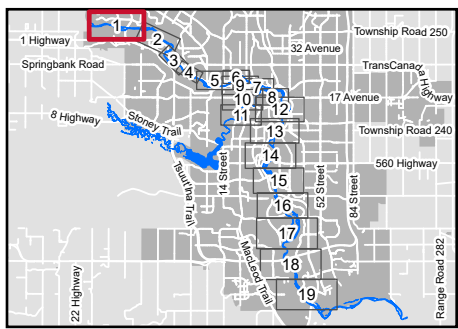


Groundwater Elevation Simulation (Calibrated Model)

1 in 20 Year Flood

- | | | | |
|-----|----------------------------|-----|------------------------|
| 1. | Valley Ridge | 11. | Lower Elbow |
| 2. | Bowness | 12. | Inglewood – Bonnybrook |
| 3. | Montgomery | 13. | Bonnybrook |
| 4. | Point McKay | 14. | Deerfoot Meadows |
| 5. | Hillhurst / West Hillhurst | 15. | Riverbend/Quarry Park |
| 6. | Sunnyside | 16. | Douglasdale |
| 7. | East Village / Bridgeland | 17. | Fish Creek |
| 8. | Inglewood | 18. | South Stoney Trail |
| 9. | Downtown | 19. | Pine Creek/Cranston |
| 10. | Beltline | | |



LEGEND

Building Footprint

Parcel

Community District

Manhole

Outfall

Storm Network

Sunnyside Seepage Collection

Flood Control Structure

Contours - 5m

3m Maximum Groundwater Depth Threshold

Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors)

Alluvial Aquifer / Model Domain

Waterbody

NOTES

1. Modelled flood conditions assume the flood conditions are modeled based on a flow rate of 1120 m³/s in the Bow River and 150 m³/s in the Elbow River. With a combined flow rate of 1270 m³/s.

2. Groundwater depth is compared between the modelled water elevations and the LIDAR data elevation.

DATA SOURCES

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- Ortho Imagery from the City of Calgary (2024)

FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
1 - VALLEY RIDGE

PROJECT

CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION

NAD 1983 CSRS 3TM 114

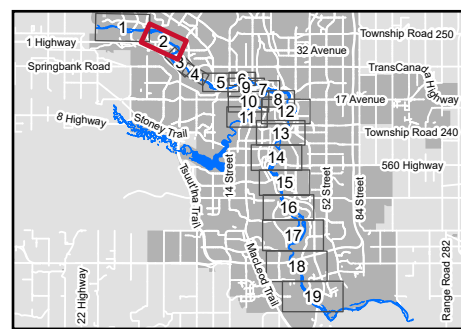
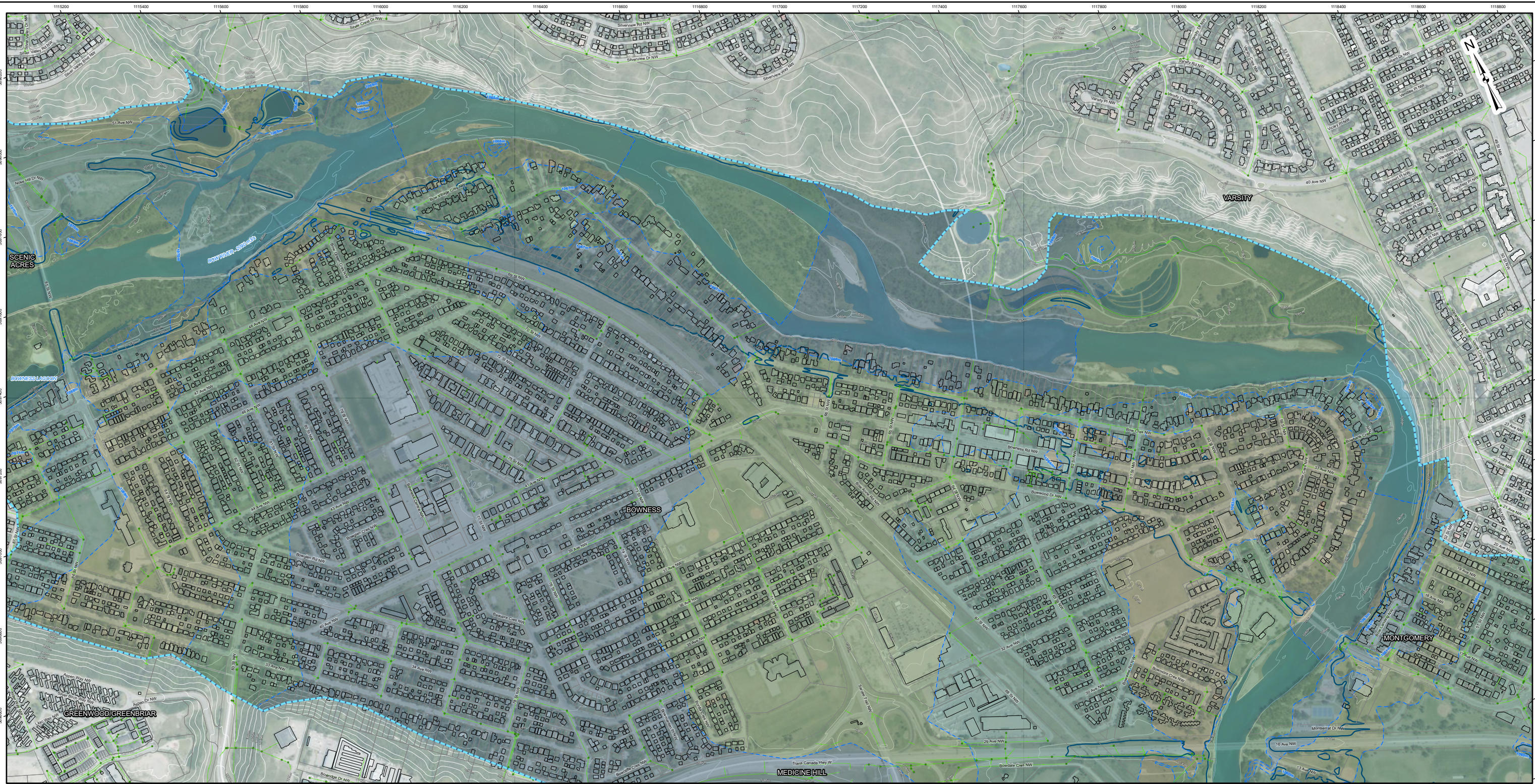
0 80 160 Meters

SCALE 1:13,500

DATE 8/14/2026

AUTHOR TDaSilva





LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------|--|--|
| | Building Footprint | | Manhole | | 3m Maximum Groundwater Depth Threshold |
| | Parcel | | Outfall | | Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors) |
| | Community District | | Storm Network | | Alluvial Aquifer / Model Domain |
| | | | Sunnyside Seepage Collection | | Waterbody |
| | | | Flood Control Structure | | |
| | | | Contours - 5m | | |

NOTES

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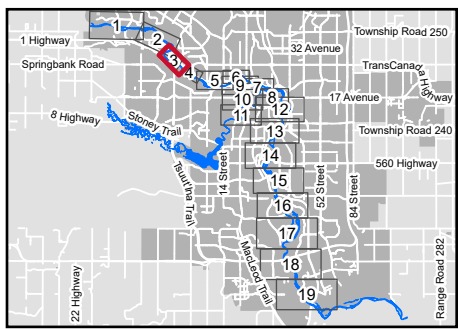
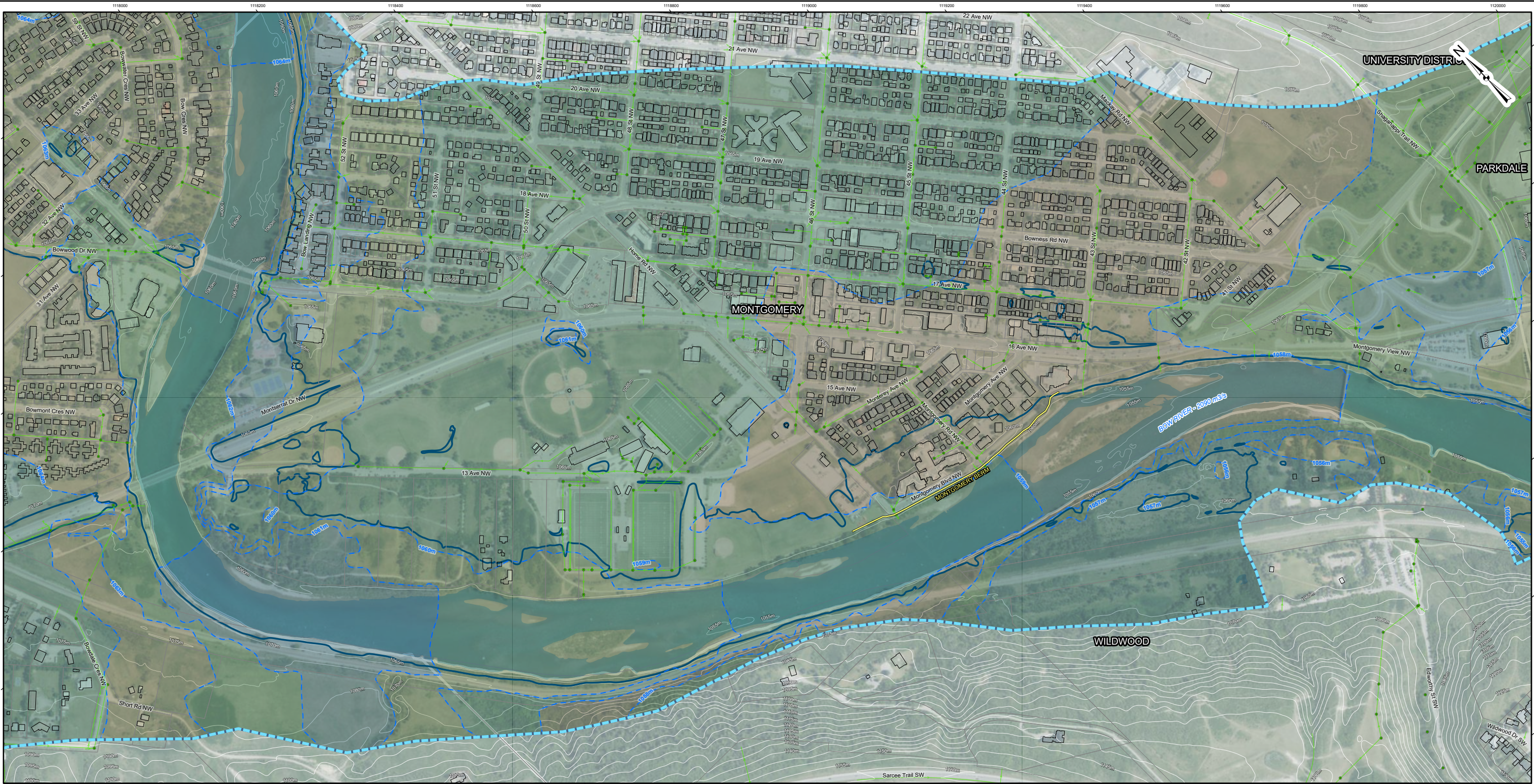
FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
2 - BOWNESS

PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

SCALE 1:10,000 DATE 8/14/2026 AUTHOR TDaSilva





LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------|--|--|
| | Building Footprint | | Manhole | | 3m Maximum Groundwater Depth Threshold |
| | Parcel | | Outfall | | Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors) |
| | Community District | | Storm Network | | Alluvial Aquifer / Model Domain |
| | | | Sunnyside Seepage Collection | | Waterbody |
| | | | Flood Control Structure | | |
| | | | Contours - 5m | | |

NOTES

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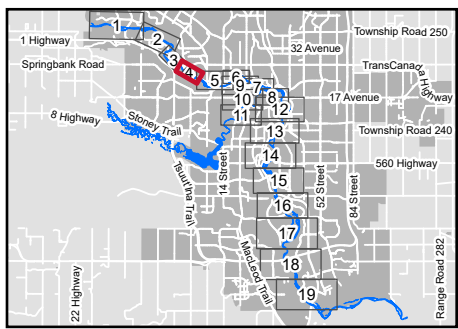
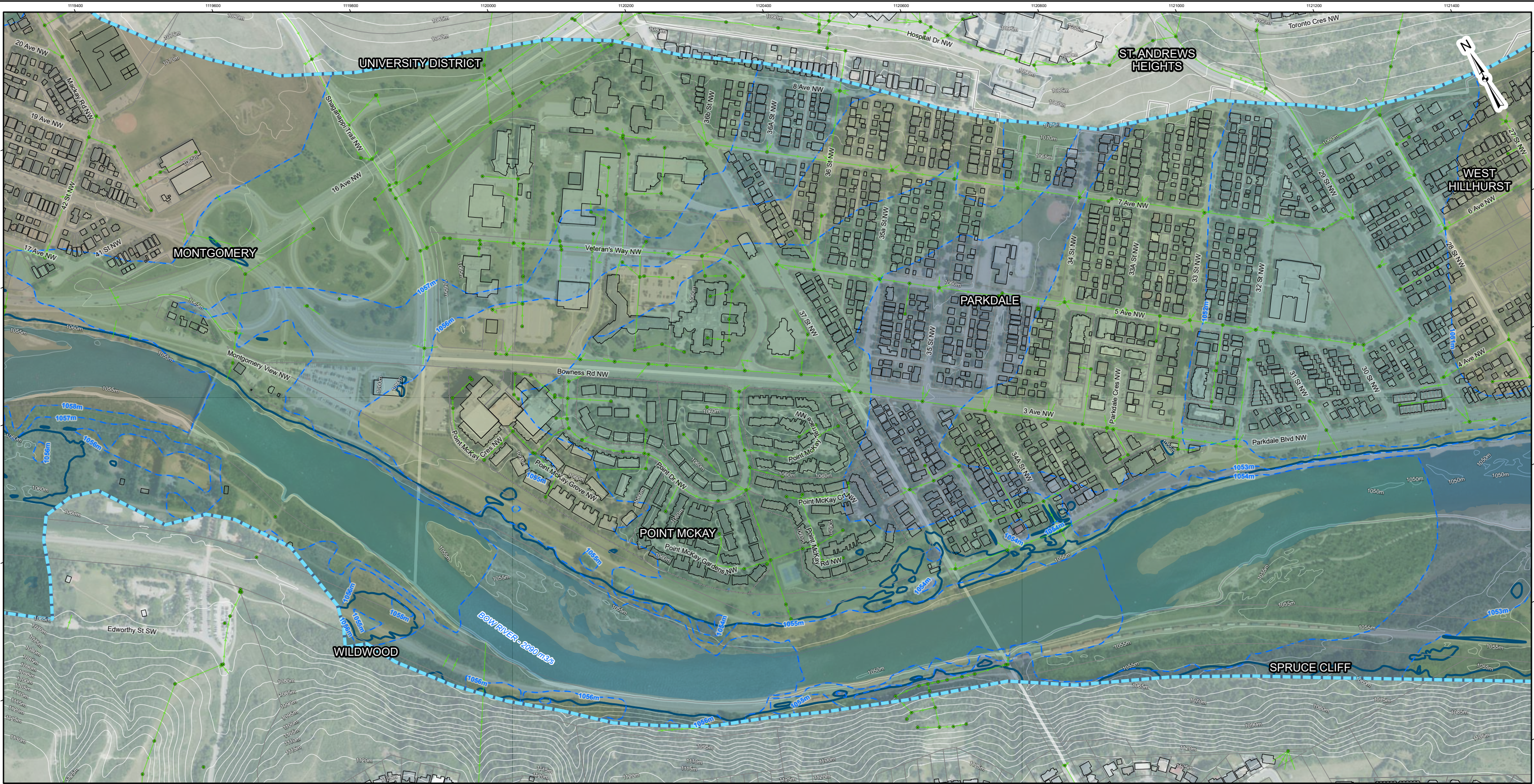
FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
3 - MONTGOMERY

PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

SCALE 1:7,000 DATE 8/14/2026 AUTHOR TDaSilva





LEGEND

Building Footprint

Parcel

Community District

Manhole

Outfall

Storm Network

Sunnyside Seepage Collection

Flood Control Structure

Contours - 5m

3m Maximum Groundwater Depth Threshold

Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors)

Alluvial Aquifer / Model Domain

Waterbody

NOTES

1. Modelled flood conditions assume the flood conditions are modeled based on a flow rate of 1120 m³/s in the Bow River and 150 m³/s in the Elbow River. With a combined flow rate of 1270 m³/s.
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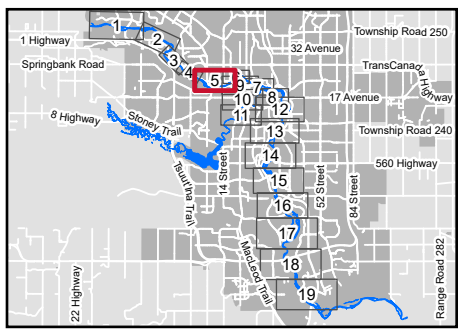
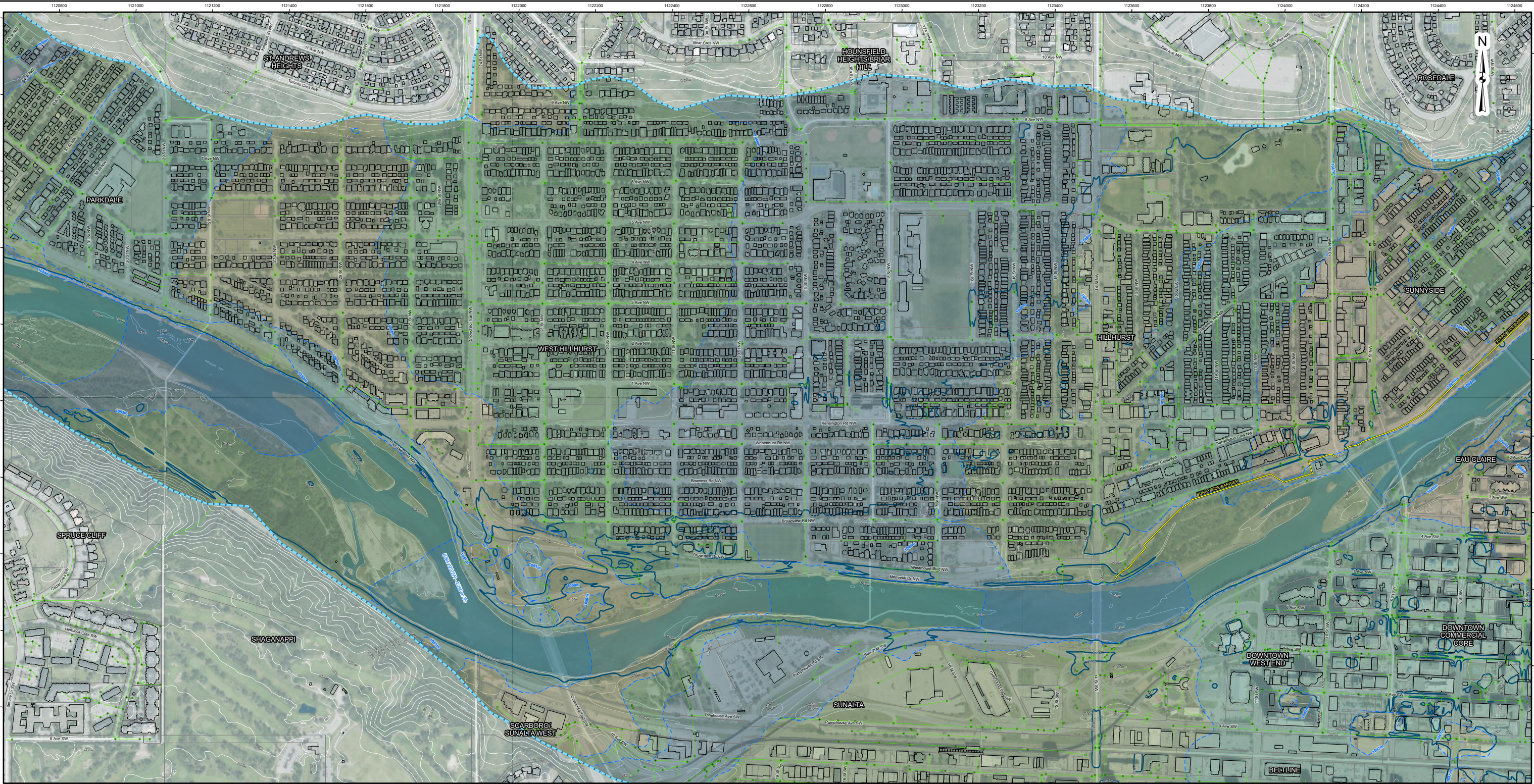
FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
4 - POINT MCKAY

PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

SCALE 1:6,000 DATE 8/14/2026 AUTHOR TDaSilva

0 30 60 Meters



LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------|--|--|
| | Building Footprint | | Manhole | | 3m Maximum Groundwater Depth Threshold |
| | Parcel | | Outfall | | Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors) |
| | Community District | | Storm Network | | Alluvial Aquifer / Model Domain |
| | | | Sunnyside Seepage Collection | | Waterbody |
| | | | Flood Control Structure | | |
| | | | Contours - 5m | | |

NOTES

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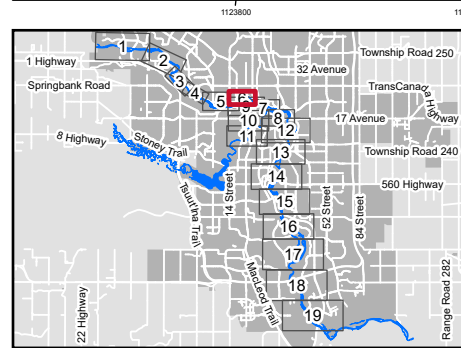
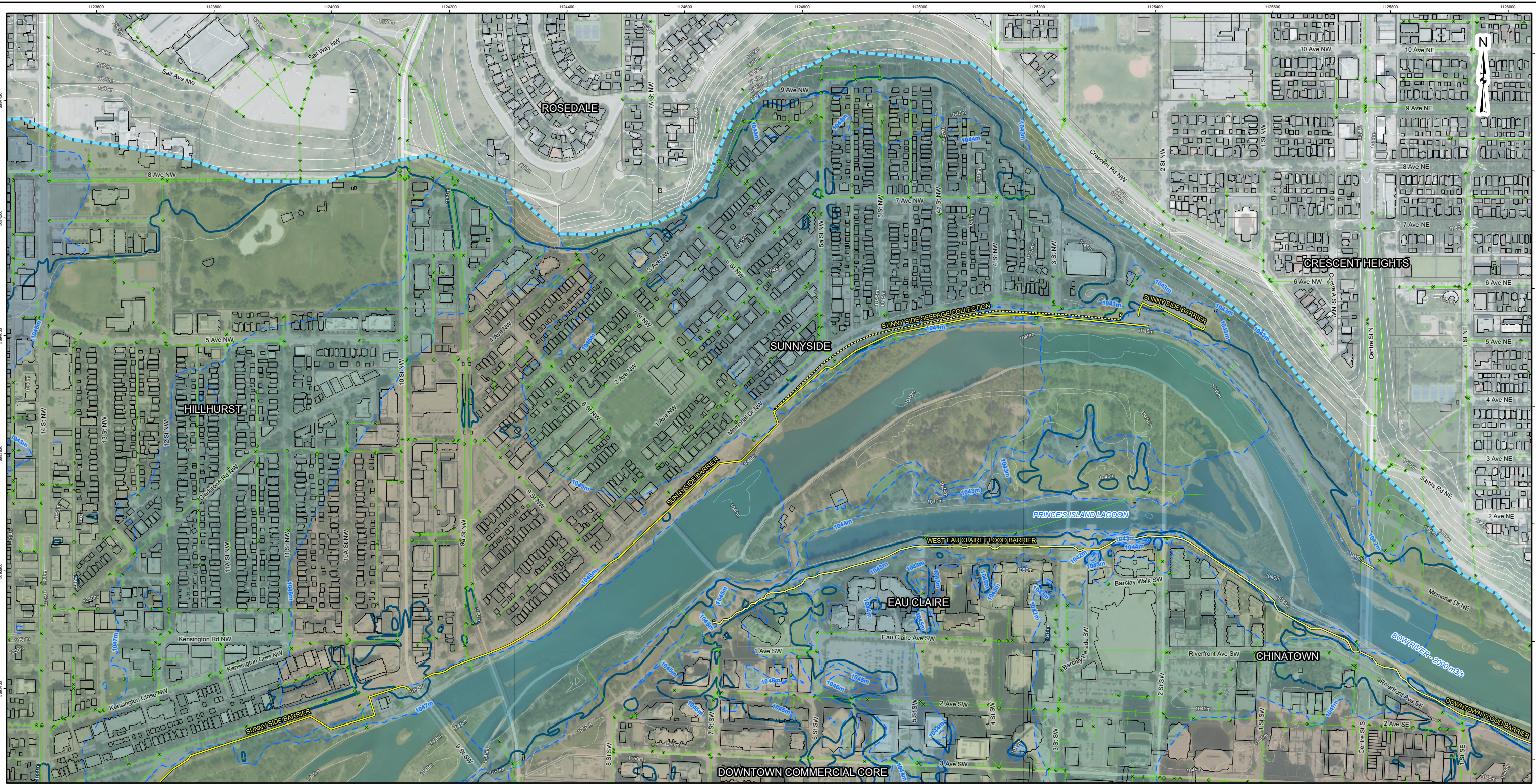
FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
5 - HILLHURST / WEST HILLHURST

PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

SCALE 1:10,000 DATE 8/14/2026 AUTHOR TDaSilva





LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------|--|--|
| | Building Footprint | | Manhole | | 3m Maximum Groundwater Depth Threshold |
| | Parcel | | Outfall | | Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors) |
| | Community District | | Storm Network | | Alluvial Aquifer / Model Domain |
| | | | Sunnyside Seepage Collection | | Waterbody |
| | | | Flood Control Structure | | |
| | | | Contours - 5m | | |

NOTES

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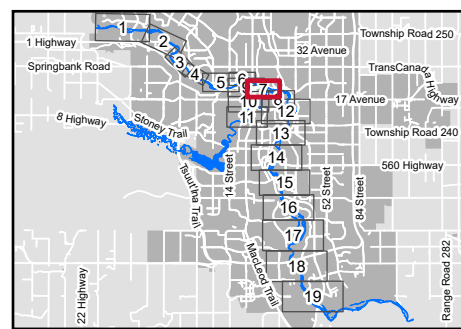
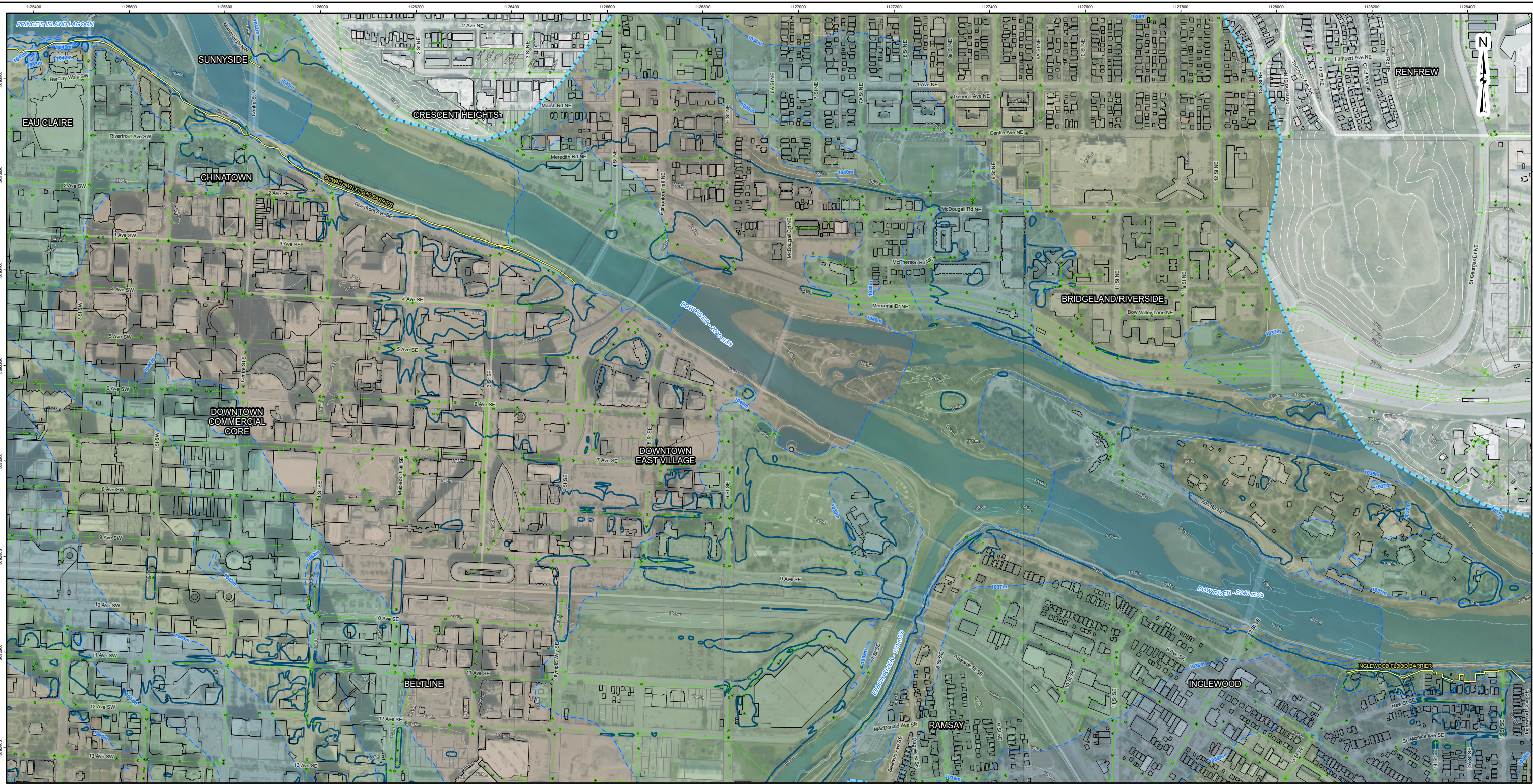
FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
6 - SUNNYSIDE

PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

SCALE 1:6,500 DATE 8/14/2026 AUTHOR TDaSilva





LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------|--|--|
| | Building Footprint | | Manhole | | 3m Maximum Groundwater Depth Threshold |
| | Parcel | | Outfall | | Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors) |
| | Community District | | Storm Network | | Alluvial Aquifer / Model Domain |
| | | | Sunnyside Seepage Collection | | Waterbody |
| | | | Flood Control Structure | | |
| | | | Contours - 5m | | |

