section Number WSE (m) Along Cross-Section
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Limit of Floodplain Mapping
- T'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 Extent

Map Publication Date: 7/29/2025
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 (At original document size of 11x 17) 1:7,500



Notes
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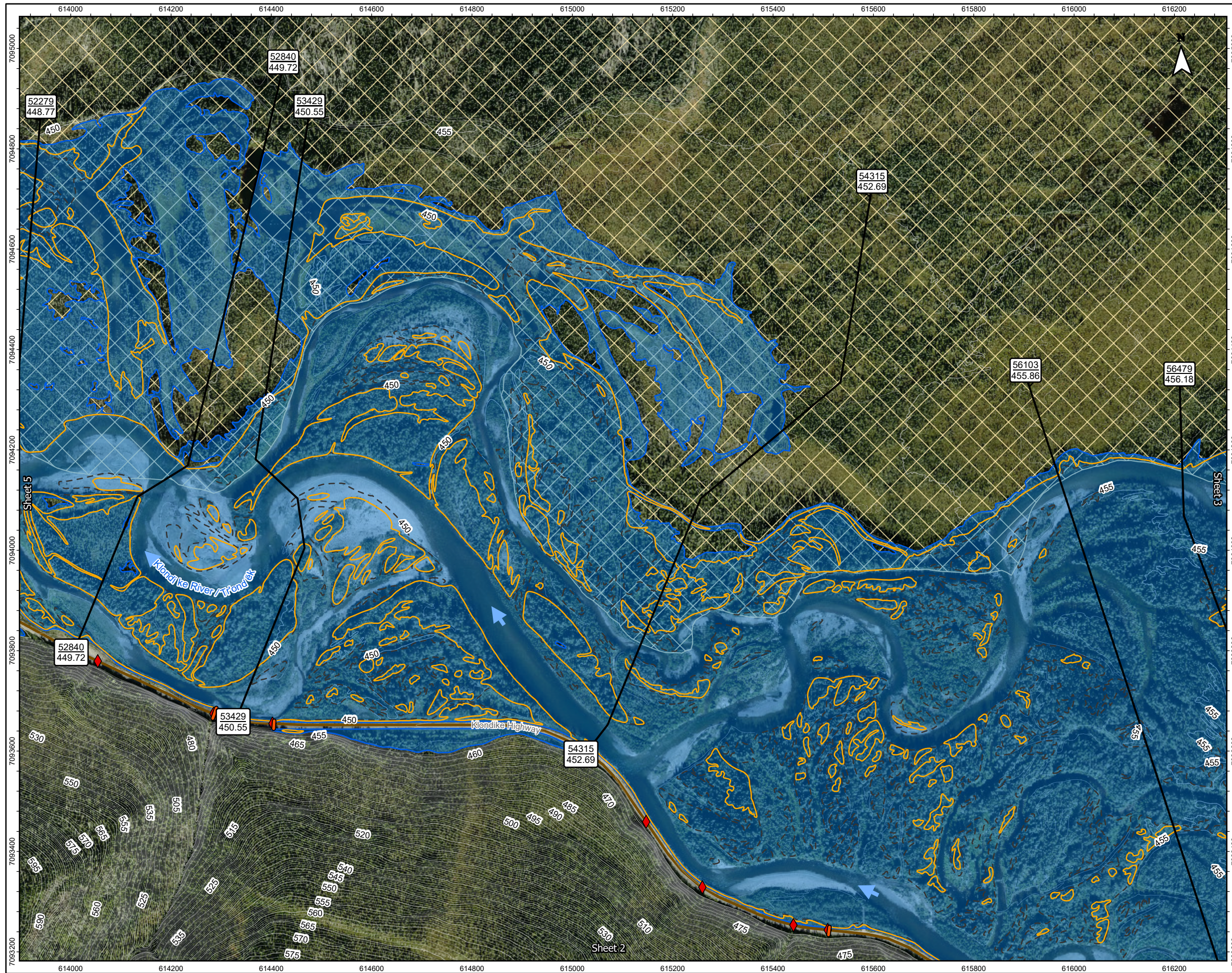


Figure No. **KR-0.5CC-04** Sheet 04 of 41

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

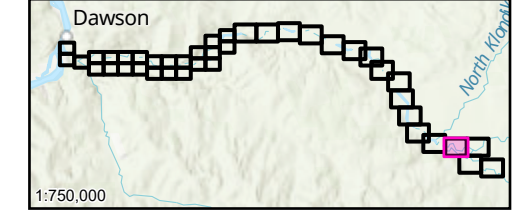
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- HPW Drainage Culverts
- Surveyed Cross-Sections Used in Hydraulic Model
- Cross-Section Number WSE (m) Along Cross-Section
- Tr'ondëk Hwëch'in Settlement Land
- Surveyed Culvert Location
- Inundation Under Modelled Open Water Runs
- Highway
- 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

Map Publication Date: 7/29/2025

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Notes

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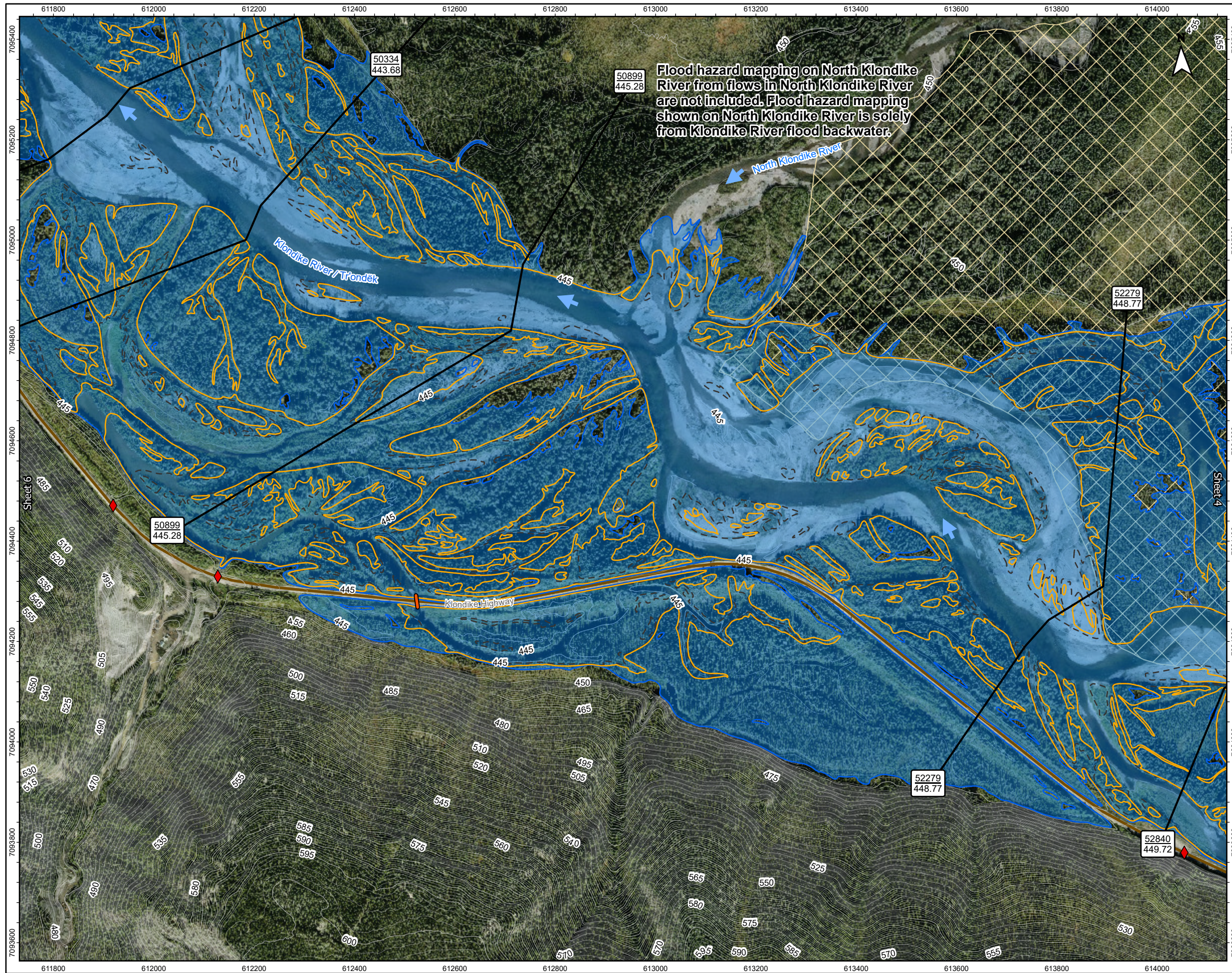


Figure No. **KR-0.5CC-05** Sheet 05 of 41

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

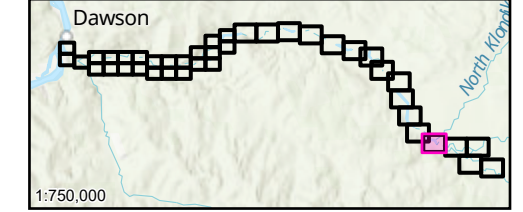
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- HPW Drainage Culverts
- Surveyed Cross-Sections Used in Hydraulic Model
- Cross-Section Number WSE (m) Along Cross-Section
- Tr'ondëk Hwëch'in Settlement Land
- Surveyed Culvert Location
- 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
- Highway
- Major Contour (5m)
- Minor Contour (1m)

Map Publication Date: 7/29/2025

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Notes

1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGVD2013a
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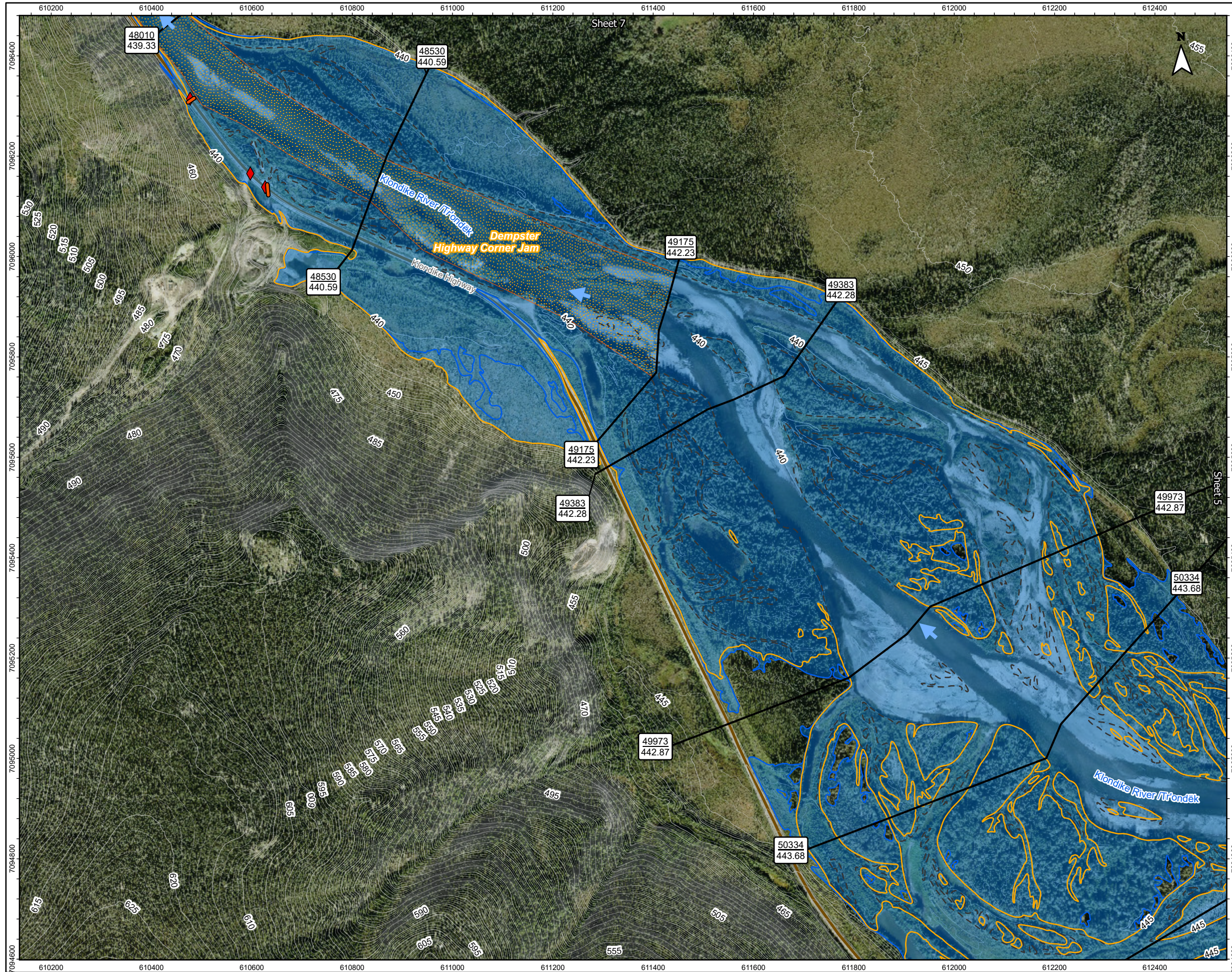


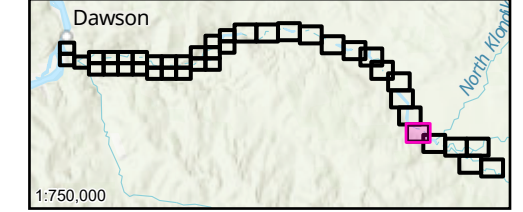
Figure No. **KR-0.5CC-06** Sheet 06 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study**
Composite Flood Hazard Map - Klondike River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change

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

- HPW Drainage Culverts
- Surveyed Cross-Sections Used in Hydraulic Model
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Surveyed Culvert Location
- Highway
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Jam Scenarios
- Cross-Section Number WSE (m) Along Cross-Section
- Major Contour (5m)
- Minor Contour (1m)

Map Publication Date: 7/29/2025
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 (At original document size of 11x 17) 1:7,500



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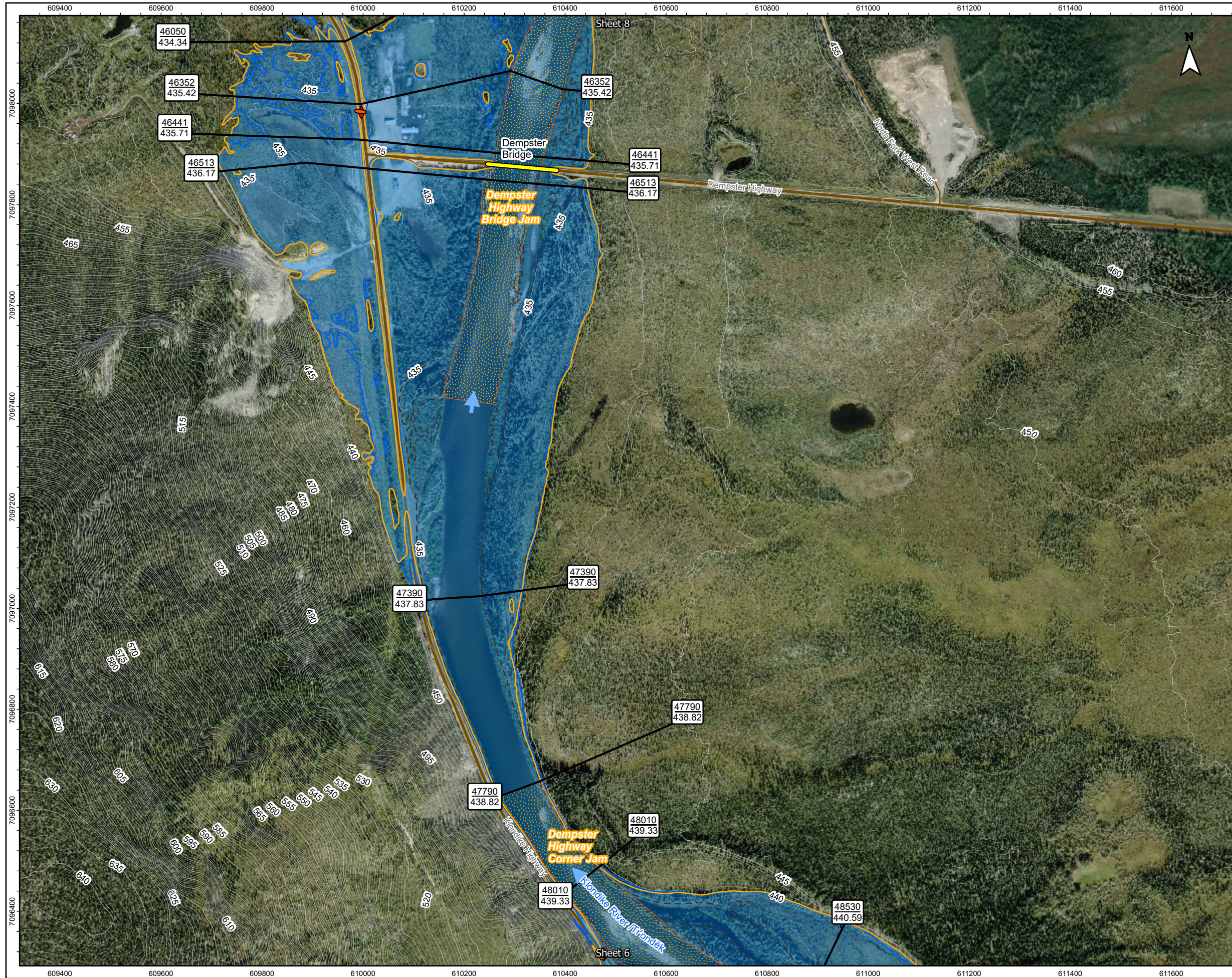


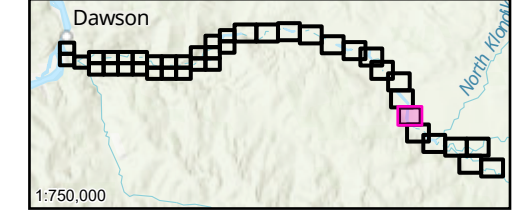
Figure No. **KR-0.5CC-07** Sheet 07 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study
 Composite Flood Hazard Map - Klondike River
 0.5% Annual Exceedance Probability (AEP) with Factor of Safety
 for Climate Change**

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

- HPW Drainage Culverts
- Minor Contour (1m)
- Cross-Section Number WSE (m) Along Cross-Section
- Surveyed Cross-Sections Used in Hydraulic Model
- Surveyed Culvert Location
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Bridge
- Highway
- Local Road
- Major Contour (5m)
- 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) 1:7,500



- Notes
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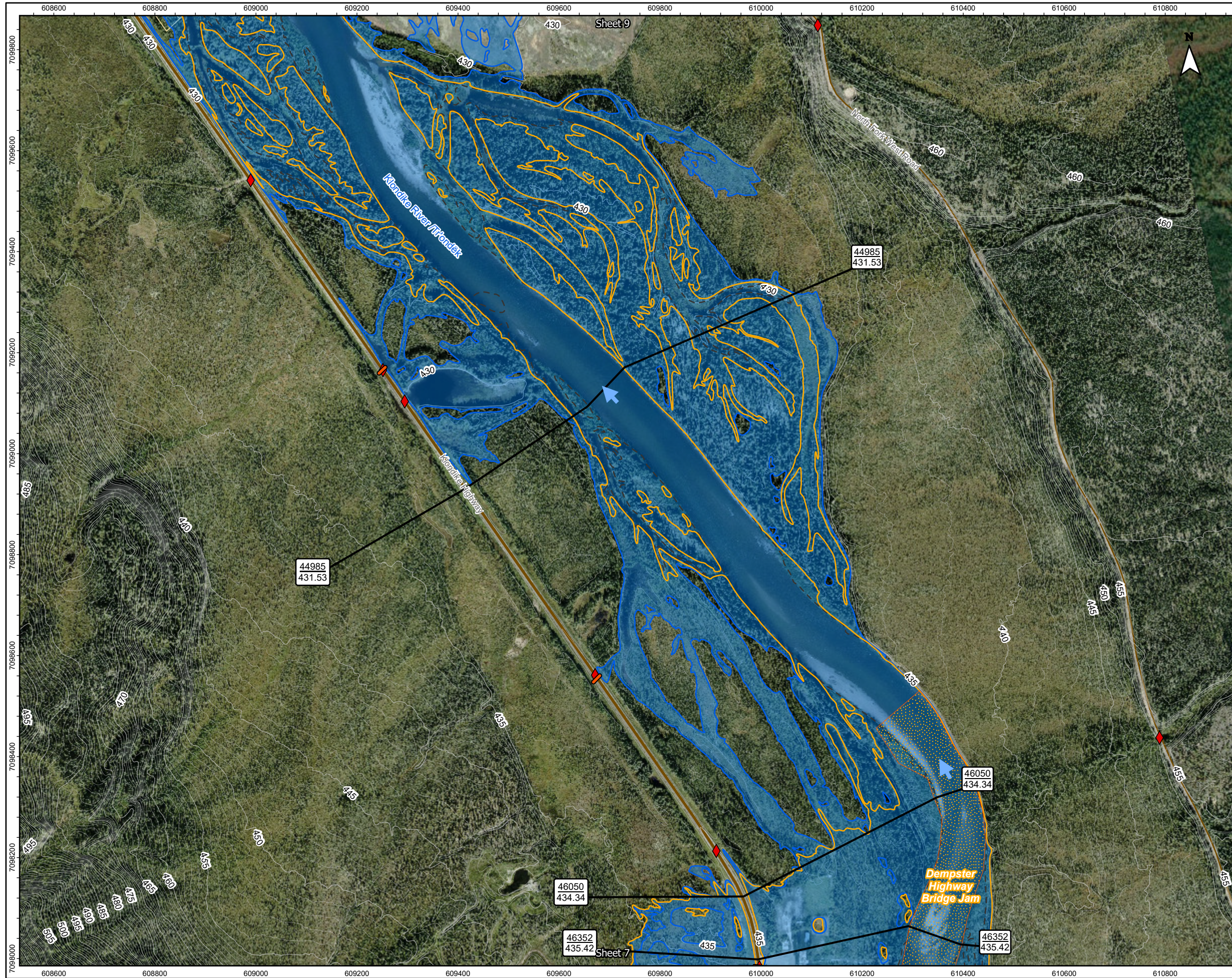


