



Figure No. **KR-5-01** Sheet 01 of 41

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)**

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

Project: 123222713

Project Location: Dawson, Yukon

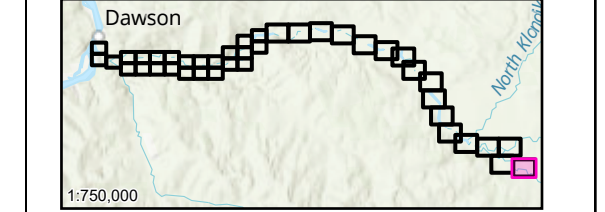
Prepared by MANDERSON on 2026-03-06
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2026-03-06

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

Map Publication Date: 03/06/2026

0 100 200 300 400 m

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



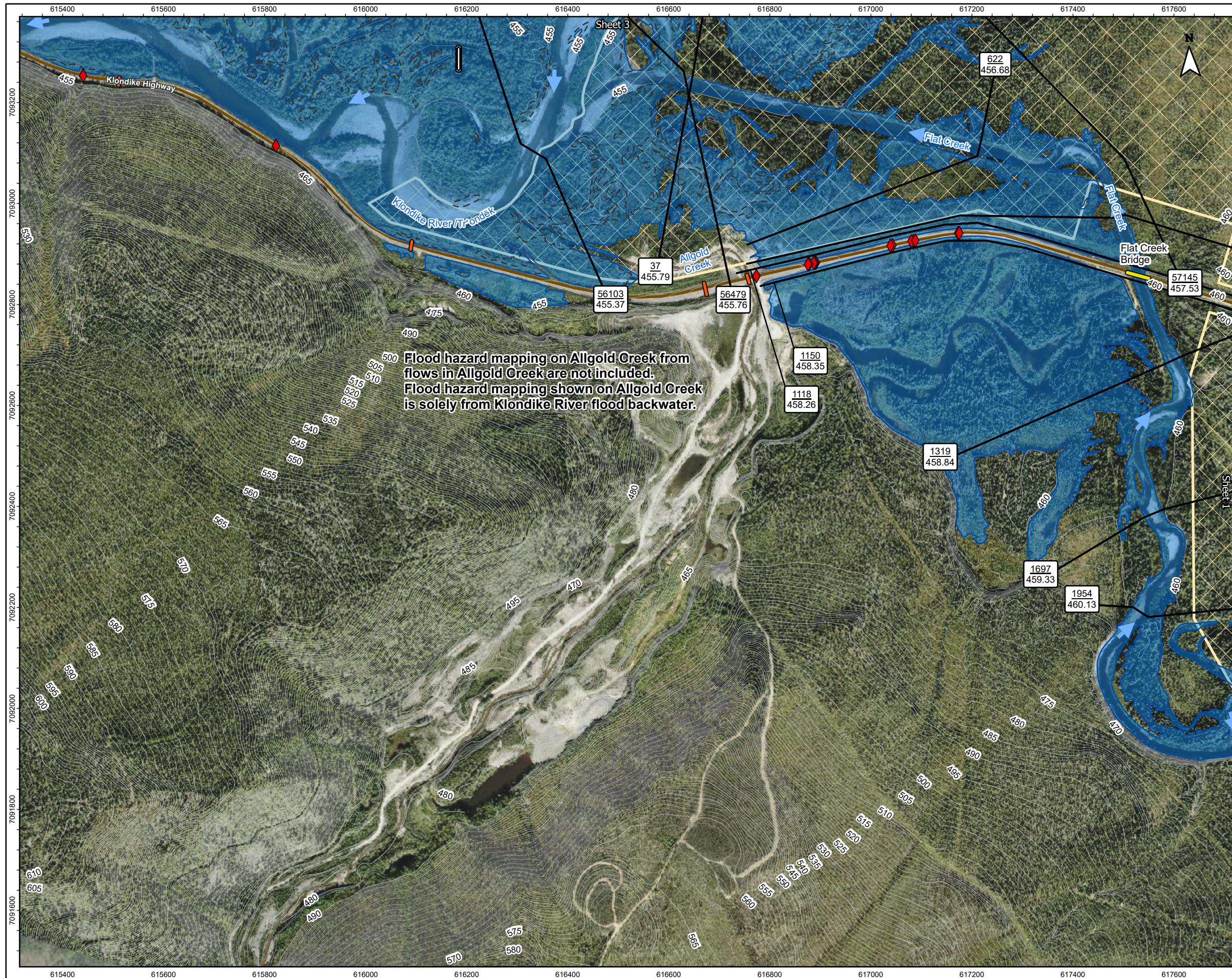
Notes

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



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 Composite Flood Hazard Map - Klondike River
 5% Annual Exceedance Probability (AEP)

Client/Project:
 Government of Yukon
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 Water Resources Branch

Project: 123222713

Project Location: Dawson, Yukon

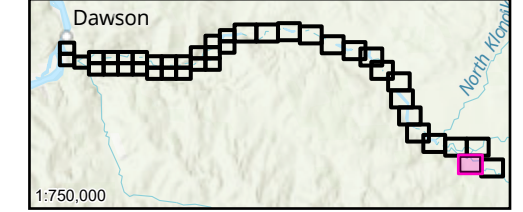
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- | | |
|---|---|
| River Flow Direction | Major Contour (5m) |
| Highway Kilometer Post | Minor Contour (1m) |
| Cross-Section Number
WSE (m) Along Cross-Section | Surveyed Cross-Sections
Used in Hydraulic Model |
| Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach
Scenario) | Tr'ondëk Hwëch'in Settlement
Land |
| HPW Drainage Culverts | Approximate 50% AEP Open
Water Flood Inundation |
| Surveyed Culvert Location | Inundation Under Modelled
Open Water Runs |
| Bridge | Inundation Under Modelled
Breakup Ice Jam Runs |
| Highway | Composite Open Water and
Ice Jam Inundation Extent |

Map Publication Date: 03/06/2026

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Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)

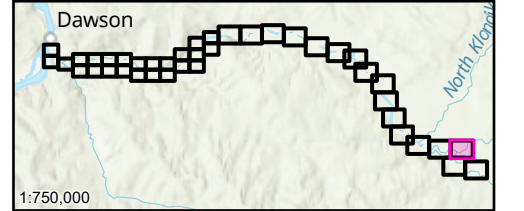
Client/Project:
 Government of Yukon
 Department of Environment
 Water Resources Branch

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
- Limit of Flood Hazard Mapping
- Tr'ondëk Hwëch'in Settlement Land
- Cross-Section Number
WSE (m) Along Cross-Section
- Approximate 50% AEP Open Water Flood Inundation
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario)
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Composite Open Water and Ice Jam Inundation Extent
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model

Map Publication Date: 03/06/2026
 0 100 200 300 400 m
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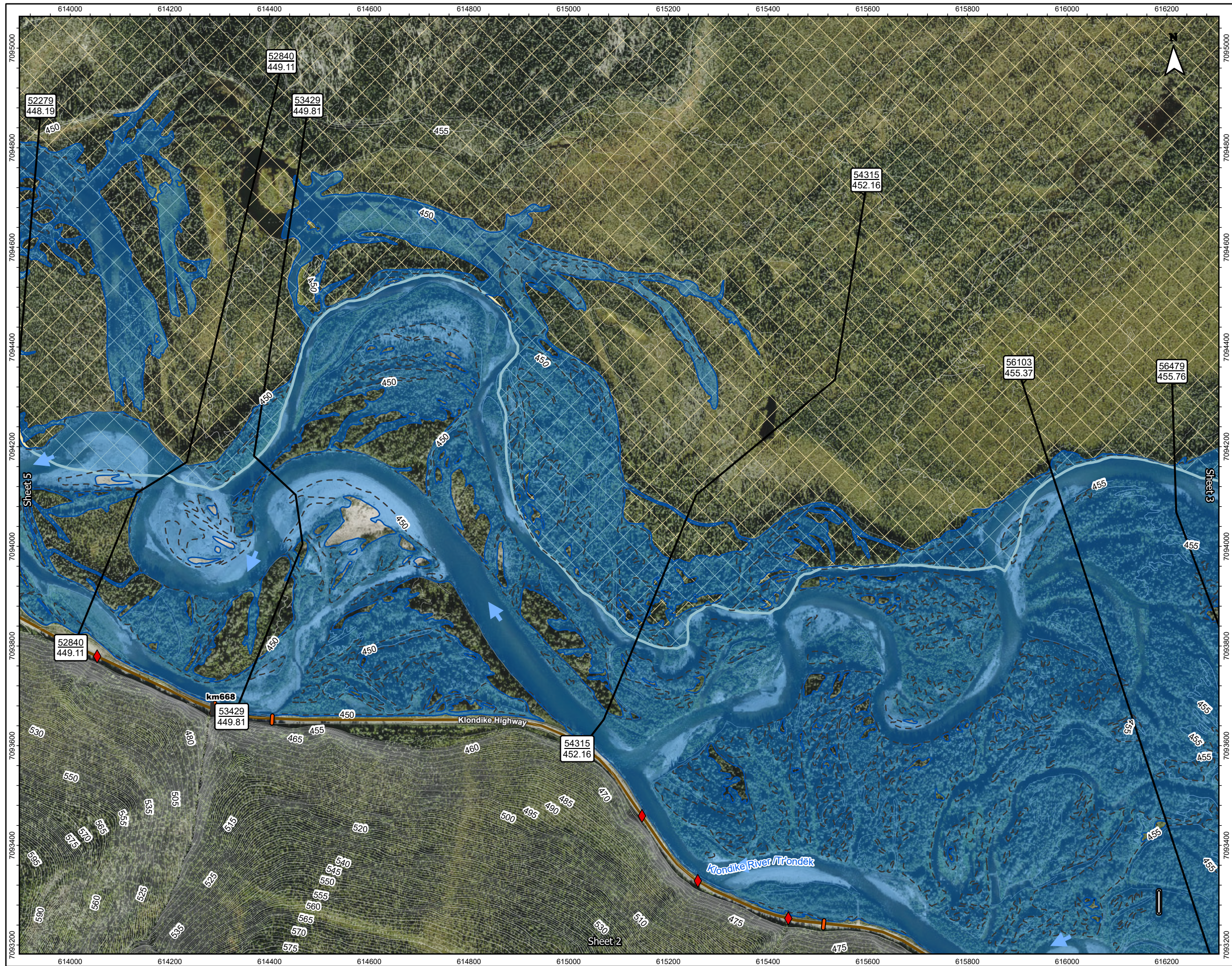


Figure No. **KR-5-04** Sheet 04 of 41

Title: **Dawson City and Klondike Valley Flood Mapping Study
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Department of Environment
Water Resources Branch

Project: 123222713

Project Location: Dawson, Yukon

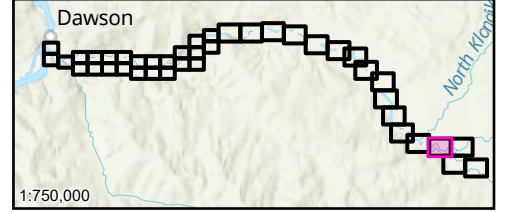
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- River Flow Direction
- Highway Kilometer Post
- Cross-Section Number
WSE (m) Along Cross-Section
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario)
- HPW Drainage Culverts
- Surveyed Culvert Location
- Highway
- Major 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 Scenario)
- Inundation Under Modelled
Open Water Runs
- Inundation Under Modelled
Breakup Ice Jam Runs
- Composite Open Water and
Ice Jam Inundation Extent

Map Publication Date: 03/06/2026

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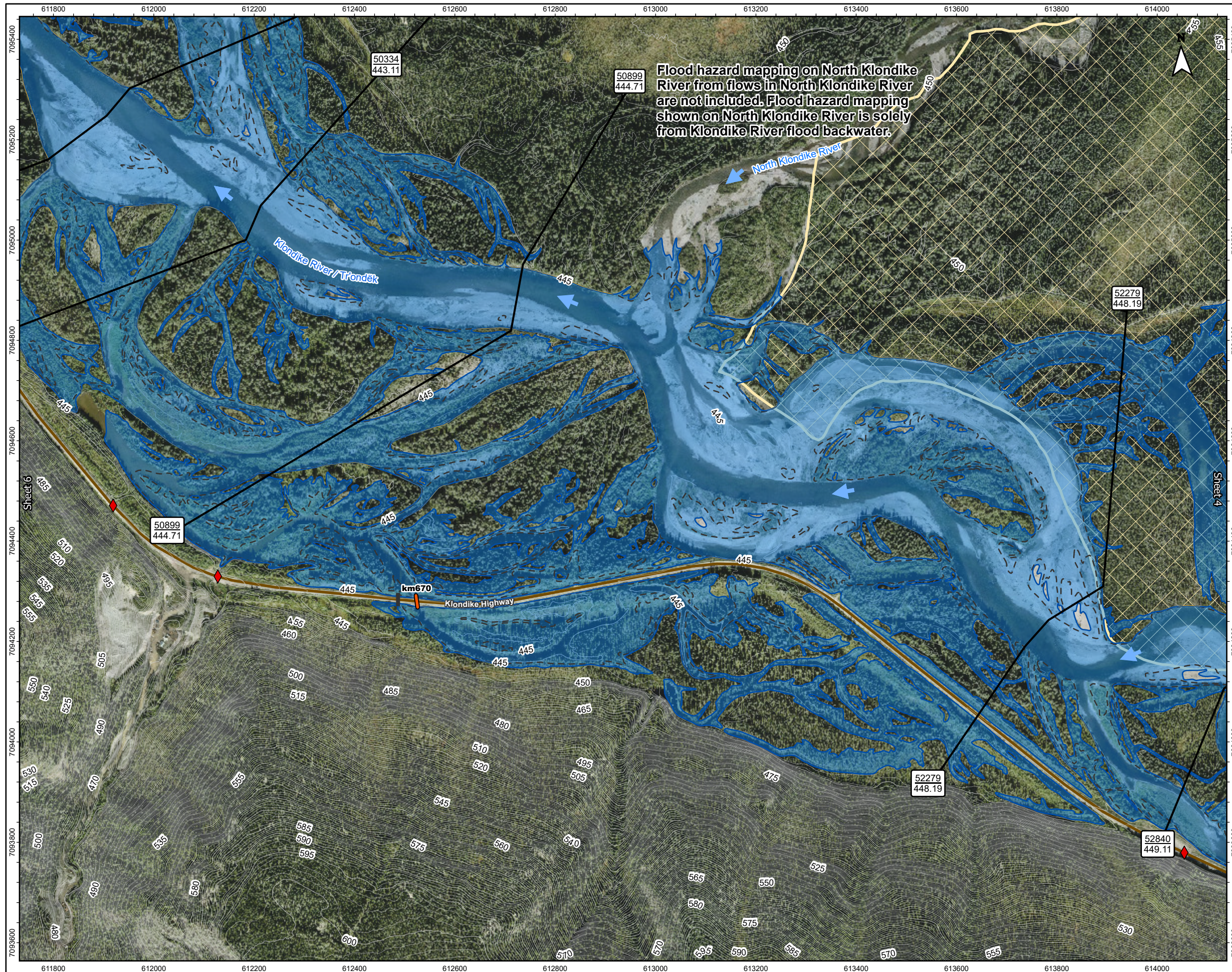


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Composite Flood Hazard Map - Klondike River
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Government of Yukon
Department of Environment
Water Resources Branch

Project: 123222713

Project Location: Dawson, Yukon

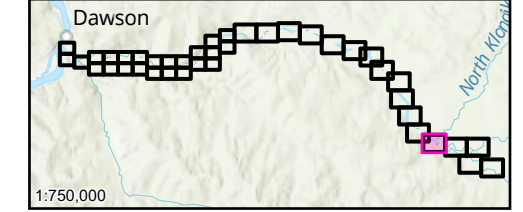
Prepared by MANDERSON on 2026-03-06
Requested by JMUIRHEAD on 2024-03-30
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- River Flow Direction
- Major Contour (5m)
- Minor Contour (1m)
- Highway Kilometer Post
- Cross-Section Number
- WSE (m) Along Cross-Section
- Cross-Section Number
- WSE (m) Along Cross-Section
- HPW Drainage Culverts
- Surveyed Culvert Location
- Highway
- 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 Extent

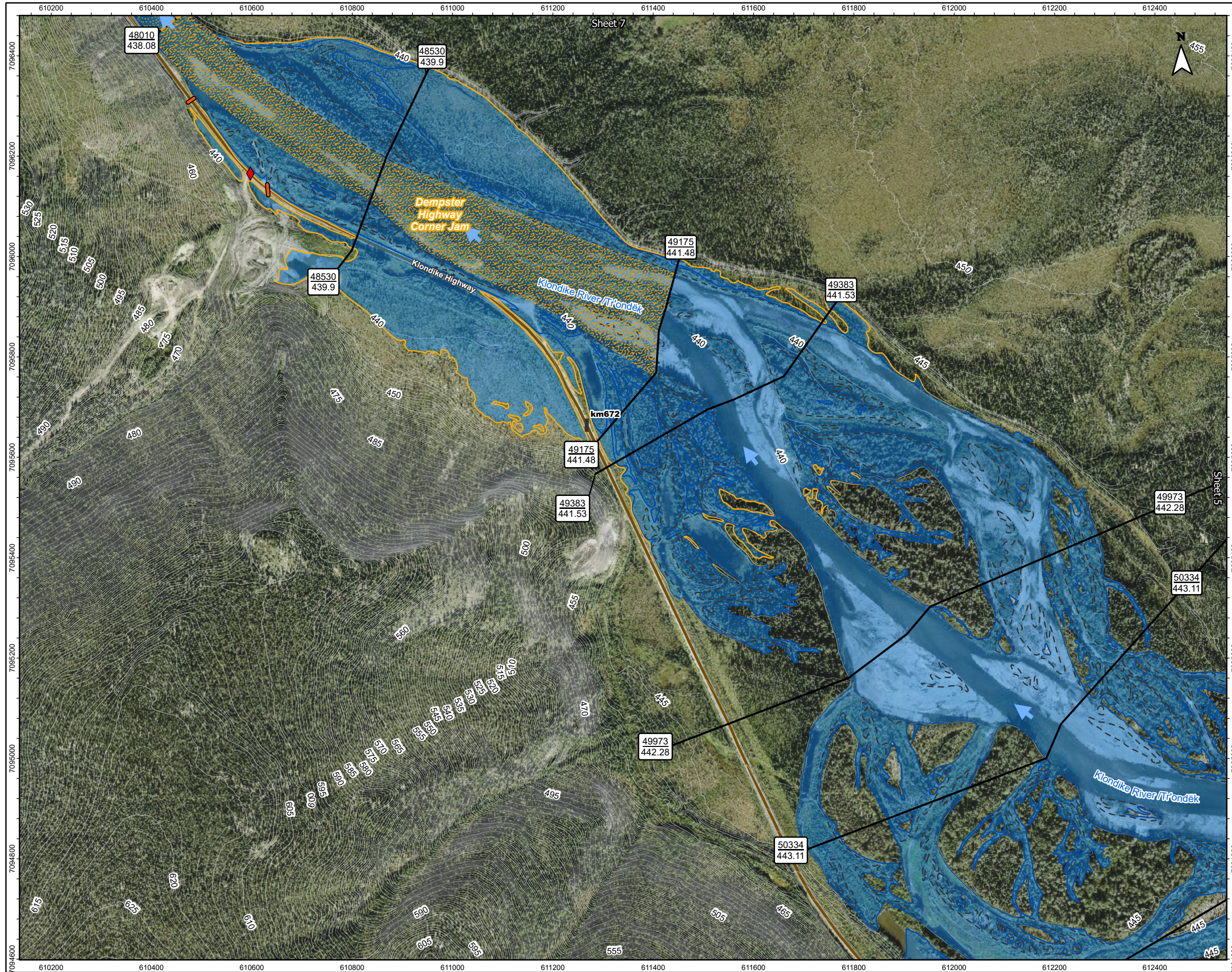
Map Publication Date: 03/06/2026

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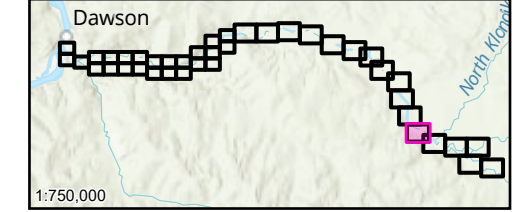
Client/Project:
Government of Yukon
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Water Resources Branch

Project: 123222713

Project Location: Dawson, Yukon
Prepared by MANDERSON on 2026-03-06
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- | | |
|--|--|
| River Flow Direction | Minor Contour (1m) |
| Highway Kilometer Post | Surveyed Cross-Sections Used in Hydraulic Model |
| Cross-Section Number
WSE (m) Along Cross-Section | Toe of Ice Jam |
| Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario) | Approximate 50% AEP Open Water Flood Inundation |
| HPW Drainage Culverts | Inundation Under Modelled Open Water Runs |
| Surveyed Culvert Location | Inundation Under Modelled Breakup Ice Jam Runs |
| Highway | Composite Open Water and Ice Jam Inundation Extent |
| Major Contour (5m) | Potential Presence of Ice Debris During Jam Scenario |
| | Ice Jamming Extents |

Map Publication Date: 03/06/2026
0 100 200 300 400 m
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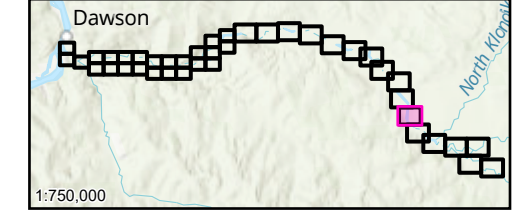
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- River Flow Direction
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- Cross-Section Number
WSE (m) Along Cross-Section
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario)
- Surveyed Culvert Location
- Bridge
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Toe of Ice Jam
- Tr'ondëk Hwëch'in Settlement Land
- Approximate 50% AEP Open Water Flood Inundation
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Map Publication Date: 03/06/2026