NOTES

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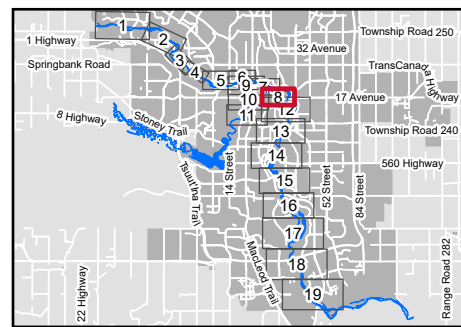
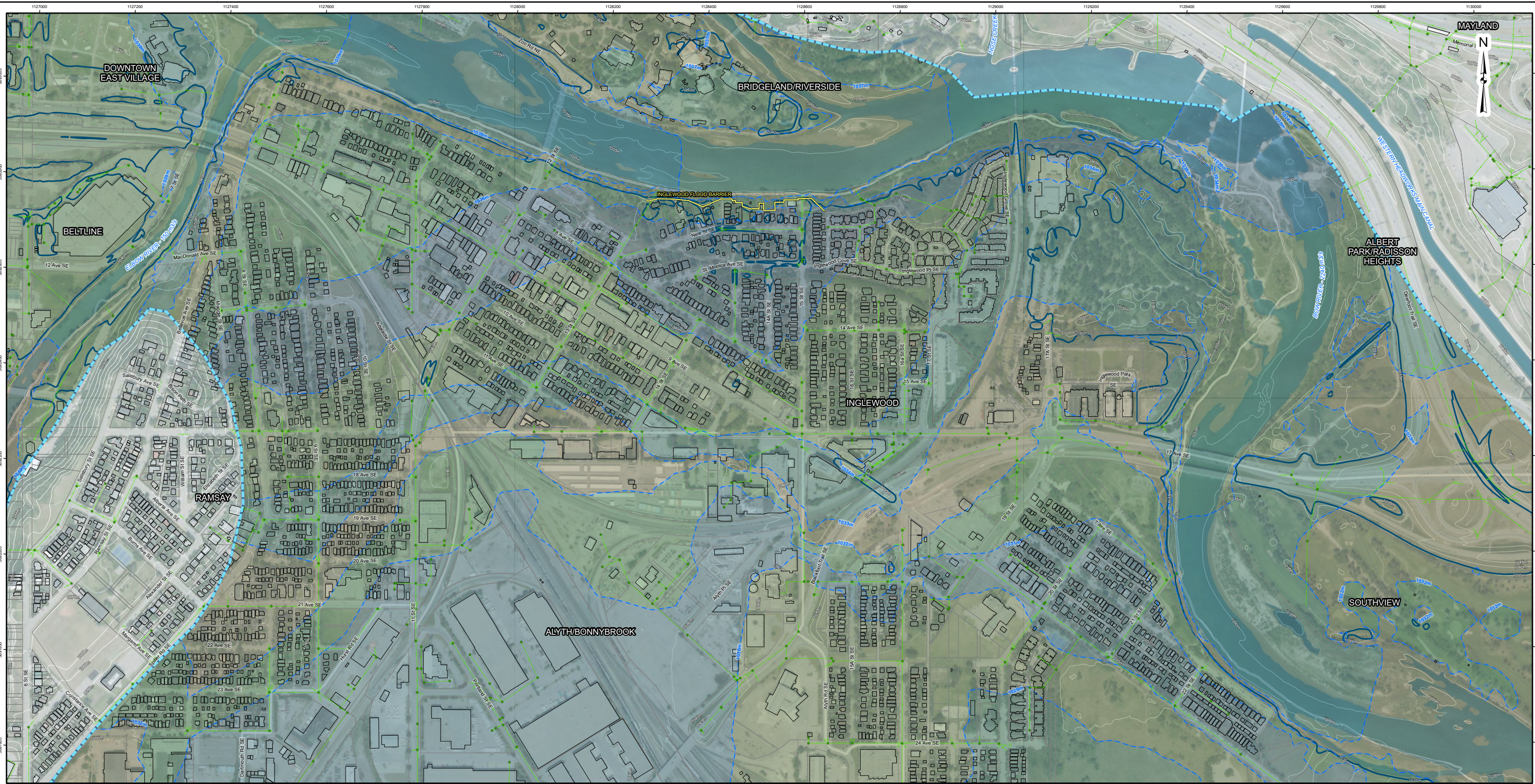
FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
7 - EAST VILLAGE / BRIDGELAND

PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

SCALE 1:8,000 DATE 8/14/2026 AUTHOR TDaSilva





LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------|--|--|
| | Building Footprint | | Manhole | | 3m Maximum Groundwater Depth Threshold |
| | Parcel | | Outfall | | Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors) |
| | Community District | | Storm Network | | Alluvial Aquifer / Model Domain |
| | | | Sunnyside Seepage Collection | | Waterbody |
| | | | Flood Control Structure | | |
| | | | Contours - 5m | | |

NOTES

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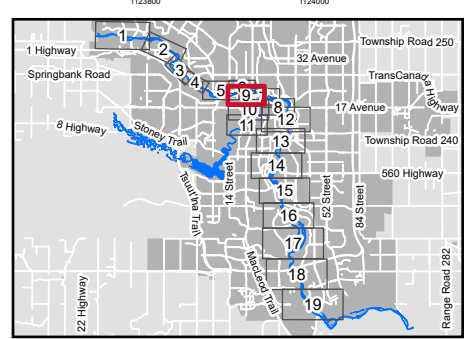
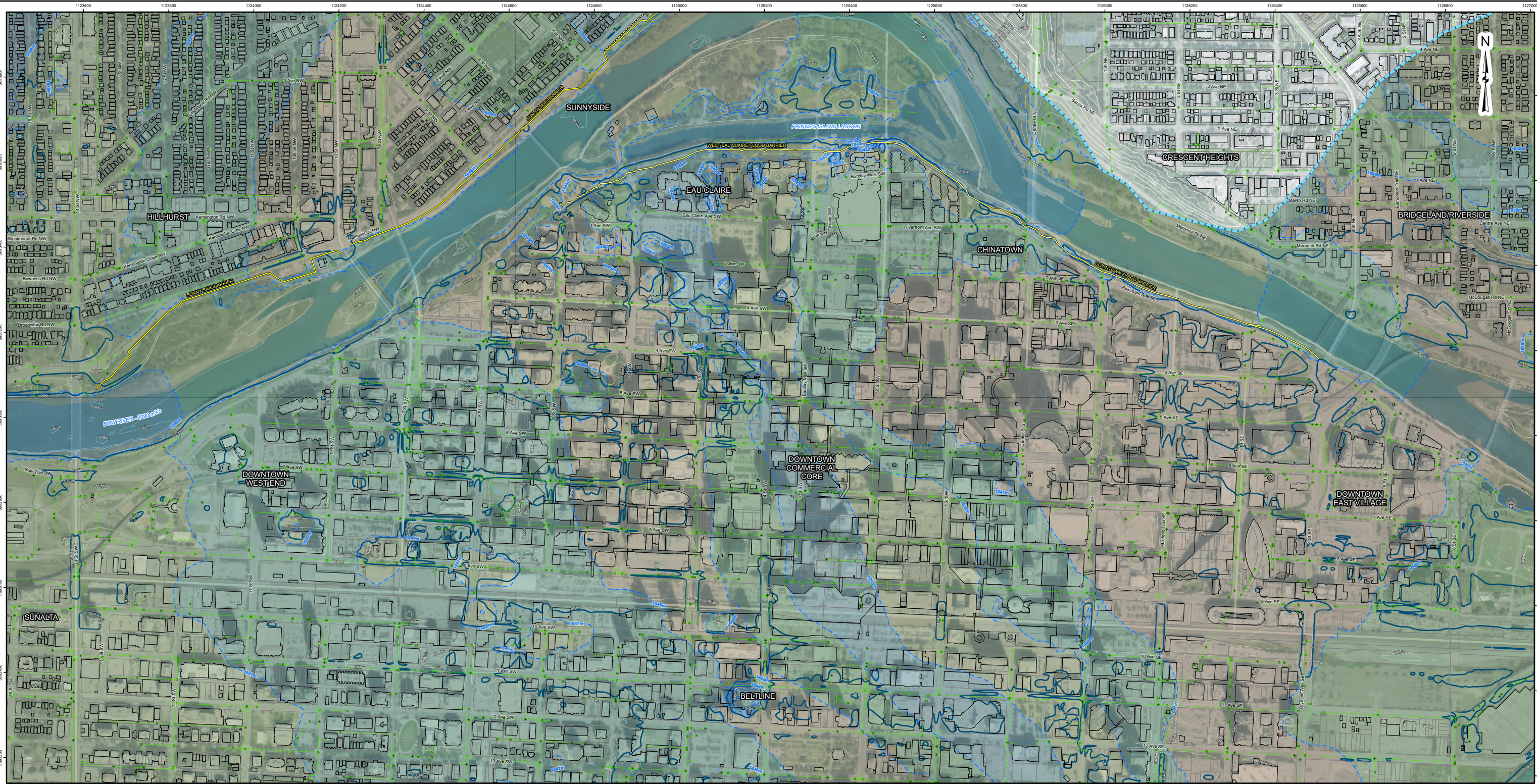
FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
8 - INGLEWOOD

PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

SCALE 1:8,000 DATE 8/14/2026 AUTHOR TDaSilva





LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------|--|--|
| | Building Footprint | | Manhole | | 3m Maximum Groundwater Depth Threshold |
| | Parcel | | Outfall | | Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors) |
| | Community District | | Storm Network | | Alluvial Aquifer / Model Domain |
| | | | Sunnyside Seepage Collection | | Waterbody |
| | | | Flood Control Structure | | |
| | | | Contours - 5m | | |