Figure No. **KR-0.5CC-08** Sheet 08 of 41

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

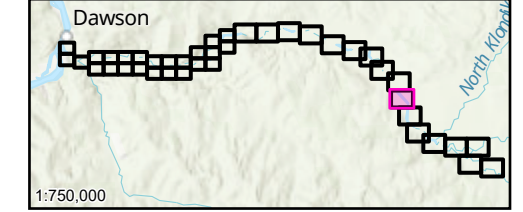
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- HPW Drainage Culverts
- 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
- Cross-Section Number WSE (m) Along Cross-Section
- Surveyed Culvert Location
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model

Map Publication Date: 7/29/2025

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- Notes
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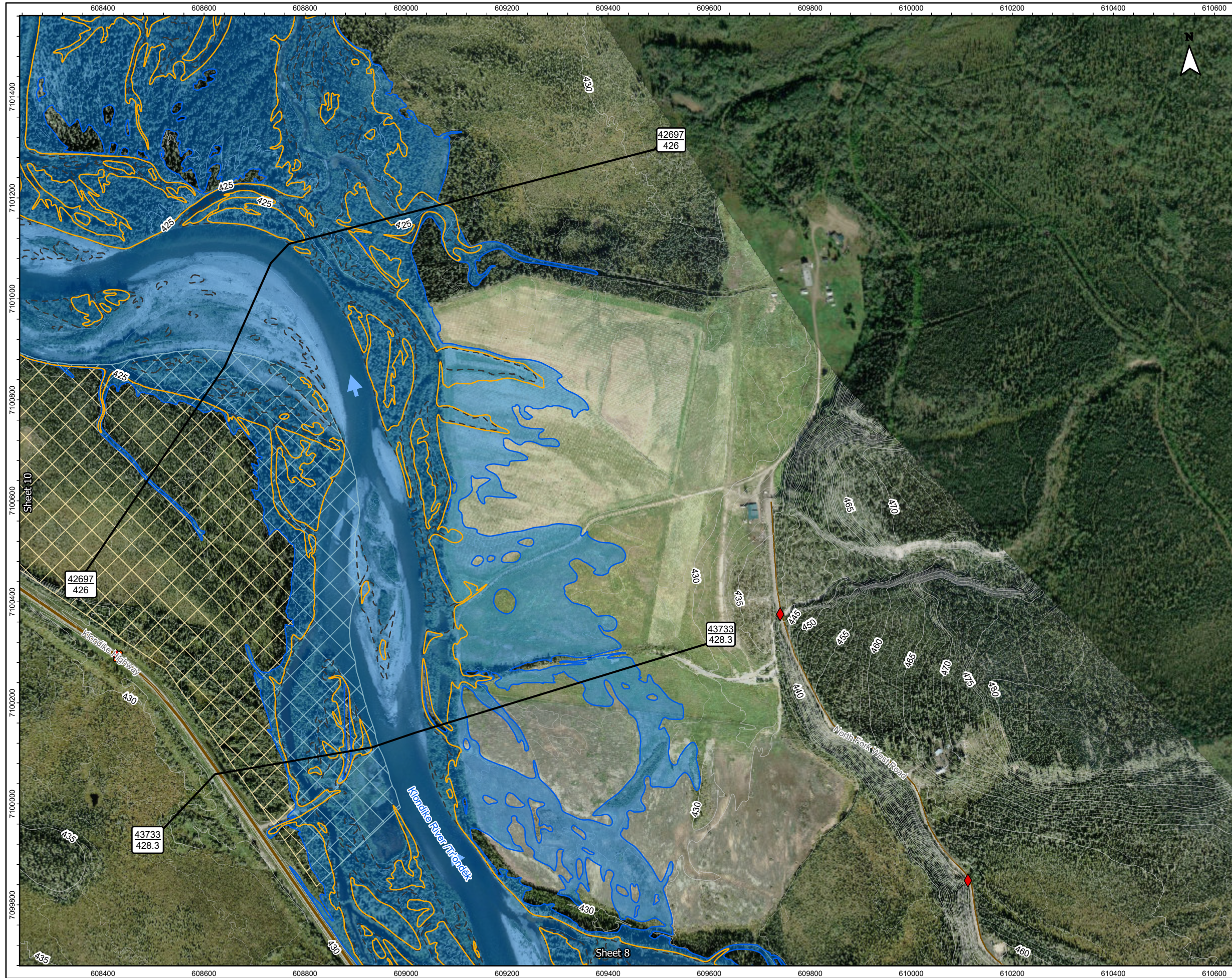


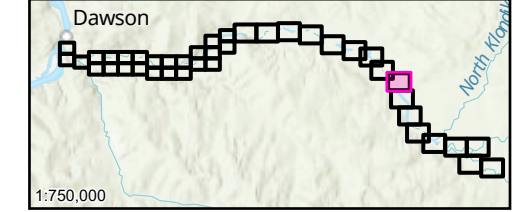
Figure No. **KR-0.5CC-09** Sheet 09 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study
 Composite Flood Hazard Map - Klondike River
 0.5% Annual Exceedance Probability (AEP) with Factor of Safety
 for Climate Change**

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
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- Inundation Under Modelled Breakup Ice Jam Runs
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- Minor Contour (1m)

Map Publication Date: 7/29/2025
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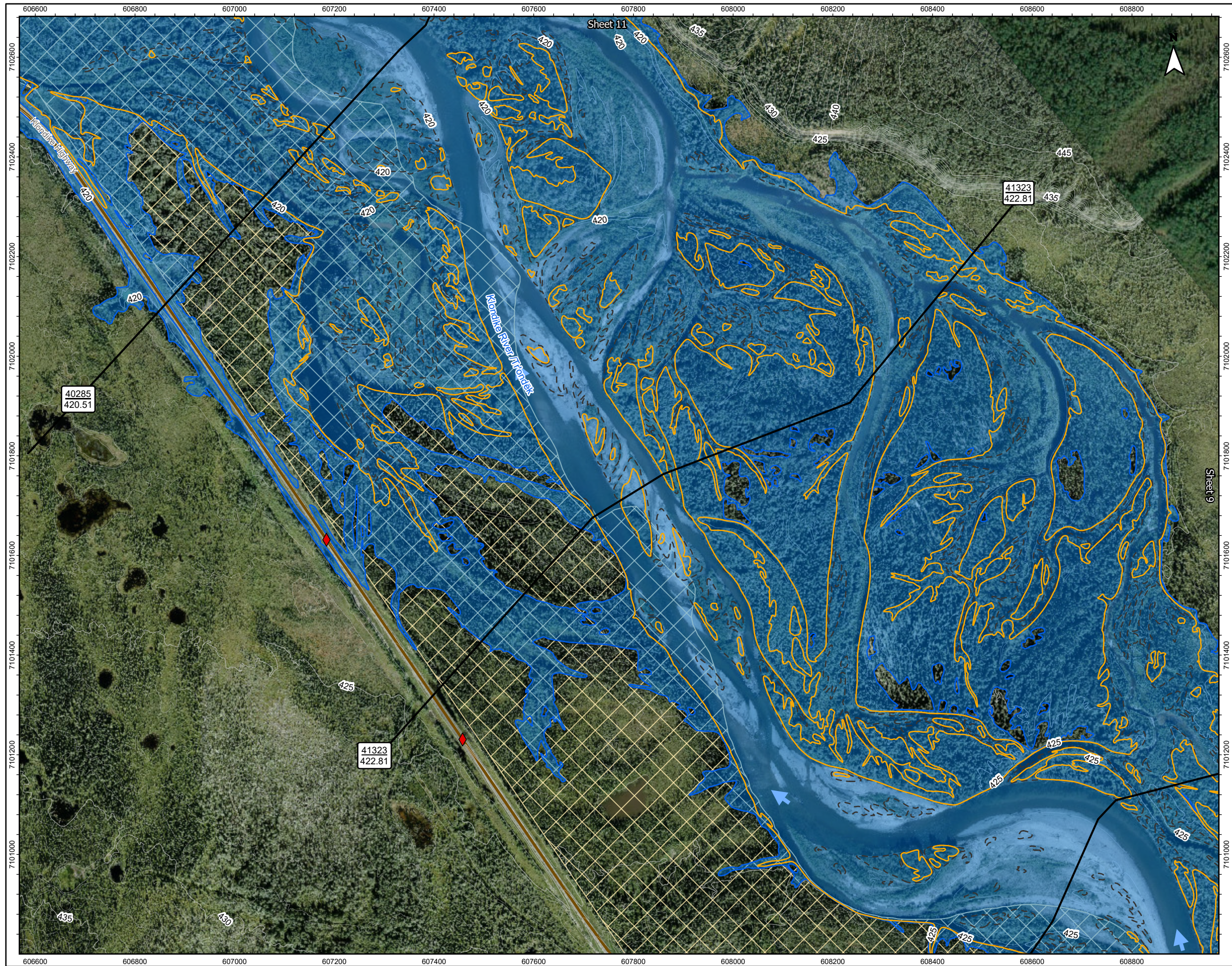


Figure No. **KR-0.5CC-10** Sheet 10 of 41

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

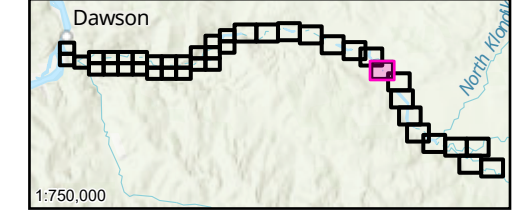
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- HPW Drainage Culverts
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Map Publication Date: 7/29/2025

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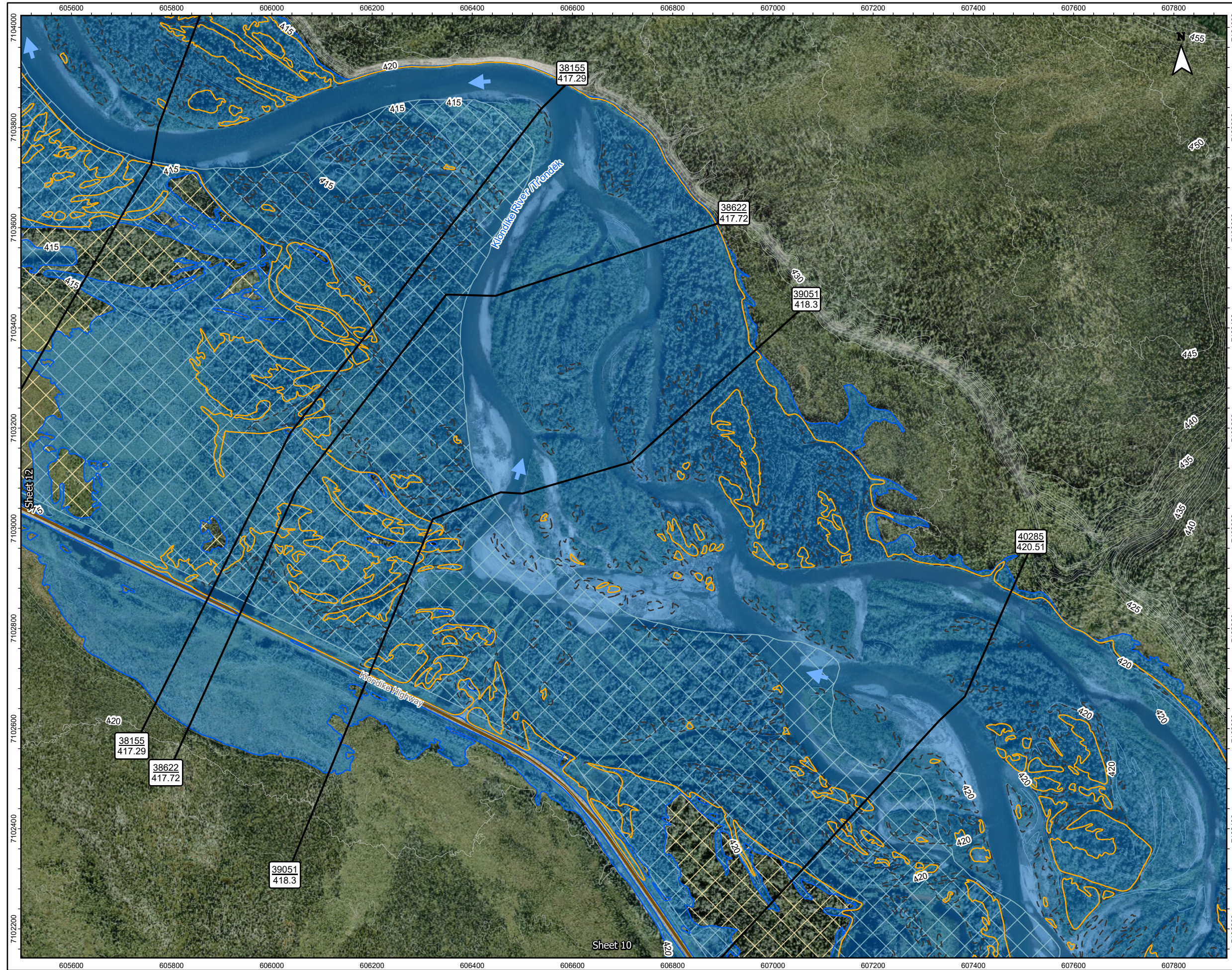


Figure No. **KR-0.5CC-11** Sheet 11 of 41

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

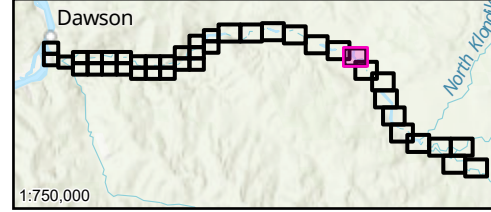
Client/Project:
**Government of Yukon
Department of Environment
Water Resources Branch**

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

- 57
517.2 Cross-Section Number WSE (m) Along Cross-Section
- Highway
- 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

Map Publication Date: 7/29/2025
0 100 200 300 400 m
(At original document size of 11x 17) 1:7,500



- 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 August, 2024 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.



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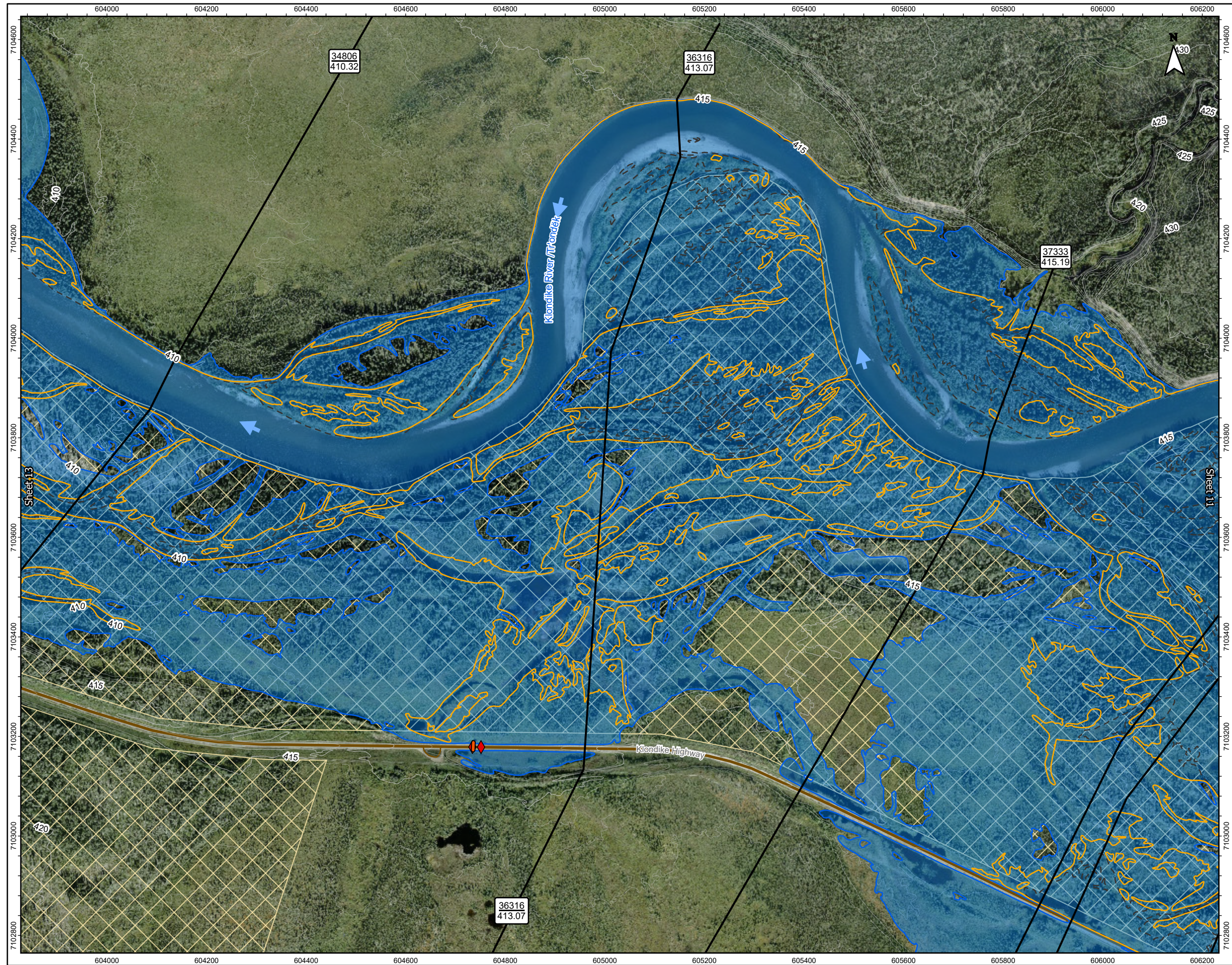


Figure No. **KR-0.5CC-12** Sheet 12 of 41

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

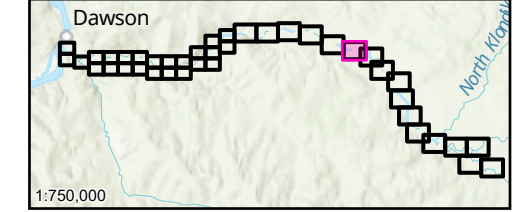
Client/Project:
**Government of Yukon
Department of Environment
Water Resources Branch**

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

- HPW Drainage Culverts
- Surveyed Cross-Sections Used in Hydraulic Model
- Cross-Section Number WSE (m) Along Cross-Section
- Tr'ondëk Hwëch'in Settlement Land
- Surveyed Culvert Location
- Inundation Under Modelled Open Water Runs
- Highway
- 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 Extent
- Minor Contour (1m)

Map Publication Date: 7/29/2025
0 100 200 300 400 m
(At original document size of 11x 17) 1:7,500



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 August, 2024 and topographical and bathymetric data that was collected in June and September 2024.
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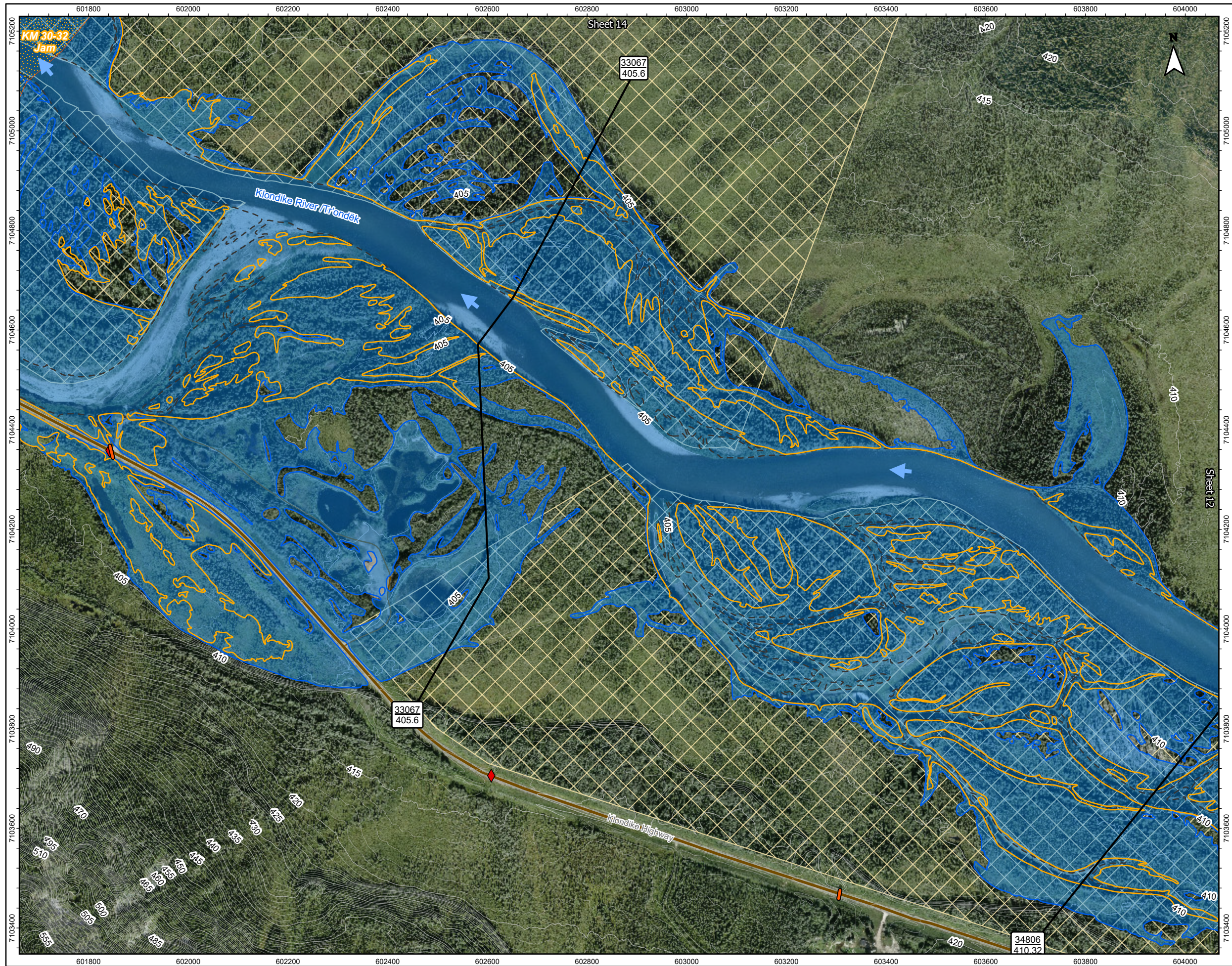


