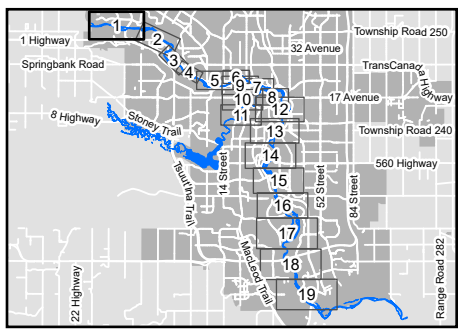
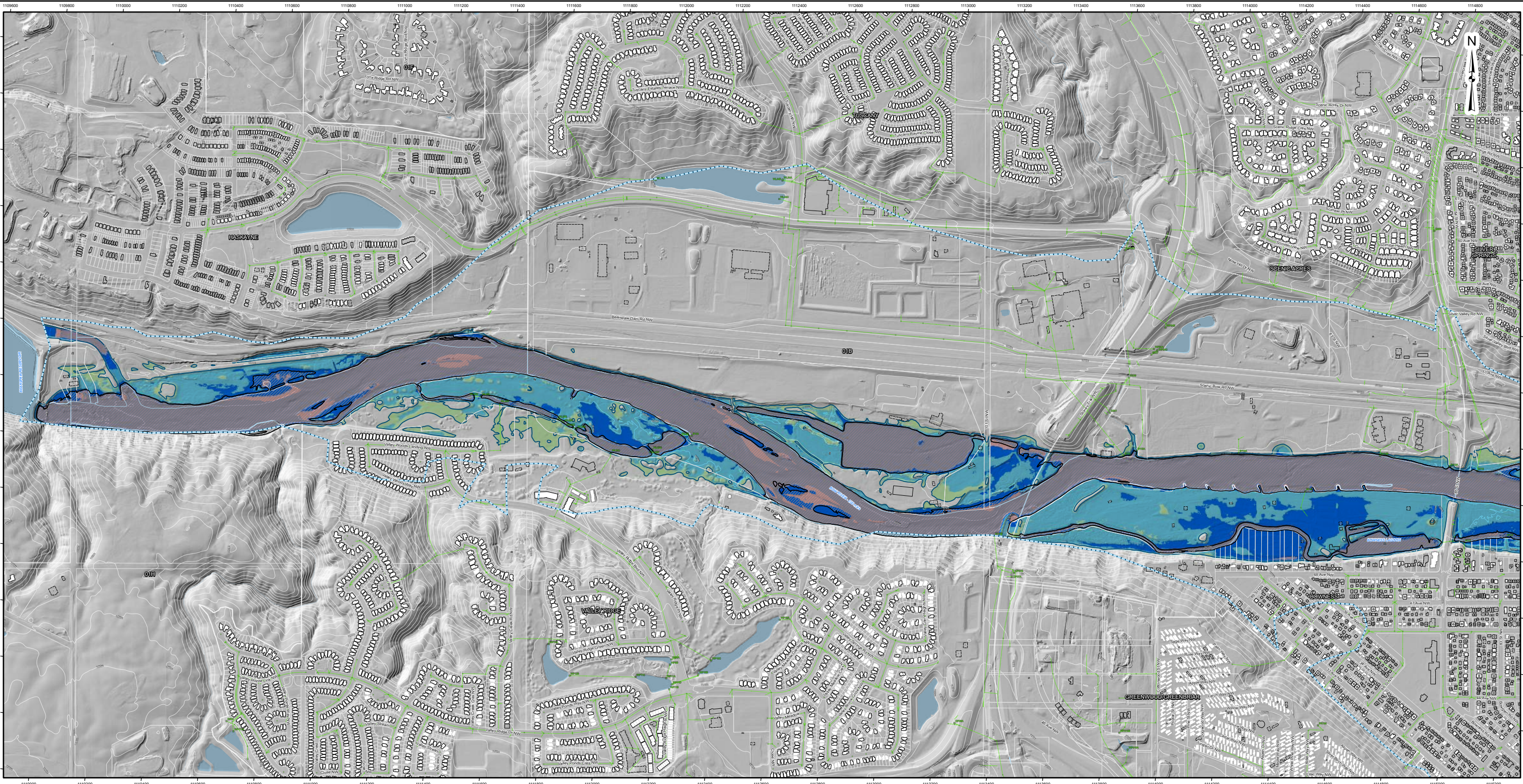