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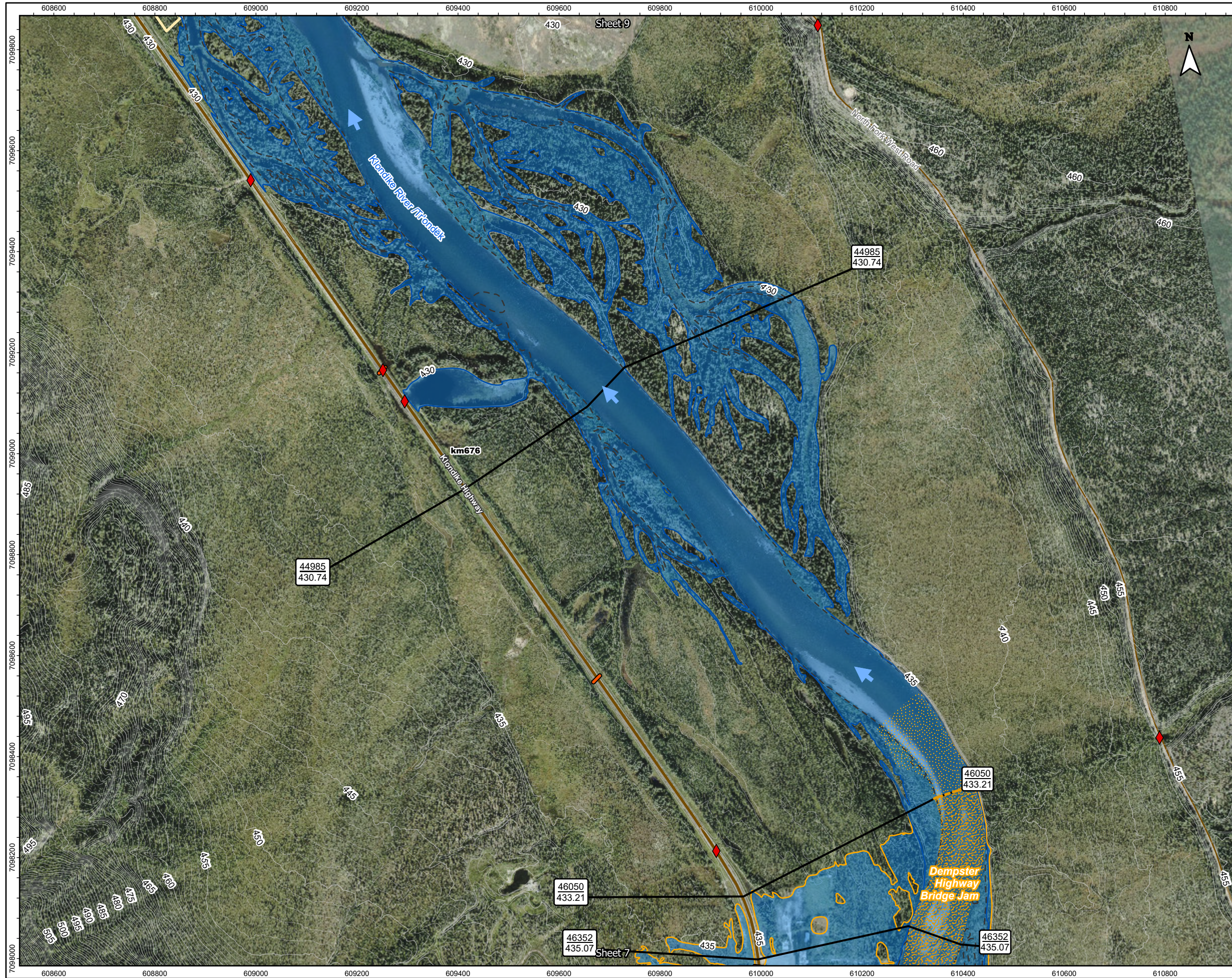


Figure No. **KR-5-08** Sheet 08 of 41

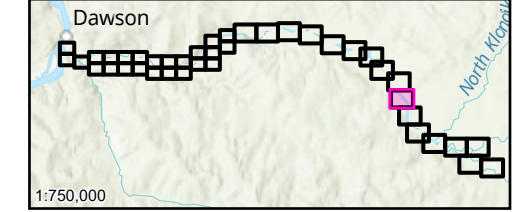
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5% Annual Exceedance Probability (AEP)**

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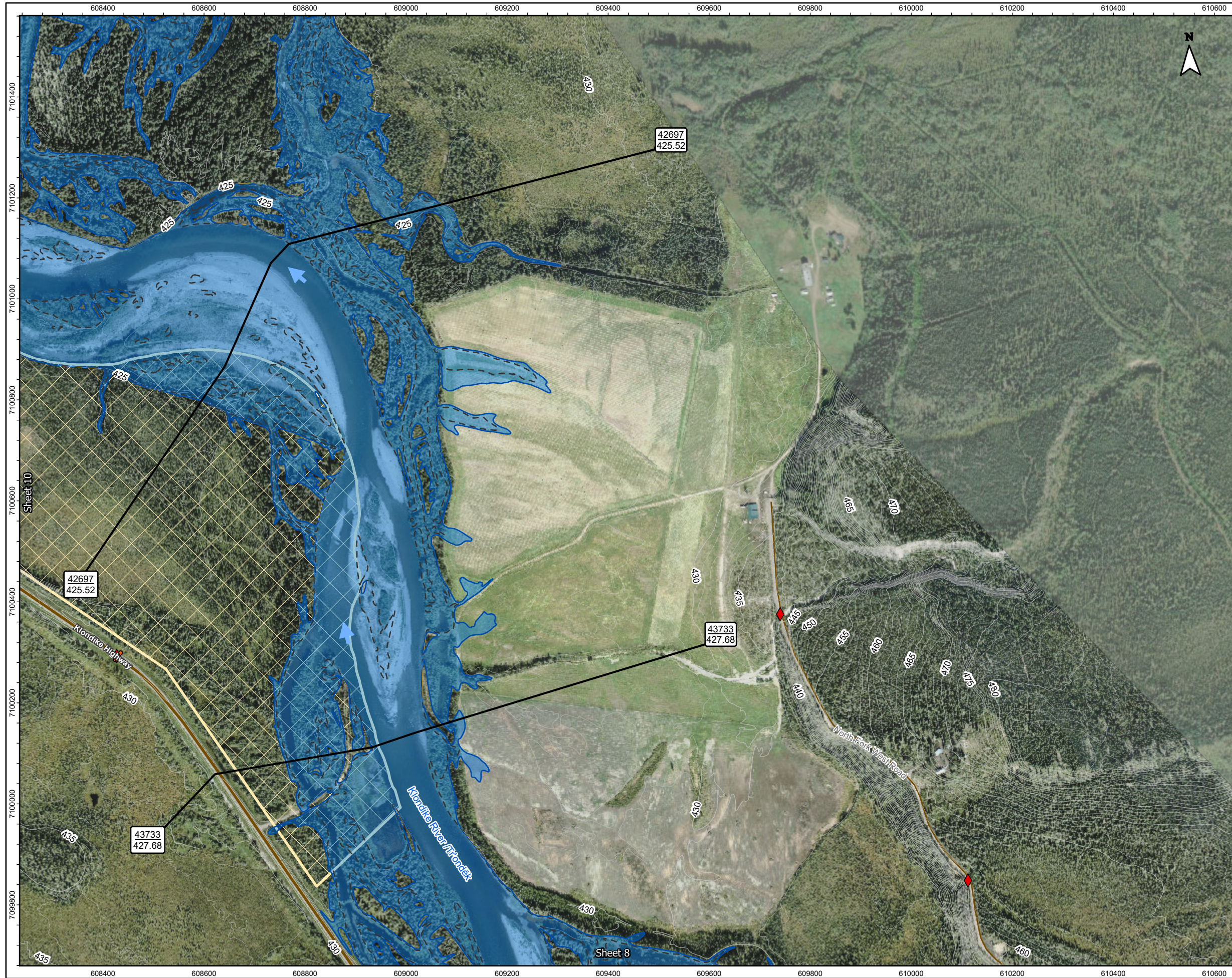
Project: 123222713
Project Location: Dawson, Yukon
Prepared by MANDERSON on 2026-03-06
Requested by JMUIRHEAD on 2024-03-30
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- River Flow Direction
- Surveyed Cross-Sections Used in Hydraulic Model
- Toe of Ice Jam
- Highway Kilometer Post
- Tr'ondëk Hwëch'in Settlement Land
- Cross-Section Number
WSE (m) Along Cross-Section
- Approximate 50% AEP Open Water Flood Inundation
- Inundation Under Modelled Open Water Runs
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario)
- Inundation Under Modelled Breakup Ice Jam Runs
- Composite Open Water and Ice Jam Inundation Extent
- HPW Drainage Culverts
- Surveyed Culvert Location
- Potential Presence of Ice Debris During Jam Scenario
- Ice Jamming Extents
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)

Map Publication Date: 03/06/2026
0 100 200 300 400 m
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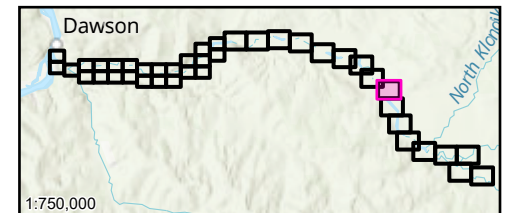
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Project: 123222713

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- | | |
|---|---|
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| Highway Kilometer Post | Minor Contour (1m) |
| Cross-Section Number
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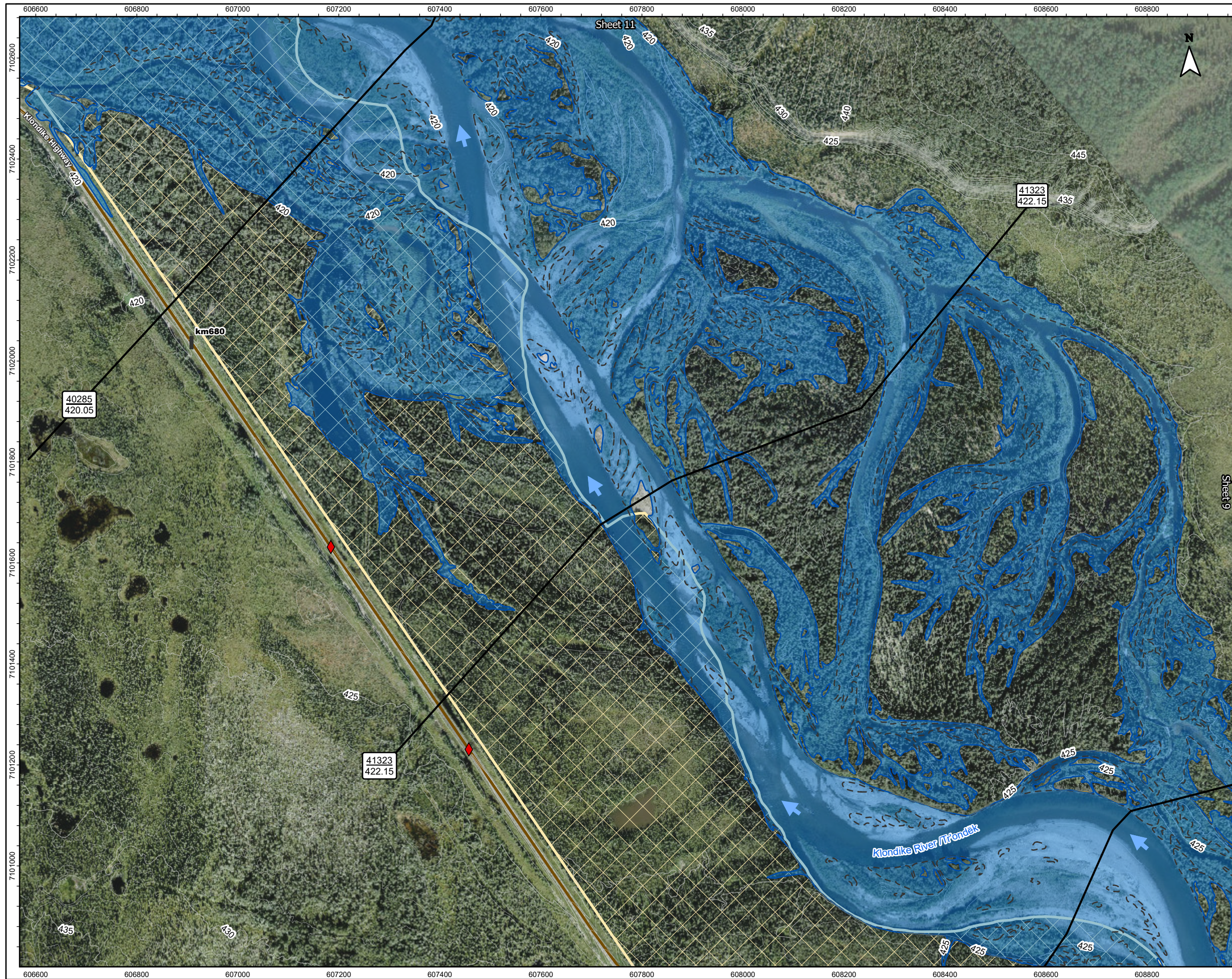


Figure No. **KR-5-10** Sheet 10 of 41

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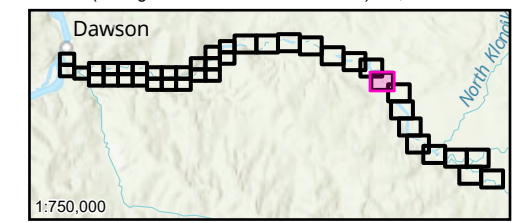
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Project: 123222713

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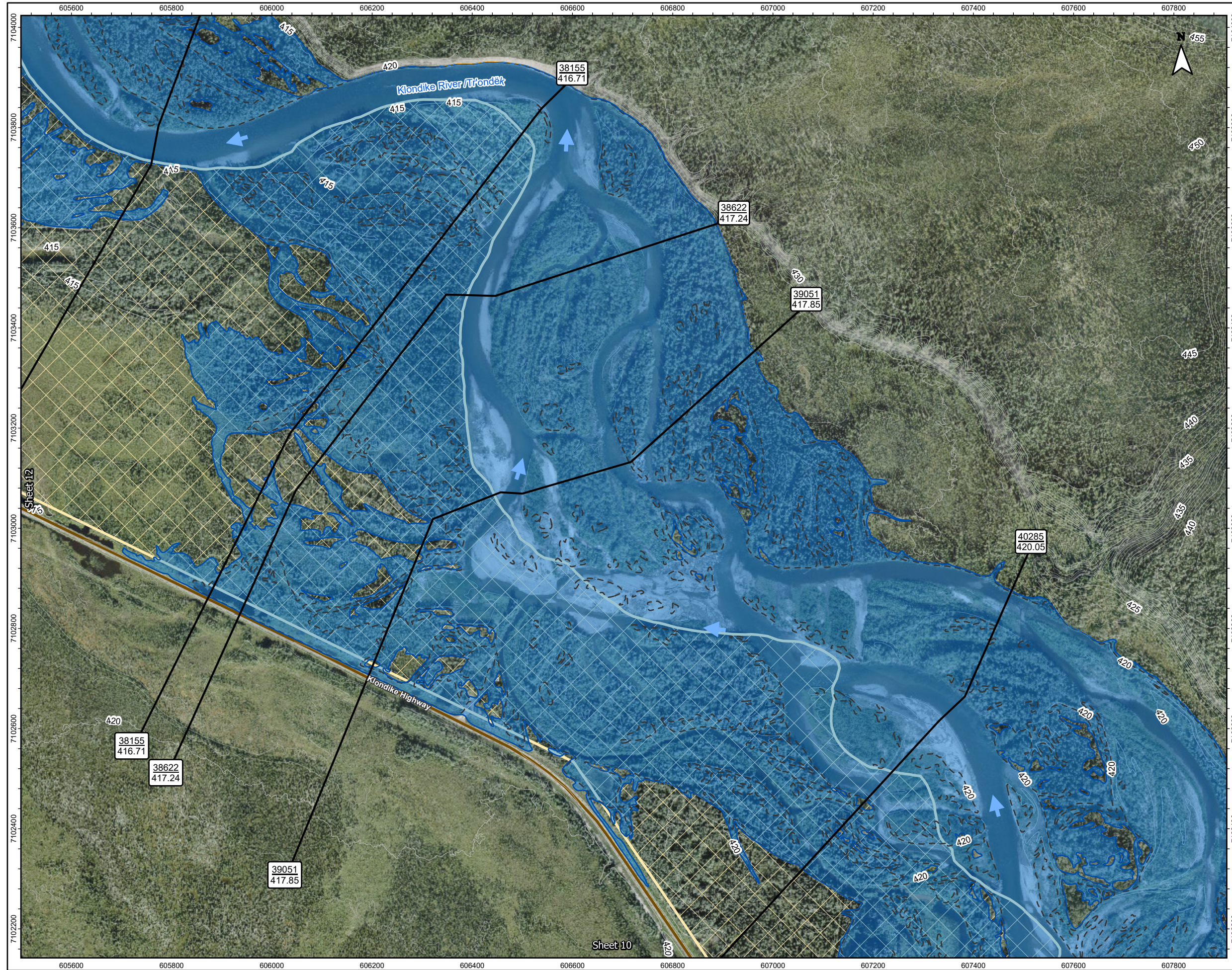
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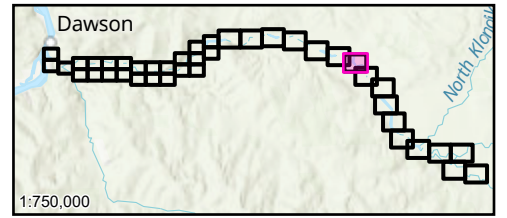
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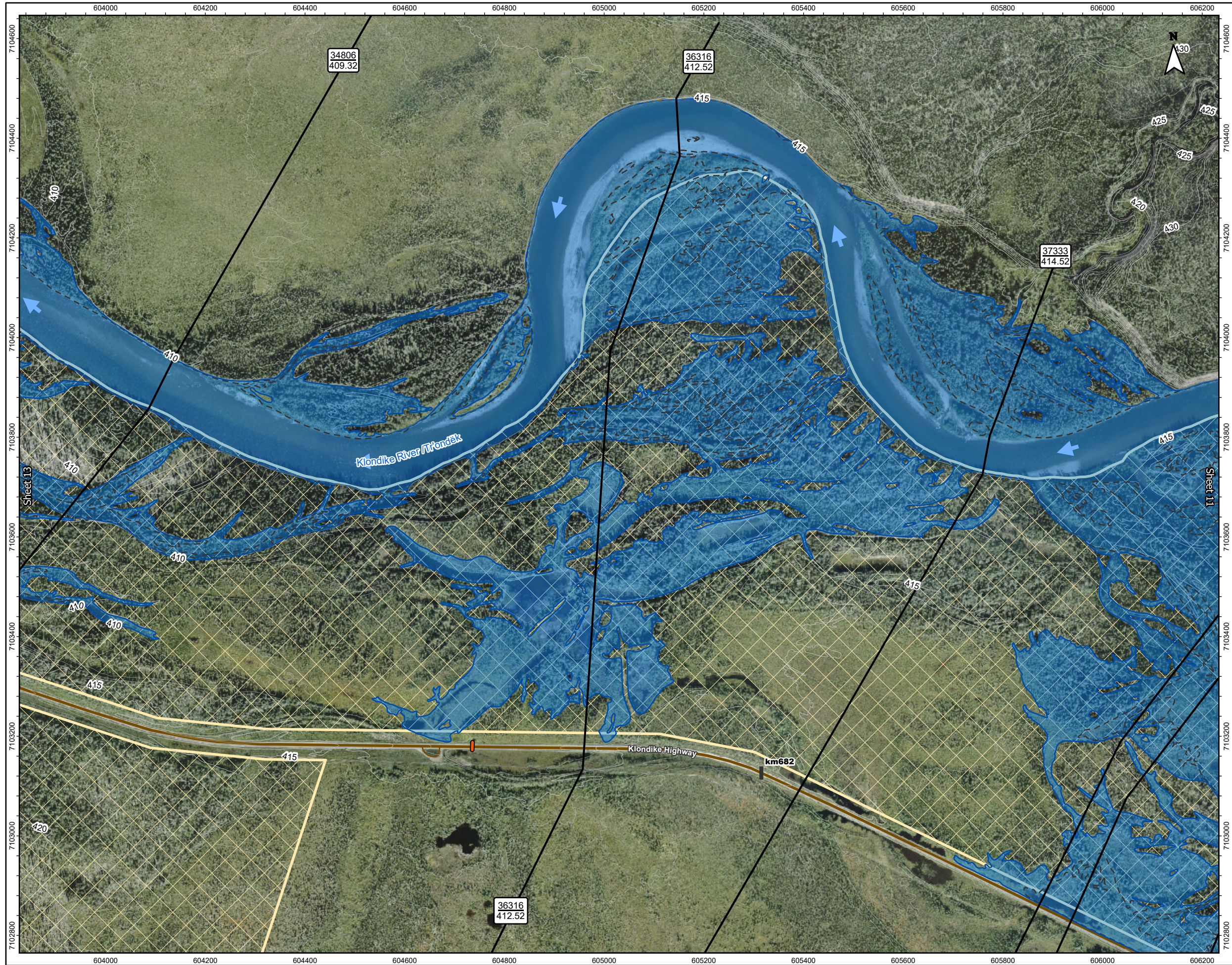
Project Location: Dawson, Yukon
Prepared by MANDERSON on 2026-03-06
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- Tr'ondëk Hwëch'in Settlement Land
- Highway Kilometer Post
- Approximate 50% AEP Open Water Flood Inundation
- Cross-Section Number
WSE (m) Along Cross-Section
- Inundation Under Modelled Open Water Runs
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Break Scenario)
- Inundation Under Modelled Breakup Ice Jam Runs
- Composite Open Water and Ice Jam Inundation Extent
- Highway
- Major Contour (5m)
- Minor Contour (1m)

Map Publication Date: 03/06/2026
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
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Title: Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)

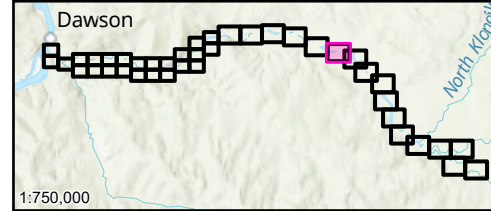
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

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
- Highway Kilometer Post
- Cross-Section Number
WSE (m) Along Cross-Section
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario)
- HPW Drainage Culverts
- Surveyed Culvert Location
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections
Used in Hydraulic Model
- T'ondék 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 Extent

Map Publication Date: 03/06/2026
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(At original document size of 11x 17) 1:7,500