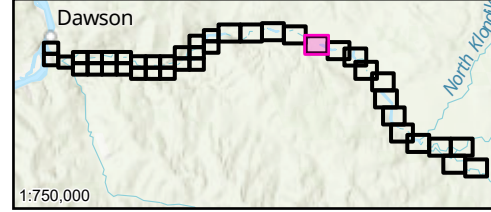
Figure No. **KR-0.5CC-13** Sheet 13 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study
 Composite Flood Hazard Map - Klondike River
 0.5% Annual Exceedance Probability (AEP) with Factor of Safety
 for Climate Change**

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

- HPW Drainage Culverts
- Tr'ondëk Hwëch'in Settlement Land
- 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 Extent
- Ice Coverage in Breakup Jam Scenarios
- Surveyed Culvert Location
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model

Map Publication Date: 7/29/2025
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 (At original document size of 11x 17) 1:7,500

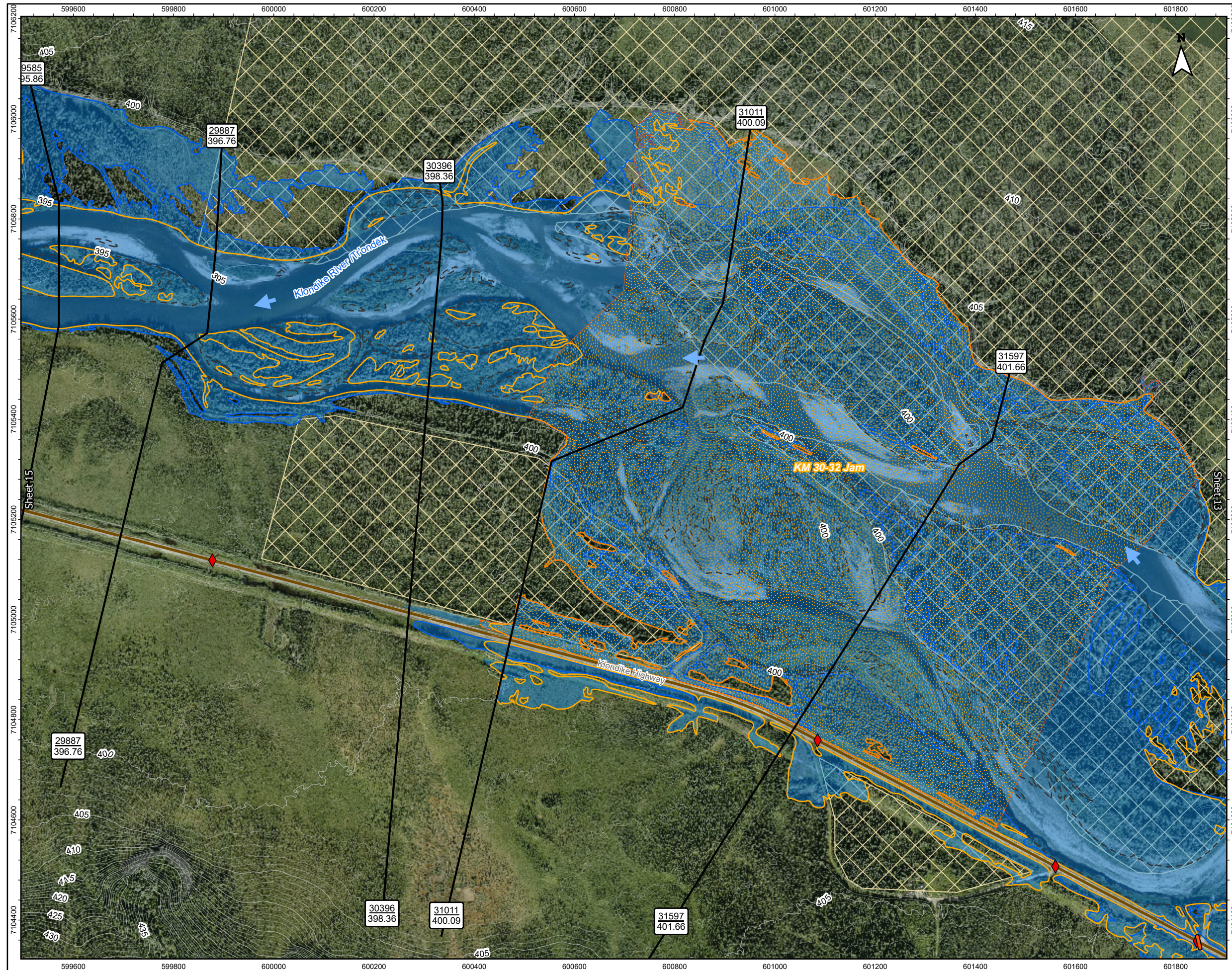


- Notes**
1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
 3. Flood hazard extents shown on these maps are based on LIDAR collected in August, 2024 and topographical and bathymetric data that was collected in June and September 2024.
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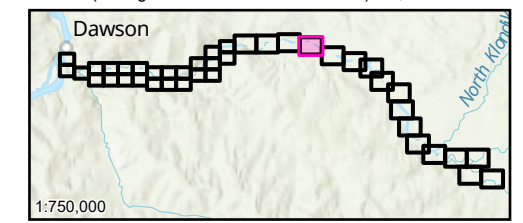
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- HPW Drainage Culverts
- Tr'ondék Hwé'ch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Surveyed Culvert Location
- Approximate 50% AEP Open Water Flood Inundation
- Composite Open Water and Ice Jam Inundation Extent
- Ice Coverage in Breakup Jam Scenarios
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Cross-Section Number WSE (m) Along Cross-Section

Map Publication Date: 7/29/2025
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(At original document size of 11x 17) 1:7,500



- 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 August, 2024 and topographical and bathymetric data that was collected in June and September 2024.
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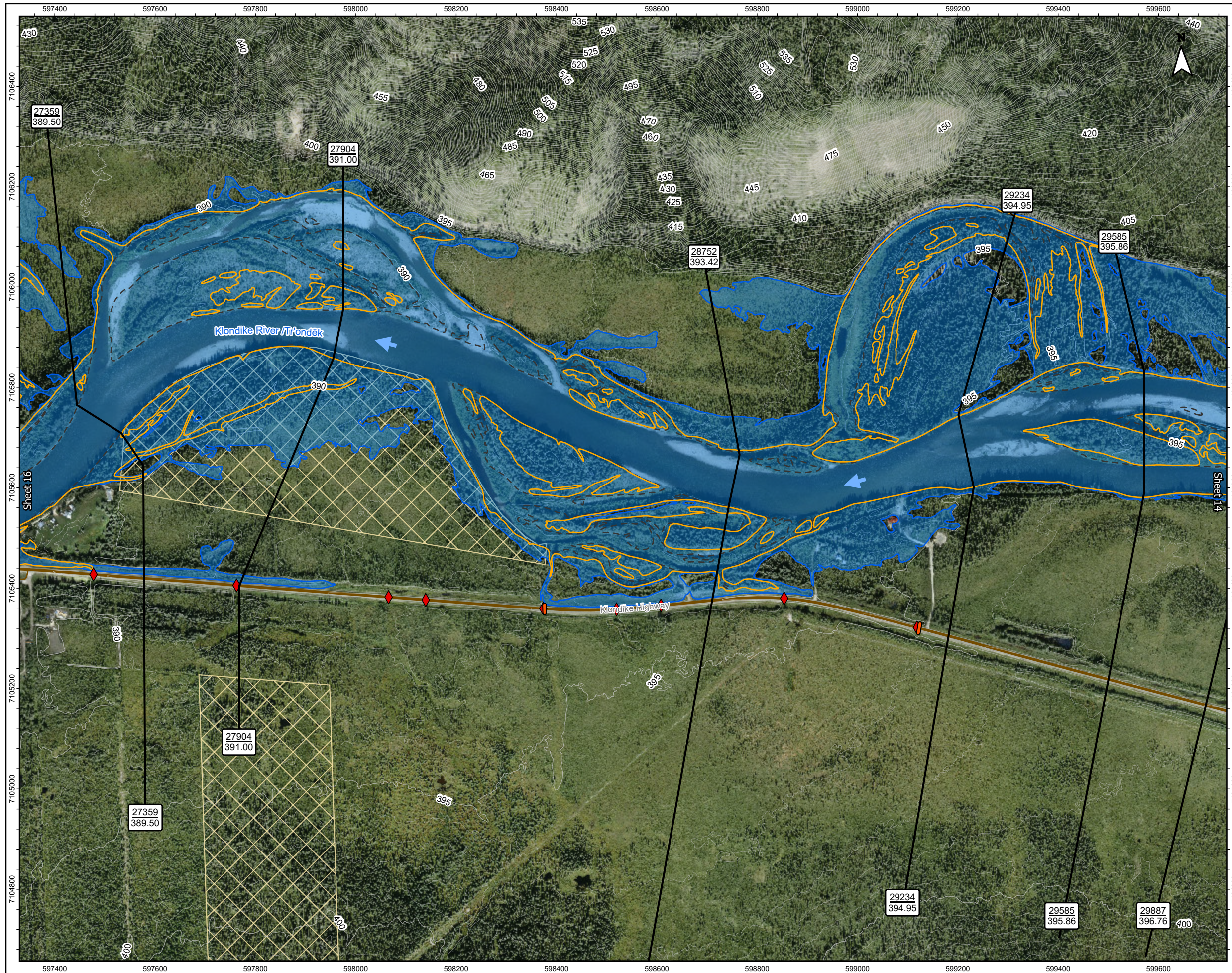


Figure No. **KR-0.5CC-15** Sheet 15 of 41

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

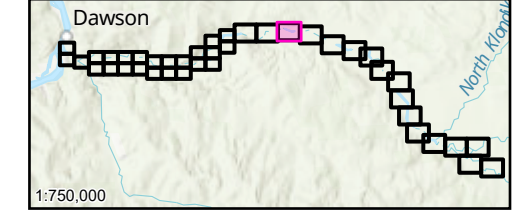
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- HPW Drainage Culverts
- Surveyed Cross-Sections Used in Hydraulic Model
- Cross-Section Number WSE (m) Along Cross-Section
- Tr'ondëk Hwëch'in Settlement Land
- Surveyed Culvert Location
- Inundation Under Modelled Open Water Runs
- Highway
- 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 Extent
- Minor Contour (1m)

Map Publication Date: 7/29/2025

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(At original document size of 11x 17) 1:7,500



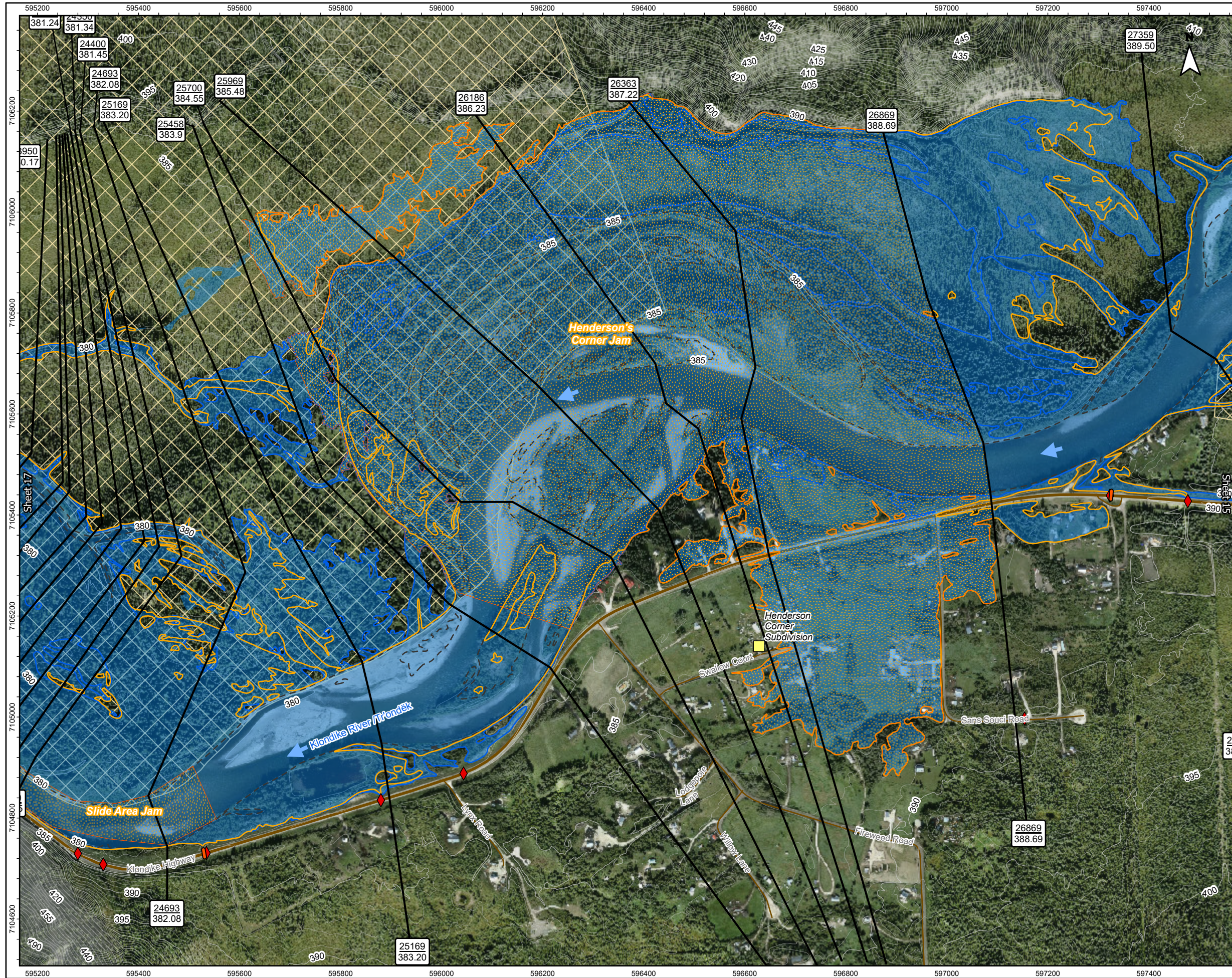
Notes

- Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
- Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
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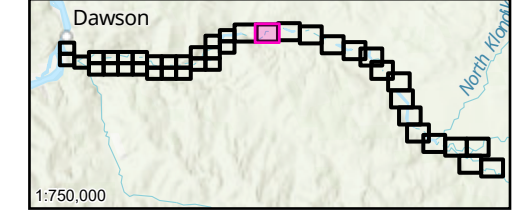
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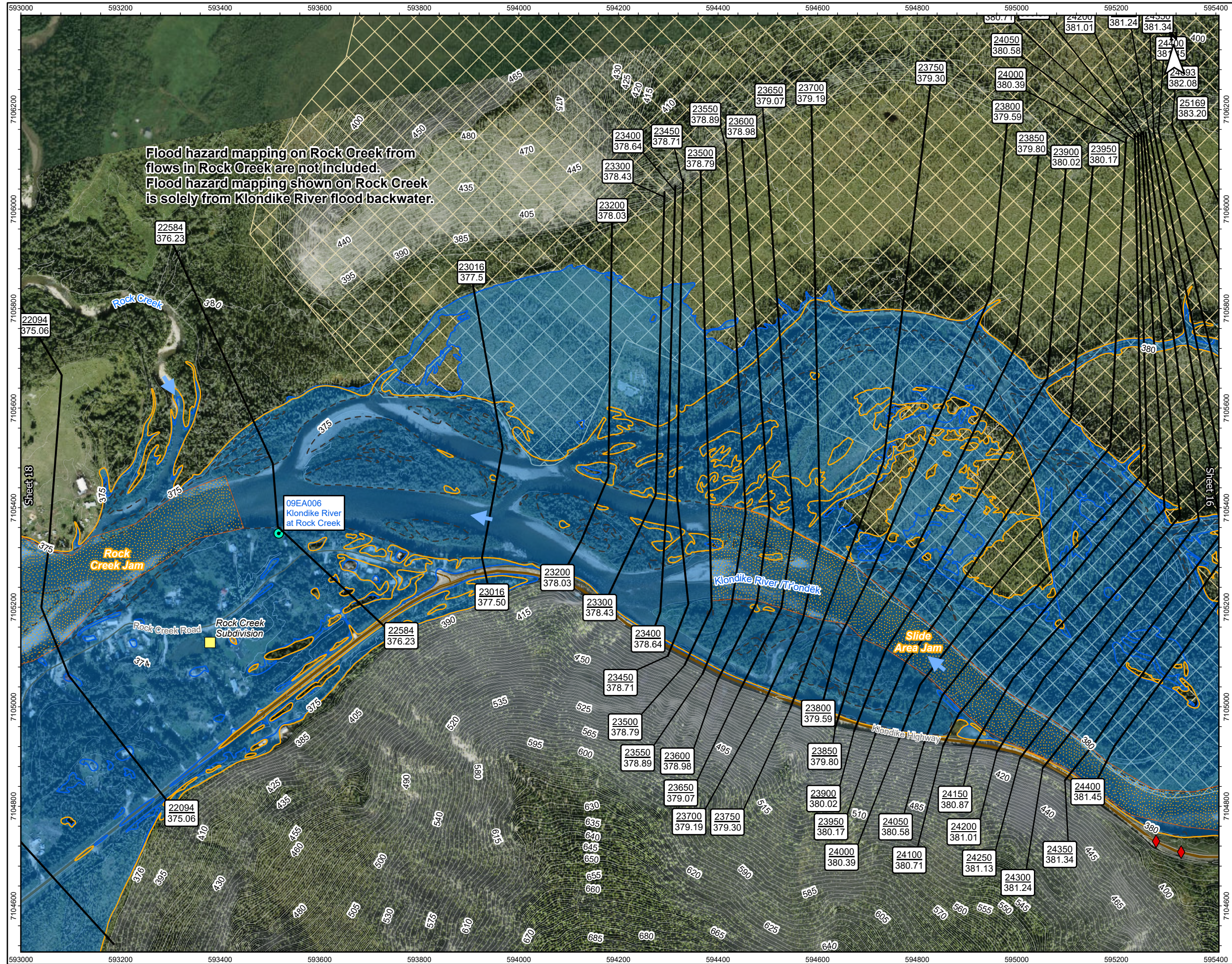


- HPW Drainage Culverts
- Community Developments
- Cross-Section Number WSE (m) Along Cross-Section
- Surveyed Culvert Location
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondëk Hwëch'in Settlement Land
- Inundation Under Modelled Open Water
- 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) 1:7,500

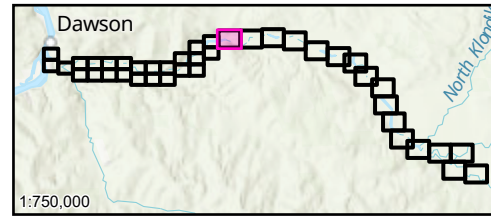


- Notes
1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
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- WSC Stations
- HPW Drainage Culverts
- Community Developments
- Cross-Section 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) 1:7,500