# Groundwater Depth and Building Risk Factors (P90)

## Annual High River Flow

- |     |                            |     |                        |
|-----|----------------------------|-----|------------------------|
| 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
- Pre-1990 Building Construction
- Below Grade Space
- Building Information Missing
- Non-Residential Building / Building Outside Scope
- Parcel
- Community District
- Alluvial Aquifer / Model Domain
- Waterbody
- Manhole
- Outfall
- Storm Network
- 3m Depth Threshold
- Flood Control Structure
- Sunnyside Seepage Collection
- Contours - 5m

Estimated Depth to Groundwater

- Below 3m
- 3m to 2.4m
- 2.4m to 1.2m
- 0m to 1.2m
- Above Ground Surface

Flood Inundation Area (2-Year)

- Directly Flooded

NOTES

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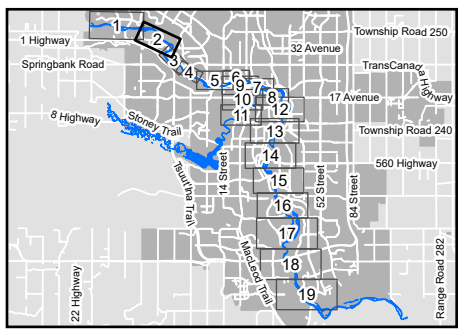
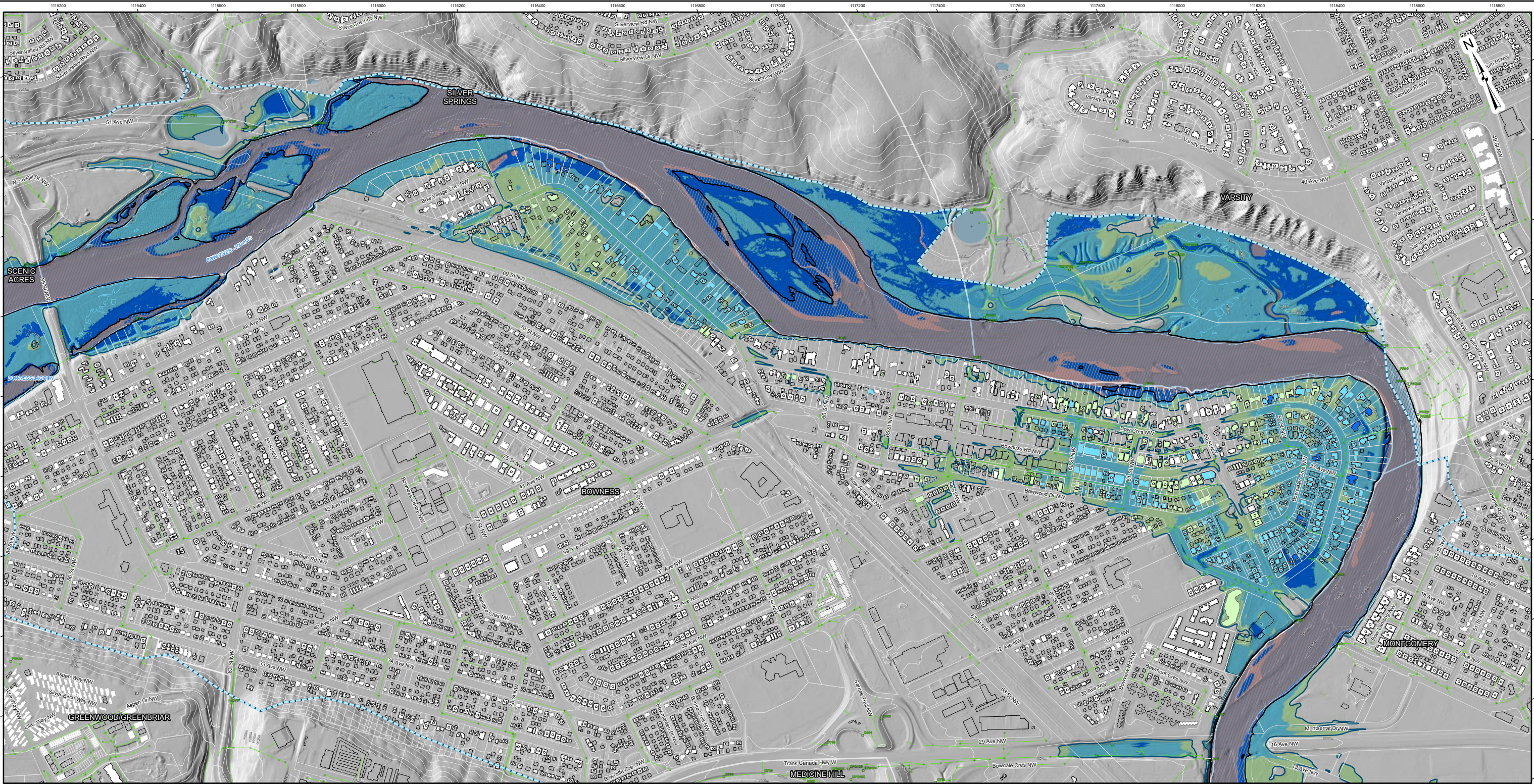
FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH FLOW  
1 - VALLEY RIDGE

PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114  
SCALE 1:13,500  
DATE 8/14/2026  
AUTHOR TDaSilva







LEGEND

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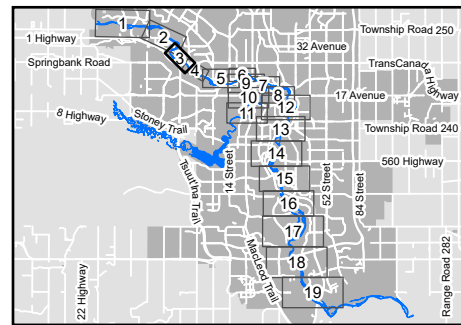
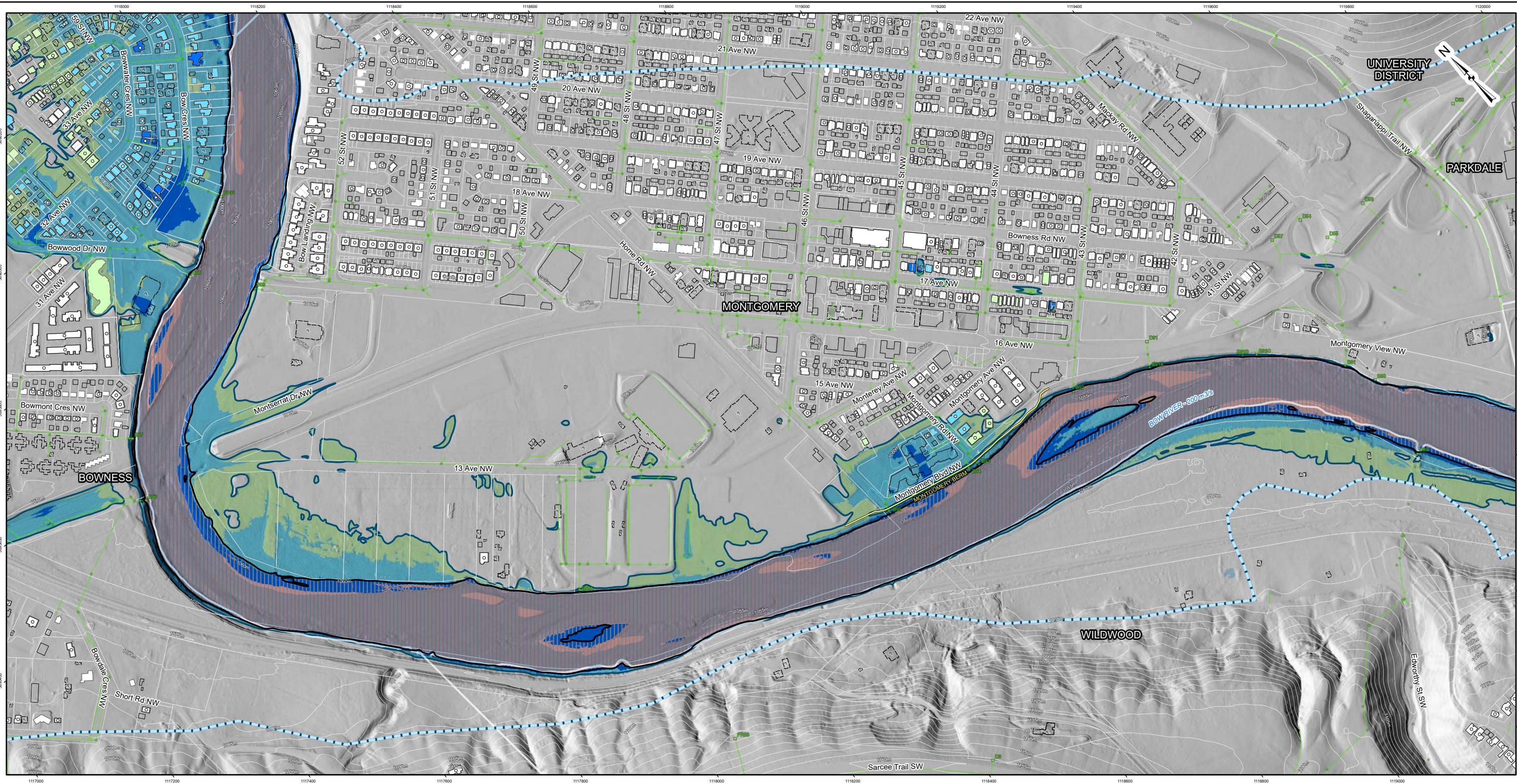
FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
2 - BOWNESS

PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114  
SCALE 1:10,000  
DATE 8/14/2026  
AUTHOR TDaSilva







#### LEGEND

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- Waterbody

- Manhole
- Outfall
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- 3m Depth Threshold
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FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
3 - MONTGOMERY

PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114

0 40 80  
Meters

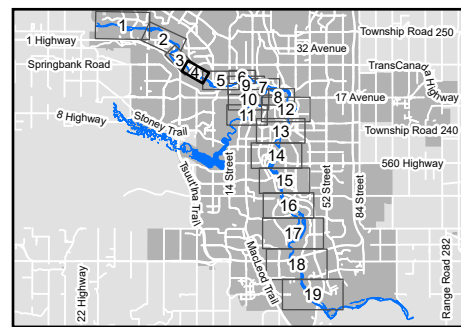
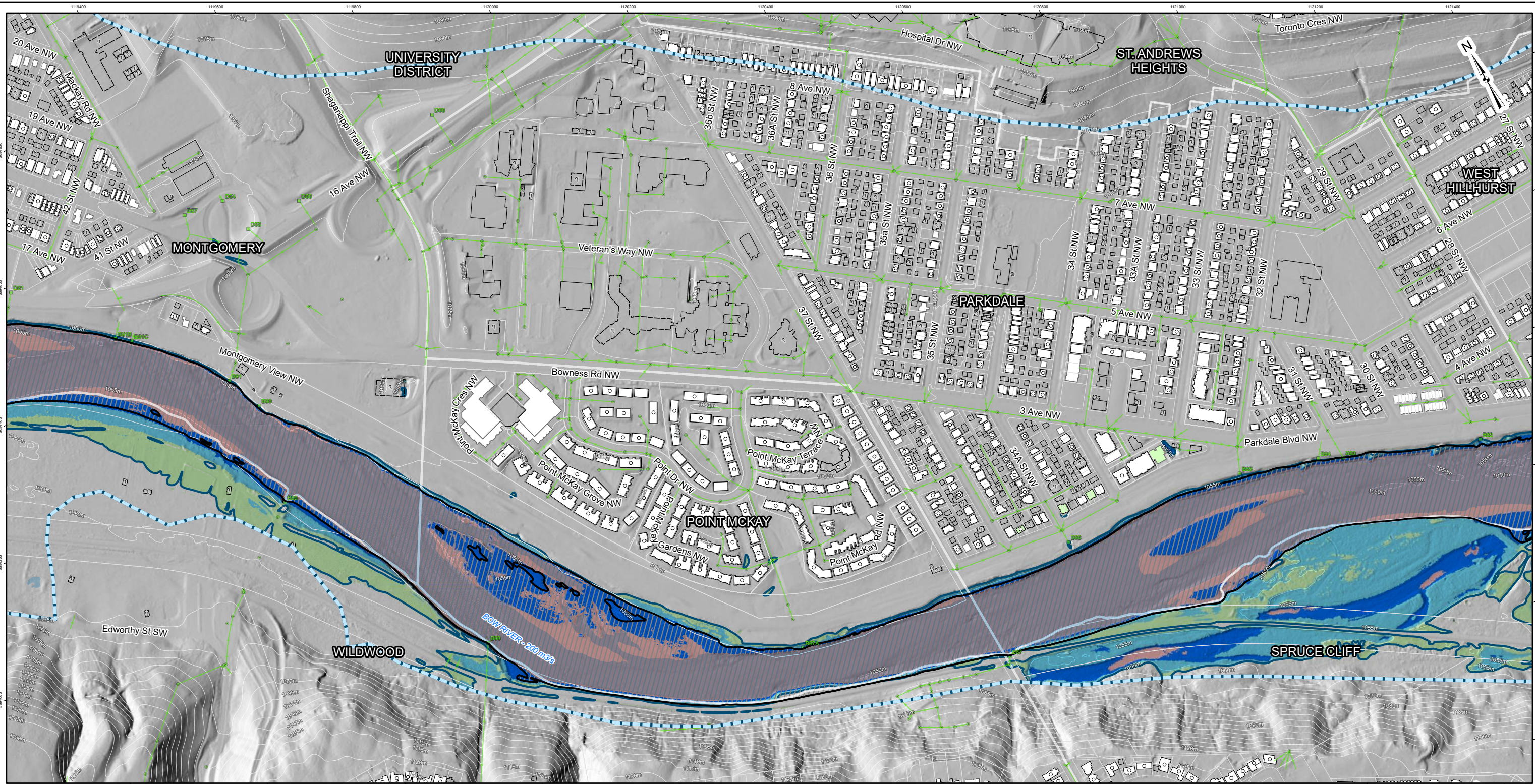
SCALE 1:7,000