NOTES

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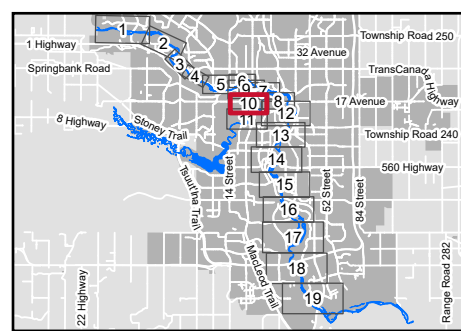
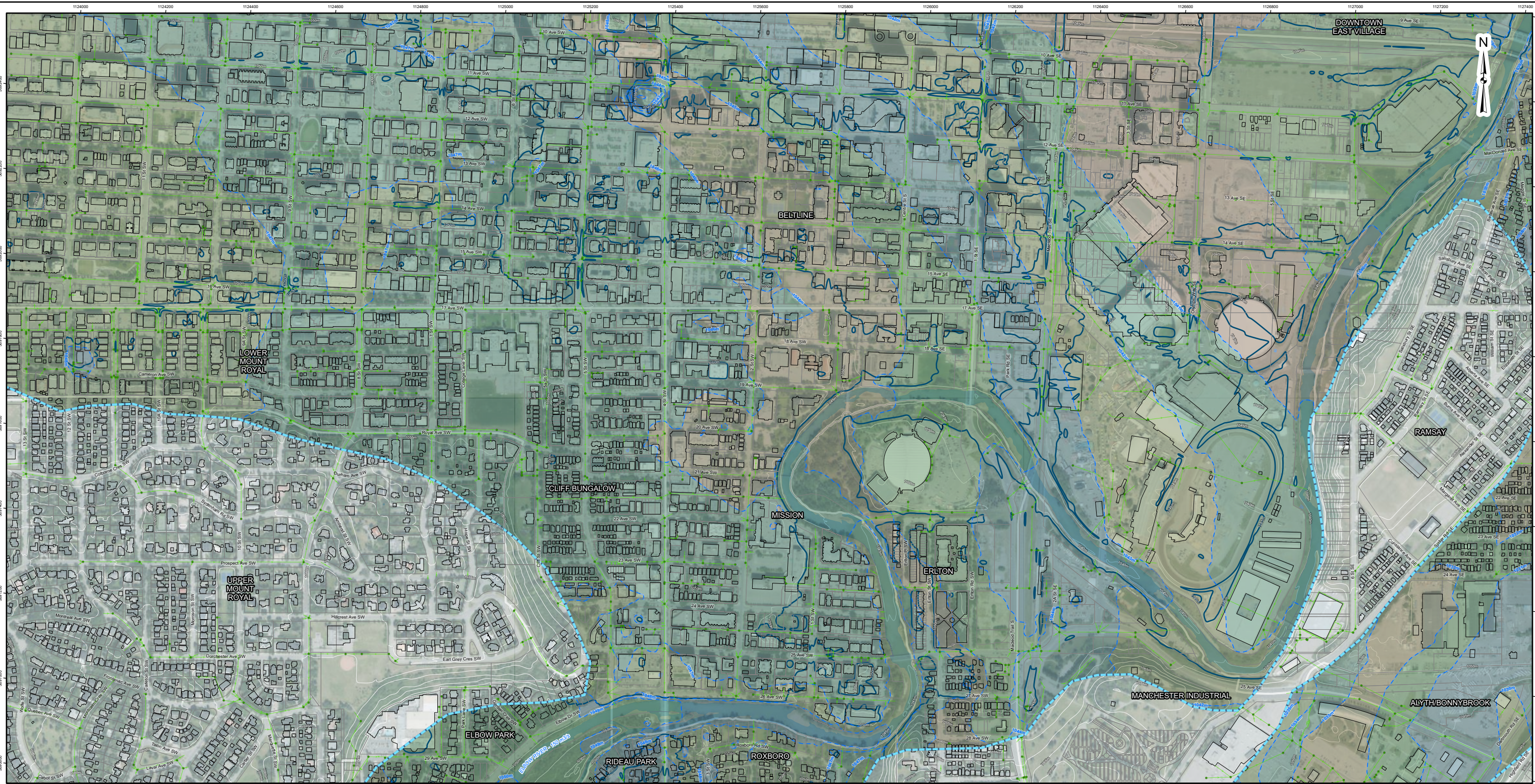
FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
9 - DOWNTOWN

PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

SCALE 1:9,000 DATE 8/14/2026 AUTHOR TDaSilva





LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------|--|--|
| | Building Footprint | | Manhole | | 3m Maximum Groundwater Depth Threshold |
| | Parcel | | Outfall | | Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors) |
| | Community District | | Storm Network | | Alluvial Aquifer / Model Domain |
| | | | Sunnyside Seepage Collection | | Waterbody |
| | | | Flood Control Structure | | |
| | | | Contours - 5m | | |

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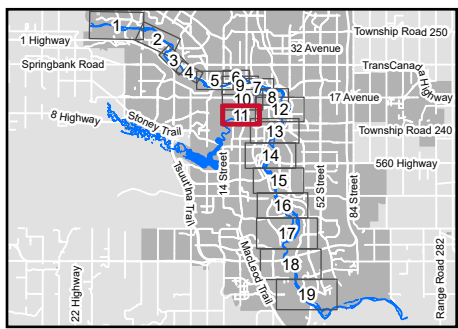
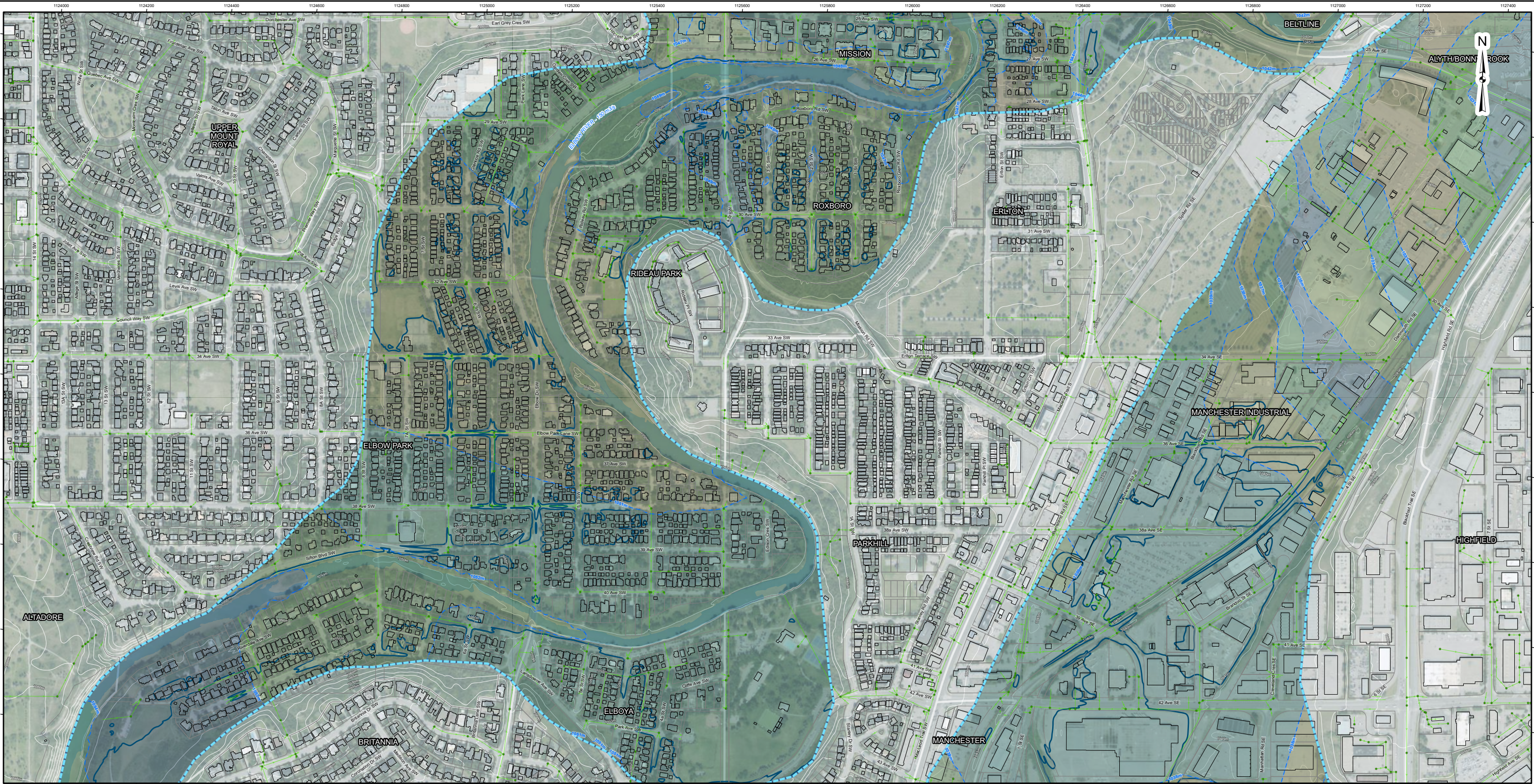
FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
10 - BELTLINE

PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

SCALE 1:9,000 DATE 8/14/2026 AUTHOR TDaSilva





LEGEND

Building Footprint

Parcel

Community District

Manhole

Outfall

Storm Network

Sunnyside Seepage Collection

Flood Control Structure

Contours - 5m

3m Maximum Groundwater Depth Threshold

Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors)

Alluvial Aquifer / Model Domain

Waterbody

NOTES

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FIGURE 2.4

GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)