- 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 August, 2024 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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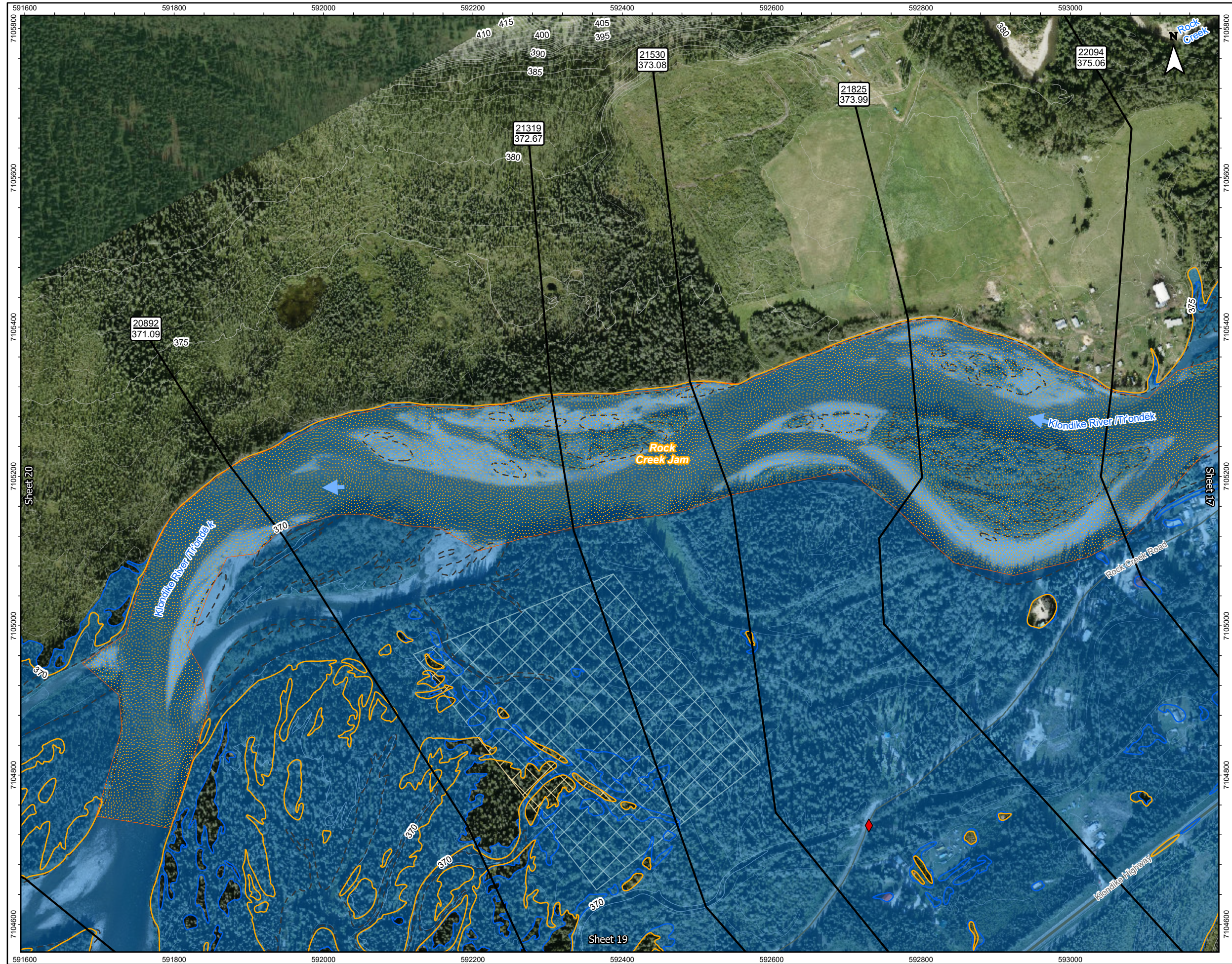


Figure No. **KR-0.5CC-18** Sheet 18 of 41

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

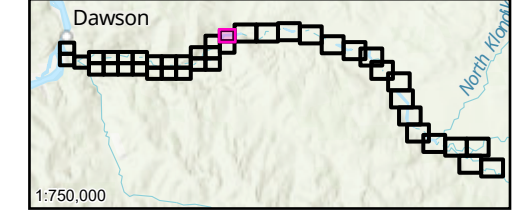
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

Project: 123222713

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

- HPW Drainage Culverts
- Tr'ondëk Hwëch'in Settlement Land
- Cross-Section Number WSE (m) Along Cross-Section
- Inundation Under Modelled Open Water Runs
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- 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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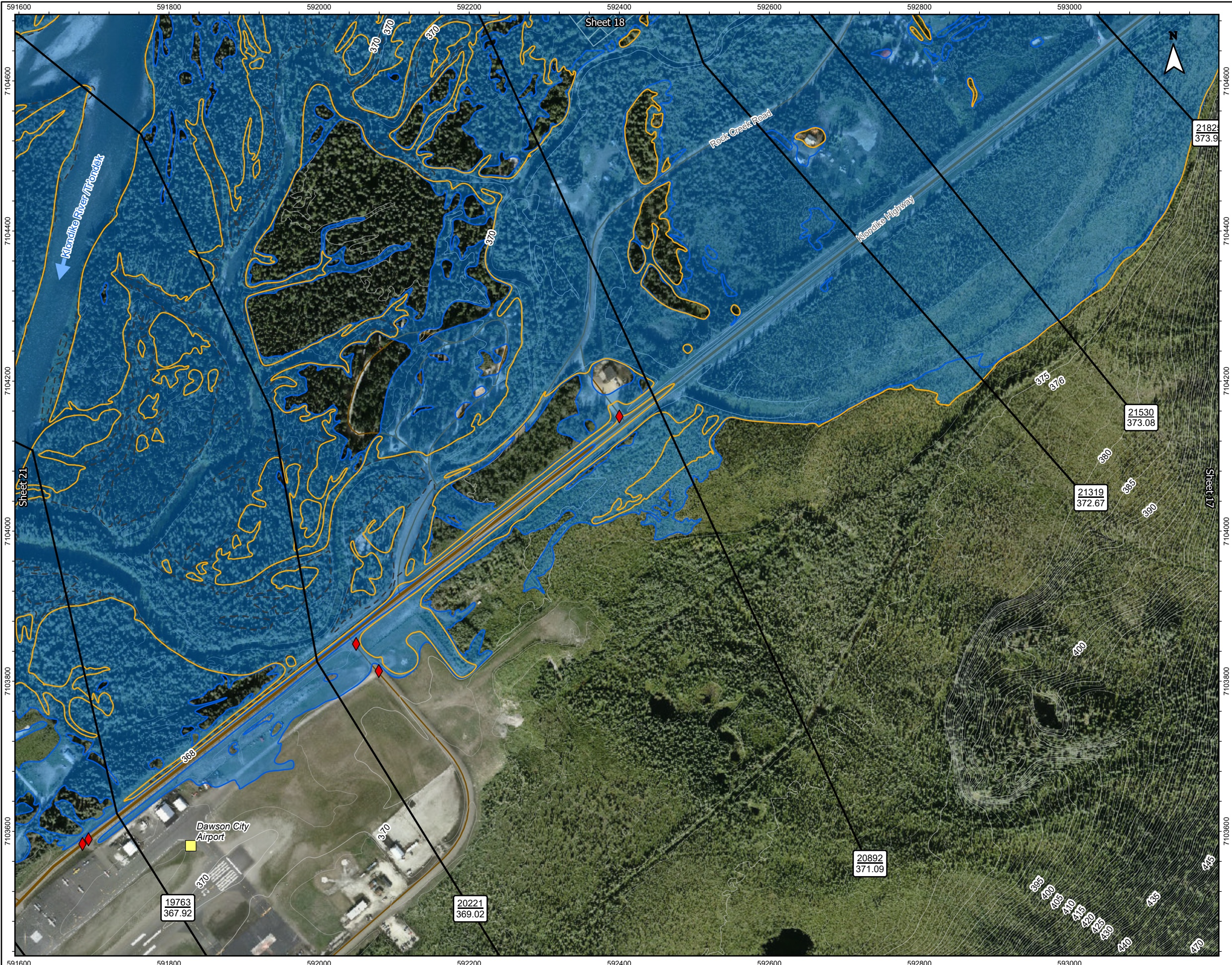
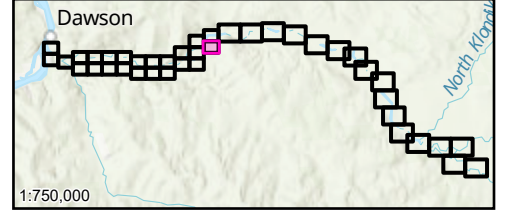


Figure No. **KR-0.5CC-19** Sheet 19 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 0.5% Annual Exceedance Probability (AEP) with Factor of Safety for Climate Change**
 Client/Project: Government of Yukon, Department of Environment, Water 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

- HPW Drainage Culverts
- Community Developments
- 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

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 August, 2024 and topographical and bathymetric data that was collected in June and September 2024.
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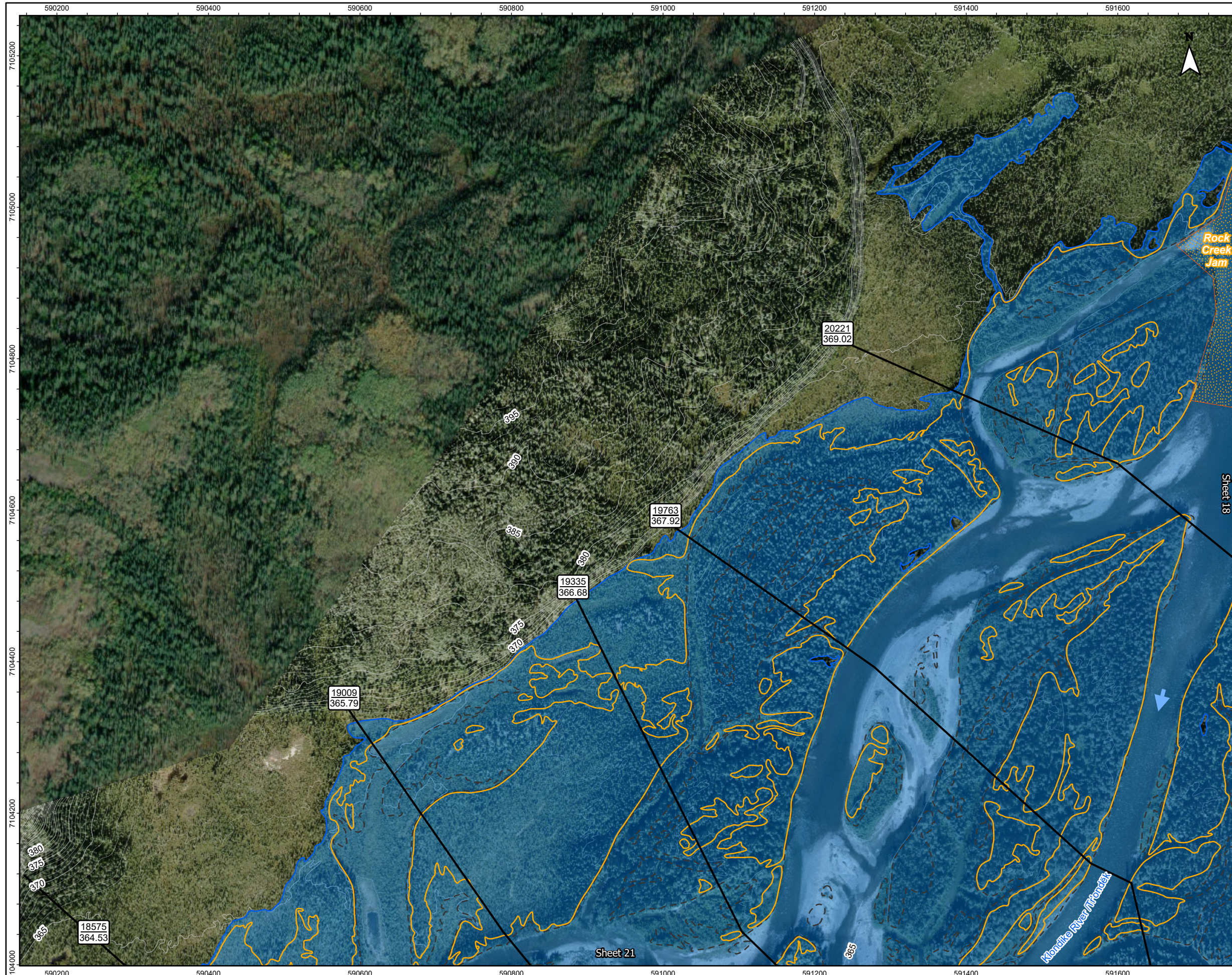


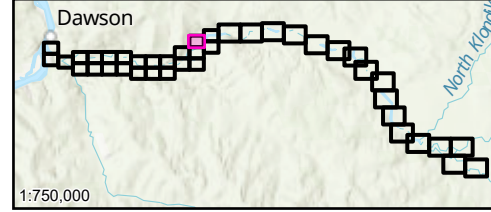
Figure No. **KR-0.5CC-20** Sheet 20 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study
 Composite Flood Hazard Map - Klondike River
 0.5% Annual Exceedance Probability (AEP) with Factor of Safety
 for Climate Change**

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

- 57 Cross-Section Number WSE (m) Along Cross-Section
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- 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
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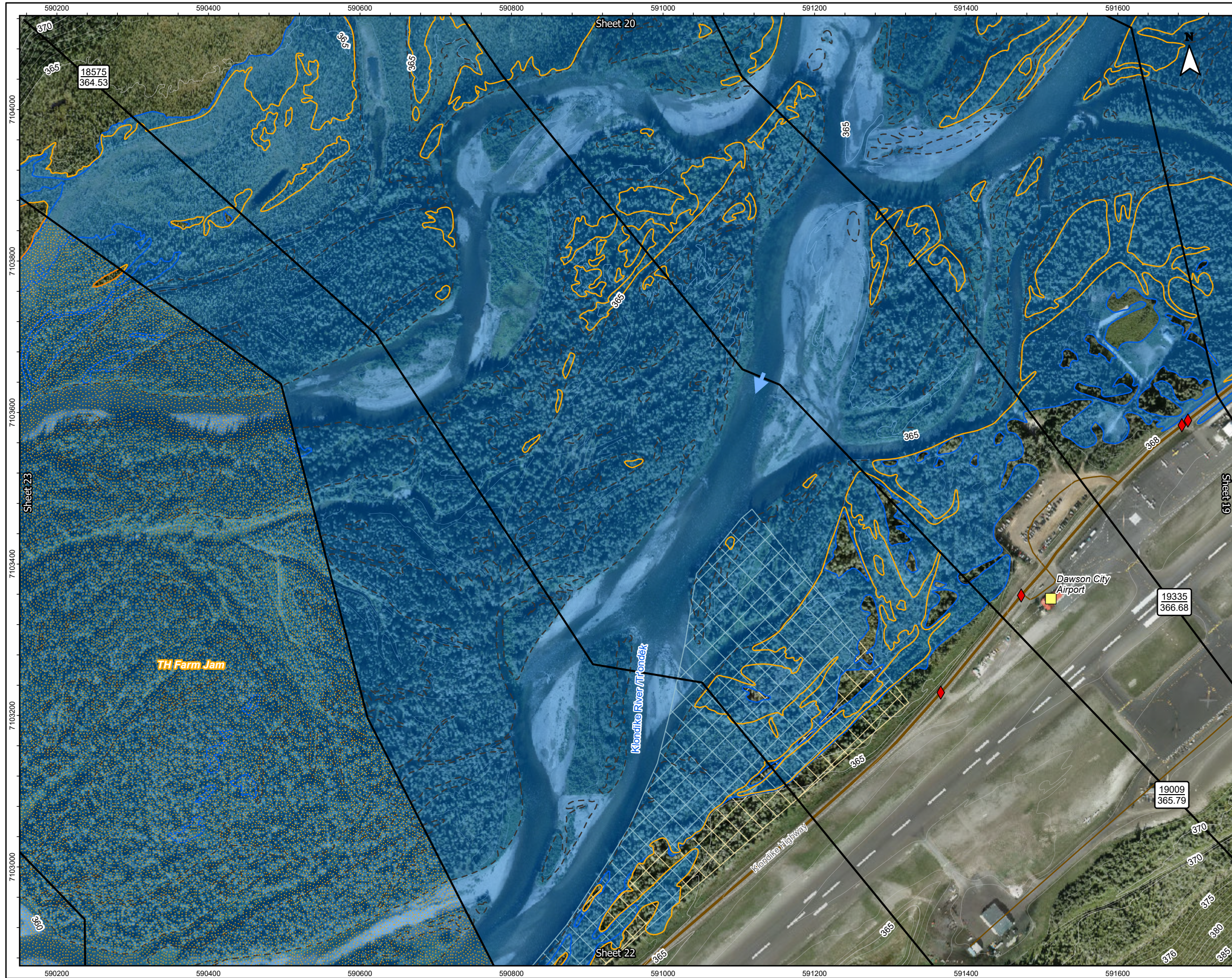


Figure No. **KR-0.5CC-21** Sheet 21 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study
 Composite Flood Hazard Map - Klondike River
 0.5% Annual Exceedance Probability (AEP) with Factor of Safety
 for Climate Change**

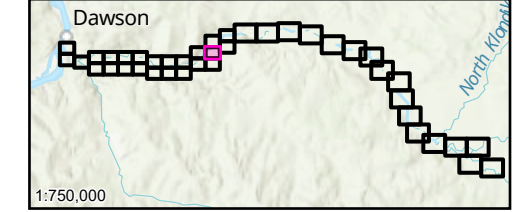
Client/Project:
 Government of Yukon
 Department of Environment
 Water Resources Branch

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

- HPW Drainage Culverts
- Community Developments
- 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
 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
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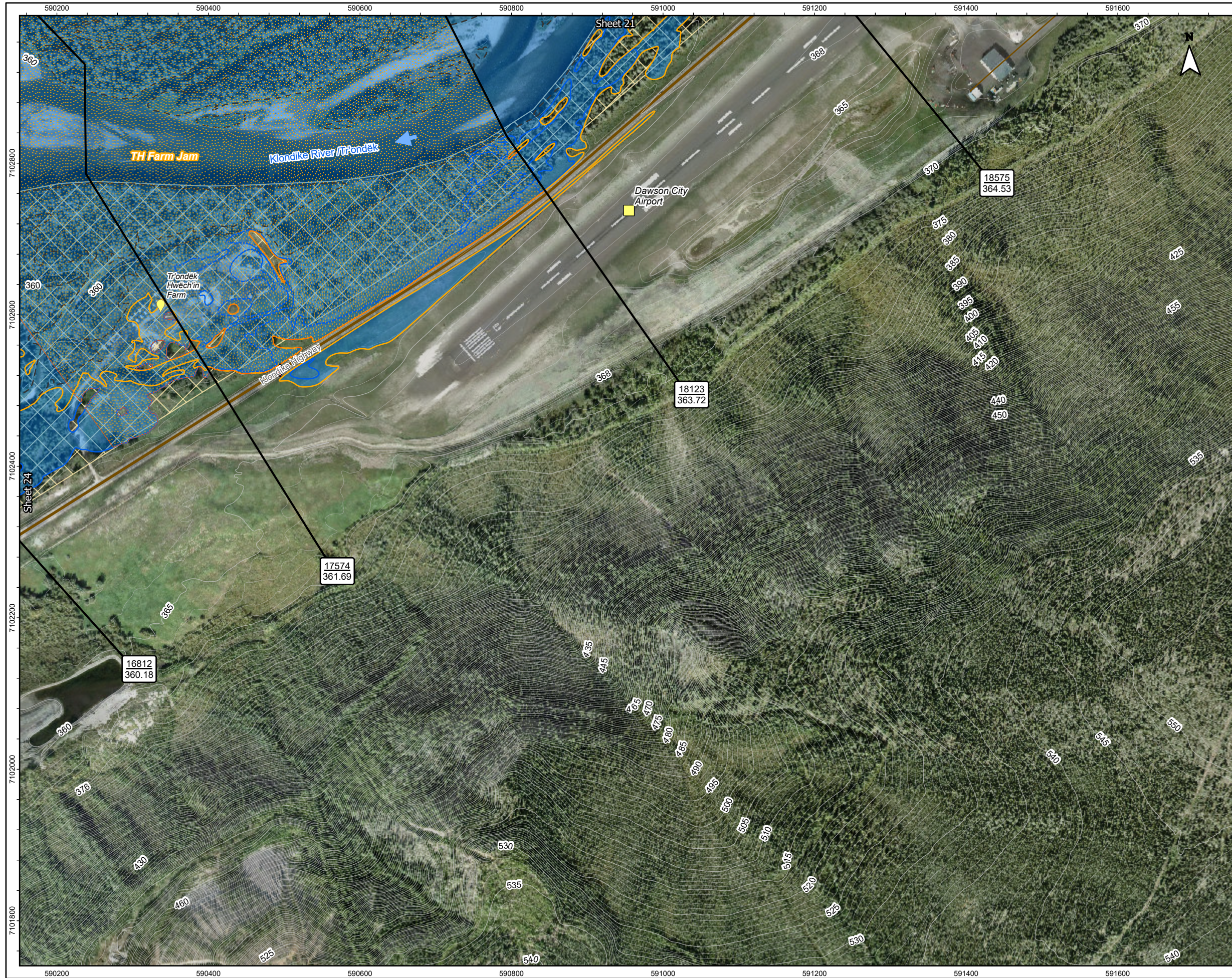


Figure No. **KR-0.5CC-22** Sheet 22 of 41

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

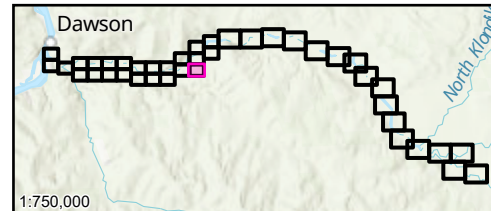
Client/Project:
**Government of Yukon
Department of Environment
Water Resources Branch**

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

- HPW Drainage Culverts
- 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'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
0 50 100 150 200 250 m
(At original document size of 11x 17) 1:5,000