- Notes**
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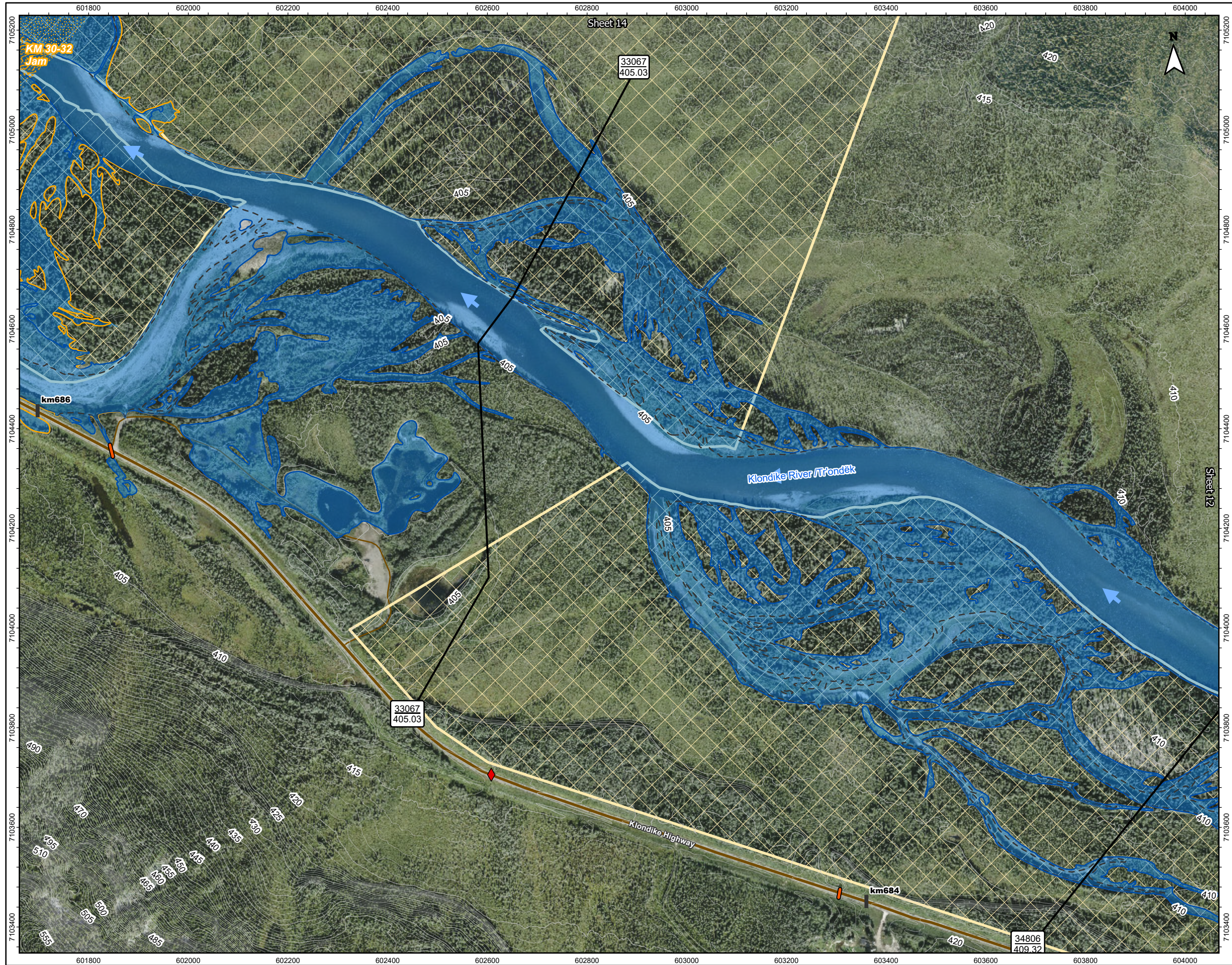


Figure No. **KR-5-13** Sheet 13 of 41

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)**

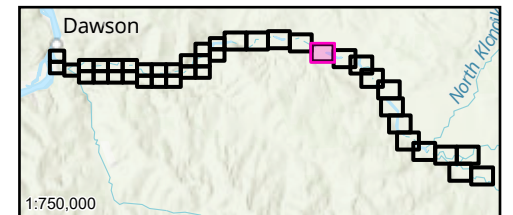
Client/Project:
**Government of Yukon
Department of Environment
Water Resources Branch**

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

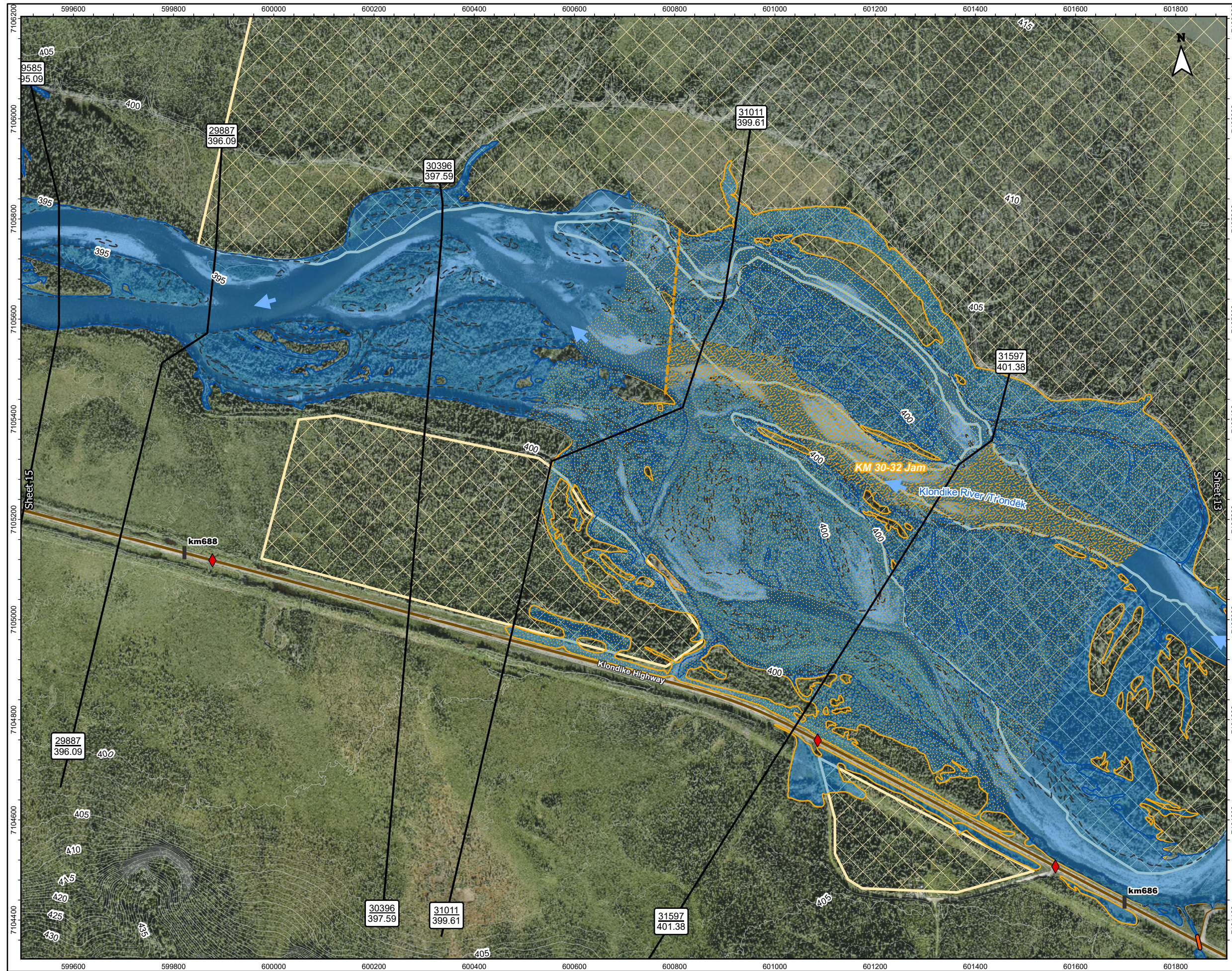
- River Flow Direction
- Highway Kilometer Post
- Cross-Section Number 57, WSE (m) Along Cross-Section 517.2
- Cross-Section Number 22140, WSE (m) Along Cross-Section 320.26, WSE in Dike Breach Scenario (WSE in Dike Breach Scenario) 620.04
- HPW Drainage Culverts
- Surveyed Culvert Location
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondëk Hwëch'in Settlement Land
- 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 Extent
- Potential Presence of Ice Debris During Jam Scenario
- Ice Jamming Extents

Map Publication Date: 03/06/2026
0 100 200 300 400 m
(At original document size of 11x 17) 1:7,500



- Notes**
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Title: Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)

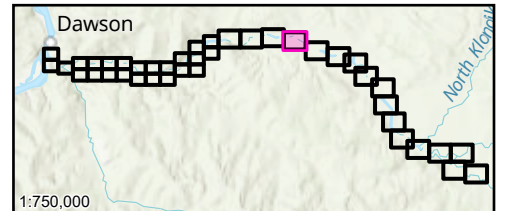
Client/Project:
 Government of Yukon
 Department of Environment
 Water Resources Branch

Project: 123222713

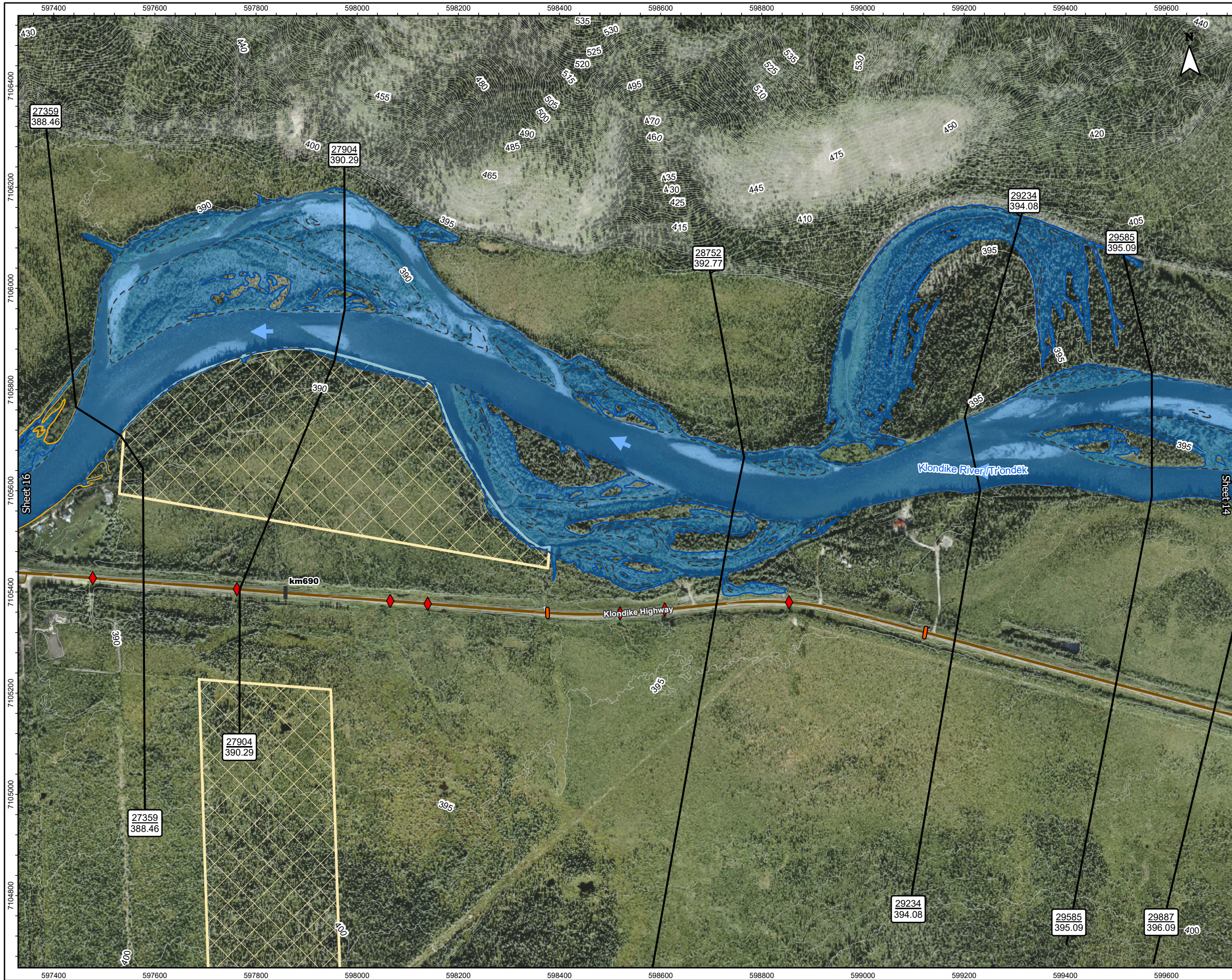
Project Location: Dawson, Yukon
 Prepared by MANDERSON on 2026-03-06
 Requested by JMUIRHEAD on 2024-03-30
 Review by JMUIRHEAD on 2026-03-06

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

Map Publication Date: 03/06/2026
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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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Title: Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)

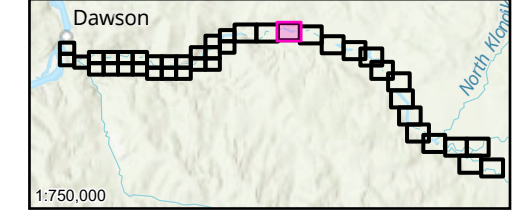
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

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

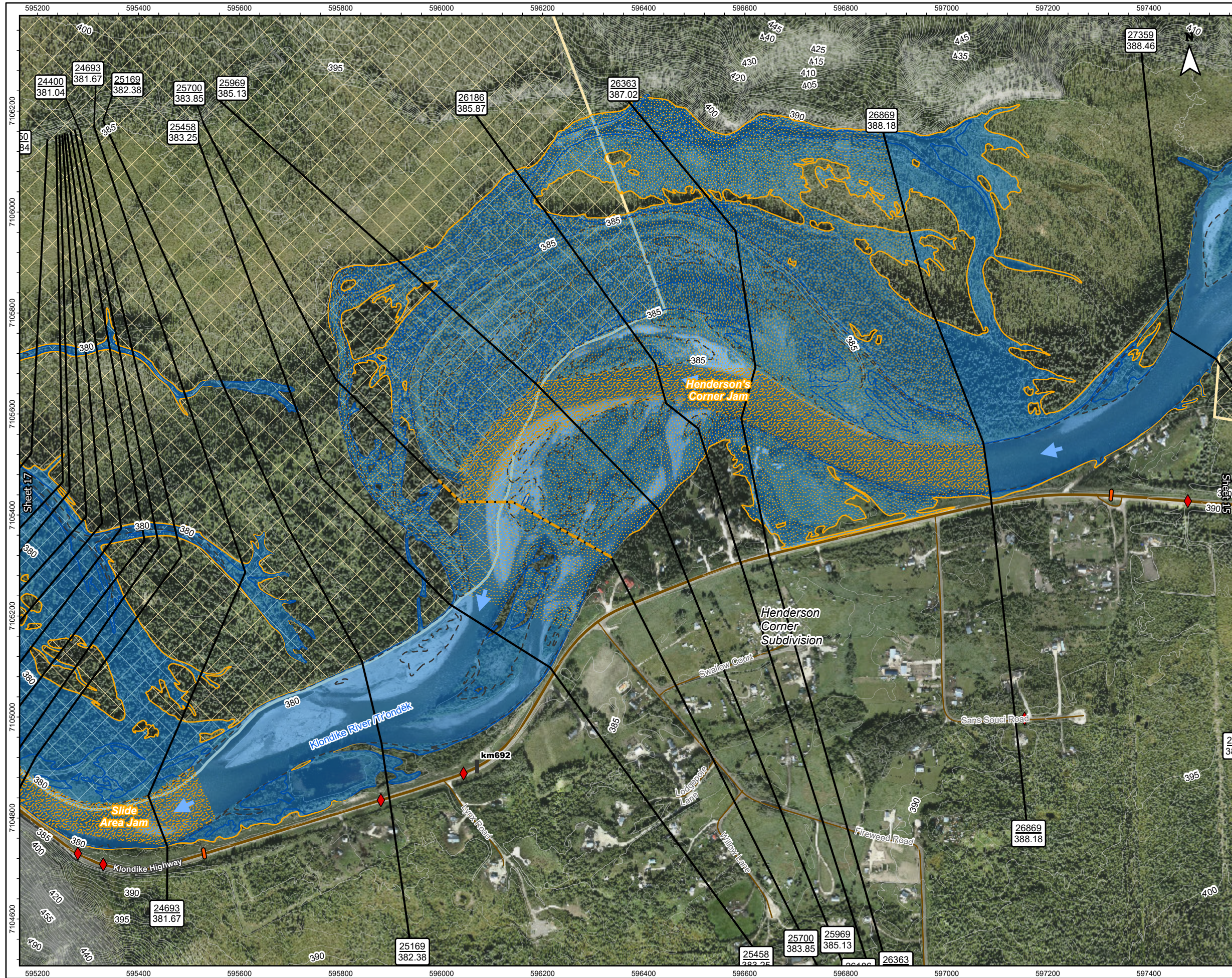
- River Flow Direction
- Highway Kilometer Post
- Cross-Section Number
WSE (m) Along Cross-Section
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario)
- HPW Drainage Culverts
- Surveyed Culvert Location
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed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

Map Publication Date: 03/06/2026
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(At original document size of 11x 17) 1:7,500



Notes

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Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)**

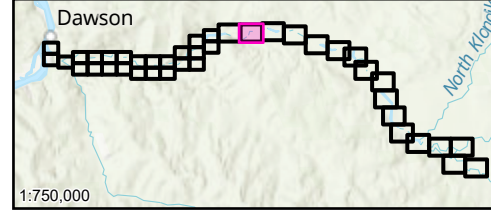
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

Project: 123222713

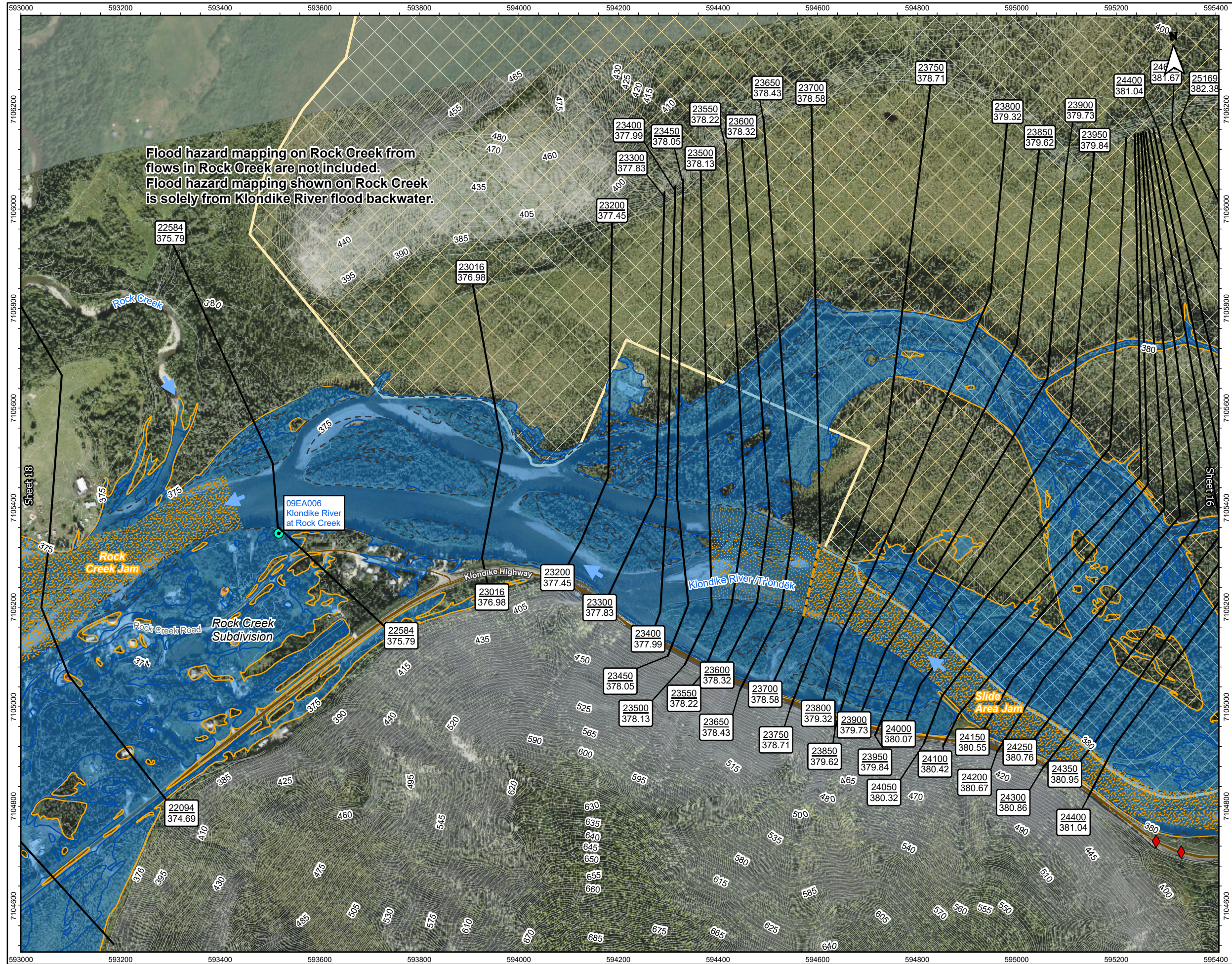
Project Location: Dawson, Yukon
Prepared by MANDERSON on 2026-03-06
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2026-03-06

- River Flow Direction
- Surveyed Cross-Sections Used in Hydraulic Model
- Highway Kilometer Post
- Toe of Ice Jam
- Cross-Section Number
WSE (m) Along Cross-Section
- T'ondëk Hwëch'in Settlement Land
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario)
- Approximate 50% AEP Open Water Flood Inundation
- Inundation Under Modelled Open Water Runs
- HPW Drainage Culverts
- Inundation Under Modelled Breakup Ice Jam Runs
- Surveyed Culvert Location
- Composite Open Water and Ice Jam Inundation Extent
- Highway
- Potential Presence of Ice Debris During Jam Scenario
- Local Road
- Ice Jamming Extents
- Major Contour (5m)
- Minor Contour (1m)