DATE 8/14/2026

AUTHOR TDaSilva







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FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
4 - POINT MCKAY

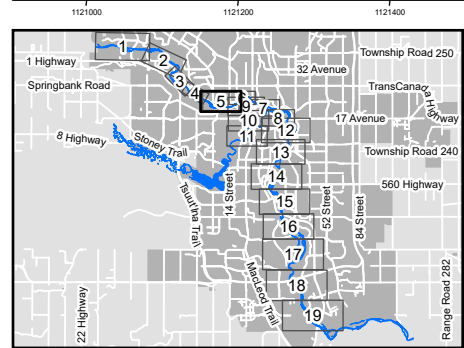
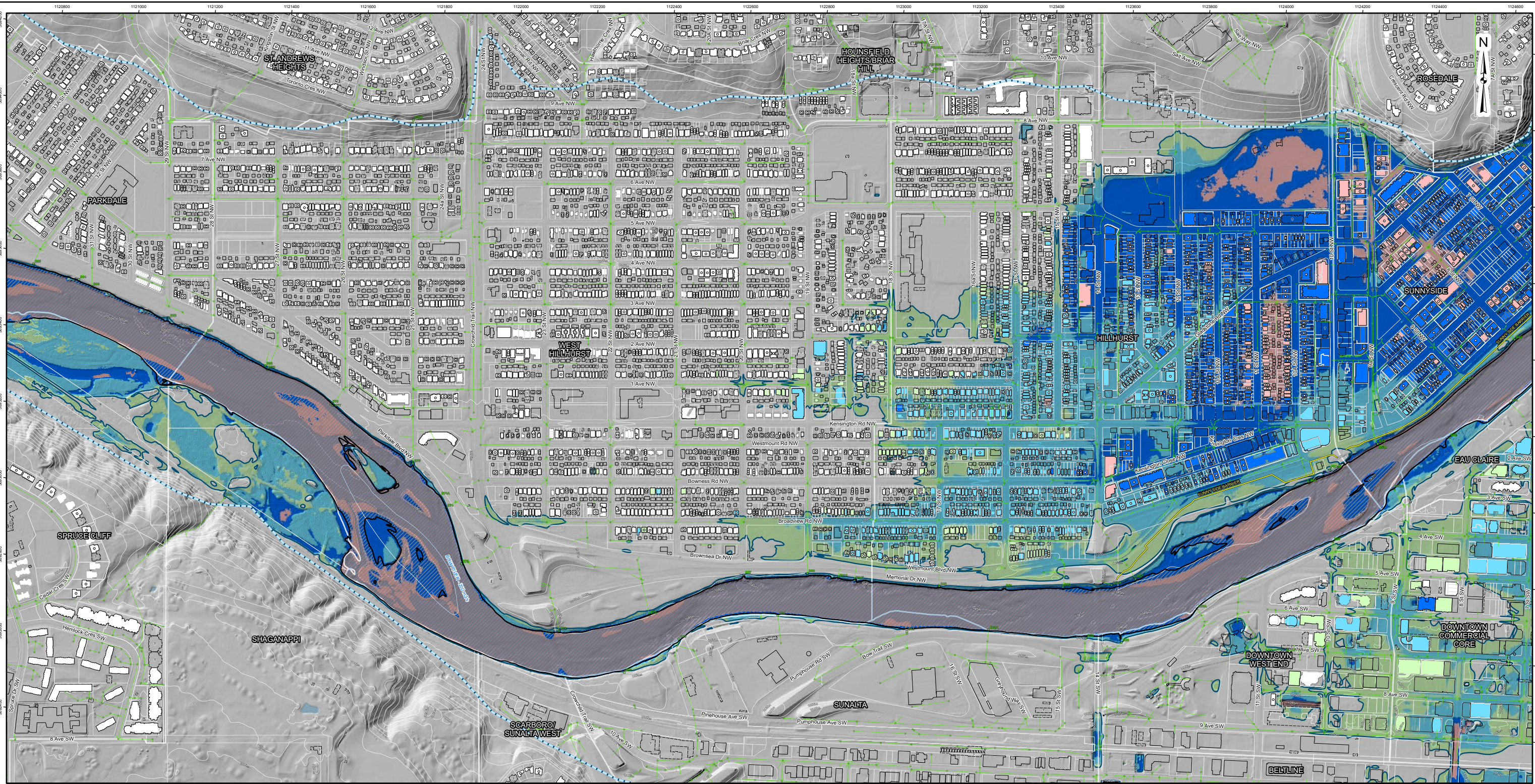
PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114