- Notes**
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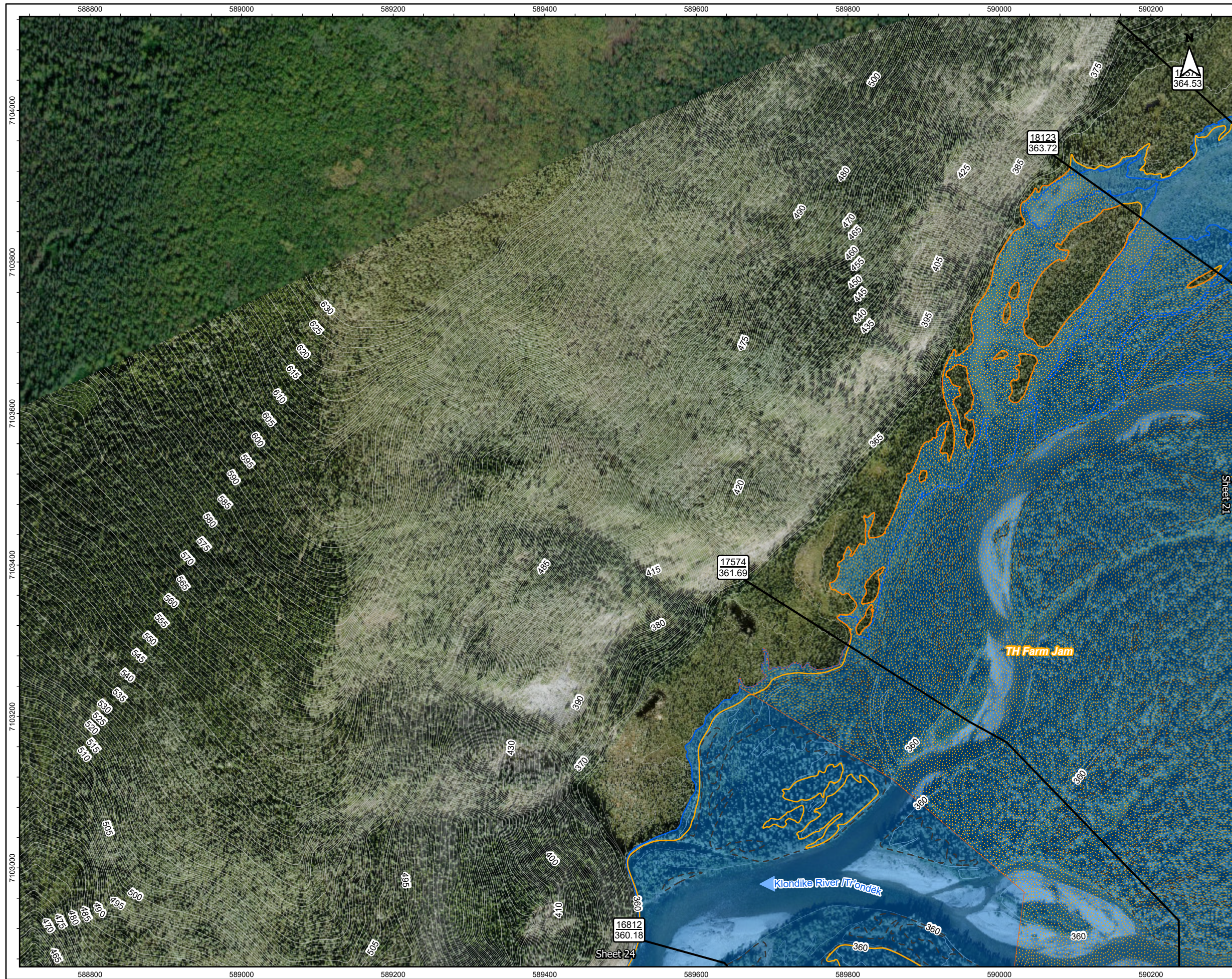


Figure No. **KR-0.5CC-23** Sheet 23 of 41

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

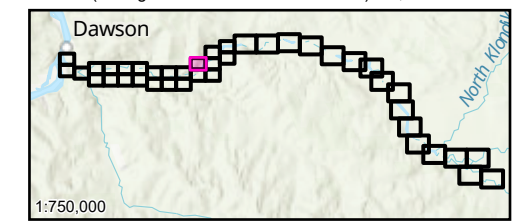
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

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

- 57 Cross-Section Number WSE (m) Along Cross-Section
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Approximate 50% AEP Open Water Flood Inundation
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- 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



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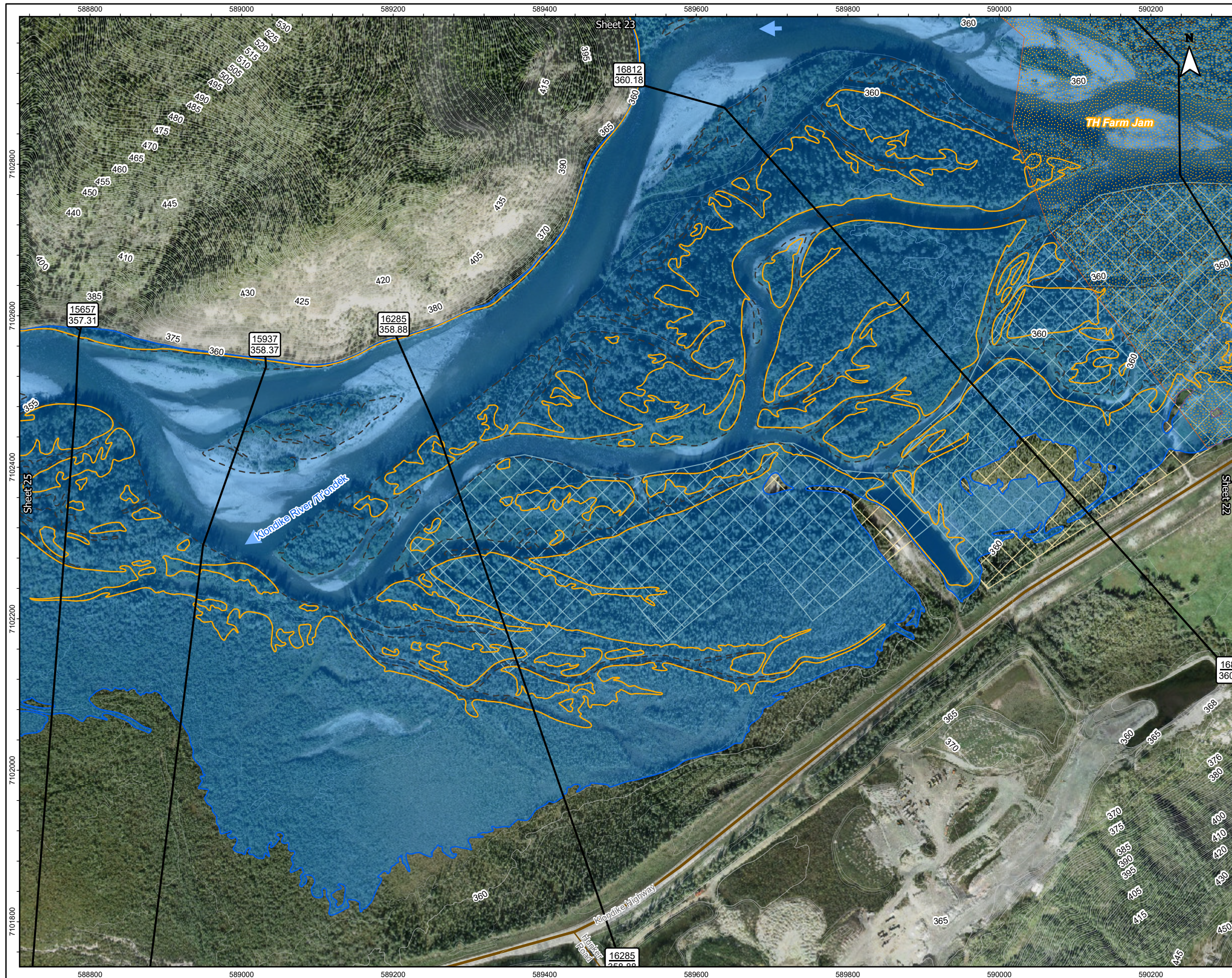


Figure No. **KR-0.5CC-24** Sheet 24 of 41

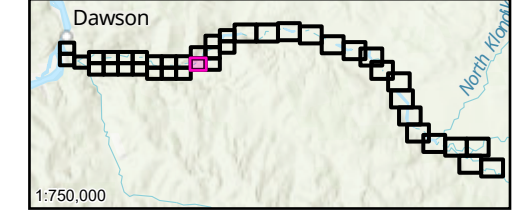
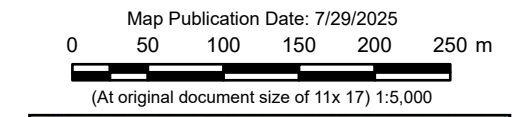
Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change**

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

- | | | | |
|-------------|--|--|--|
| 57
517.2 | Cross-Section Number WSE (m) Along Cross-Section | | T'ondëk Hwëch'in Settlement Land |
| | Highway | | Inundation Under Modelled Open Water Runs |
| | Local Road | | 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 |

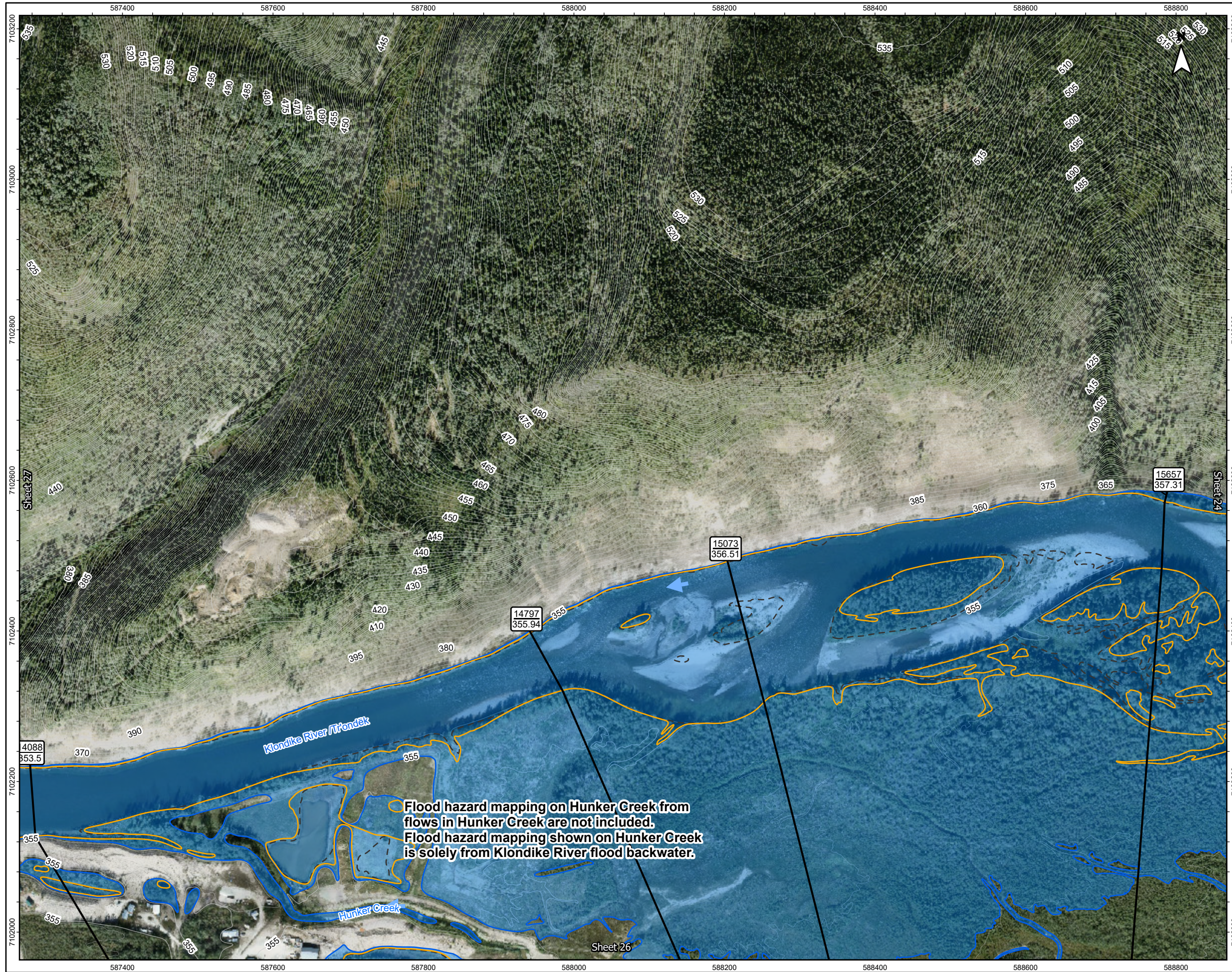


- Notes**
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This project is funded in part by the Government of Canada

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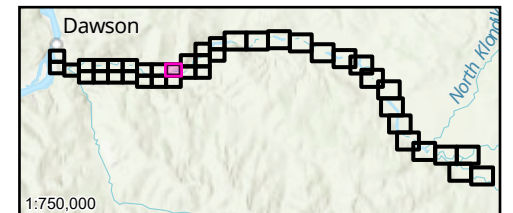
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Flood hazard mapping on Hunker Creek from flows in Hunker Creek are not included. Flood hazard mapping shown on Hunker Creek is solely from Klondike River flood backwater.

- 57 Cross-Section Number WSE (m) Along Cross-Section
- Surveyed Culvert Location
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- 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

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



Notes

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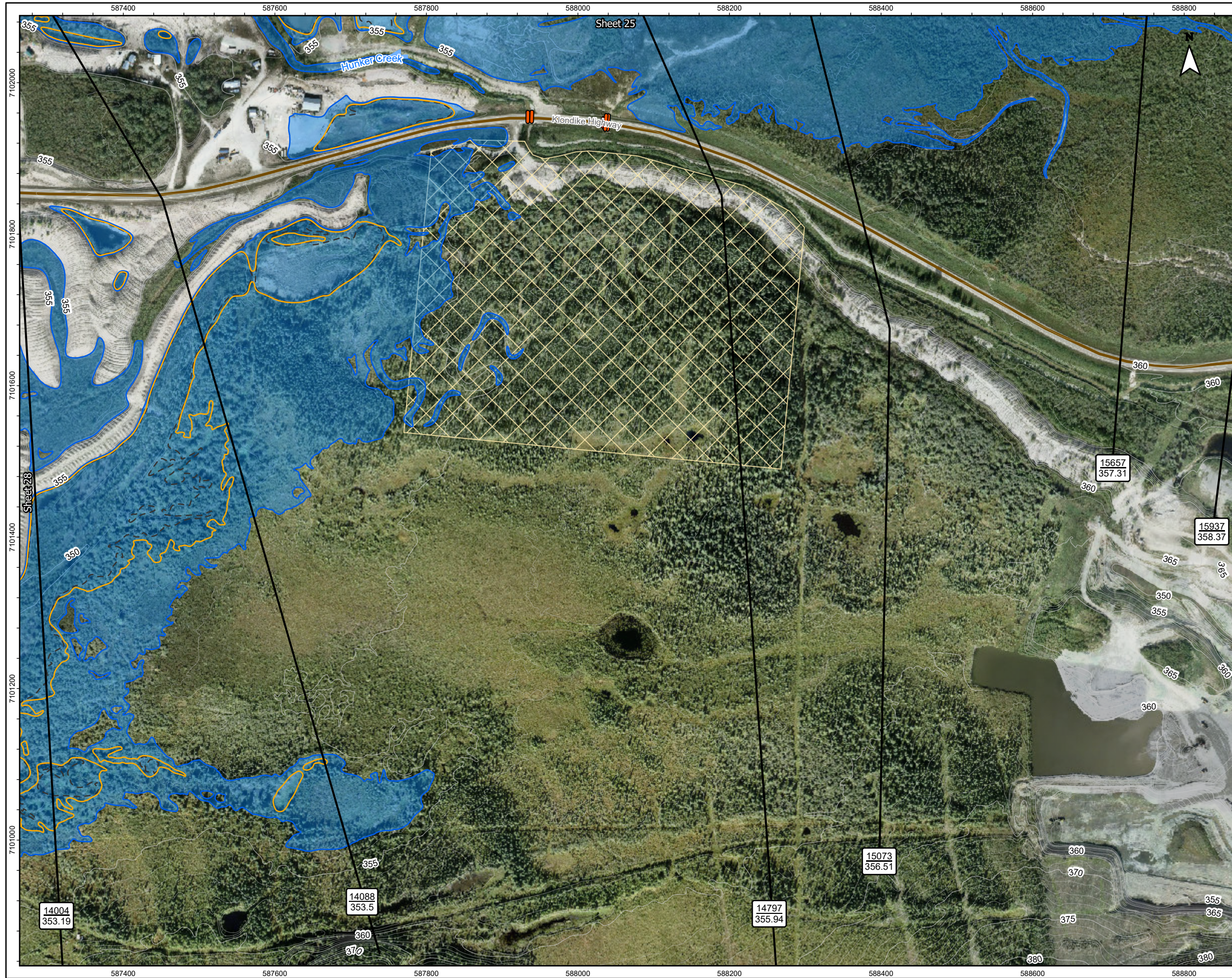


Figure No. **KR-0.5CC-26** Sheet 26 of 41

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

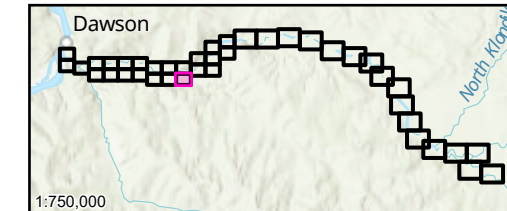
Client/Project:
**Government of Yukon
Department of Environment
Water Resources Branch**

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

- HPW Drainage Culverts
- Surveyed Cross-Sections Used in Hydraulic Model
- Cross-Section Number WSE (m) Along Cross-Section
- Tr'ondëk Hwëch'in Settlement Land
- Surveyed Culvert Location
- Inundation Under Modelled Open Water Runs
- Highway
- 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

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



- Notes**
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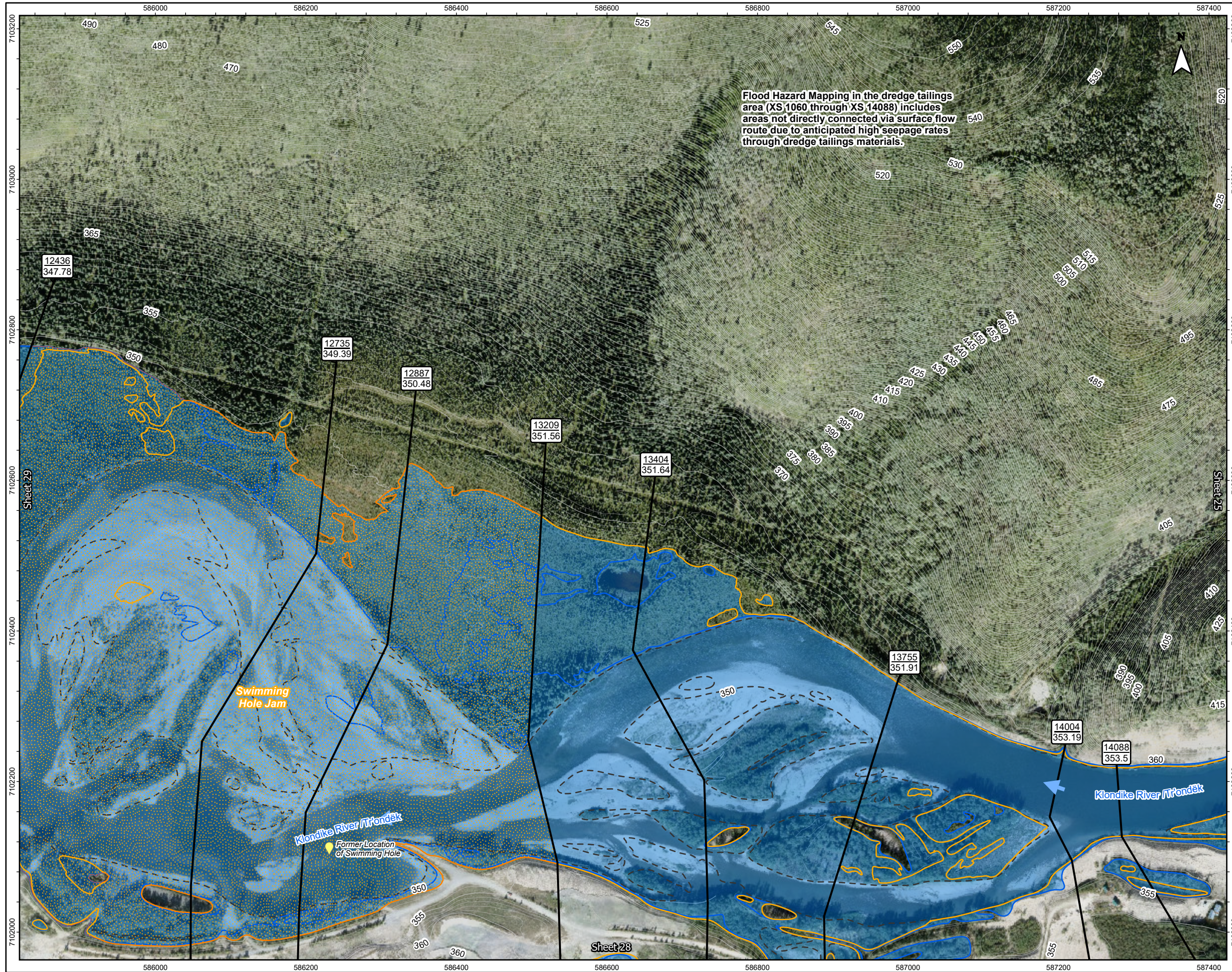