Map Publication Date: 03/06/2026
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(At original document size of 11x 17) 1:7,500



- Notes
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Title: Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)

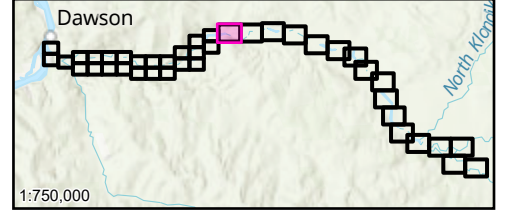
Client/Project:
 Government of Yukon
 Department of Environment
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Project: 123222713

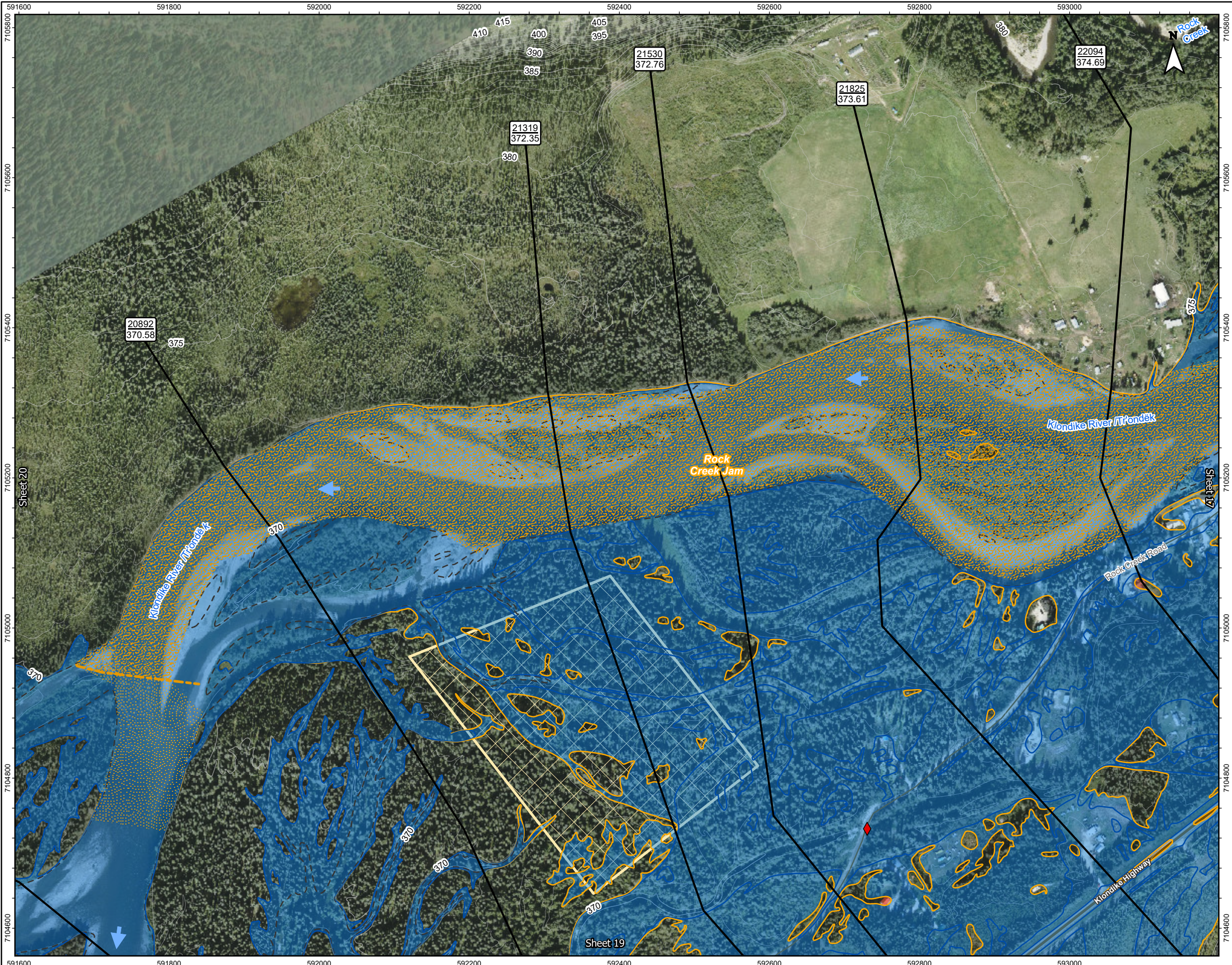
Project Location: Dawson, Yukon
 Prepared by MANDERSON on 2026-03-06
 Requested by JMUIRHEAD on 2024-03-30
 Review by JMUIRHEAD on 2026-03-06

- River Flow Direction
- WSC Stations
- Highway Kilometer Post
- Cross-Section Number
WSE (m) Along Cross-Section
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario)
- HPW Drainage Culverts
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections
Used in Hydraulic Model
- Toe of Ice Jam
- 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 Extent
- Potential Presence of Ice
Debris During Jam Scenario
- Ice Jamming Extents

Map Publication Date: 03/06/2026
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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
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Title: Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)

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

Project: 123222713

Project Location: Dawson, Yukon

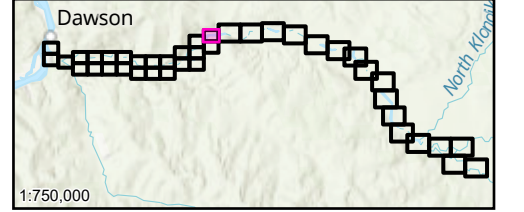
Prepared by MANDERSON on 2026-03-06
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2026-03-06

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

Map Publication Date: 03/06/2026

0 50 100 150 200 250 m

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



- Notes**
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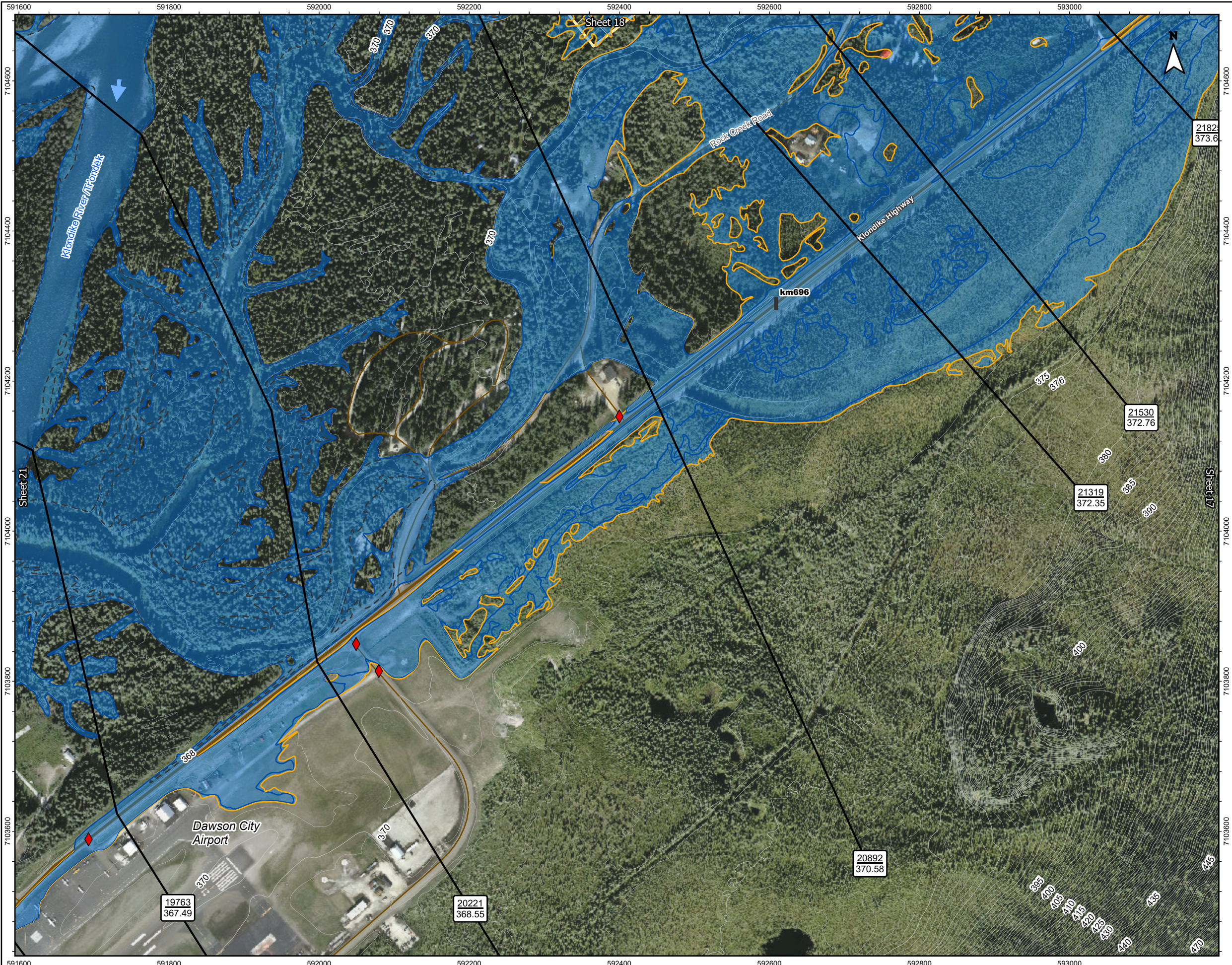


Figure No. **KR-5-19** Sheet 19 of 41

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)**

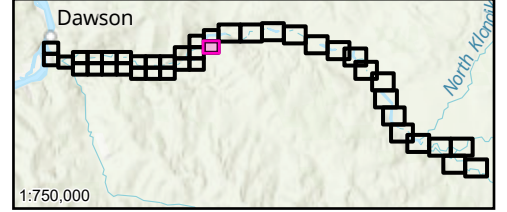
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

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
- Highway Kilometer Post
- Cross-Section Number
WSE (m) Along Cross-Section
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario)
- HPW Drainage Culverts
- 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 Modelled
Breakup Ice Jam Runs
- Composite Open Water and
Ice Jam Inundation Extent

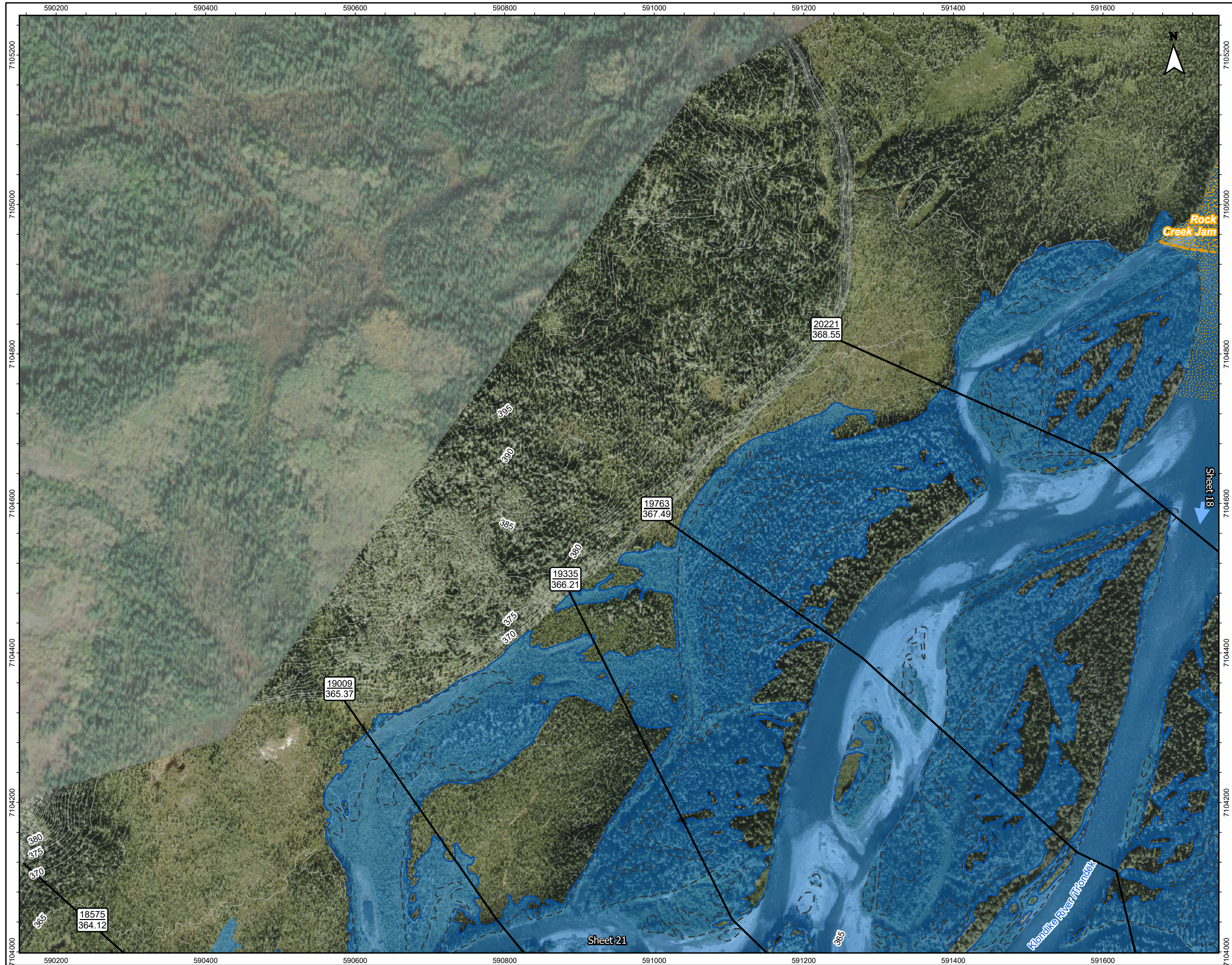
Map Publication Date: 03/06/2026
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- Notes
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Title: Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)

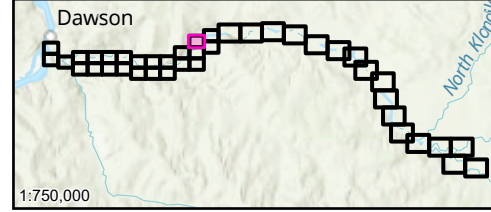
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

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
- Highway Kilometer Post
- Approximate 50% AEP Open Water Flood Inundation
- Cross-Section Number
WSE (m) Along Cross-Section
- Inundation Under Modelled Open Water Runs
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario)
- Inundation Under Modelled Breakup Ice Jam Runs
- Composite Open Water and Ice Jam Inundation Extent
- Major Contour (5m)
- Potential Presence of Ice Debris During Jam Scenario
- Minor Contour (1m)
- Ice Jamming Extents
- Surveyed Cross-Sections Used in Hydraulic Model

Map Publication Date: 03/06/2026
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(At original document size of 11x 17) 1:5,000



- Notes**
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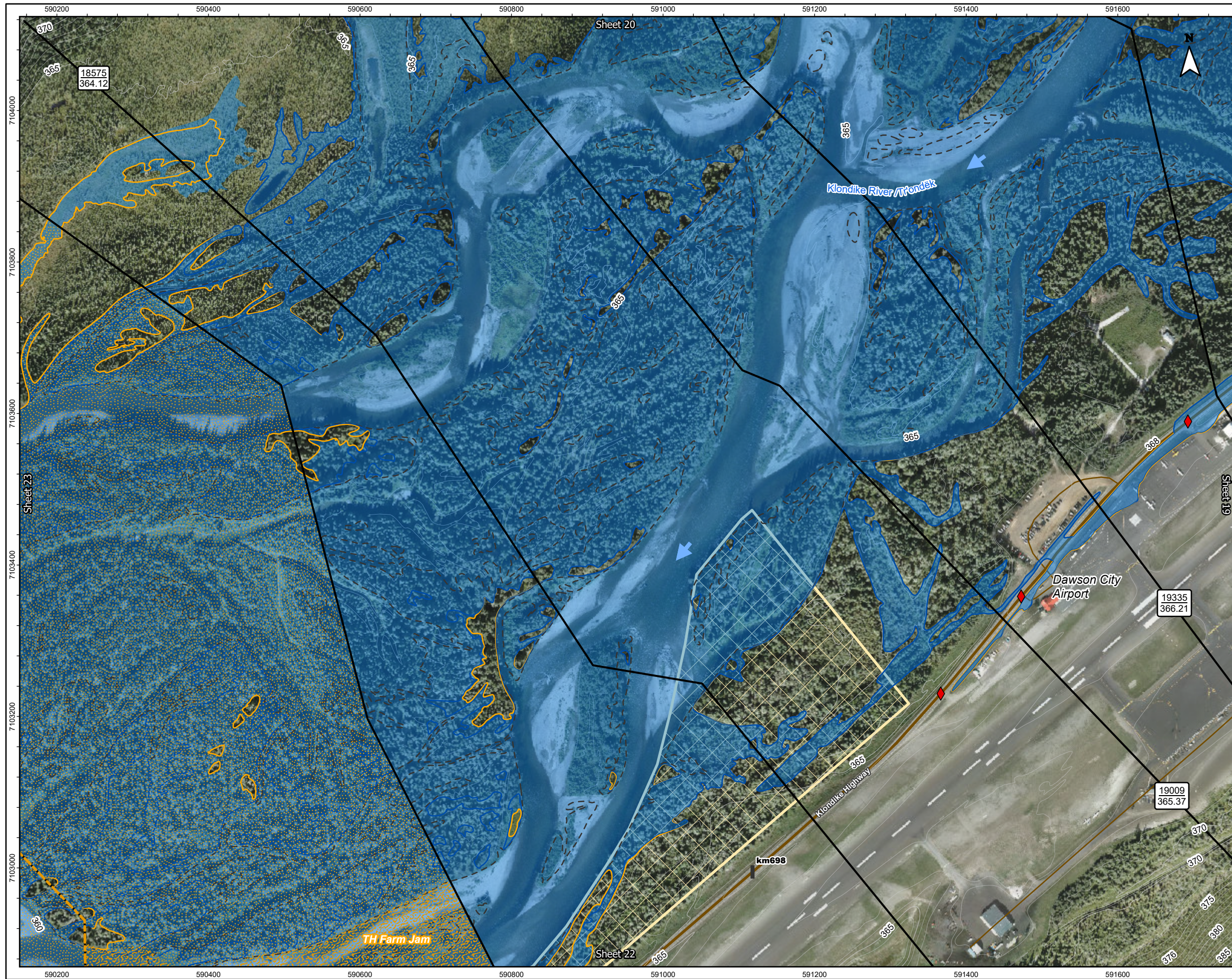


Figure No. **KR-5-21** Sheet 21 of 41

Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 5% Annual Exceedance Probability (AEP)**

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

Project: 123222713

Project Location: Dawson, Yukon

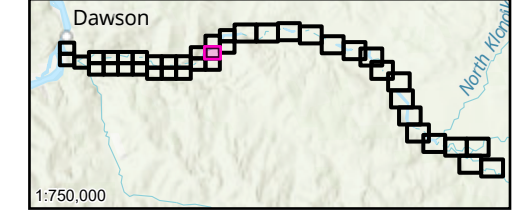
Prepared by MANDERSON on 2026-03-06
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2026-03-06

- River Flow Direction
- Highway Kilometer Post
- Cross-Section Number WSE (m) Along Cross-Section
- Cross-Section Number WSE (m) Along Cross-Section (WSE in Dike Breach Scenario)
- HPW Drainage Culverts
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Toe of Ice Jam
- 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 Extent
- Potential Presence of Ice Debris During Jam Scenario
- Ice Jamming Extents

Map Publication Date: 03/06/2026

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 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.