1 IN 20 YEAR FLOOD

11 - LOWER ELBOW

PROJECT

CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION

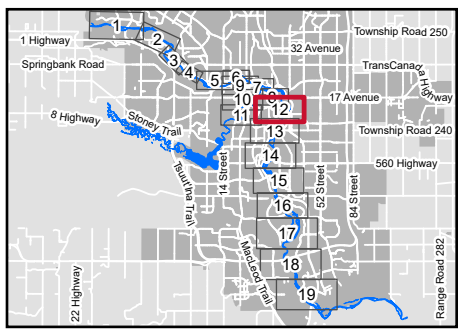
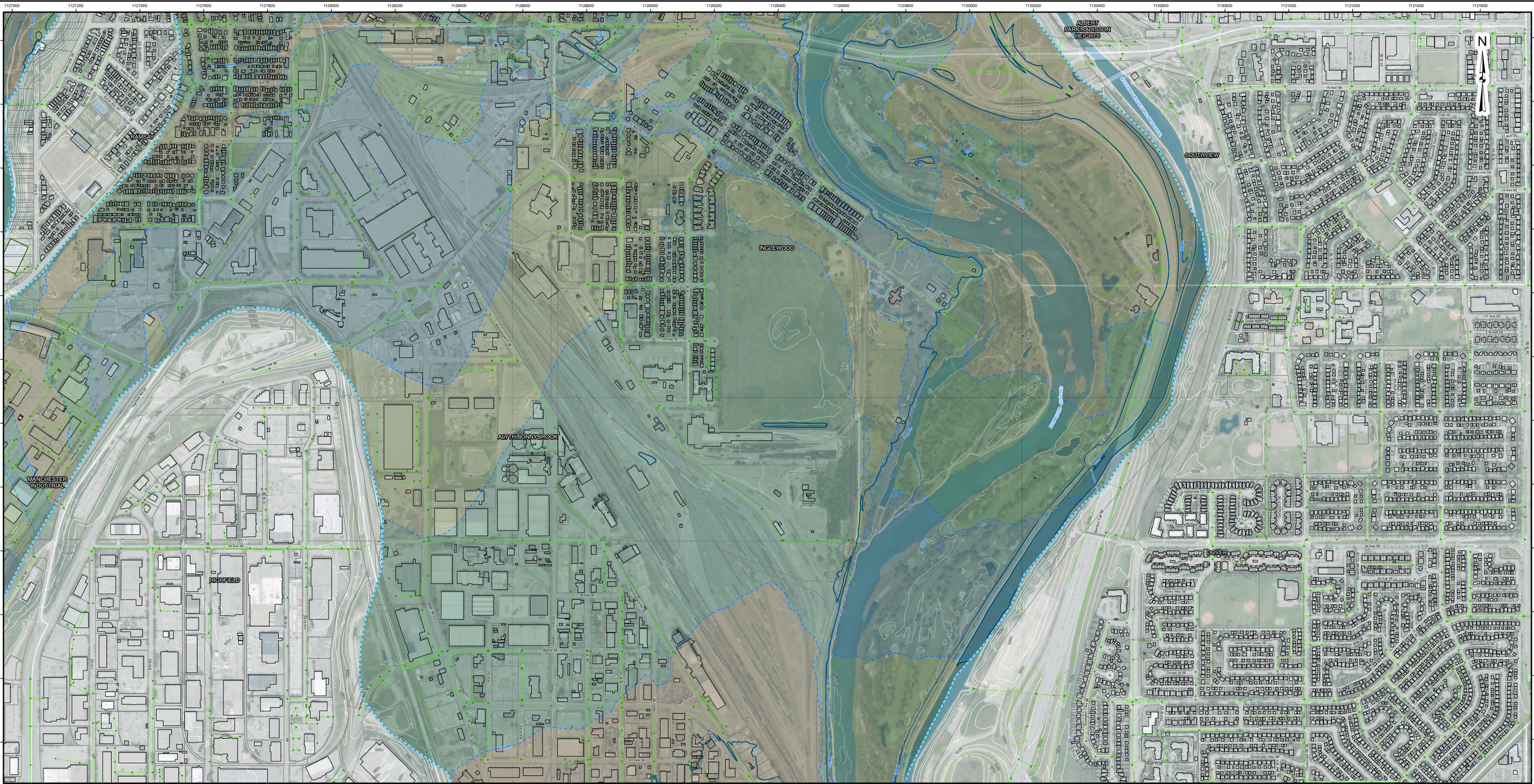
NAD 1983 CSRS 3TM 114

SCALE 1:9,000

DATE 8/14/2026

AUTHOR TDaSilva

0 50 100 Meters



LEGEND

Building Footprint

Parcel

Community District

Manhole

Outfall

Storm Network

Sunnyside Seepage Collection

Flood Control Structure

Contours - 5m

3m Maximum Groundwater Depth Threshold

Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors)

Alluvial Aquifer / Model Domain

Waterbody

NOTES

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FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
12 - INGLEWOOD - BONNYBROOK

PROJECT

CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION

NAD 1983 CSRS 3TM 114

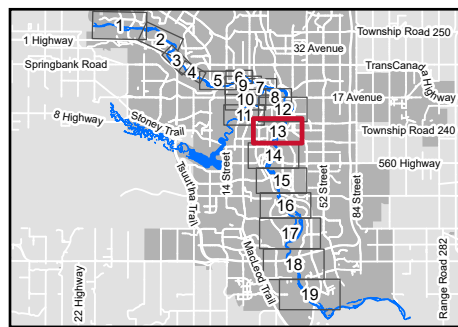
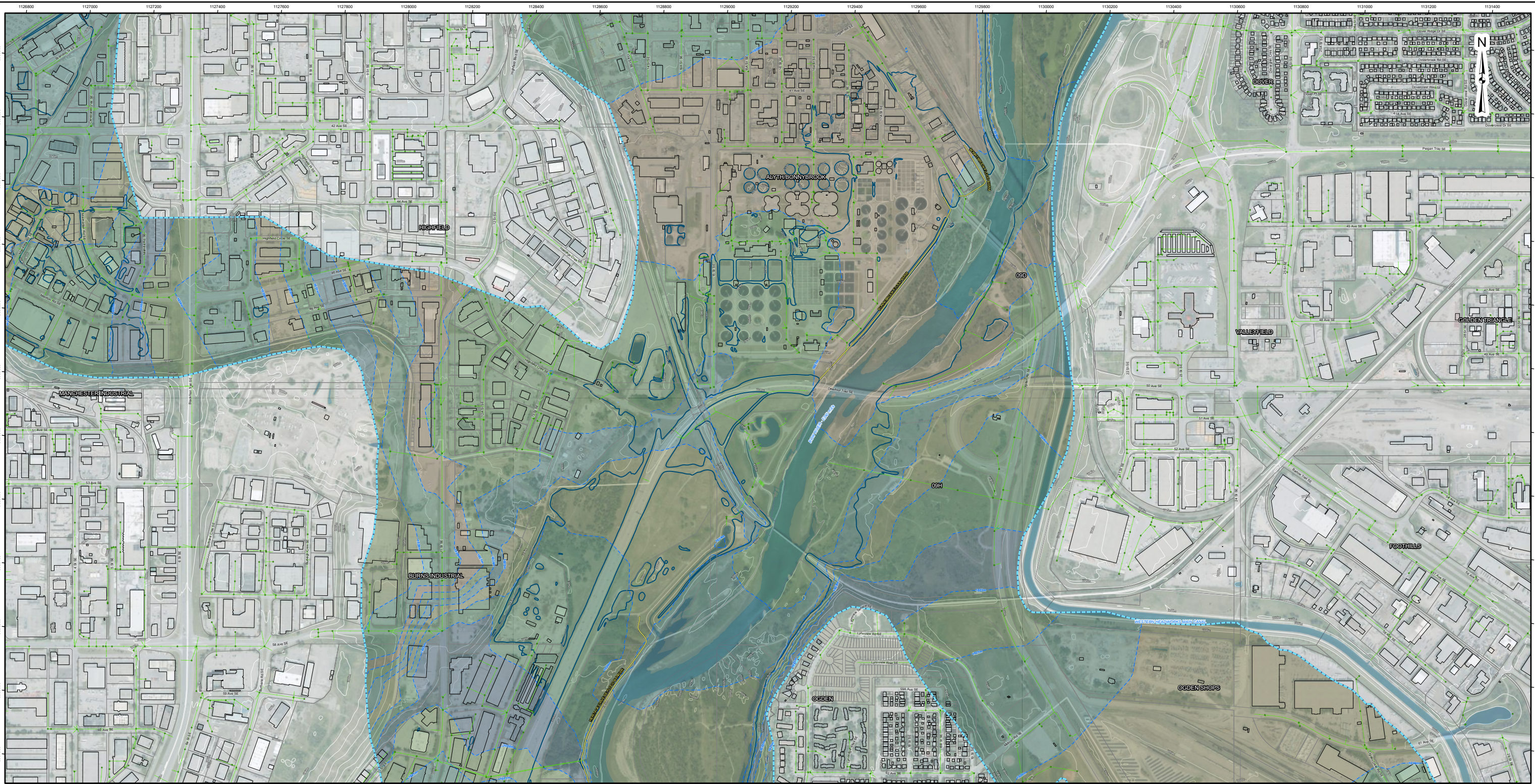
0 70 140 Meters

SCALE 1:12,000

DATE 8/14/2026

AUTHOR TDaSilva





LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------|--|--|
| | Building Footprint | | Manhole | | 3m Maximum Groundwater Depth Threshold |
| | Parcel | | Outfall | | Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors) |
| | Community District | | Storm Network | | Alluvial Aquifer / Model Domain |
| | | | Sunnyside Seepage Collection | | Waterbody |
| | | | Flood Control Structure | | |
| | | | Contours - 5m | | |

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FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
13 - BONNYBROOK

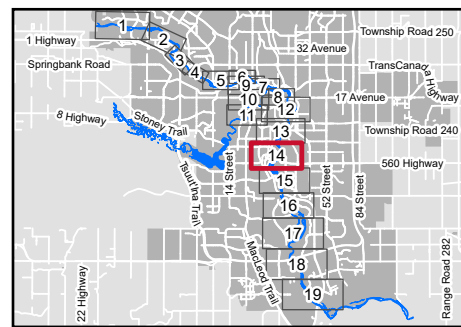
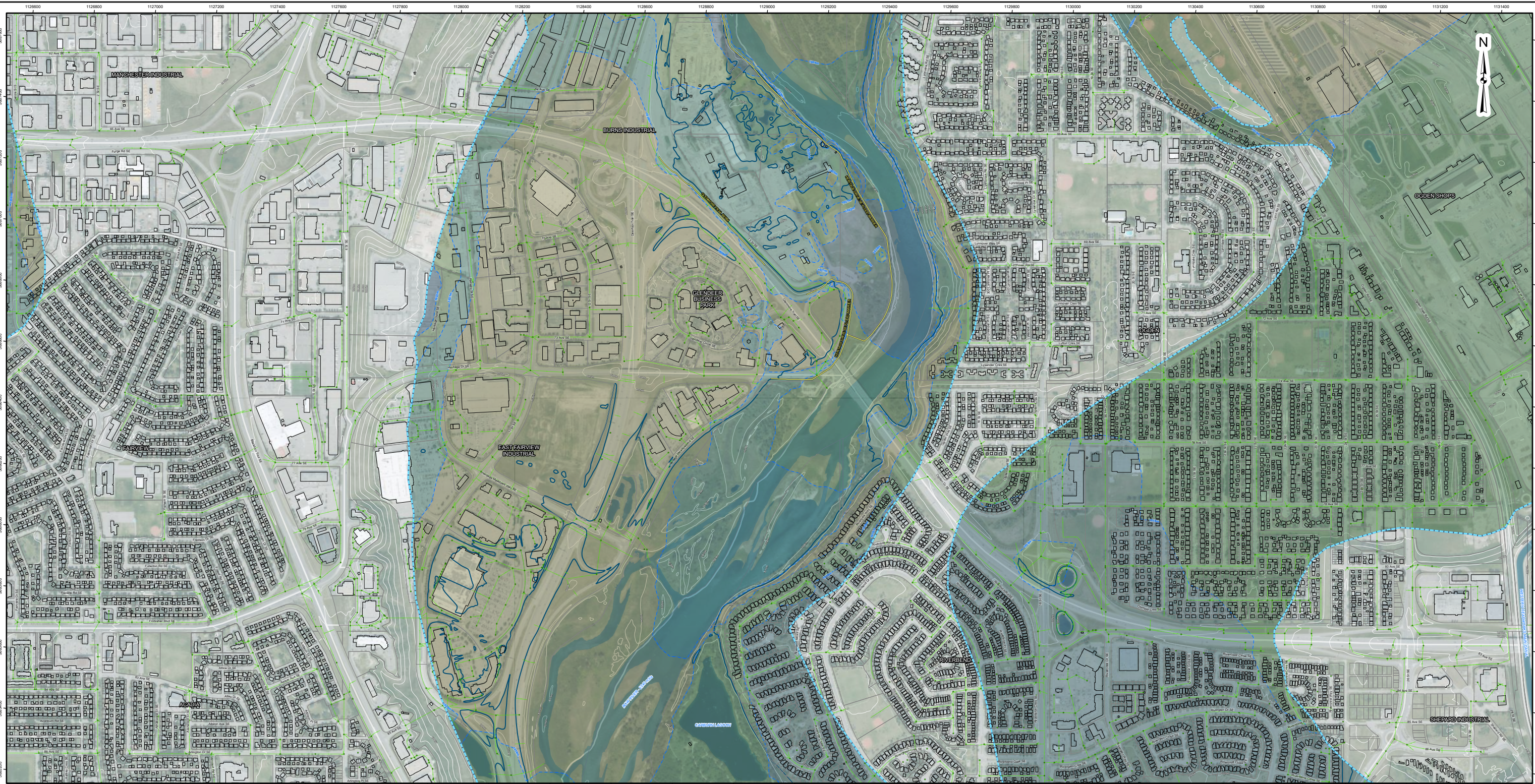
PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