Figure No. **KR-0.5CC-27** Sheet 27 of 41

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

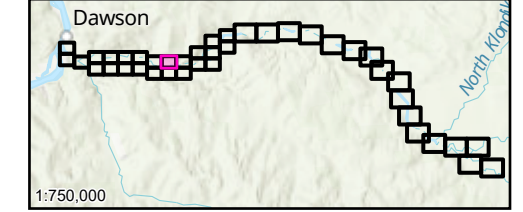
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2025-07-29

- Point of Interest
- Cross-Section Number WSE (m) Along Cross-Section
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- 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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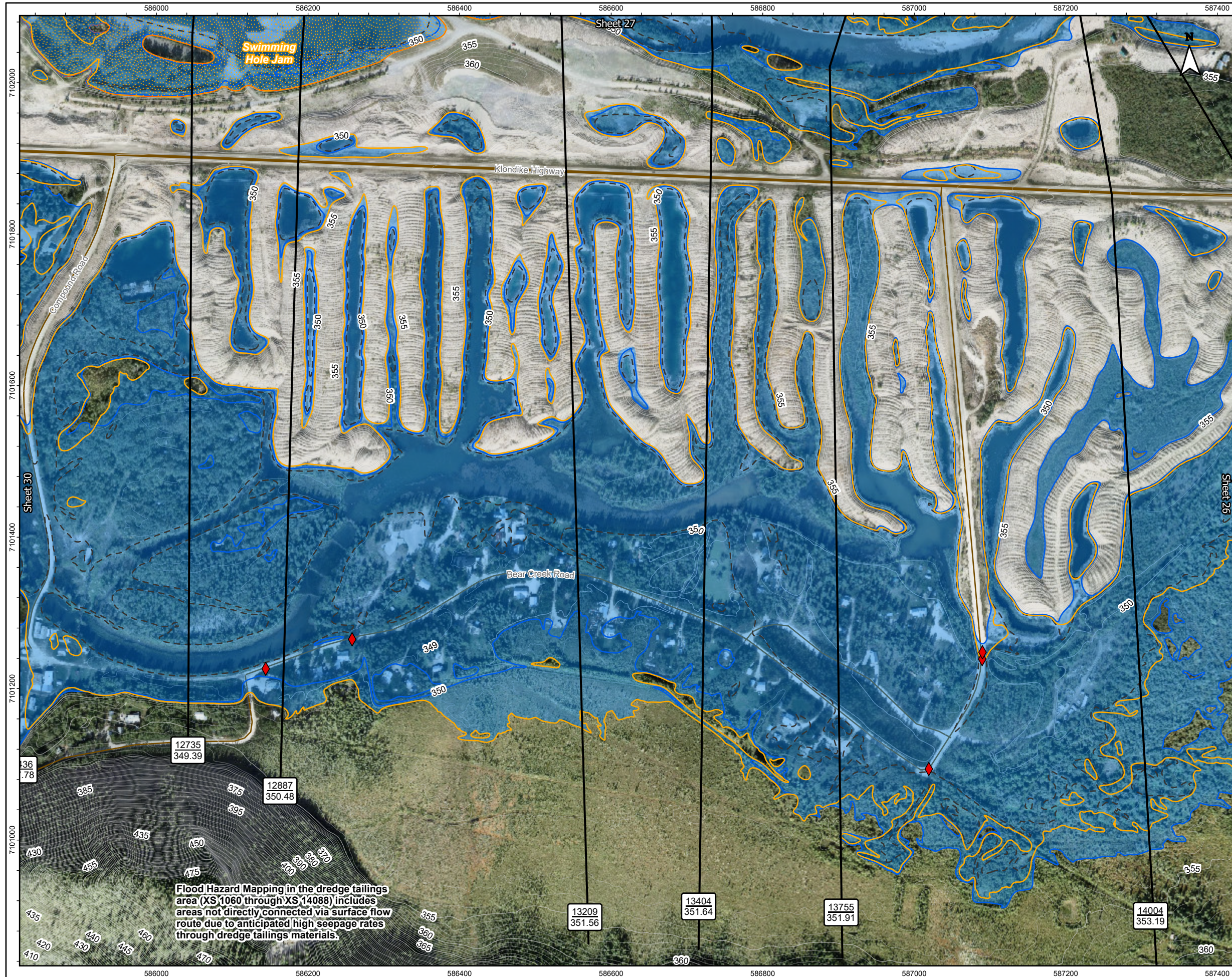


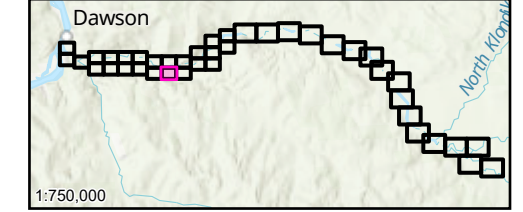
Figure No. **KR-0.5CC-28** Sheet 28 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 0.5% Annual Exceedance Probability (AEP) with Factor of Safety for Climate Change**

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

- HPW Drainage Culverts
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- Approximate 50% AEP Open Water Flood Inundation
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- Ice Coverage in Breakup Jam Scenarios
- Cross-Section Number WSE (m) Along Cross-Section
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)

Map Publication Date: 7/29/2025
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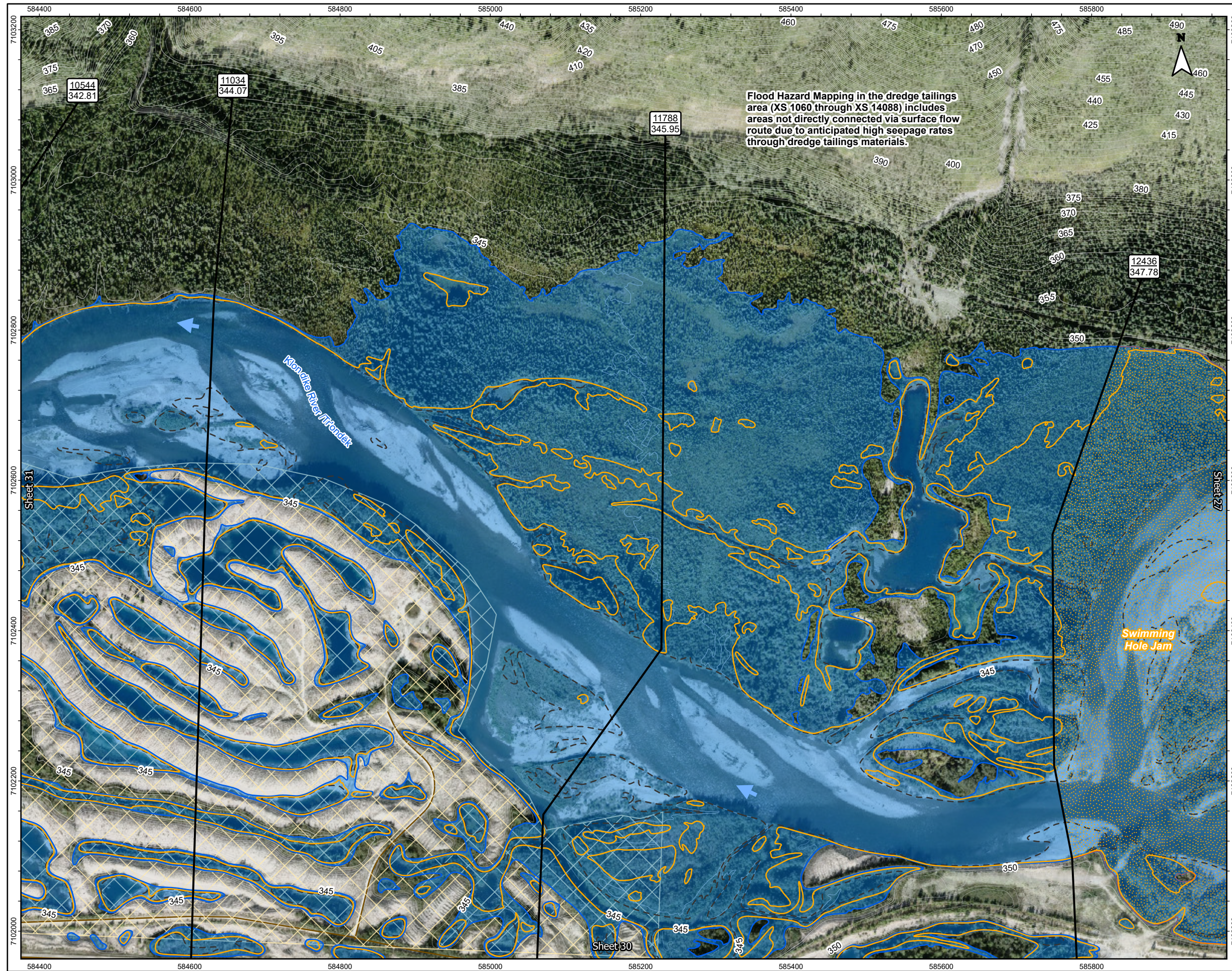


Figure No. **KR-0.5CC-29** Sheet 29 of 41

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
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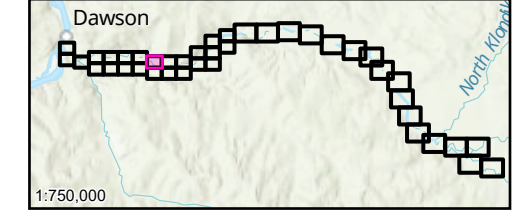
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

Project: 123222713

Project Location: Dawson, Yukon
Prepared by MANDERSON on 2025-07-29
Requested by JMUIRHEAD on 2024-03-30
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Map Publication Date: 7/29/2025
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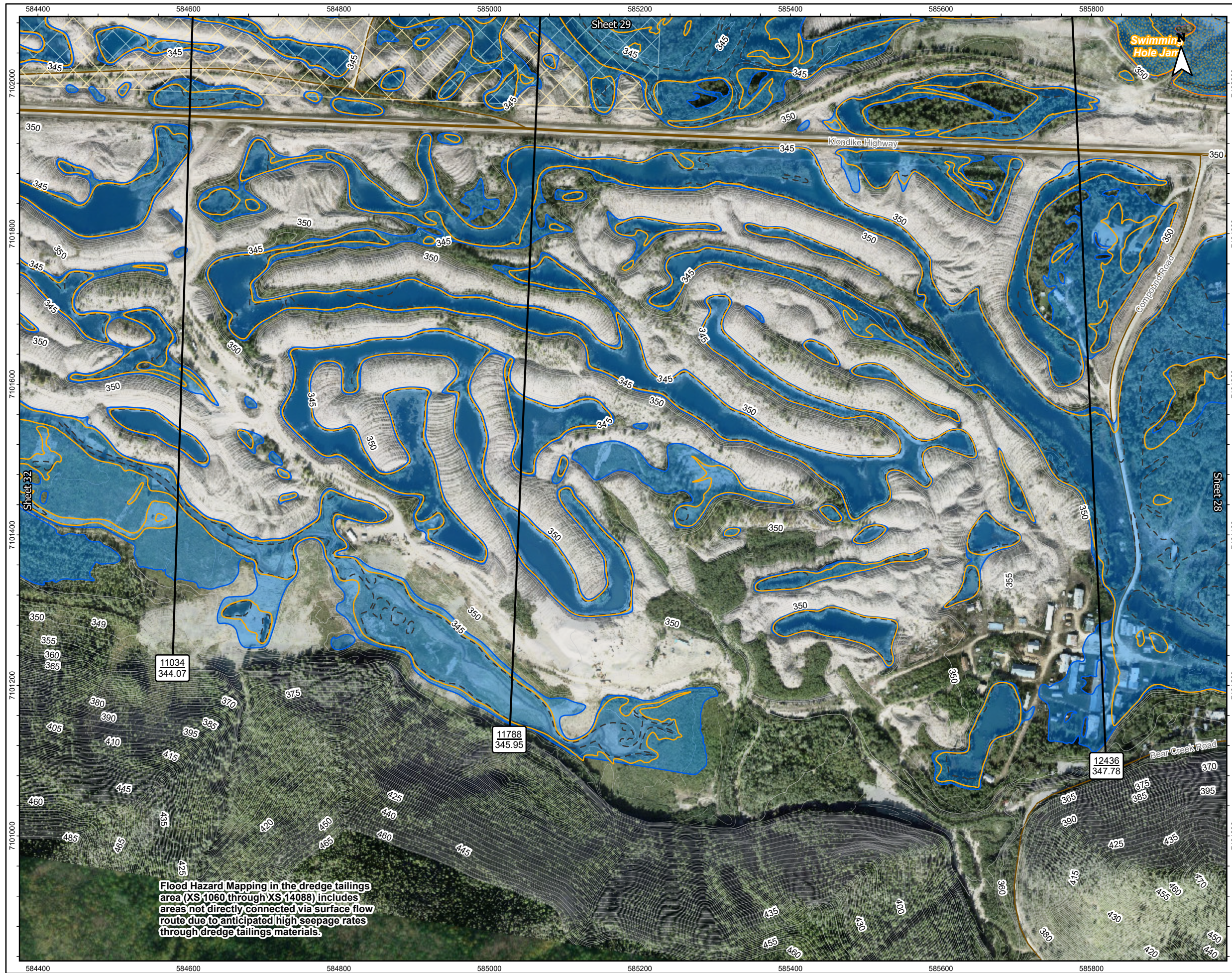


- Notes
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Flood Hazard Mapping in the dredge tailings area (XS1060 through XS14088) includes areas not directly connected via surface flow route due to anticipated high seepage rates through dredge tailings materials.

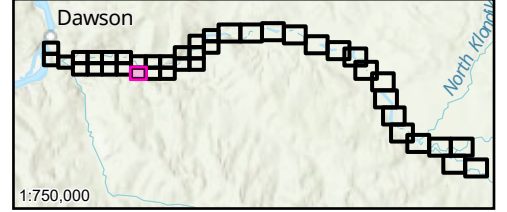
Figure No. **KR-0.5CC-30** Sheet 30 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 0.5% Annual Exceedance Probability (AEP) with Factor of Safety for Climate Change**

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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Map Publication Date: 7/29/2025
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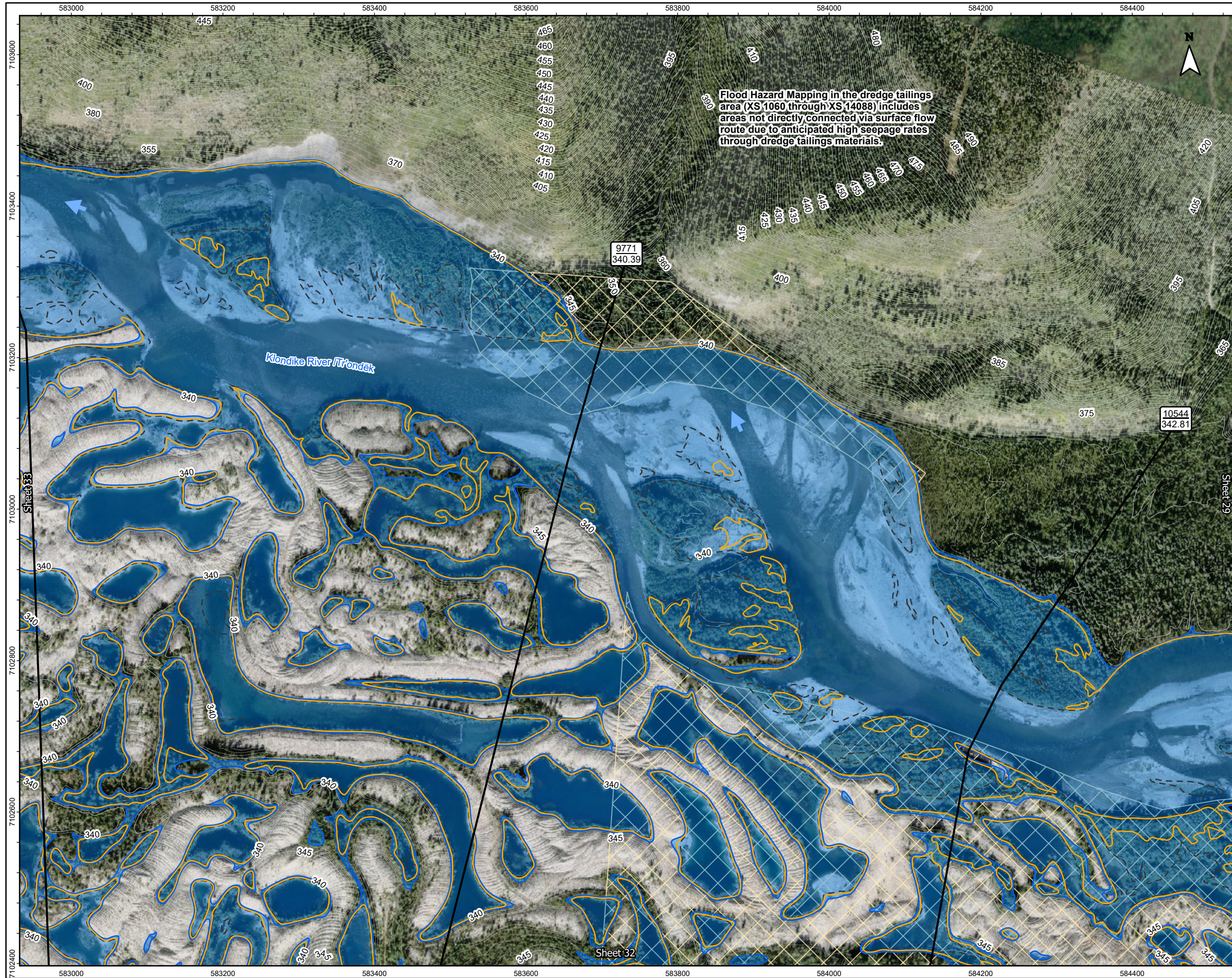


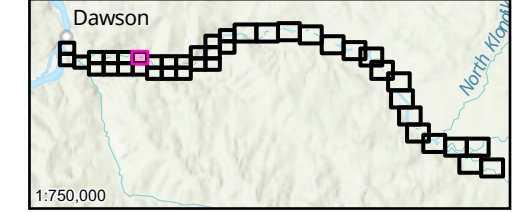
Figure No. **KR-0.5CC-31** Sheet 31 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 0.5% Annual Exceedance Probability (AEP) with Factor of Safety for Climate Change**

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

- 57 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 Extent

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

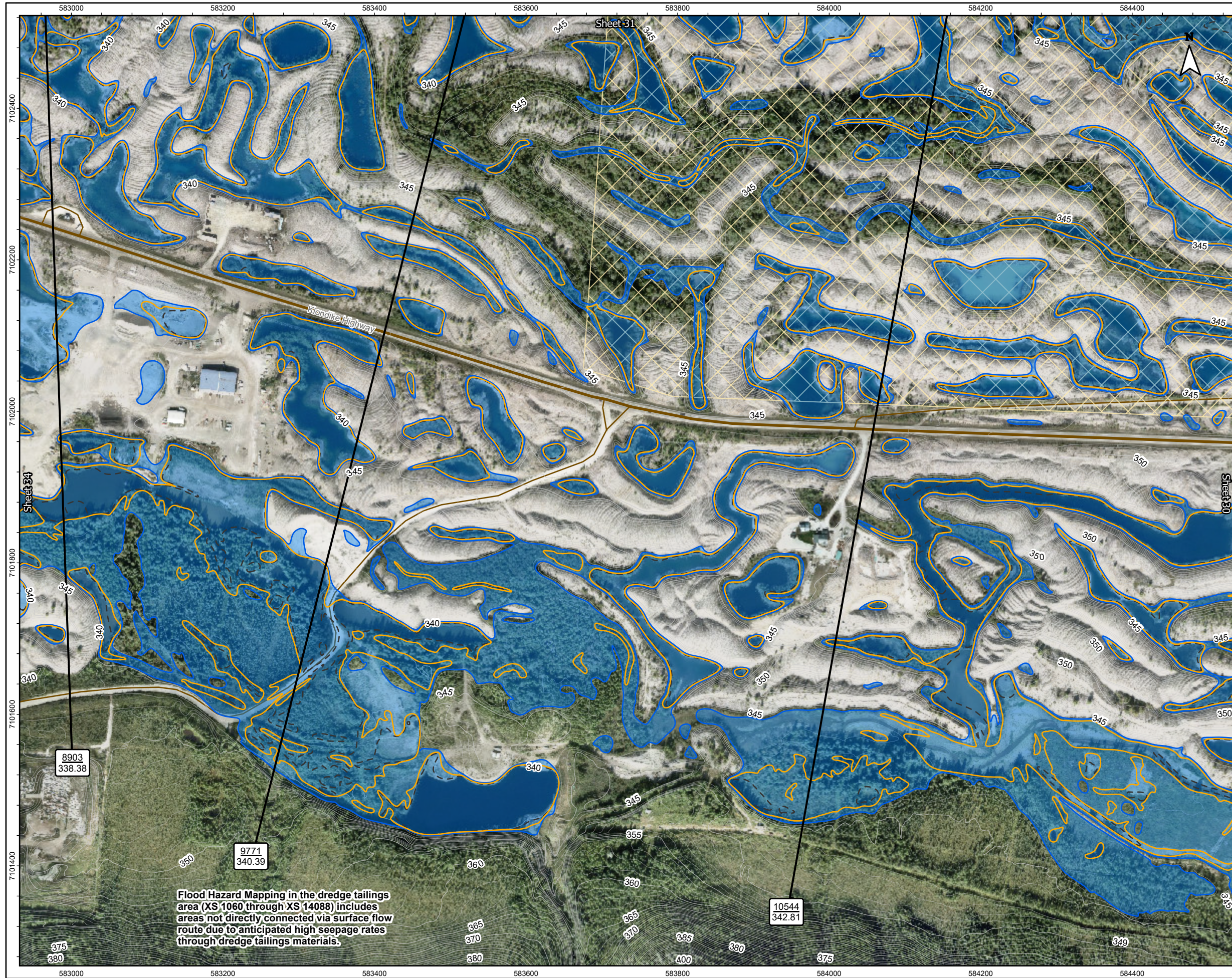


Notes
 1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
 3. Flood hazard extents shown on these maps are based on LIDAR collected in August, 2024 and topographical and bathymetric data that 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.