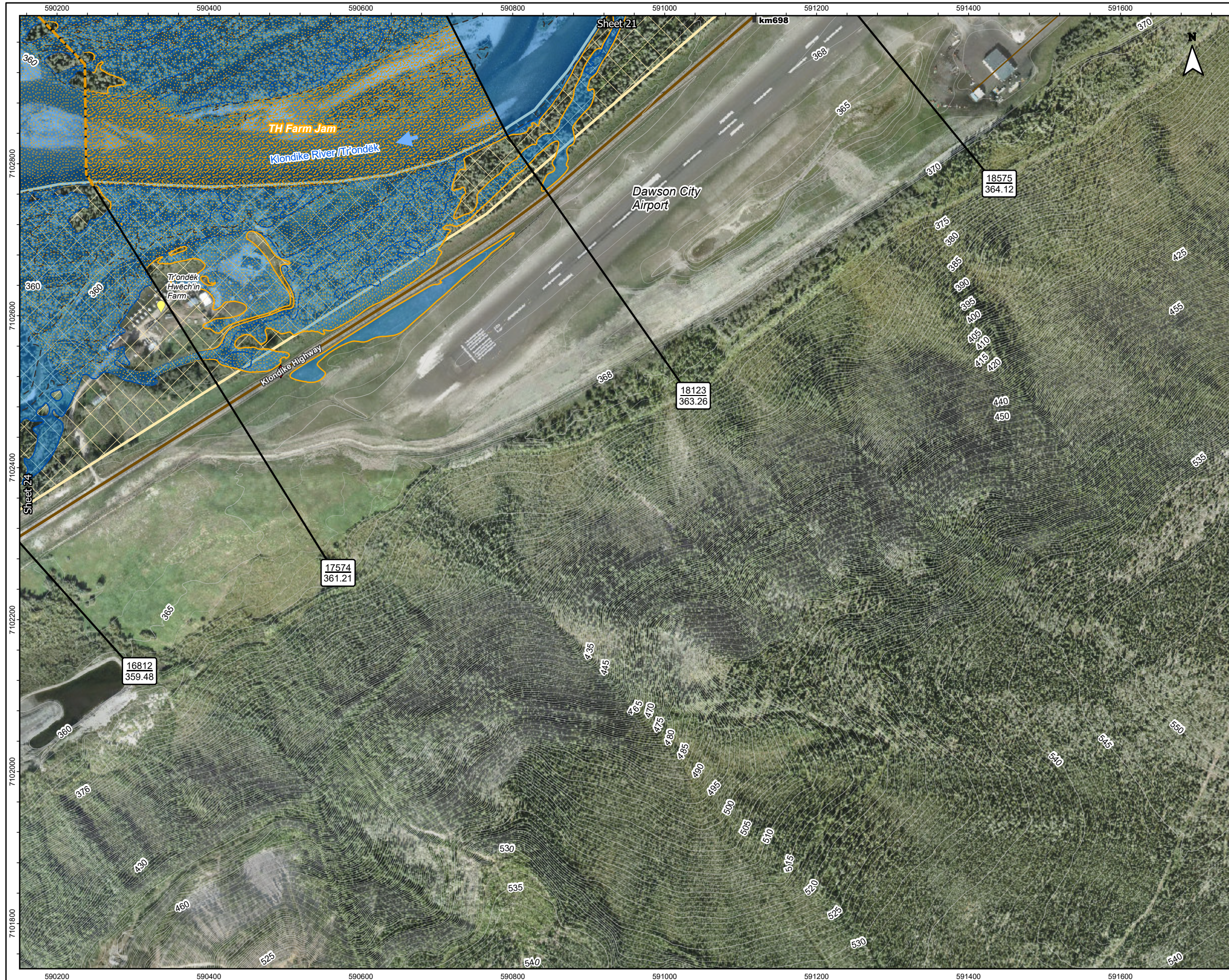


Figure No. **KR-5-22** Sheet 22 of 41

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)**

Client/Project:

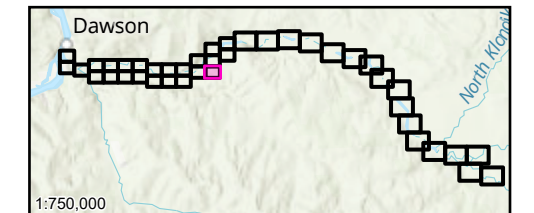
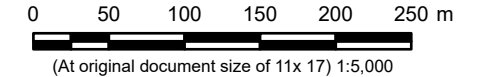
Government of Yukon
Department of Environment
Water Resources Branch

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
- Highway Kilometer Post
- Cross-Section Number
WSE (m) Along Cross-Section
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario)
- HPW Drainage Culverts
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections
Used in Hydraulic Model
- Toe of Ice Jam
- 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 Extent
- Potential Presence of Ice
Debris During Jam Scenario
- Ice Jamming Extents

Map Publication Date: 03/06/2026



- 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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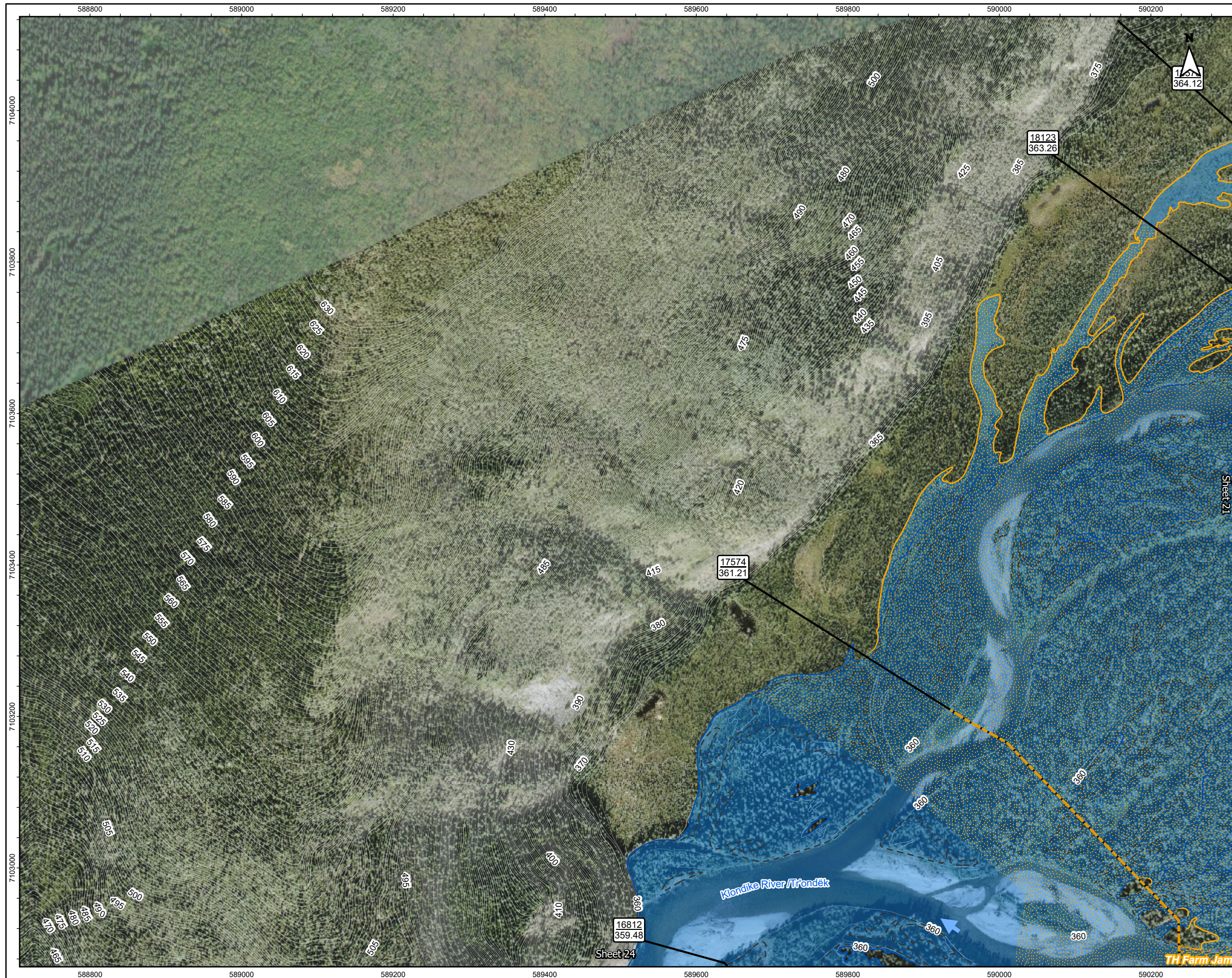


Figure No. **KR-5-23** Sheet 23 of 41

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)**

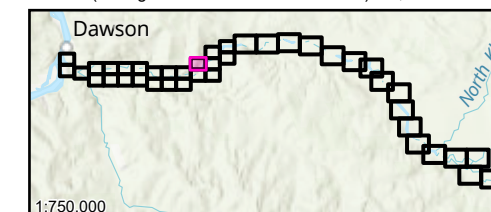
Client/Project:
**Government of Yukon
Department of Environment
Water Resources Branch**

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
- Highway Kilometer Post
- 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
- Toe of Ice Jam
- 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 Extent
- Potential Presence of Ice
Debris During Jam Scenario
- Ice Jamming Extents

Map Publication Date: 03/06/2026
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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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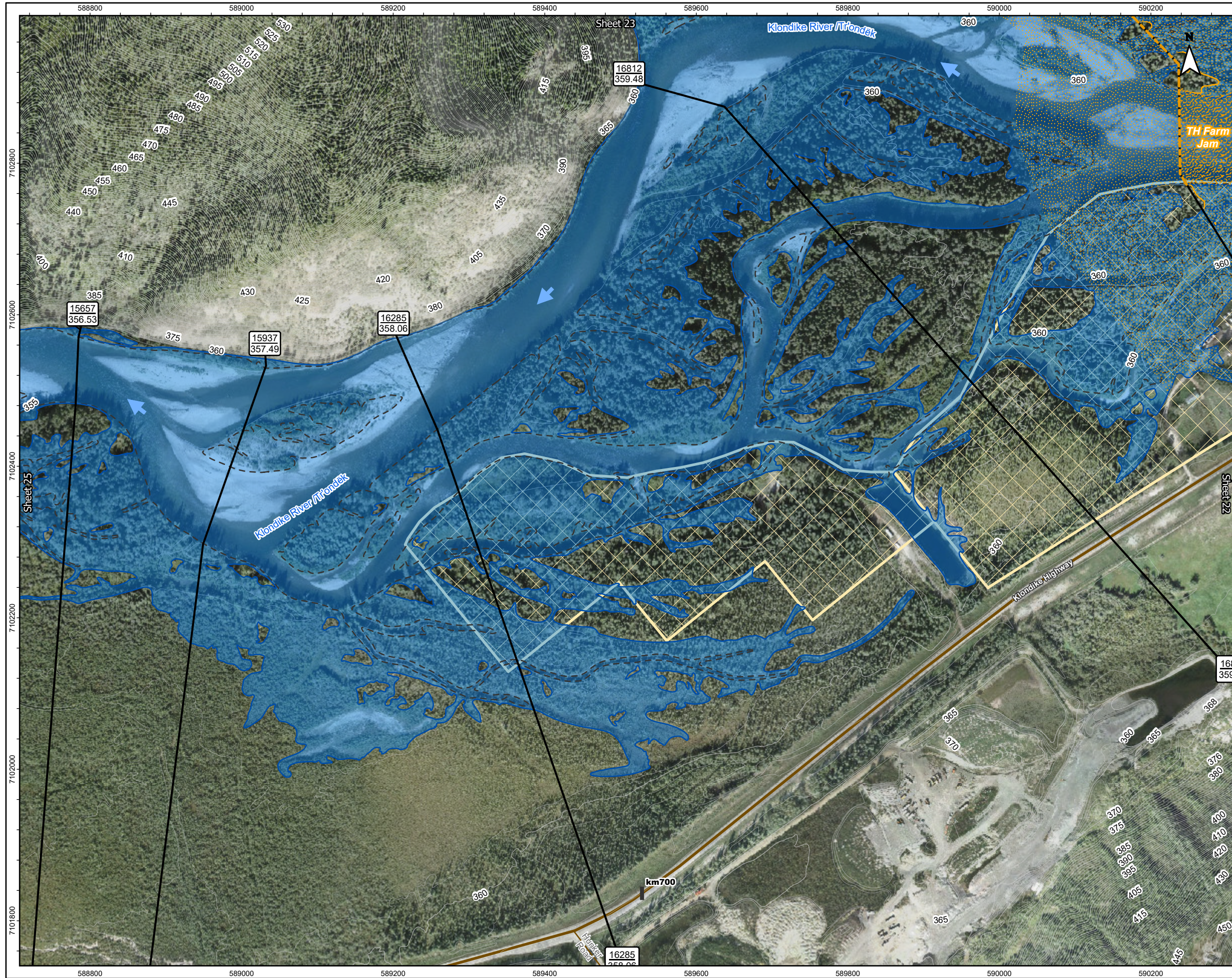


Figure No. **KR-5-24** Sheet 24 of 41

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)**

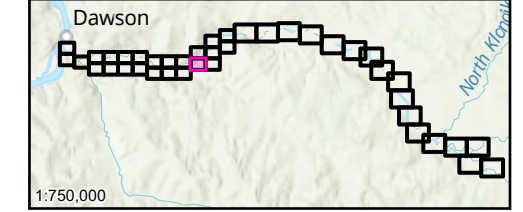
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

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
- Highway Kilometer Post
- Cross-Section Number
- Cross-Section Number
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Toe of Ice Jam
- T'ondék 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 Extent
- Potential Presence of Ice Debris During Jam Scenario
- Ice Jamming Extents

Map Publication Date: 03/06/2026
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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 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.

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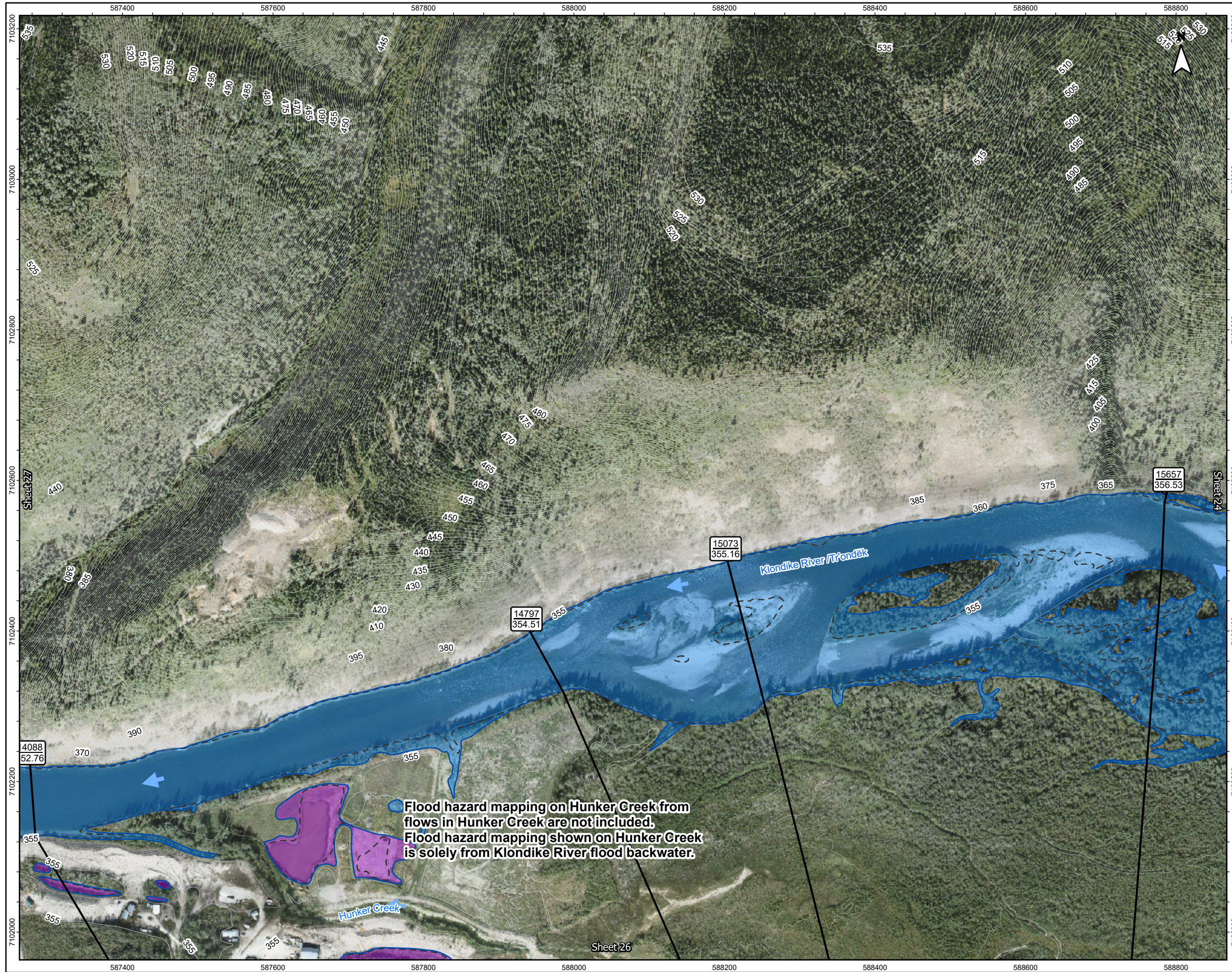


Figure No. **KR-5-25** Sheet 25 of 41

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)**

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

Project: 123222713

Project Location: Dawson, Yukon

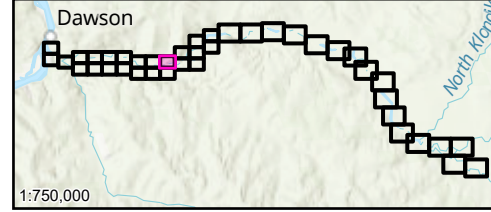
Prepared by MANDERSON on 2026-03-06
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2026-03-06

- River Flow Direction
- Surveyed Cross-Sections Used in Hydraulic Model
- Highway Kilometer Post
- Approximate 50% AEP Open Water Flood Inundation
- Cross-Section Number
WSE (m) Along Cross-Section
- Inundation Under Modelled Open Water Runs
- Cross-Section Number
WSE (m) Along Cross-Section (WSE in Dike Breach Scenario)
- Inundation Under Modelled Breakup Ice Jam Runs
- Surveyed Culvert Location
- Composite Open Water and Ice Jam Inundation Extent
- Major Contour (5m)
- Inundation Extent From Subsurface Seepage
- Minor Contour (1m)

Map Publication Date: 03/06/2026

0 50 100 150 200 250 m

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



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.

- 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.
 - 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.

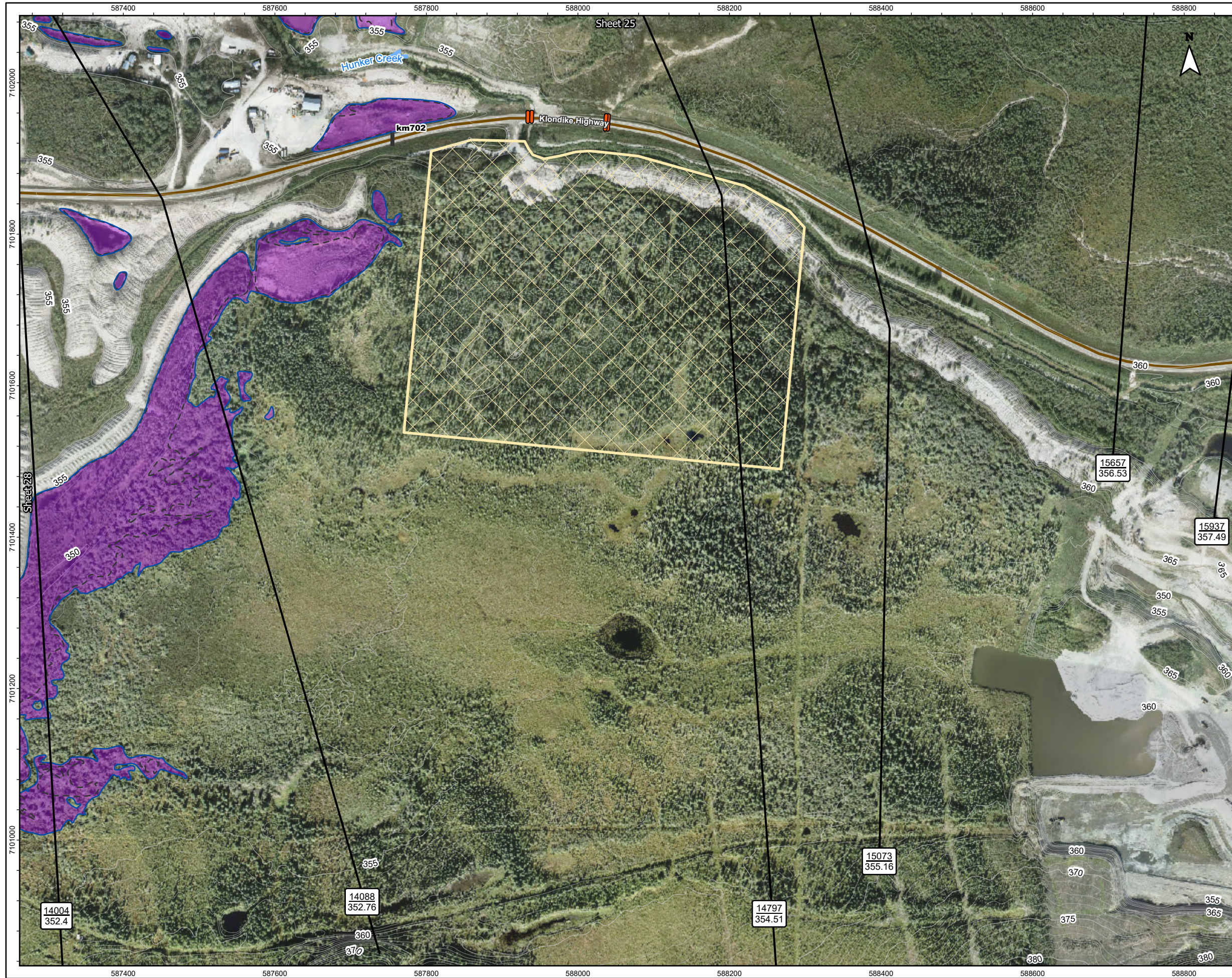


Figure No. **KR-5-26** Sheet 26 of 41

Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)**

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

Project: 123222713

Project Location: Dawson, Yukon

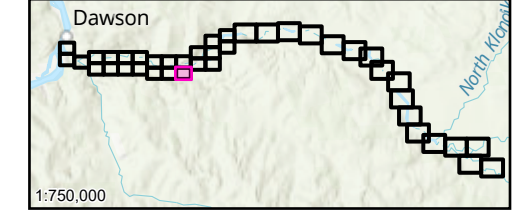
Prepared by MANDERSON on 2026-03-06
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2026-03-06

- | | | | |
|--|---|--|--|
| | Highway Kilometer Post | | Minor Contour (1m) |
| | Cross-Section Number
WSE (m) Along Cross-Section | | Surveyed Cross-Sections
Used in Hydraulic Model |
| | Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach
Scenario) | | Tr'ondëk Hwëch'in Settlement
Land |
| | Surveyed Culvert Location | | Approximate 50% AEP Open
Water Flood Inundation |
| | Highway | | Inundation Under Modelled
Open Water Runs |
| | Major Contour (5m) | | Inundation Extent From
Subsurface Seepage |