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







### LEGEND

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- Below Grade Space
- Building Information Missing
- Non-Residential Building / Building Outside Scope
- Parcel
- Community District
- Alluvial Aquifer / Model Domain
- Waterbody

- Manhole
- Outfall
- Storm Network
- 3m Depth Threshold
- Flood Control Structure
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FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
5 - HILLHURST / WEST HILLHURST

PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114

0 60 120  
Meters

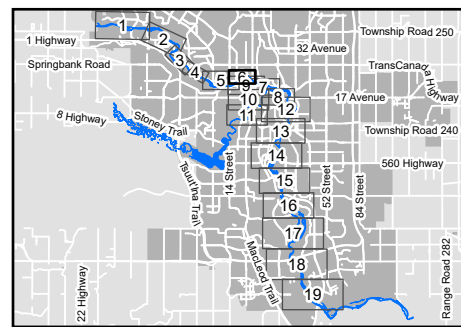
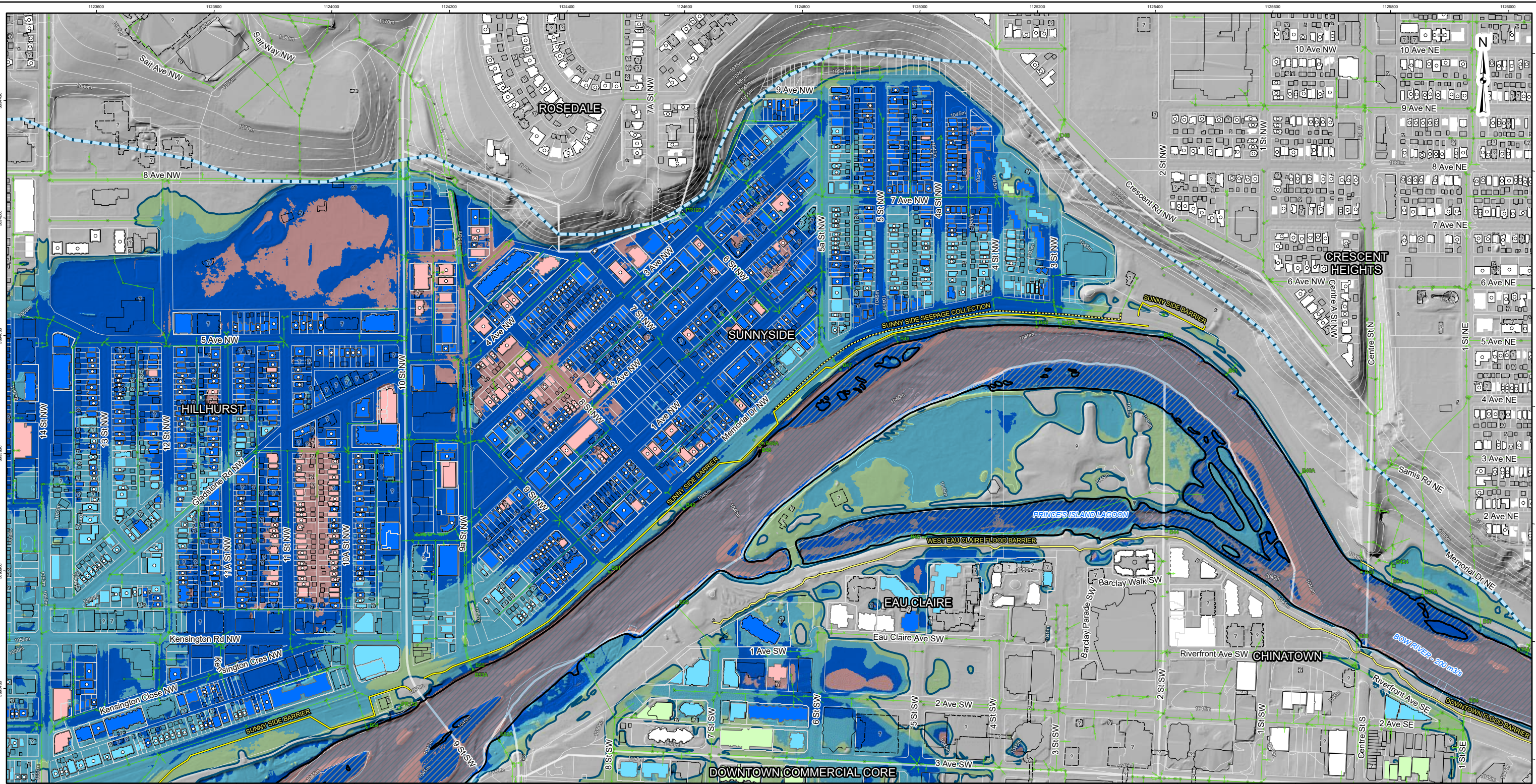
SCALE 1:10,000

DATE 8/14/2026

AUTHOR TDaSilva







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- Below Grade Space
- Building Information Missing
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#### FIGURE 3.2 GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90) ANNUAL HIGH RIVER FLOW 6 - SUNNYSIDE