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

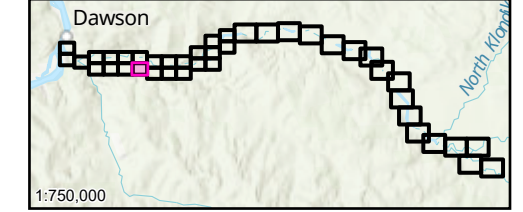
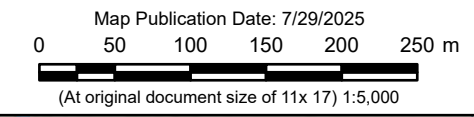
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

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

- 57 Cross-Section Number WSE (m) Along Cross-Section
- 517.2
- 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 Extent



- Notes**
- Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 - Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
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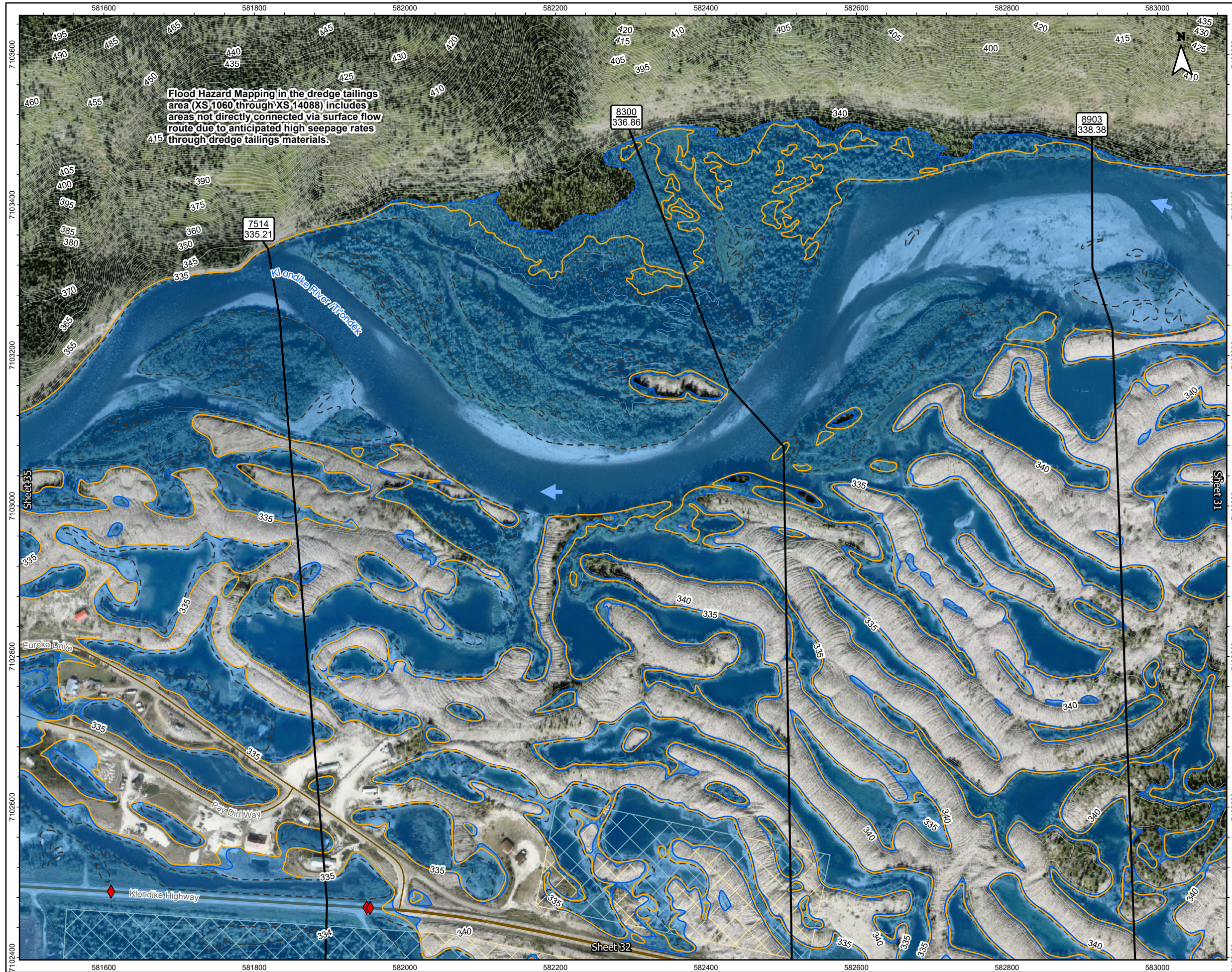


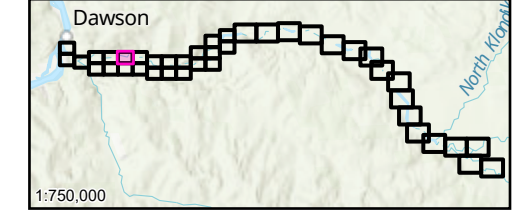
Figure No. **KR-0.5CC-33** Sheet 33 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 0.5% Annual Exceedance Probability (AEP) with Factor of Safety for Climate Change**

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

- HPW Drainage Culverts
- Surveyed Cross-Sections Used in Hydraulic Model
- Cross-Section Number WSE (m) Along Cross-Section
- Tr'ondëk Hwëch'in Settlement Land
- Highway
- Inundation Under Modelled Open Water Runs
- Local Road
- 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

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

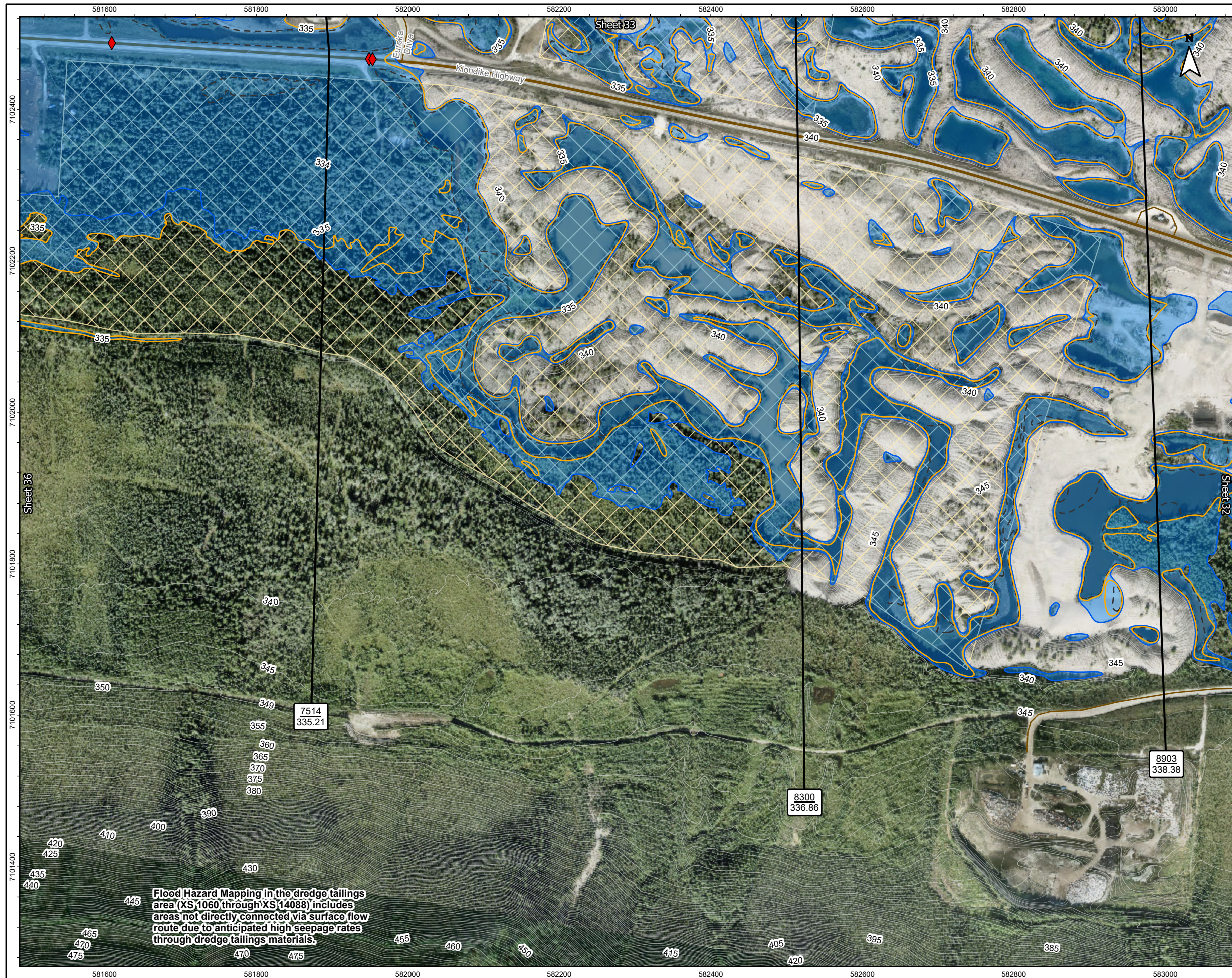


- Notes
1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
 3. Flood hazard extents shown on these maps are based on LIDAR collected in August, 2024 and topographical and bathymetric data that was collected in June and September 2024.
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Flood Hazard Mapping in the dredge tailings area (XS 1060 through XS 14088) includes areas not directly connected via surface flow route due to anticipated high seepage rates through dredge tailings materials.

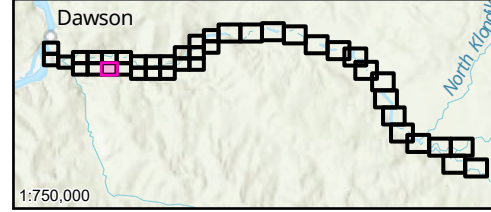
Figure No. **KR-0.5CC-34** Sheet 34 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 0.5% Annual Exceedance Probability (AEP) with Factor of Safety for Climate Change**

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

- HPW Drainage Culverts
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondëk Hwëch'in Settlement Land
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- 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

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

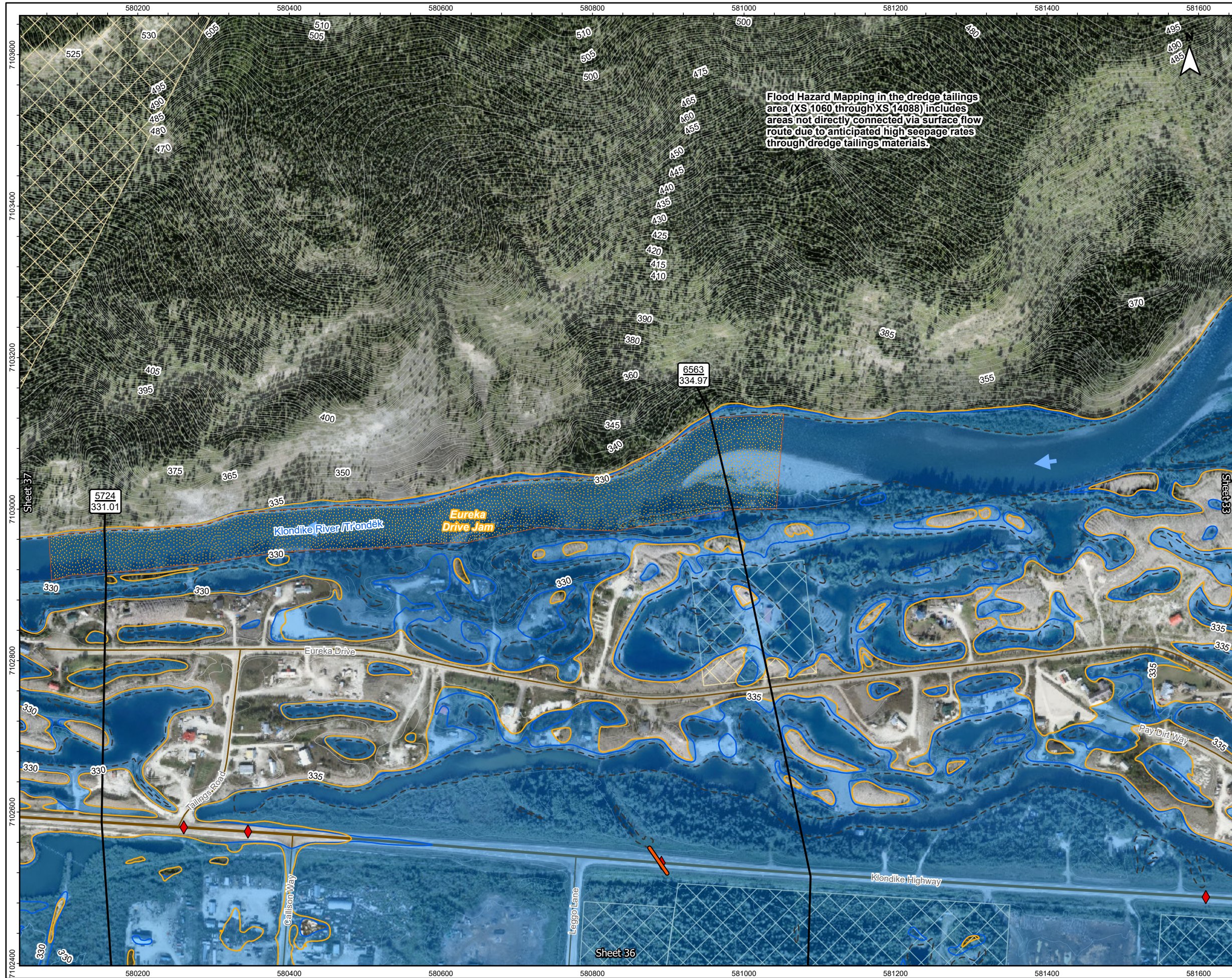


- Notes**
- Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 - Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
 - Flood hazard extents shown on these maps are based on LIDAR collected in August, 2024 and topographical and bathymetric data that was collected in June and September 2024.
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 - 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.

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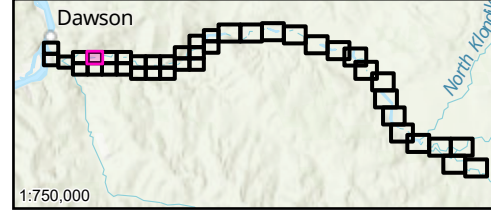


Flood Hazard Mapping in the dredge tailings area (XS 1060 through XS 1408) includes areas not directly connected via surface flow route due to anticipated high seepage rates through dredge tailings materials.

Figure No. **KR-0.5CC-35** Sheet 35 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike 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

- HPW Drainage Culverts
- Tr'ondëk Hwëch'in Settlement Land
- 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
- Surveyed Culvert Location
- Composite Open Water and Ice Jam Inundation Extent
- Highway
- Ice Coverage in Breakup Jam Scenarios
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model

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

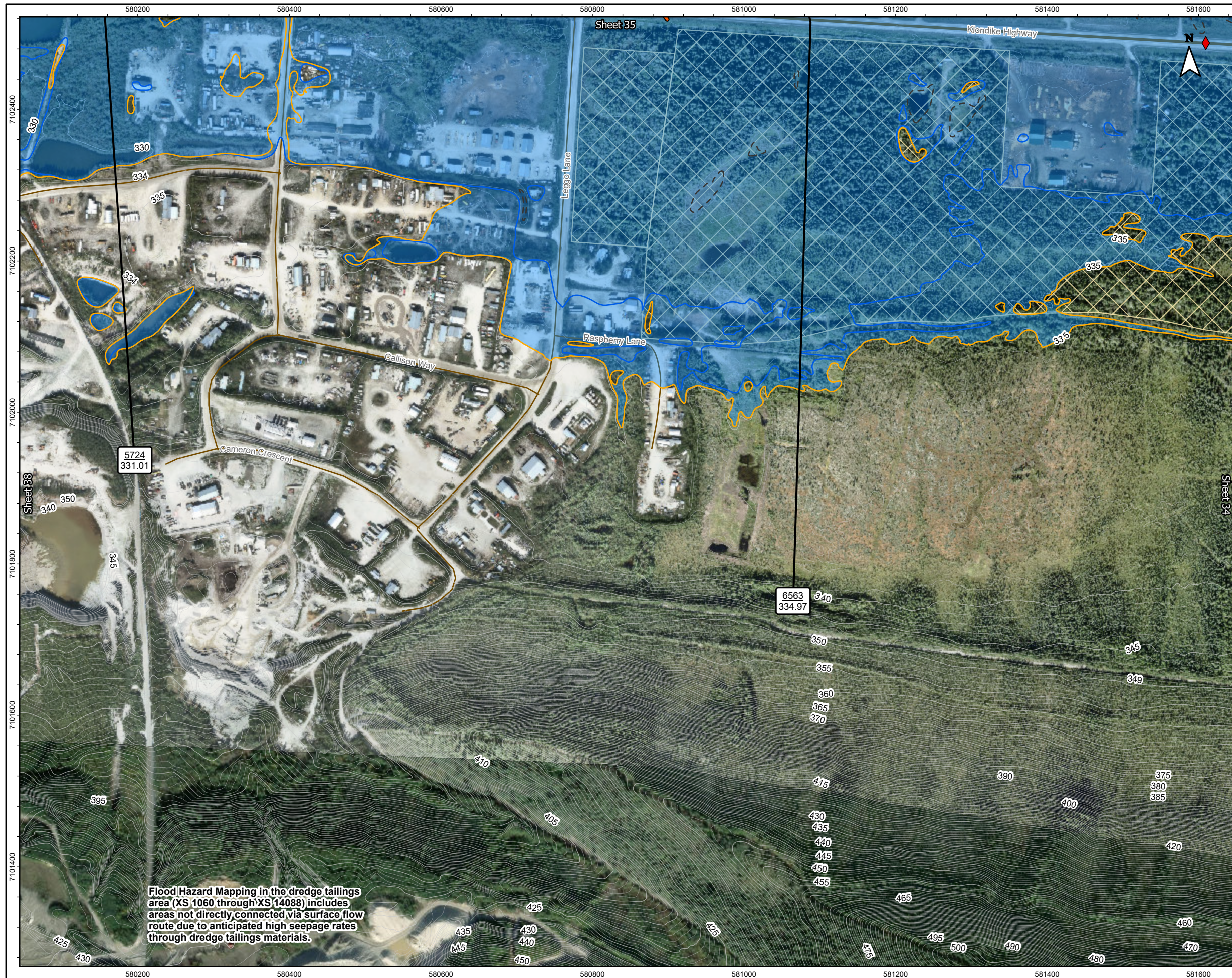


- Notes
1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
 3. Flood hazard extents shown on these maps are based on LIDAR collected in August, 2024 and topographical and bathymetric data that 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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Flood Hazard Mapping in the dredge tailings area (XS 1060 through XS 14088) includes areas not directly connected via surface flow route due to anticipated high seepage rates through dredge tailings materials.