Map Publication Date: 03/06/2026

0 50 100 150 200 250 m

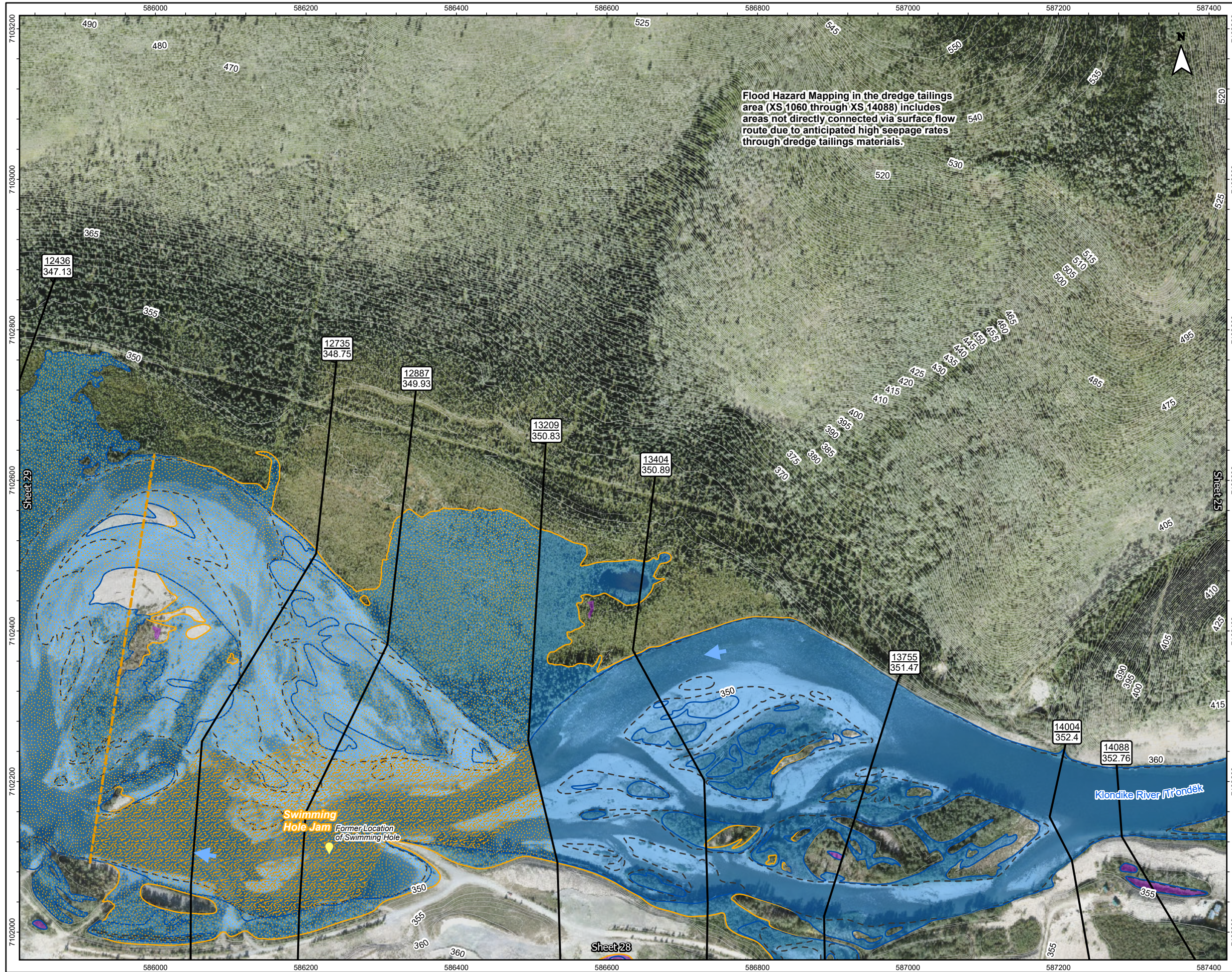
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- Notes**
1. Coordinate System: NAD 1983 CSRS UTM Zone 7N Vertical Datum: CGVD2013, Geoid: CGG2013a
 2. Data Sources: GeoYukon, Canada Lands Survey (CLS) CCM 982, CANVEC
 3. Flood hazard extents shown on these maps are based on LiDAR collected in August,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

Title: Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)

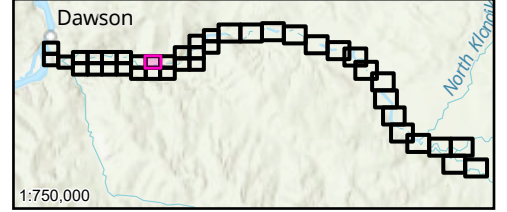
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

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

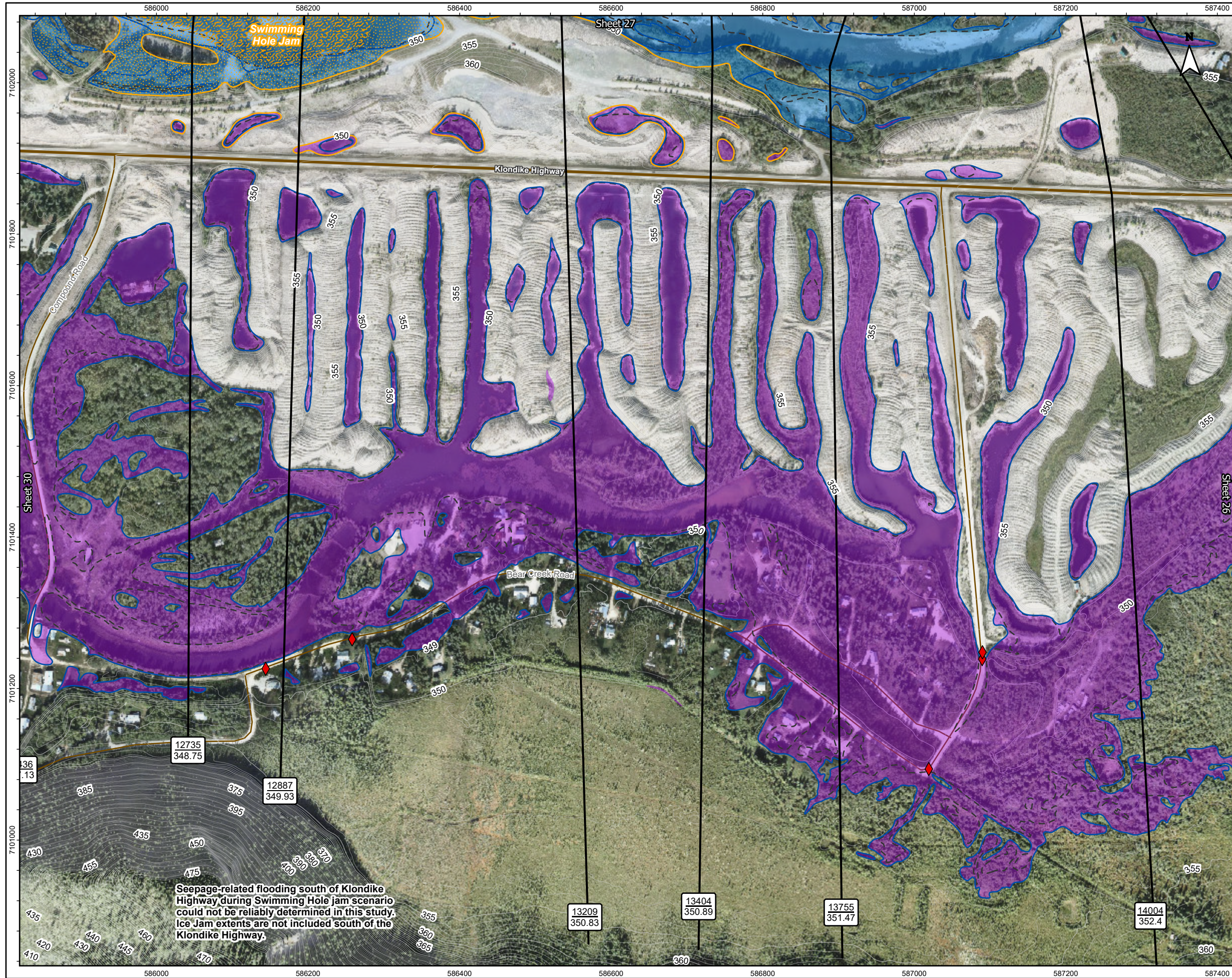
- River Flow Direction
- Point of Interest
- Highway Kilometer Post
- Cross-Section Number
WSE (m) Along Cross-Section
- Cross-Section Number
WSE (m) Along Cross-Section
(WSE in Dike Breach Scenario)
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections
Used in Hydraulic Model
- Toe of Ice Jam
- 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 Extent
- Inundation Extent From
Subsurface Seepage
- Potential Presence of Ice
Debris During Jam Scenario
- Ice Jamming Extents

Map Publication Date: 03/06/2026
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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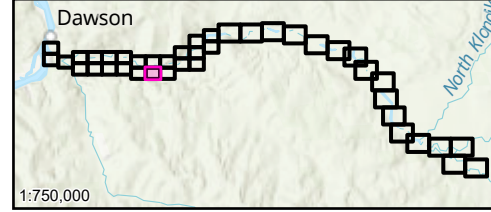


Seepage-related flooding south of Klondike Highway during Swimming Hole jam scenario could not be reliably determined in this study. Ice Jam extents are not included south of the Klondike Highway.

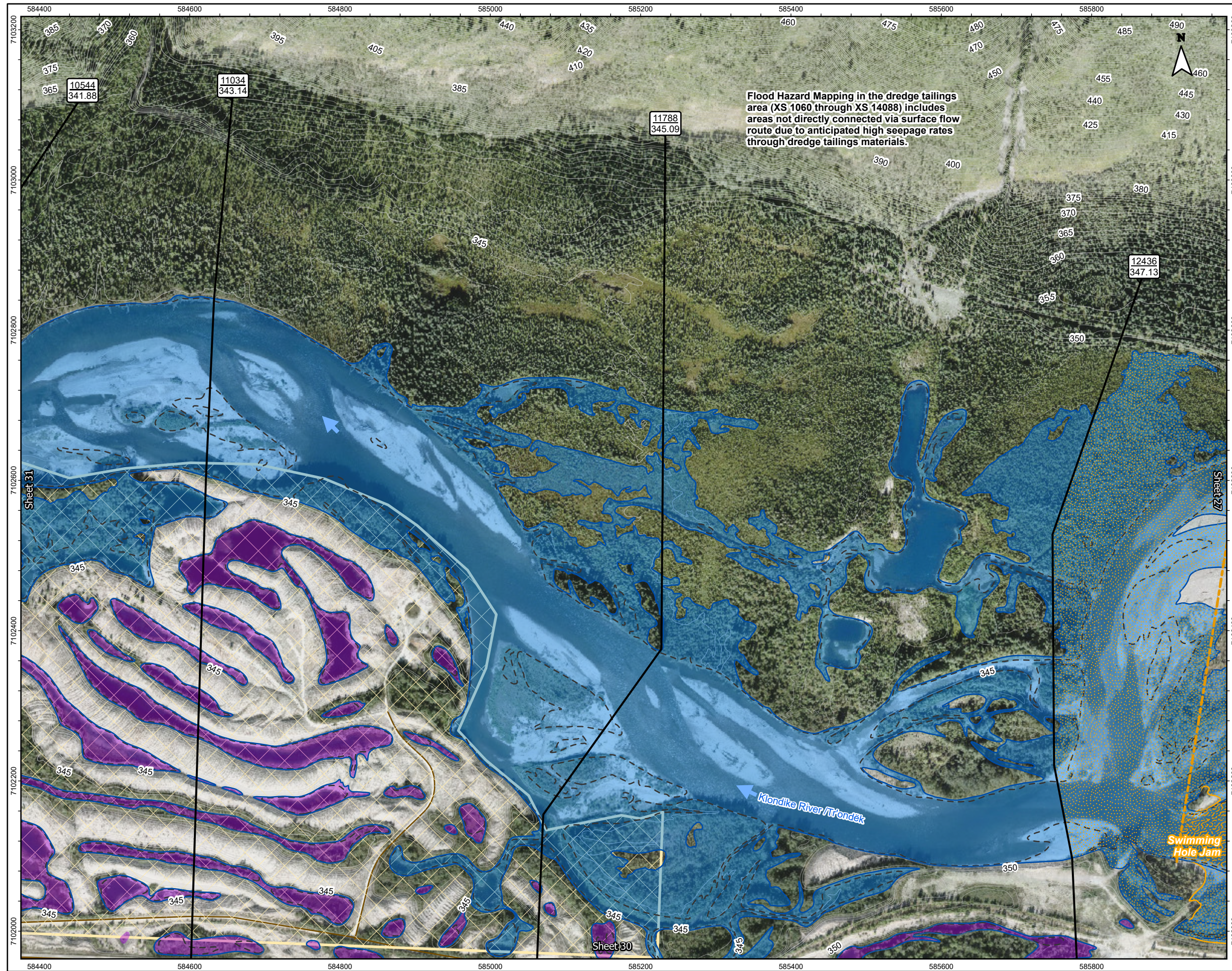
Figure No. **KR-5-28** Sheet 28 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 5% Annual Exceedance Probability (AEP)**
 Client/Project: Government of Yukon, Department of Environment, Water Resources Branch
 Project: 123222713
 Project Location: Dawson, Yukon
 Prepared by MANDERSON on 2026-03-06, Requested by JMUIRHEAD on 2024-03-30, Review by JMUIRHEAD on 2026-03-06

- Highway Kilometer Post
- Surveyed Cross-Sections Used in Hydraulic Model
- 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 Extent
- Inundation Extent From Subsurface Seepage
- Potential Presence of Ice Debris During Jam Scenario
- Ice Jamming Extents
- HPW Drainage Culverts
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)

Map Publication Date: 03/06/2026
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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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Title: Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)

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

Project: 123222713

Project Location: Dawson, Yukon

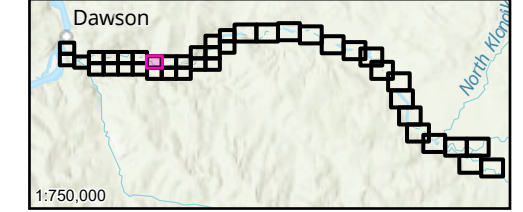
Prepared by MANDERSON on 2026-03-06
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2026-03-06

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

Map Publication Date: 03/06/2026

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



Notes

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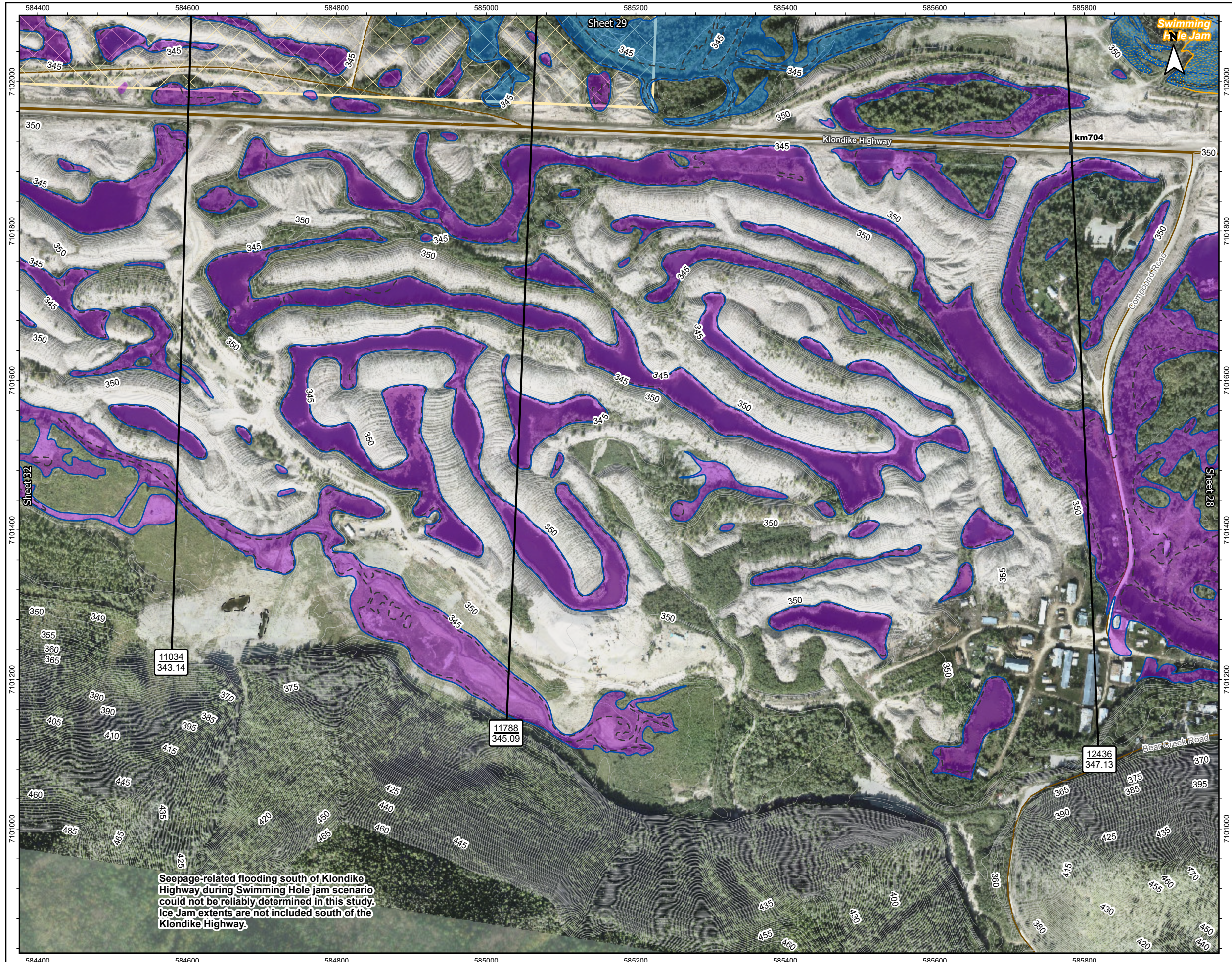
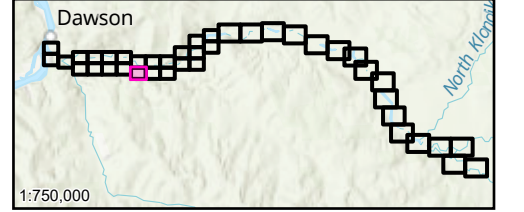


Figure No. **KR-5-30** Sheet 30 of 41
 Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 5% Annual Exceedance Probability (AEP)**
 Client/Project: Government of Yukon, Department of Environment, Water Resources Branch
 Project: 123222713
 Project Location: Dawson, Yukon
 Prepared by MANDERSON on 2026-03-06
 Requested by JMUIRHEAD on 2024-03-30
 Review by JMUIRHEAD on 2026-03-06

- Highway Kilometer Post
- 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 Extent
- Inundation Extent From Subsurface Seepage
- Potential Presence of Ice Debris During Jam Scenario
- Ice Jamming Extents
- Cross-Section Number 57, WSE (m) Along Cross-Section 517.2
- Cross-Section Number 22140, 320.26, 320.04, 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

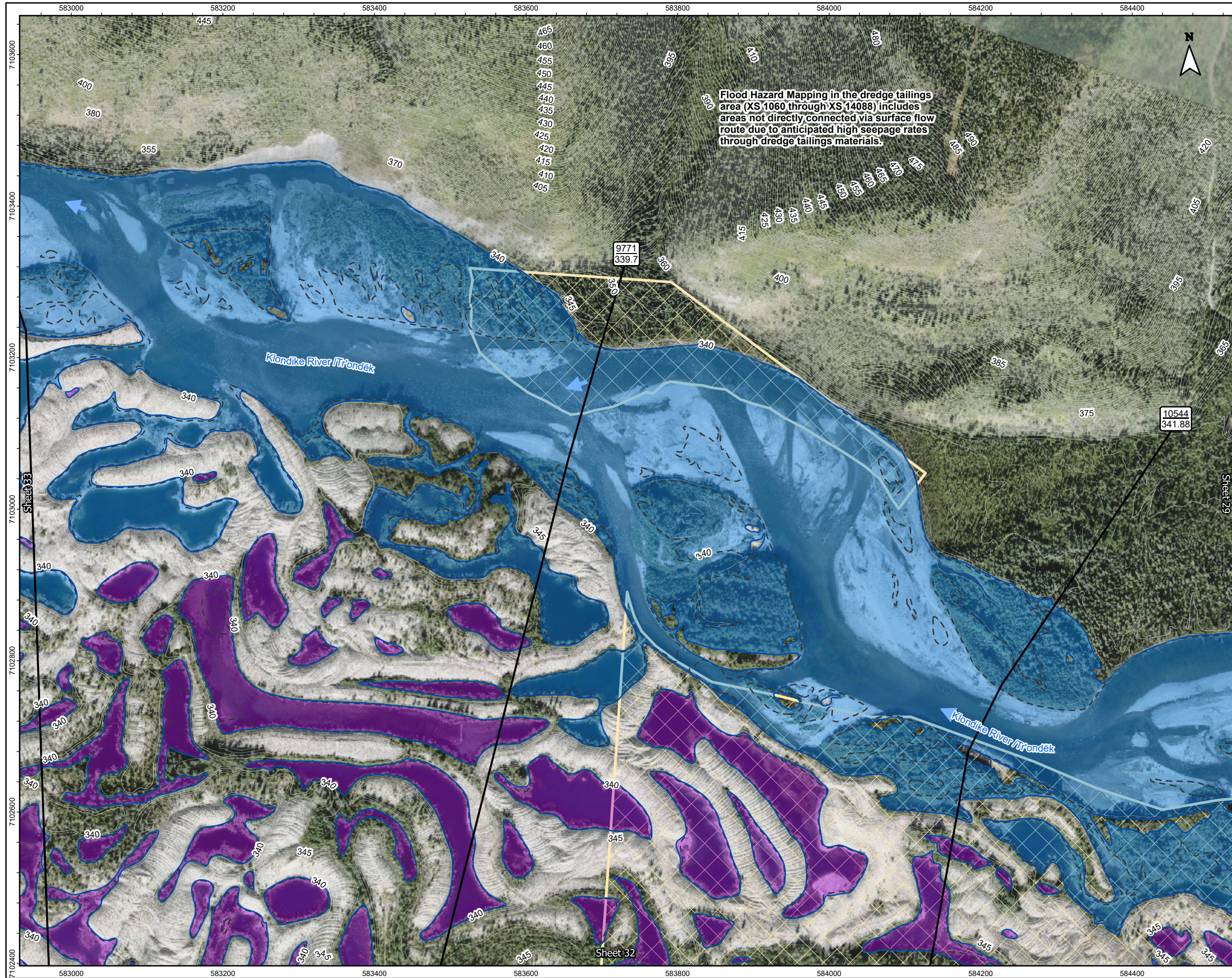
Map Publication Date: 03/06/2026
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 (At original document size of 11x 17) 1:5,000



Seepage-related flooding south of Klondike Highway during Swimming Hole jam scenario could not be reliably determined in this study. Ice Jam extents are not included south of the Klondike Highway.

- 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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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.