0 70 140
Meters

SCALE 1:12,000 DATE 8/14/2026 AUTHOR TDaSilva





LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------|--|--|
| | Building Footprint | | Manhole | | 3m Maximum Groundwater Depth Threshold |
| | Parcel | | Outfall | | Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors) |
| | Community District | | Storm Network | | Alluvial Aquifer / Model Domain |
| | | | Sunnyside Seepage Collection | | Waterbody |
| | | | Flood Control Structure | | |
| | | | Contours - 5m | | |

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- Ortho Imagery from the City of Calgary (2024)

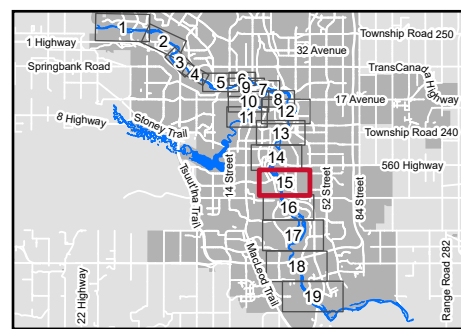
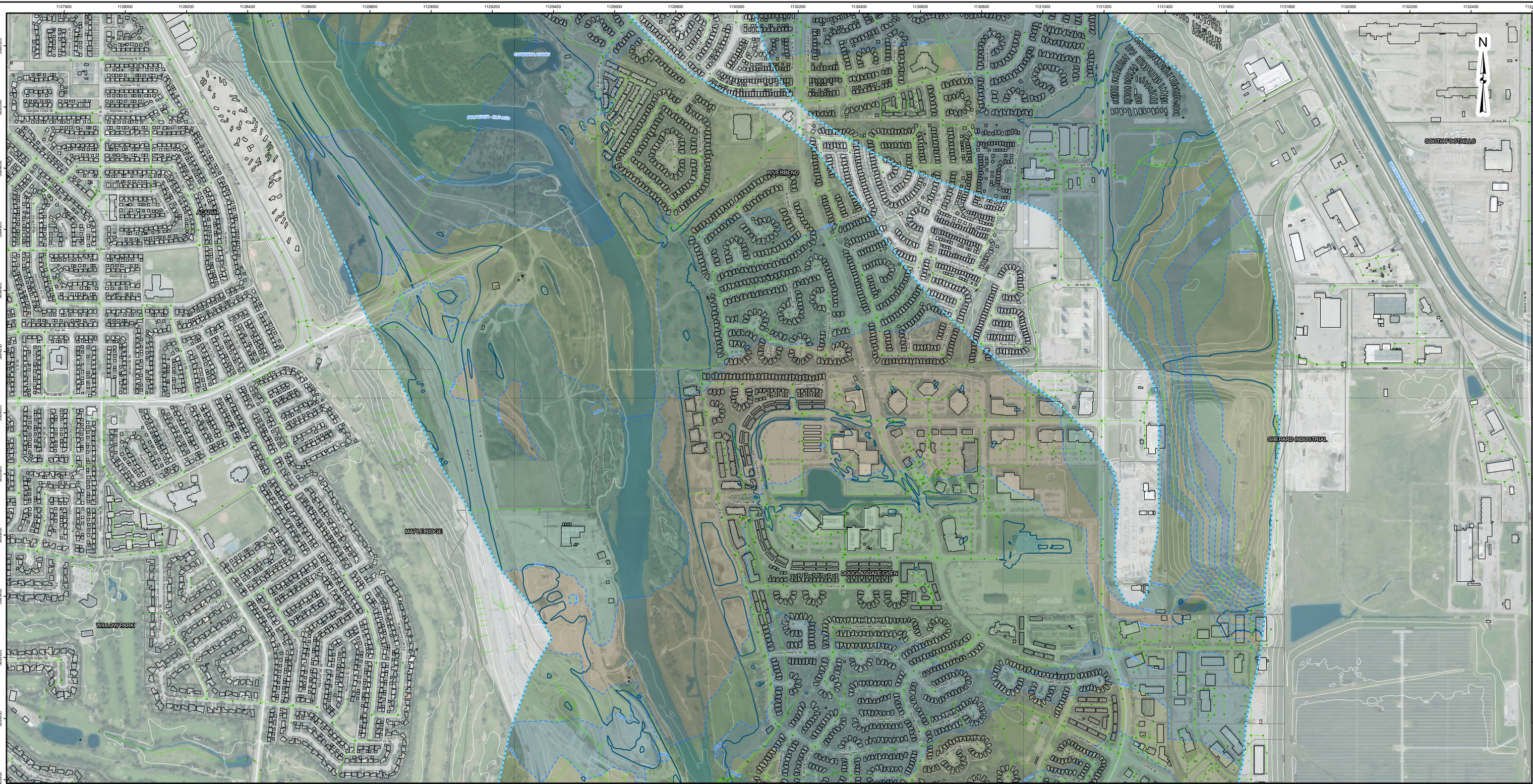
FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
14 - DEERFOOT MEADOWS

PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

SCALE 1:12,500 DATE 8/14/2026 AUTHOR TDaSilva





LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------|--|--|
| | Building Footprint | | Manhole | | 3m Maximum Groundwater Depth Threshold |
| | Parcel | | Outfall | | Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors) |
| | Community District | | Storm Network | | Alluvial Aquifer / Model Domain |
| | | | Sunnyside Seepage Collection | | Waterbody |
| | | | Flood Control Structure | | |
| | | | Contours - 5m | | |

NOTES

1. Modelled flood conditions assume the flood conditions are modeled based on a flow rate of 1120 m³/s in the Bow River and 150 m³/s in the Elbow River. With a combined flow rate of 1270 m³/s.
2. Groundwater depth is compared between the modelled water elevations and the LIDAR data elevation.

DATA SOURCES

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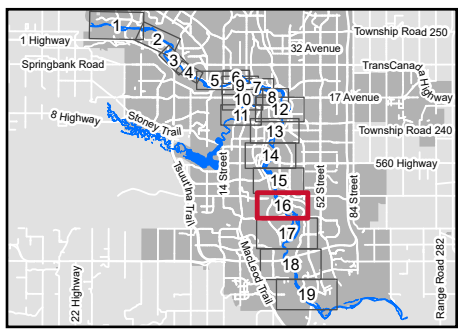
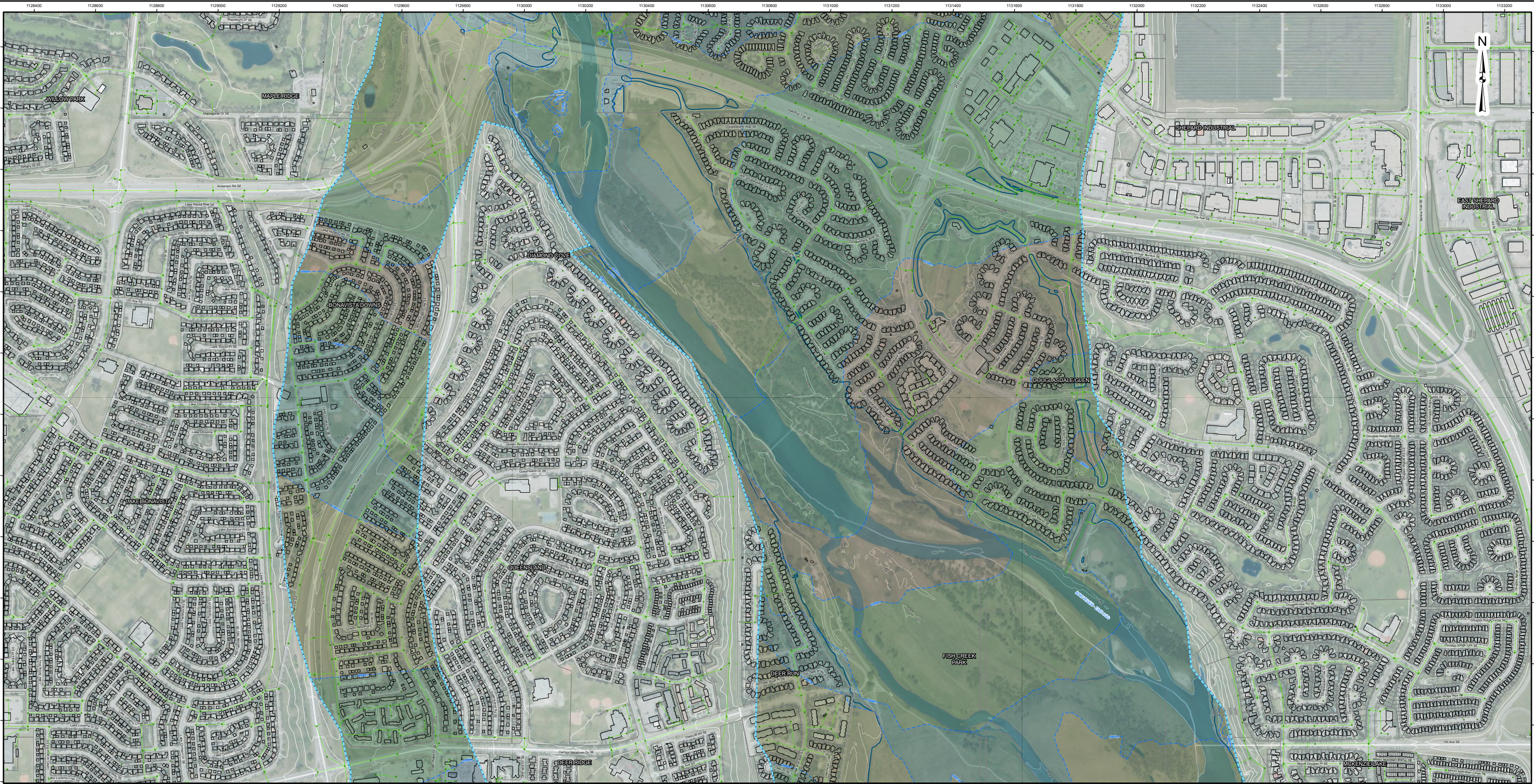
FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
15 - RIVERBEND / QUARRY PARK

PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

SCALE 1:12,500 DATE 8/14/2026 AUTHOR TDaSilva





LEGEND

Building Footprint

Parcel

Community District

Manhole

Outfall

Storm Network

Sunnyside Seepage Collection

Flood Control Structure

Contours - 5m

3m Maximum Groundwater Depth Threshold

Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors)

Alluvial Aquifer / Model Domain

Waterbody

NOTES

1. Modelled flood conditions assume the flood conditions are modeled based on a flow rate of 1120 m³/s in the Bow River and 150 m³/s in the Elbow River. With a combined flow rate of 1270 m³/s.

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FIGURE 2.4

GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)

1 IN 20 YEAR FLOOD

16 - DOUGLASDALE

PROJECT

CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION

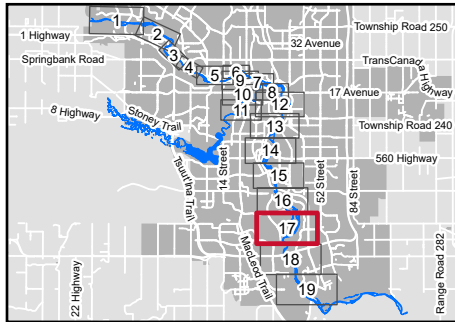
NAD 1983 CSRS 3TM 114

0 75 150 Meters

SCALE 1:12,500

DATE 8/14/2026

AUTHOR TDaSilva



LEGEND

- | | | | | | |
|--|--------------------|--|------------------------------|--|--|
| | Building Footprint | | Manhole | | 3m Maximum Groundwater Depth Threshold |
| | Parcel | | Outfall | | Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors) |
| | Community District | | Storm Network | | Alluvial Aquifer / Model Domain |
| | | | Sunnyside Seepage Collection | | Waterbody |
| | | | Flood Control Structure | | |
| | | | Contours - 5m | | |

NOTES

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FIGURE 2.4
GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)
1 IN 20 YEAR FLOOD
17 - FISH CREEK

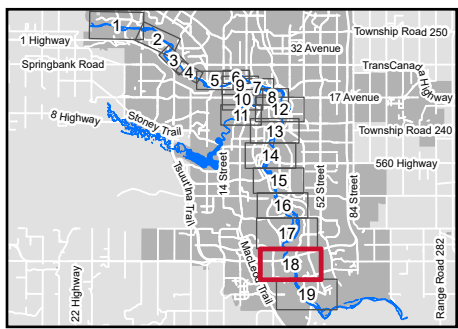
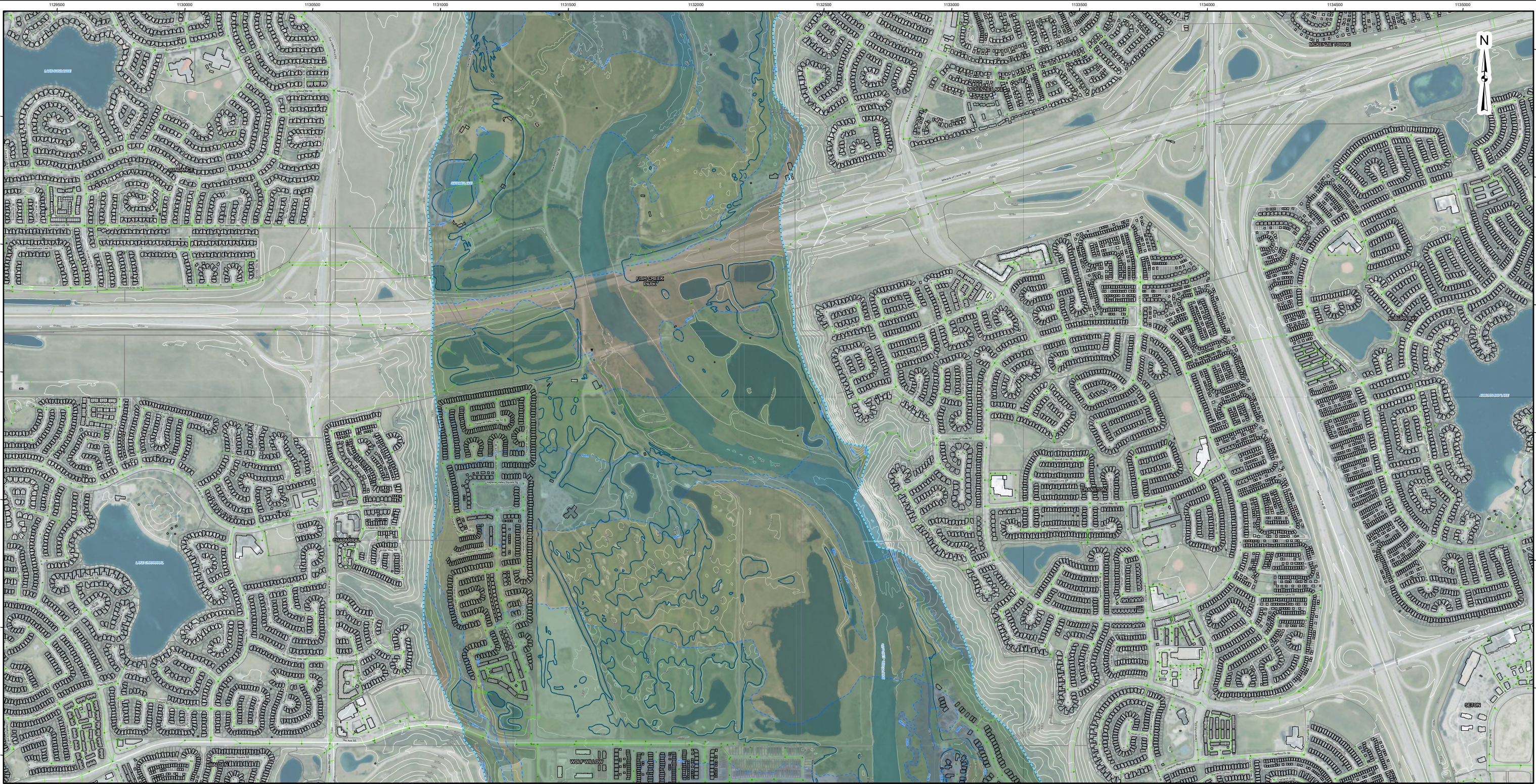
PROJECT
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION
NAD 1983 CSRS 3TM 114

0 90 180
Meters

SCALE 1:15,000 DATE 8/14/2026 AUTHOR TDaSilva





LEGEND

Building Footprint

Parcel

Community District

Manhole

Outfall

Storm Network

Sunnyside Seepage Collection

Flood Control Structure

Contours - 5m

3m Maximum Groundwater Depth Threshold

Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors)

Alluvial Aquifer / Model Domain

Waterbody

NOTES

1. Modelled flood conditions assume the flood conditions are modeled based on a flow rate of 1120 m³/s in the Bow River and 150 m³/s in the Elbow River. With a combined flow rate of 1270 m³/s.

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FIGURE 2.4

GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)

1 IN 20 YEAR FLOOD

18 - SOUTH STONEY TRAIL

PROJECT

CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION

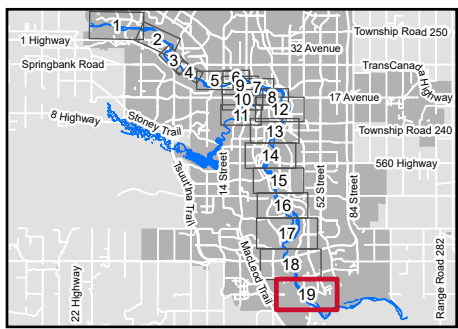
NAD 1983 CSRS 3TM 114

0 90 180 Meters

SCALE 1:15,000

DATE 8/14/2026

AUTHOR TDaSilva



LEGEND

Building Footprint

Parcel

Community District

Manhole

Outfall

Storm Network

Sunnyside Seepage Collection

Flood Control Structure

Contours - 5m

3m Maximum Groundwater Depth Threshold

Maximum Groundwater Elevation Contour (1.0 m) (Varying Colors)

Alluvial Aquifer / Model Domain

Waterbody

NOTES

1. Modelled flood conditions assume the flood conditions are modeled based on a flow rate of 1120 m³/s in the Bow River and 150 m³/s in the Elbow River. With a combined flow rate of 1270 m³/s.

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FIGURE 2.4

GROUNDWATER ELEVATION SIMULATION (CALIBRATED MODEL)

1 IN 20 YEAR FLOOD

19 - PINE CREEK / CRANSTON

PROJECT

CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION

NAD 1983 CSRS 3TM 114

0 90 180

Meters

SCALE 1:15,000

DATE 8/14/2026

AUTHOR TDaSilva

Fluid Domains

Calgary

ISL

Scaled to 11 x 17