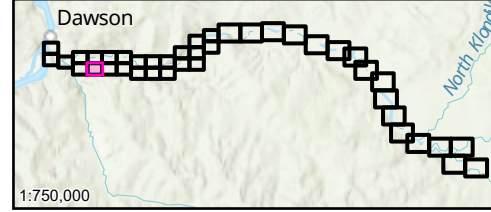
Figure No. **KR-0.5CC-36** Sheet 36 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 0.5% Annual Exceedance Probability (AEP) with Factor of Safety for Climate Change**

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

- HPW Drainage Culverts
- 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 Extent
- Cross-Section Number WSE (m) Along Cross-Section
- Surveyed Culvert Location
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)

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

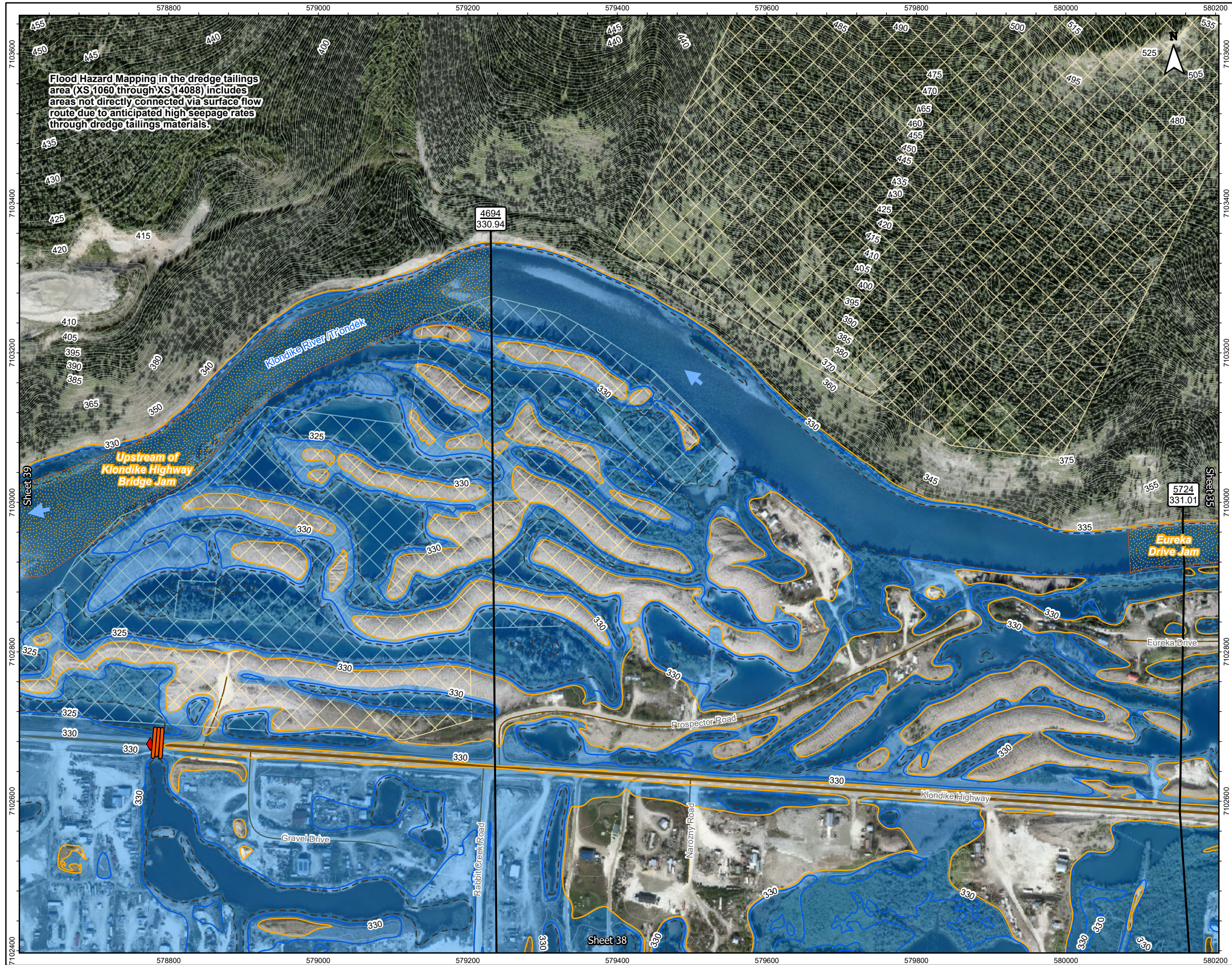


Notes
 1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
 3. Flood hazard extents shown on these maps are based on LIDAR collected in August, 2024 and topographical and bathymetric data that was collected in June and September 2024.
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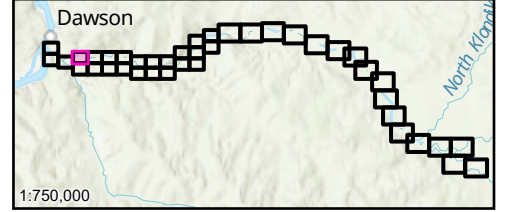
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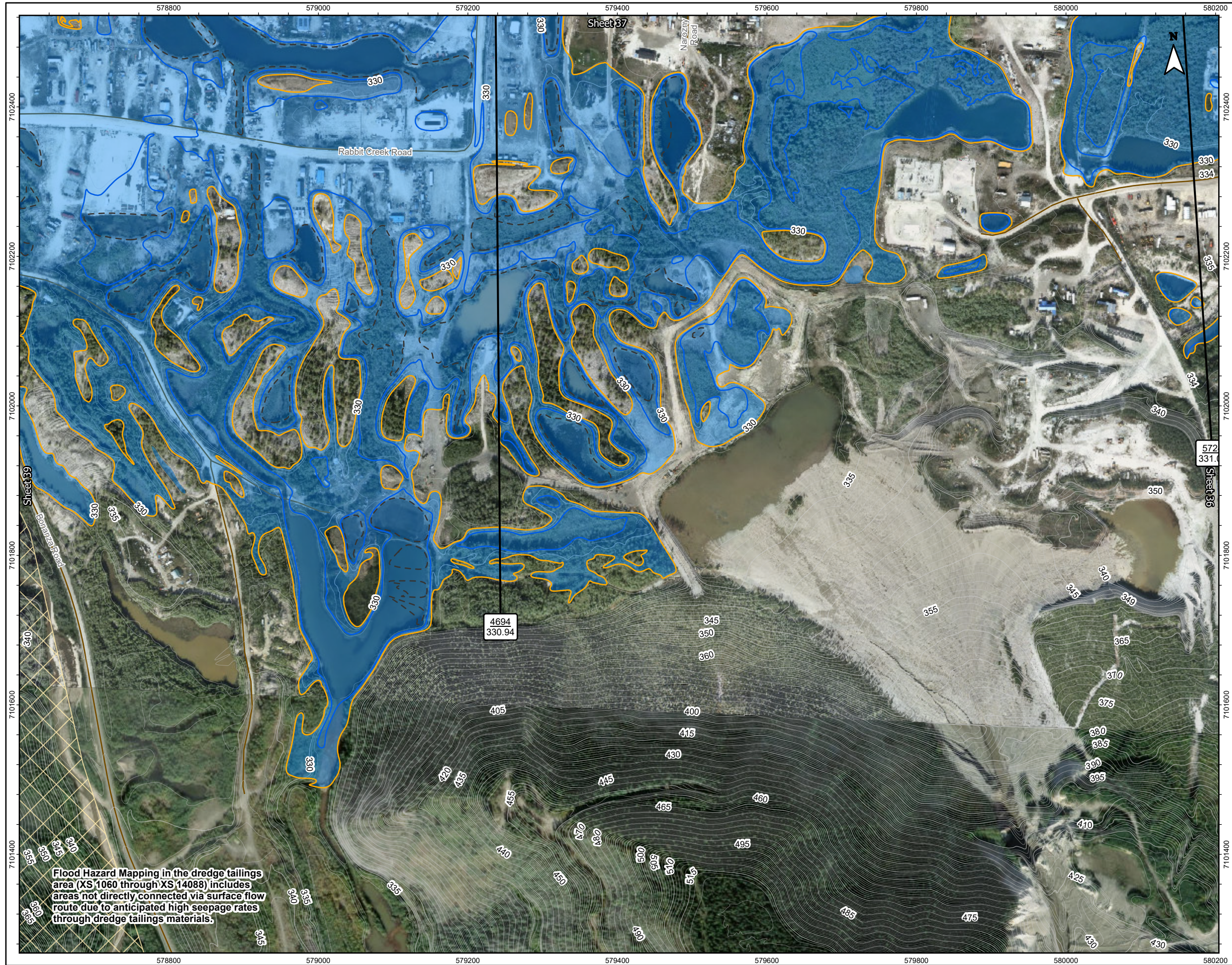
Flood Hazard Mapping in the dredge tailings area (XS 1060 through XS 14088) includes areas not directly connected via surface flow route due to anticipated high seepage rates through dredge tailings materials.

- HPW Drainage Culverts
- Tr'ondëk Hwëch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Surveyed Culvert Location
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- 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
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Flood Hazard Mapping in the dredge tailings area (XS 1060 through XS 14088) includes areas not directly connected via surface flow route due to anticipated high seepage rates through dredge tailings materials.

Figure No. **KR-0.5CC-38** Sheet 38 of 41

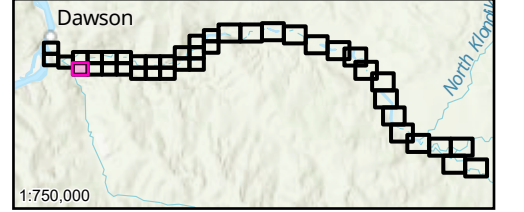
Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 0.5% Annual Exceedance Probability (AEP) with Factor of Safety for Climate Change**

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

Project: 123222713
 Project Location: Dawson, Yukon
 Prepared by JMUIRHEAD 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 Extent

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

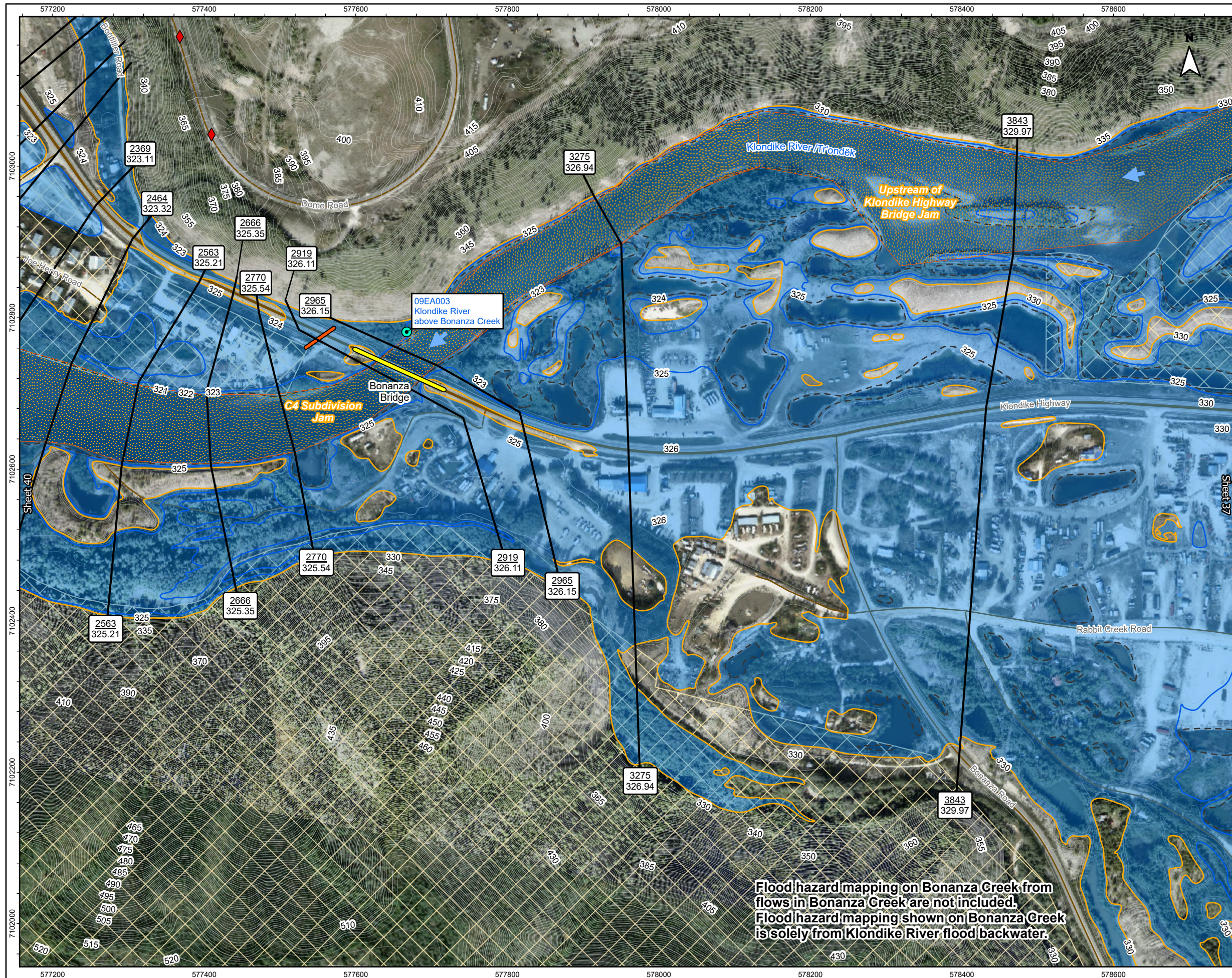


- Notes
1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
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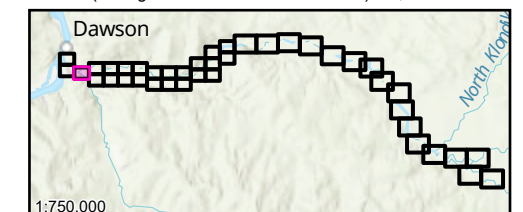
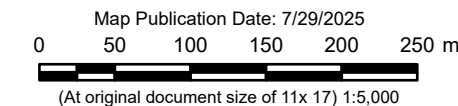


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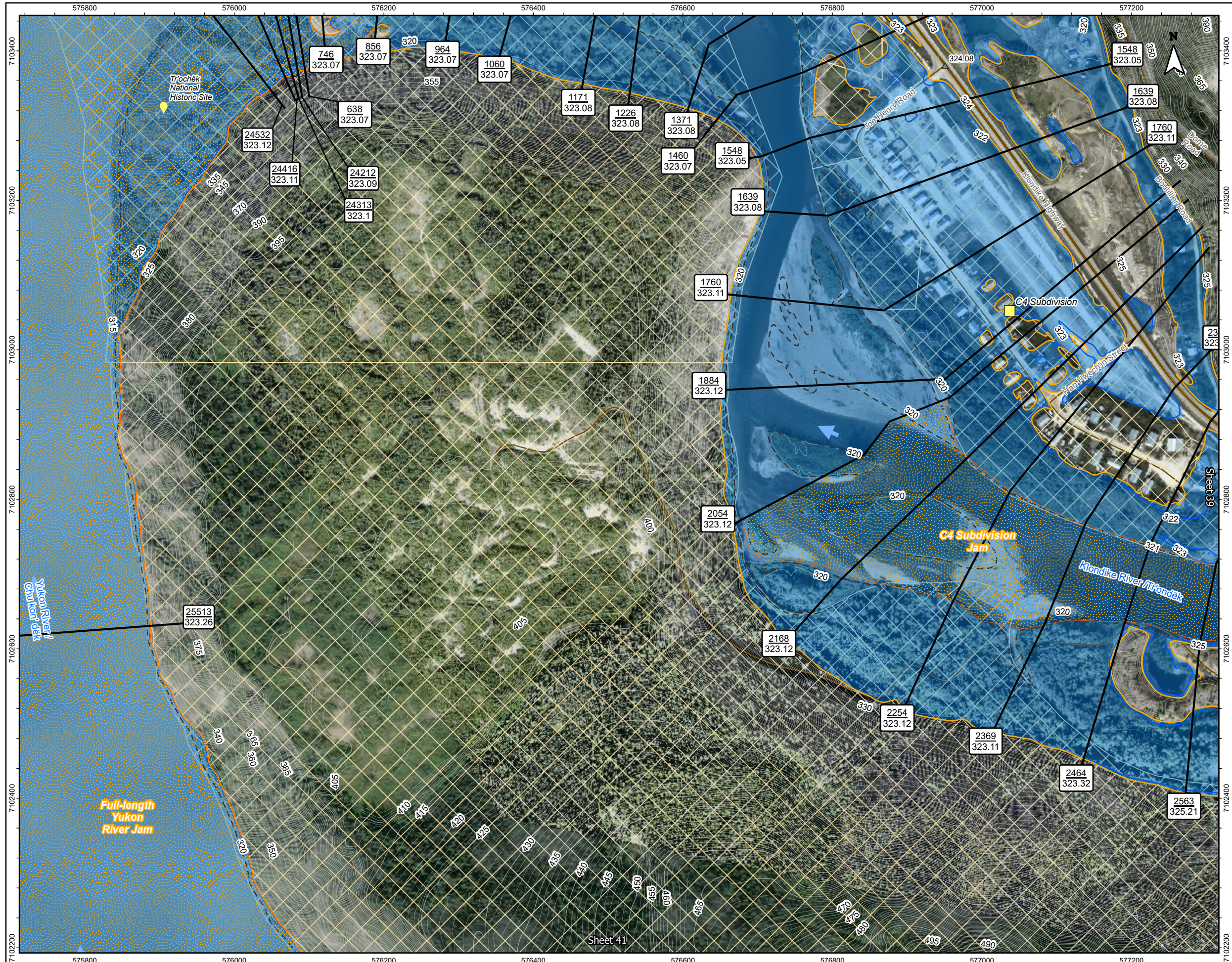
- WSC Stations
- ◆ HPW Drainage Culverts
- 57
517.2 Cross-Section Number WSE (m) Along Cross-Section
- Surveyed Culvert Location
- Bridge
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Tr'ondëk Hwëch'in Settlement Land
- Inundation Under Modelled Open Water Runs
- Inundation Under 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



Notes

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Flood hazard mapping on Bonanza Creek from flows in Bonanza Creek are not included. Flood hazard mapping shown on Bonanza Creek is solely from Klondike River flood backwater.



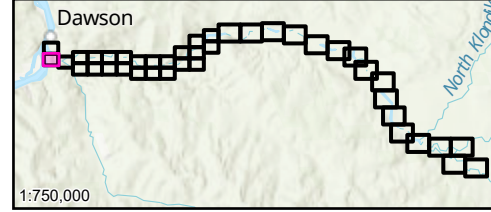
Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
0.5% Annual Exceedance Probability (AEP) with Factor of Safety
for Climate Change**

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
- 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

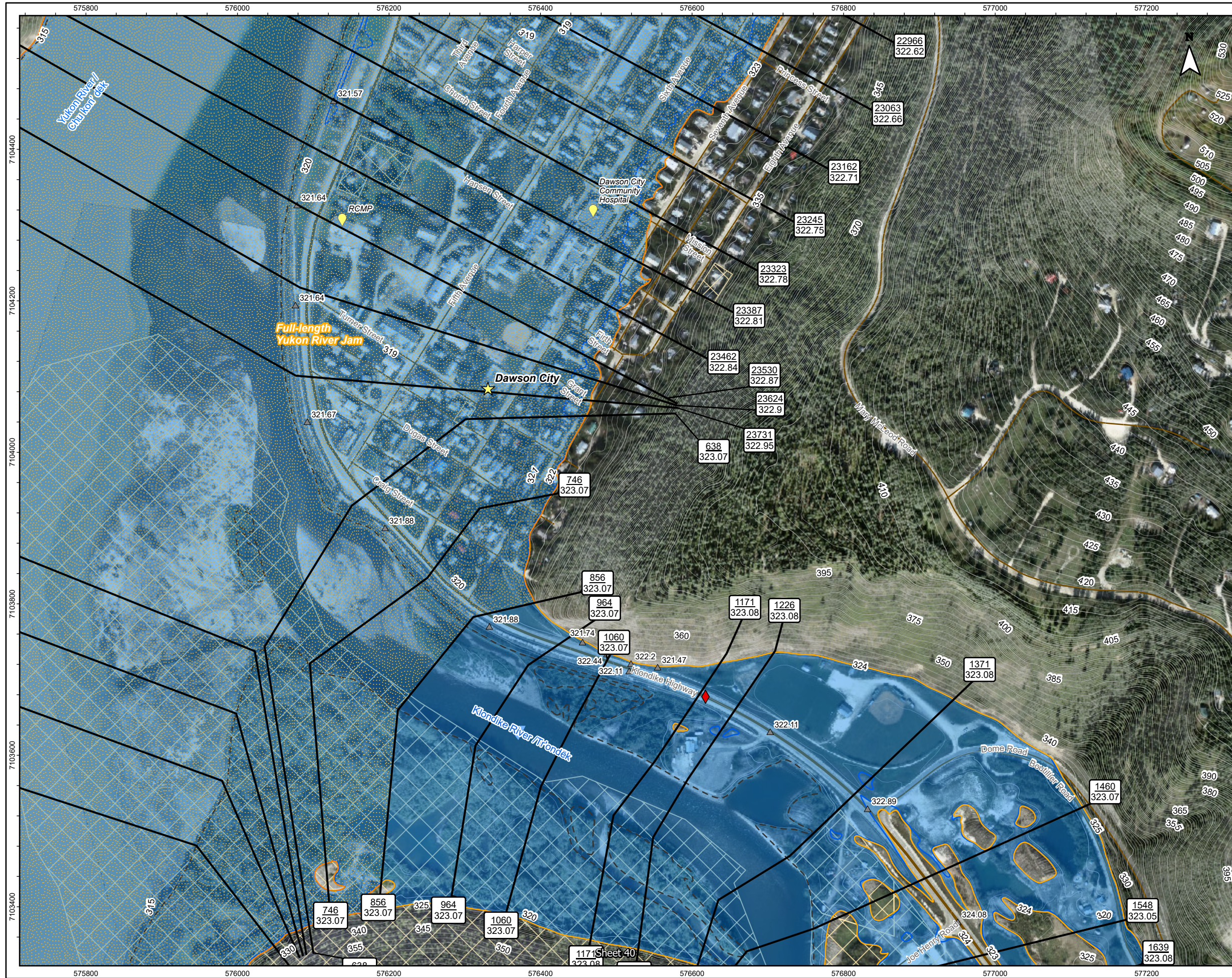
Map Publication Date: 7/29/2025
0 50 100 150 200 250 m
(At original document size of 11x 17) 1:5,000



- 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 August, 2024 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.

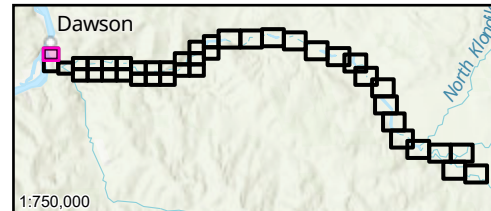
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DRAFT - FOR REVIEW ONLY



- 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
0 50 100 150 200 250 m
(At original document size of 11x 17) 1:5,000



- Notes
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