Title: Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)

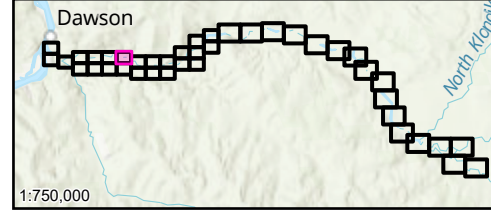
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

Project: 123222713

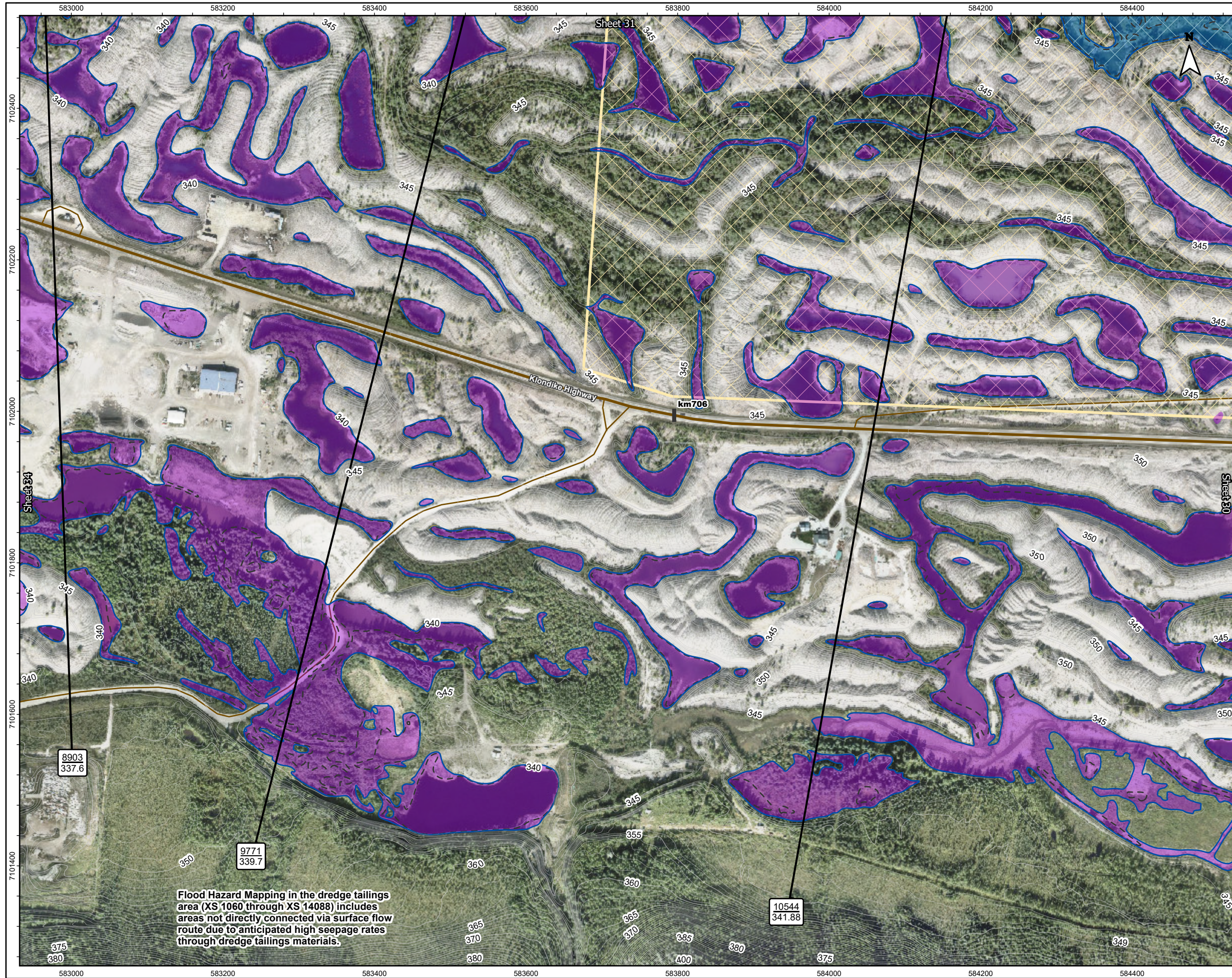
Project Location: Dawson, Yukon
Prepared by MANDERSON on 2026-03-06
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2026-03-06

- River Flow Direction
- Tr'ondëk Hwëch'in Settlement Land
- Highway Kilometer Post
- Approximate 50% AEP Open Water Flood Inundation
- WSE (m) Along Cross-Section 57 (517.2)
- Inundation Under Modelled Open Water Runs
- WSE (m) Along Cross-Section 22140 (320.26/320.04)
- Inundation Under Modelled Breakup Ice Jam Runs
- Composite Open Water and Ice Jam Inundation Extent
- Inundation Extent From Subsurface Seepage
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model

Map Publication Date: 03/06/2026
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
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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.

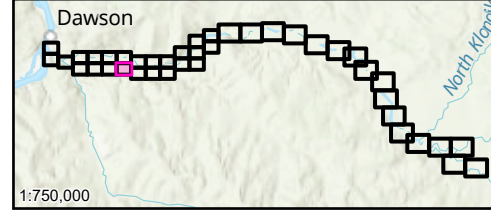
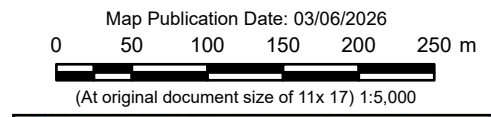
Title: Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)

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

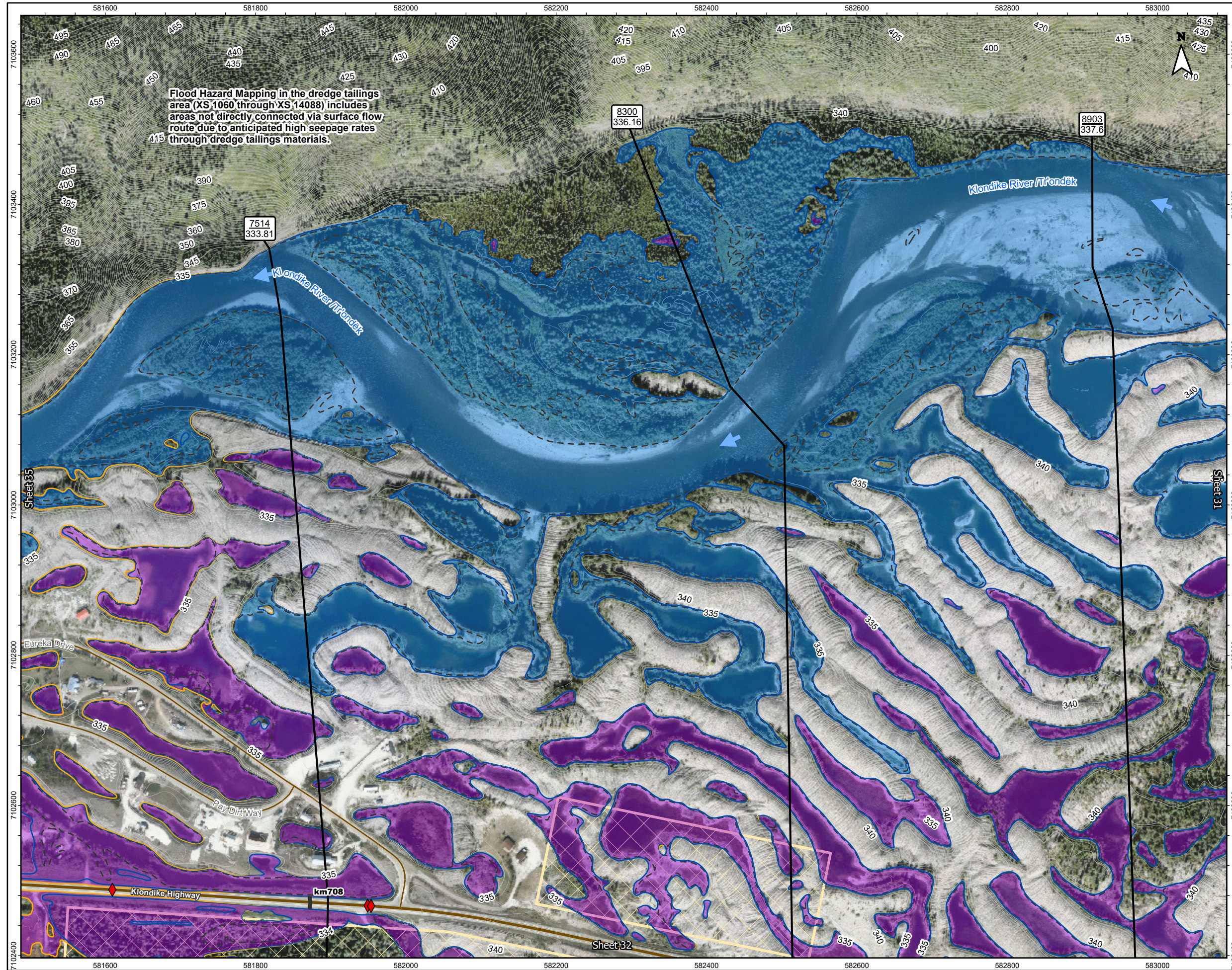
Project: 123222713

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

- Highway Kilometer Post
- 57 Cross-Section Number
- 517.2 WSE (m) Along Cross-Section
- 22140 Cross-Section Number
- 320.26 WSE (m) Along Cross-Section
- 320.04 (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 Modelled Breakup Ice Jam Runs
- Composite Open Water and Ice Jam Inundation Extent
- Inundation Extent From Subsurface Seepage



- Notes**
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Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 5% Annual Exceedance Probability (AEP)**

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

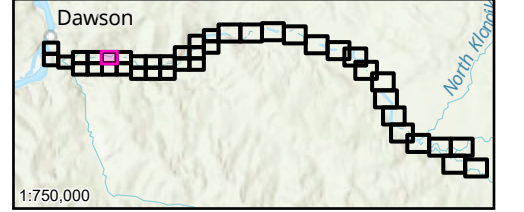
Project: 123222713

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
- Highway Kilometer Post
- Cross-Section Number WSE (m) Along Cross-Section
- Cross-Section Number WSE (m) Along Cross-Section (WSE in Dike Breach Scenario)
- HPW Drainage Culverts
- 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 Modelled Breakup Ice Jam Runs
- Composite Open Water and Ice Jam Inundation Extent
- Inundation Extent From Subsurface Seepage

Map Publication Date: 03/06/2026
0 50 100 150 200 250 m
(At original document size of 11x 17) 1:5,000



- Notes
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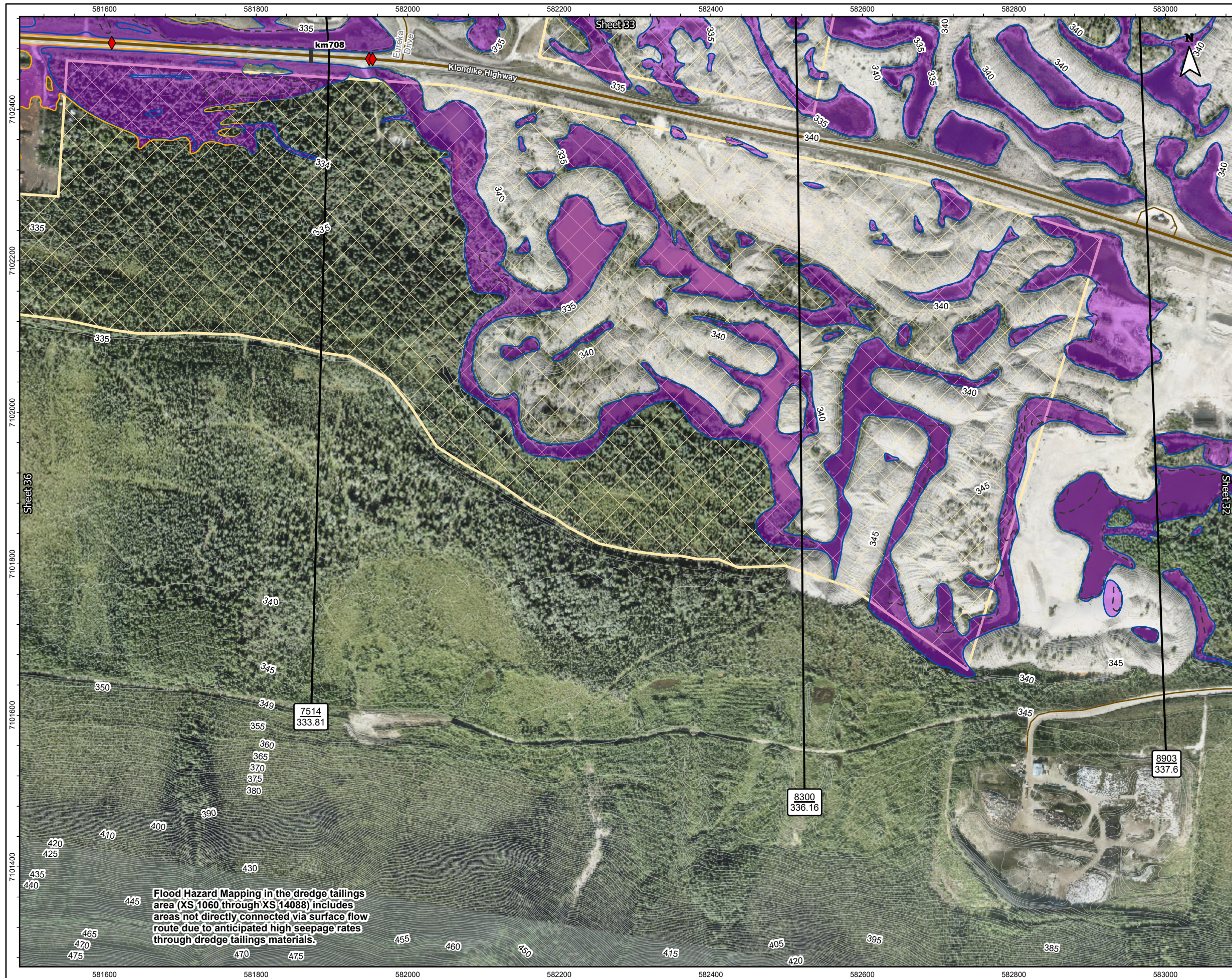


Figure No. **KR-5-34** Sheet 34 of 41

Title: **Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 5% Annual Exceedance Probability (AEP)**

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

Project: 123222713

Project Location: Dawson, Yukon

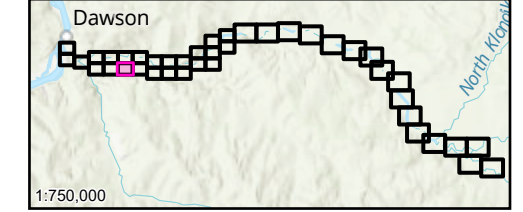
Prepared by MANDERSON on 2026-03-06
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2026-03-06

- Highway Kilometer Post
- Minor Contour (1m)
- 57 Cross-Section Number WSE (m) Along Cross-Section
- 22140 Cross-Section Number WSE (m) Along Cross-Section (WSE in Dike Breach Scenario)
- 320.26 HPW Drainage Culverts
- 320.04 Highway
- Local Road
- Major Contour (5m)
- 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
- Inundation Extent From Subsurface Seepage

Map Publication Date: 03/06/2026

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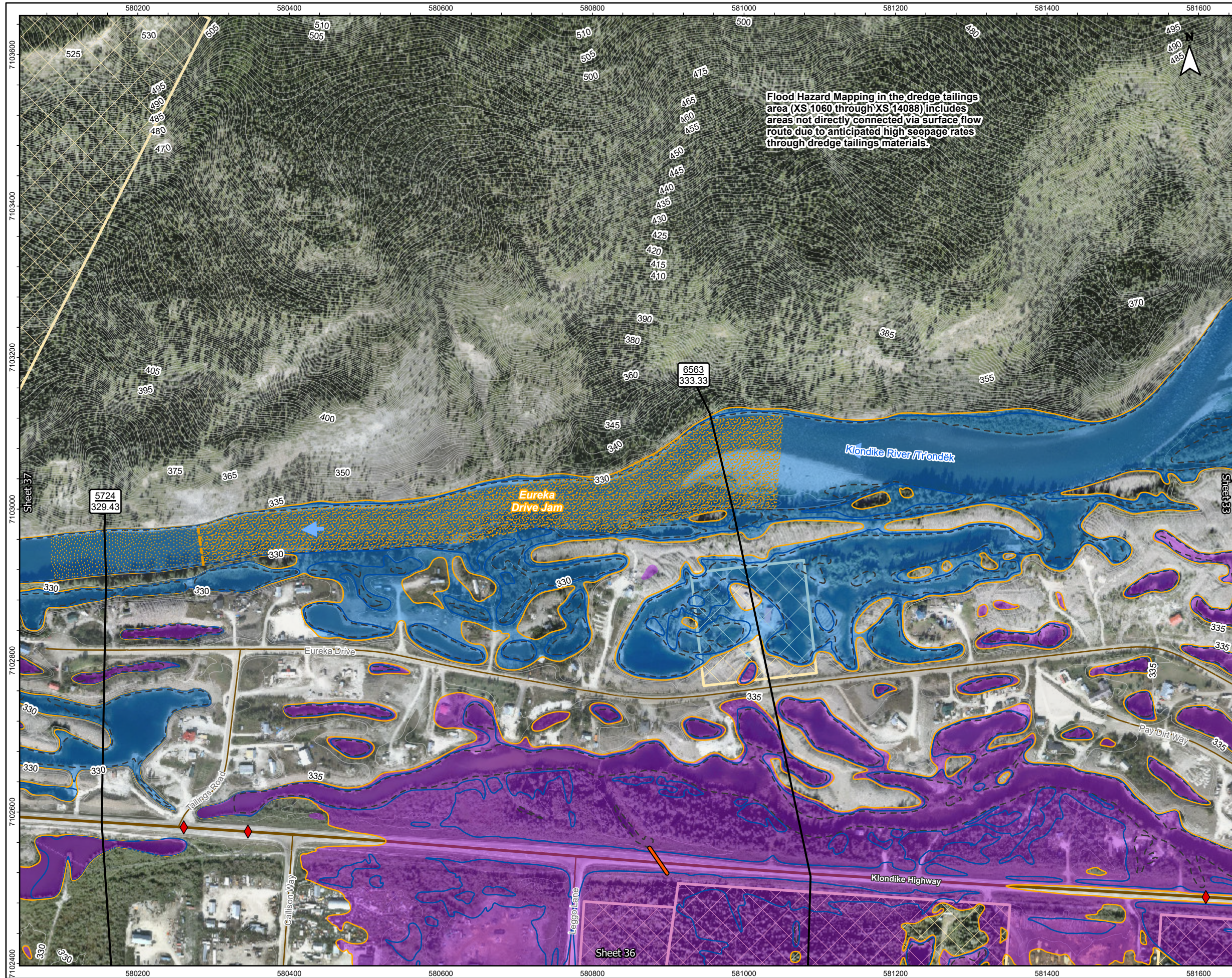
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- Notes
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Title: **Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)**

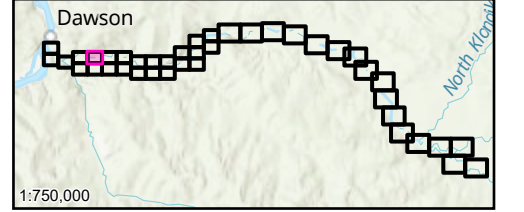
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

Project: 123222713

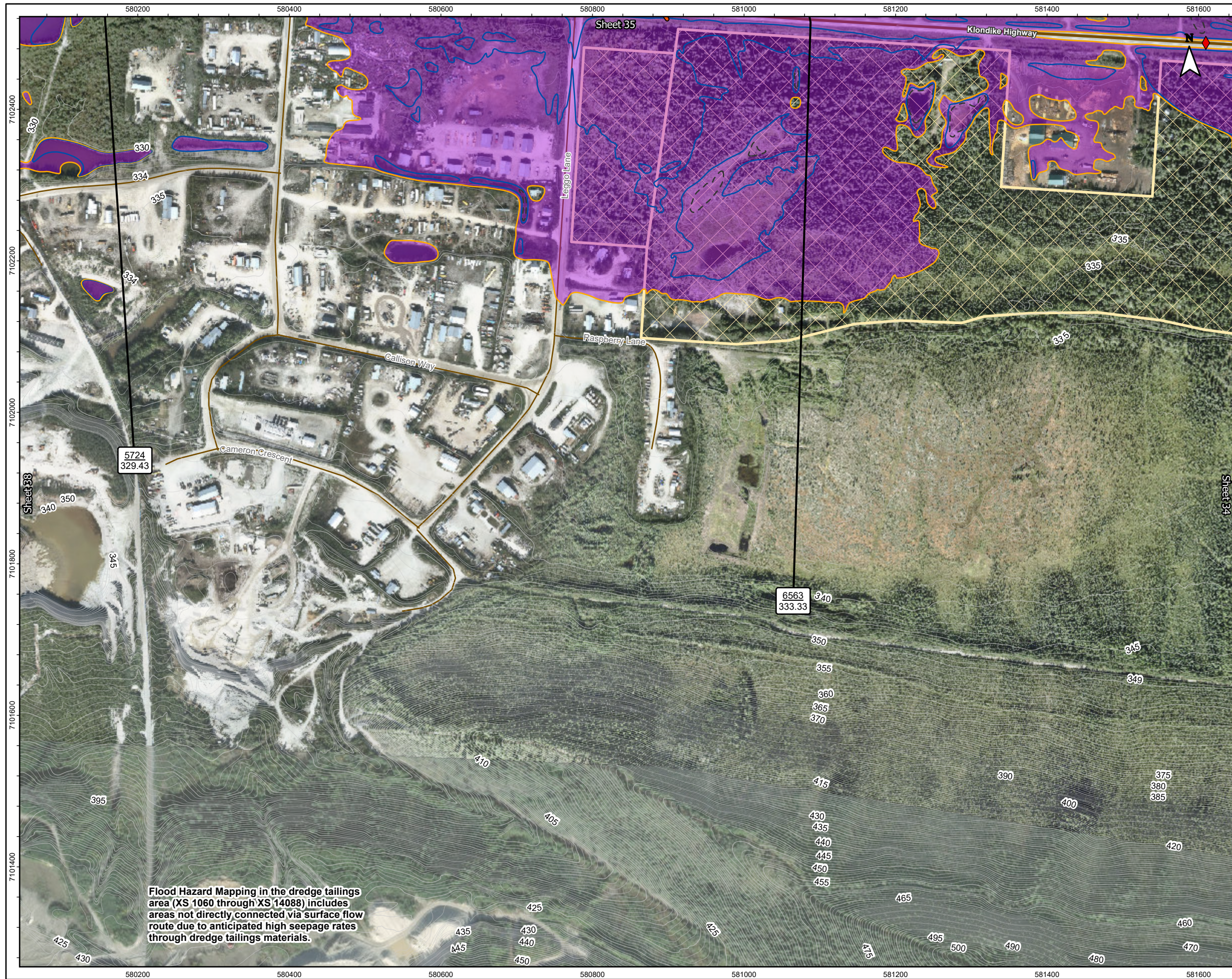
Project Location: Dawson, Yukon
Prepared by MANDERSON on 2026-03-06
Requested by JMUIRHEAD on 2024-03-30
Review by JMUIRHEAD on 2026-03-06

- River Flow Direction
- Surveyed Cross-Sections Used in Hydraulic Model
- Toe of Ice Jam
- Highway Kilometer Post
- Cross-Section Number WSE (m) Along Cross-Section
- Cross-Section Number WSE (m) Along Cross-Section (WSE in Dike Breach Scenario)
- 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 Extent
- Inundation Extent From Subsurface Seepage
- HPW Drainage Culverts
- Surveyed Culvert Location
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Potential Presence of Ice Debris During Jam Scenario
- Ice Jamming Extents

Map Publication Date: 03/06/2026
0 50 100 150 200 250 m
(At original document size of 11x 17) 1:5,000



Notes:
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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.

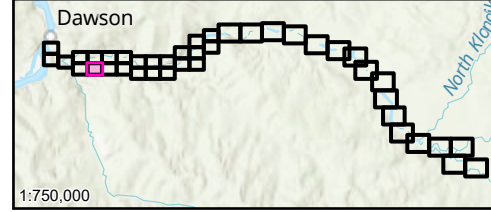
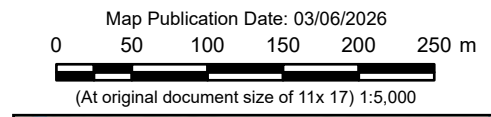
**Title: Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)**

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

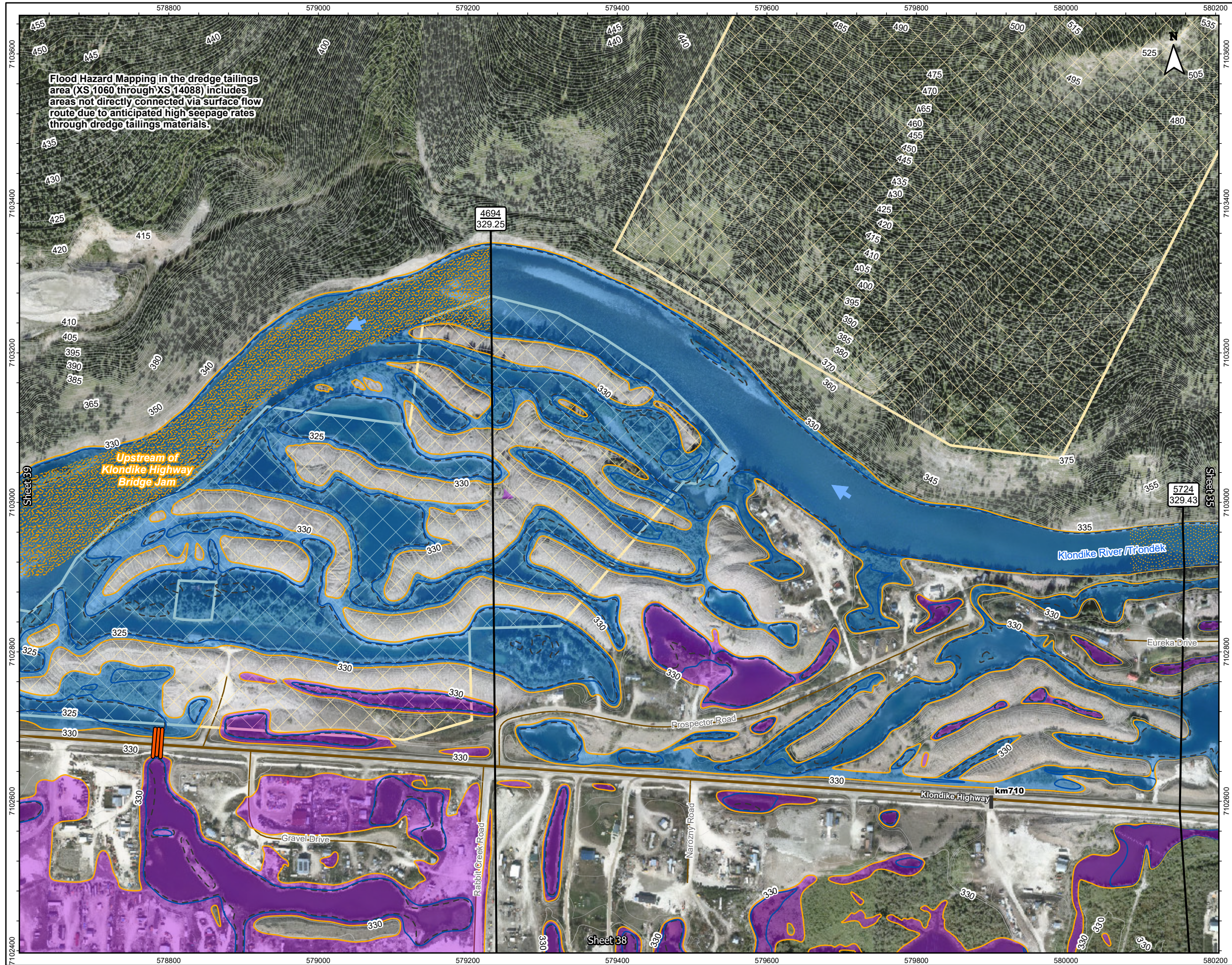
Project: 123222713

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

- | | |
|--|---|
| Highway Kilometer Post | Major Contour (5m) |
| Cross-Section Number
WSE (m) Along Cross-Section | Minor Contour (1m) |
| Cross-Section Number
WSE (m) Along Cross-Section
WSE in Dike Breach Scenario | Surveyed Cross-Sections Used in Hydraulic Model |
| HPW Drainage Culverts | Tr'ondëk Hwëch'in Settlement Land |
| Surveyed Culvert Location | Approximate 50% AEP Open Water Flood Inundation |
| Highway | Inundation Under Modelled Open Water Runs |
| Local Road | Inundation Under Modelled Breakup Ice Jam Runs |
| | Inundation Extent From Subsurface Seepage |



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Title: Dawson City and Klondike Valley Flood Mapping Study Composite Flood Hazard Map - Klondike River 5% Annual Exceedance Probability (AEP)

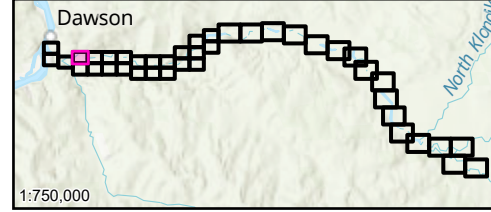
Client/Project:
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Project: 123222713

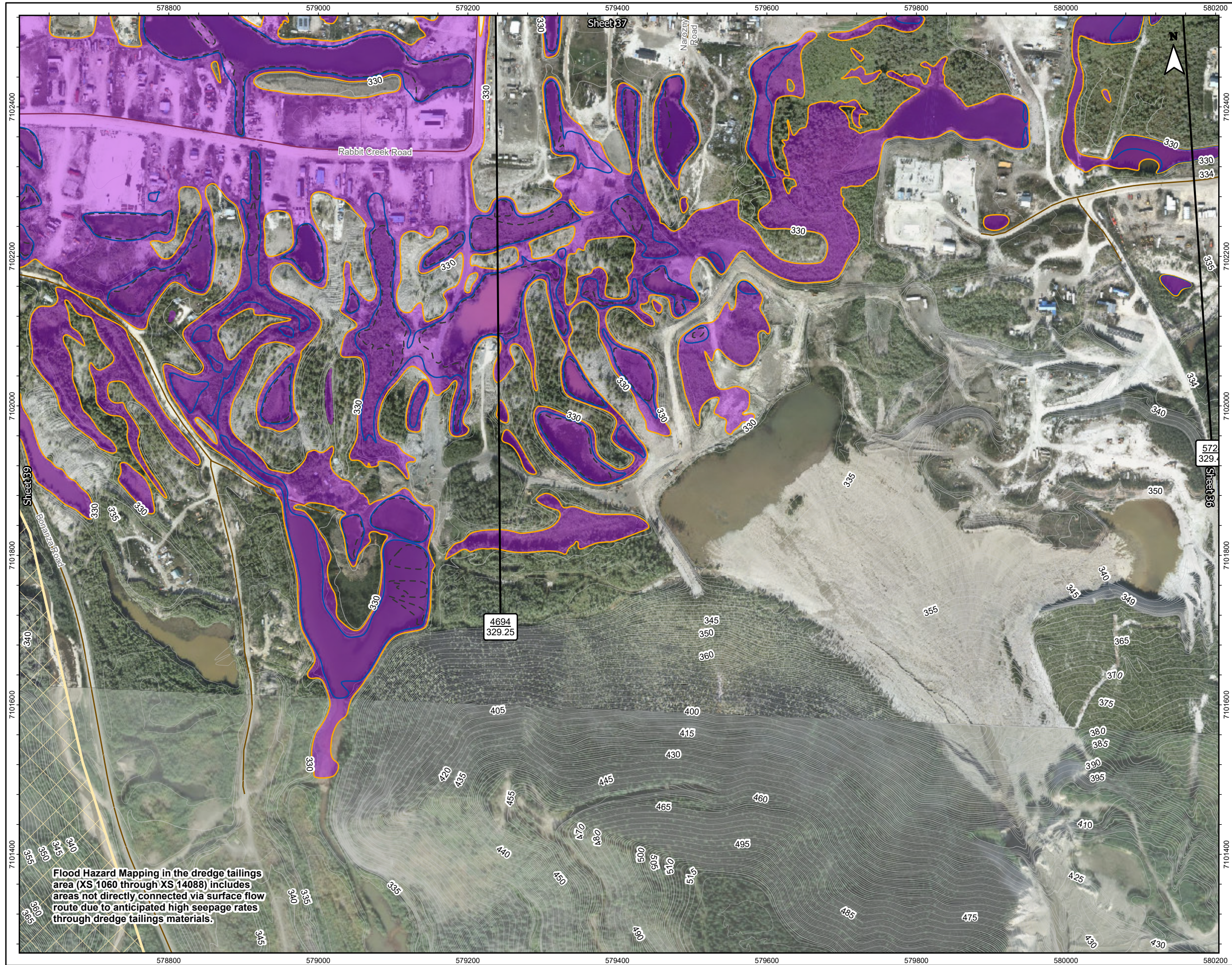
Project Location: Dawson, Yukon
 Prepared by MANDERSON on 2026-03-06
 Requested by JMUIRHEAD on 2024-03-30
 Review by JMUIRHEAD on 2026-03-06

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

Map Publication Date: 03/06/2026
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 (At original document size of 11x 17) 1:5,000



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Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)

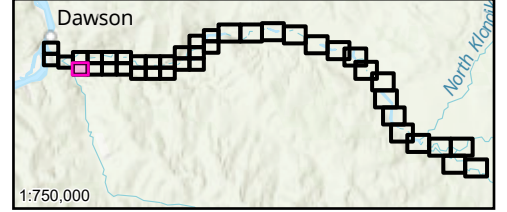
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Project: 123222713

Project Location: Dawson, Yukon
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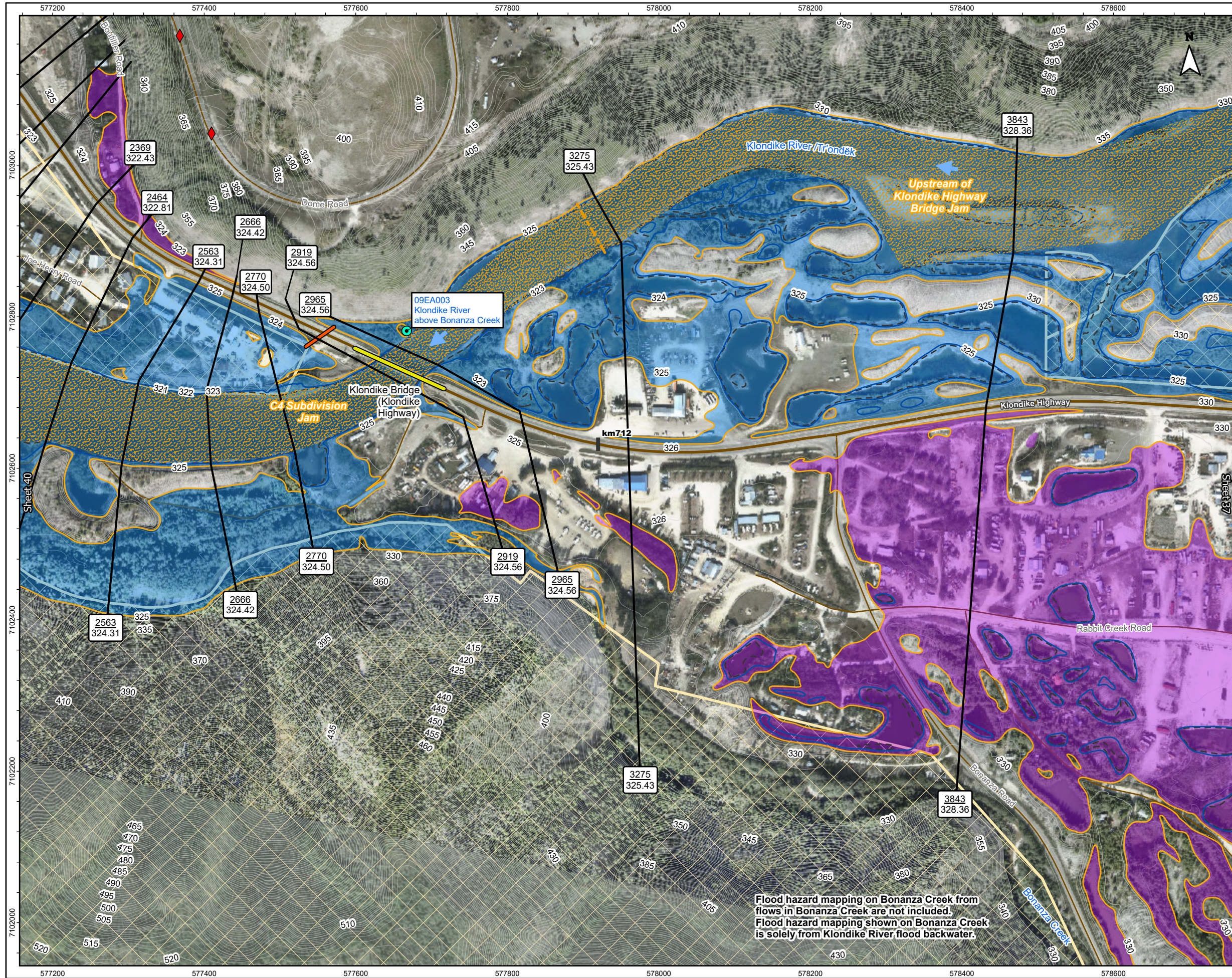
- Highway Kilometer Post
- 57 Cross-Section Number
- 22140 WSE (m) Along Cross-Section
- 320.26 WSE (m) Along Cross-Section
- 320.04 WSE (m) Along Cross-Section (WSE in Dike Breach Scenario)
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Tr'ondëk Hwëch'n Settlement Land
- Approximate 50% AEP Open Water Flood Inundation
- Inundation Under Modelled Open Water Runs
- Inundation Under Modelled Breakup Ice Jam Runs
- Inundation Extent From Subsurface Seepage

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**Dawson City and Klondike Valley Flood Mapping Study
Composite Flood Hazard Map - Klondike River
5% Annual Exceedance Probability (AEP)**

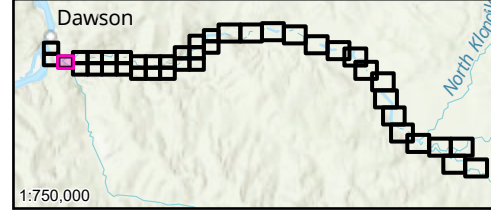
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Government of Yukon
Department of Environment
Water Resources Branch

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
- WSC Stations
- Highway Kilometer Post
- Cross-Section Number
- WSE (m) Along Cross-Section
- HPW Drainage Culverts
- Surveyed Culvert Location
- Bridge
- Highway
- Local Road
- Major Contour (5m)
- Minor Contour (1m)
- Surveyed Cross-Sections Used in Hydraulic Model
- Toe of Ice Jam
- 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 Extent
- Inundation Extent From Subsurface Seepage
- Potential Presence of Ice Debris During Jam Scenario
- Ice Jamming Extents

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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
5% Annual Exceedance Probability (AEP)

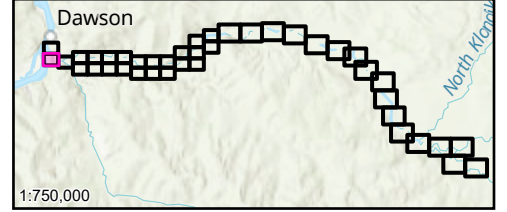
Client/Project:
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Water Resources Branch

Project: 123222713

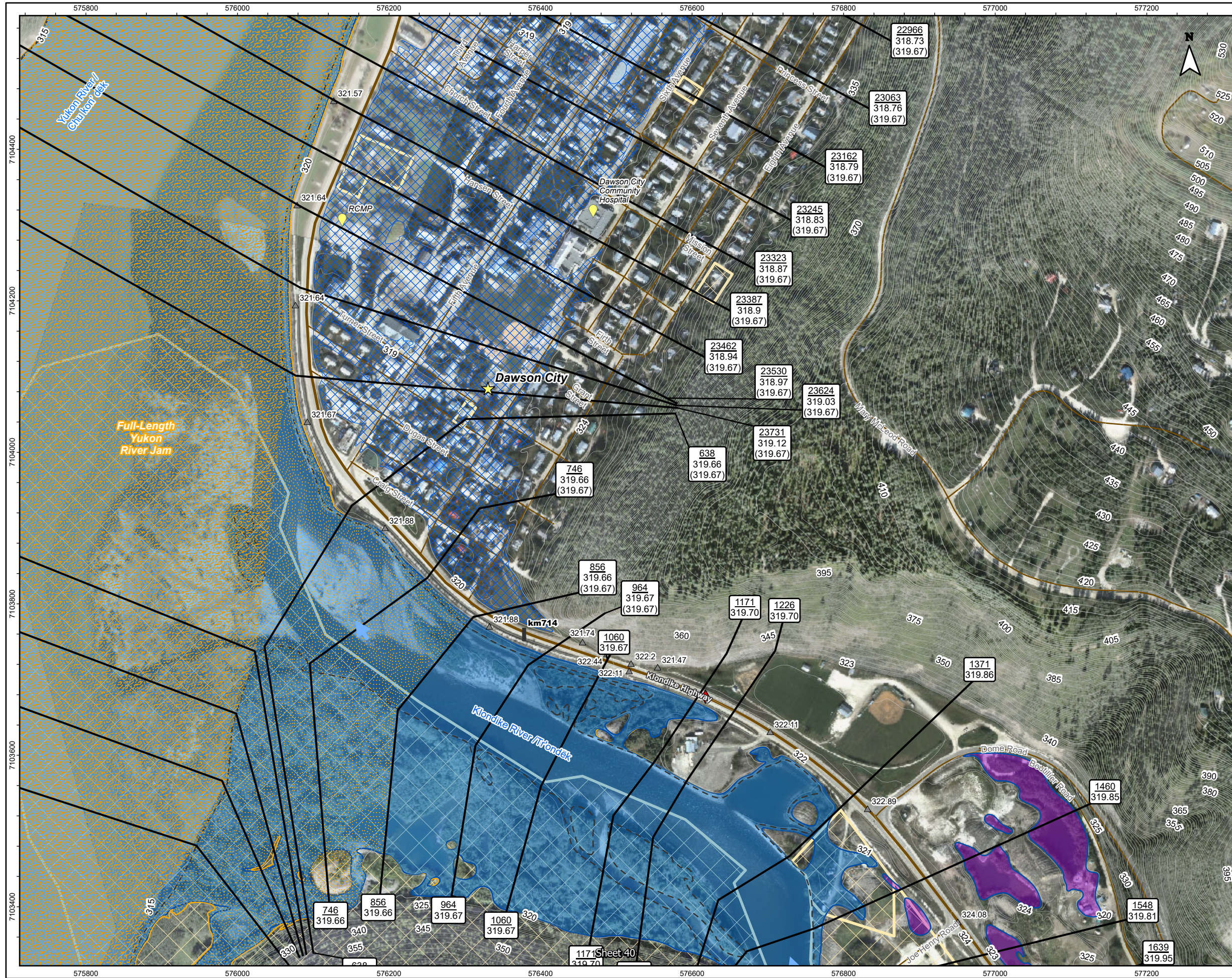
Project Location: Dawson, Yukon

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

Map Publication Date: 03/06/2026
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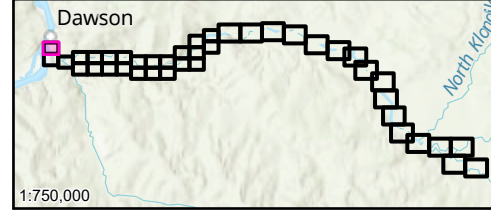
Client/Project:
Government of Yukon
Department of Environment
Water Resources Branch

Project: 123222713

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

- | | | | |
|--|---|--|--|
| | River Flow Direction | | Minor Contour (1m) |
| | Municipality | | Surveyed Cross-Sections Used in Hydraulic Model |
| | Point of Interest | | T'ondëk Hwëch'in Settlement Land |
| | Highway Kilometer Post | | Approximate 50% AEP Open Water Flood Inundation |
| | Cross-Section Number
WSE (m) Along Cross-Section | | Inundation Under Modelled Open Water Runs |
| | Cross-Section Number
WSE (m) Along Cross-Section (WSE in Dike Breach Scenario) | | Inundation Under Modelled Breakup Ice Jam Runs |
| | Ground Elevations of Interest | | Composite Open Water and Ice Jam Inundation Extent |
| | HPW Drainage Culverts | | Inundation Extent From Subsurface Seepage |
| | Highway | | Inundation Under Dike Breach Scenario |
| | Local Road | | Potential Presence of Ice Debris During Jam Scenario |
| | Major Contour (5m) | | Ice Jamming Extents |

Map Publication Date: 03/06/2026
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: CGVD2013a, 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.
 - 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.