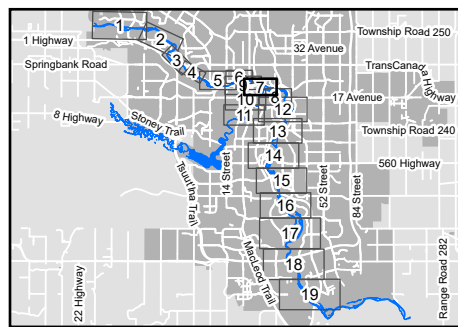
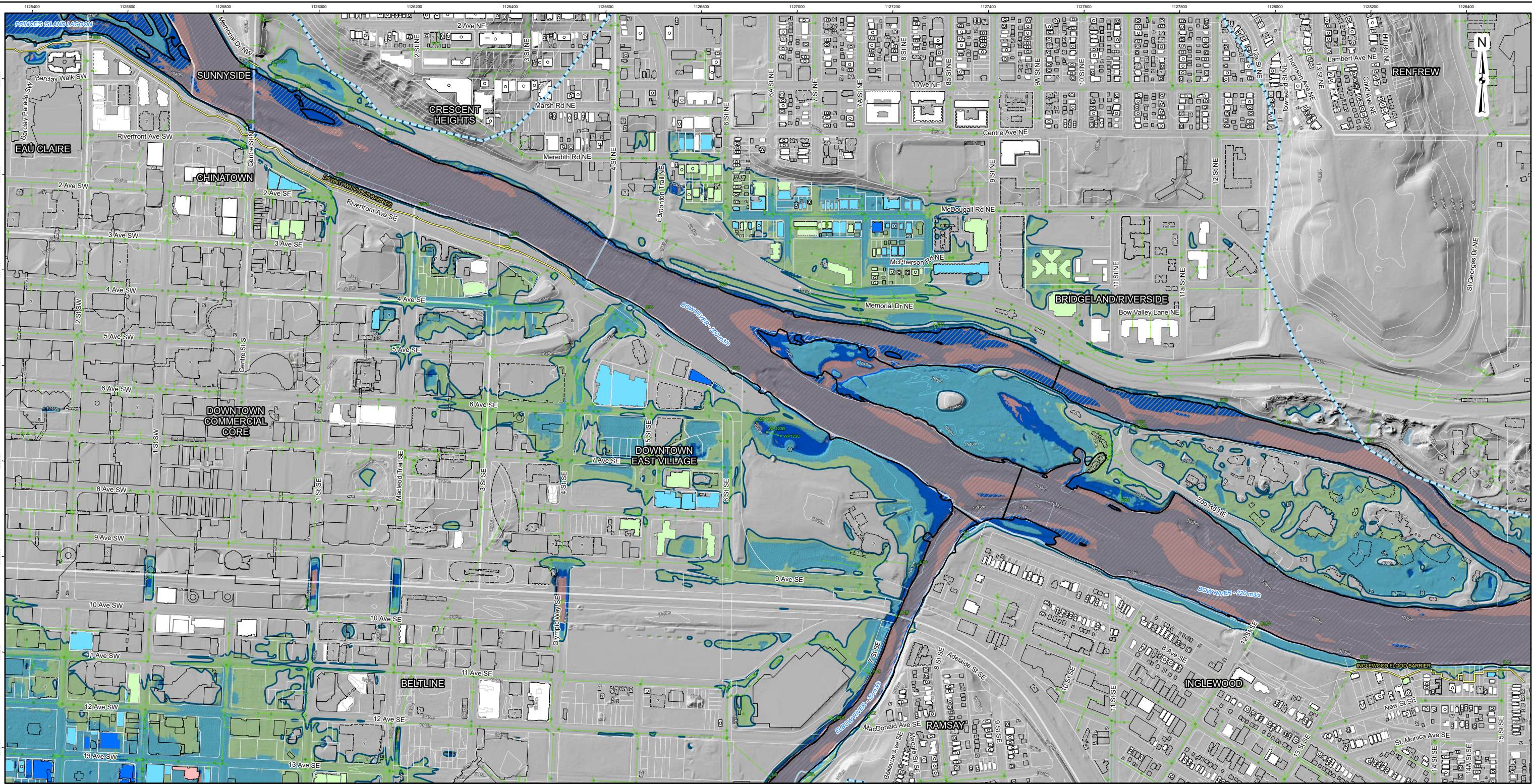
#### PROJECT CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114

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







**LEGEND**

Building Footprint

Pre-1990 Building Construction

Below Grade Space

Building Information Missing

Non-Residential Building / Building Outside Scope

Parcel

Community District

Alluvial Aquifer / Model Domain

Waterbody

Manhole

Outfall

Storm Network

3m Depth Threshold

Flood Control Structure

Sunnyside Seepage Collection

Contours - 5m

Below 3m

3m to 2.4m

2.4m to 1.2m

0m to 1.2m

Above Ground Surface

Estimated Depth to Groundwater

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**FIGURE 3.2**  
**GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)**  
**ANNUAL HIGH RIVER FLOW**  
**7 - EAST VILLAGE / BRIDGELAND**

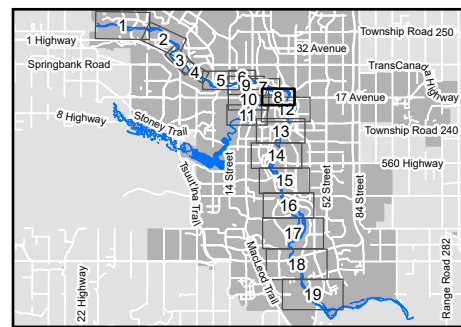
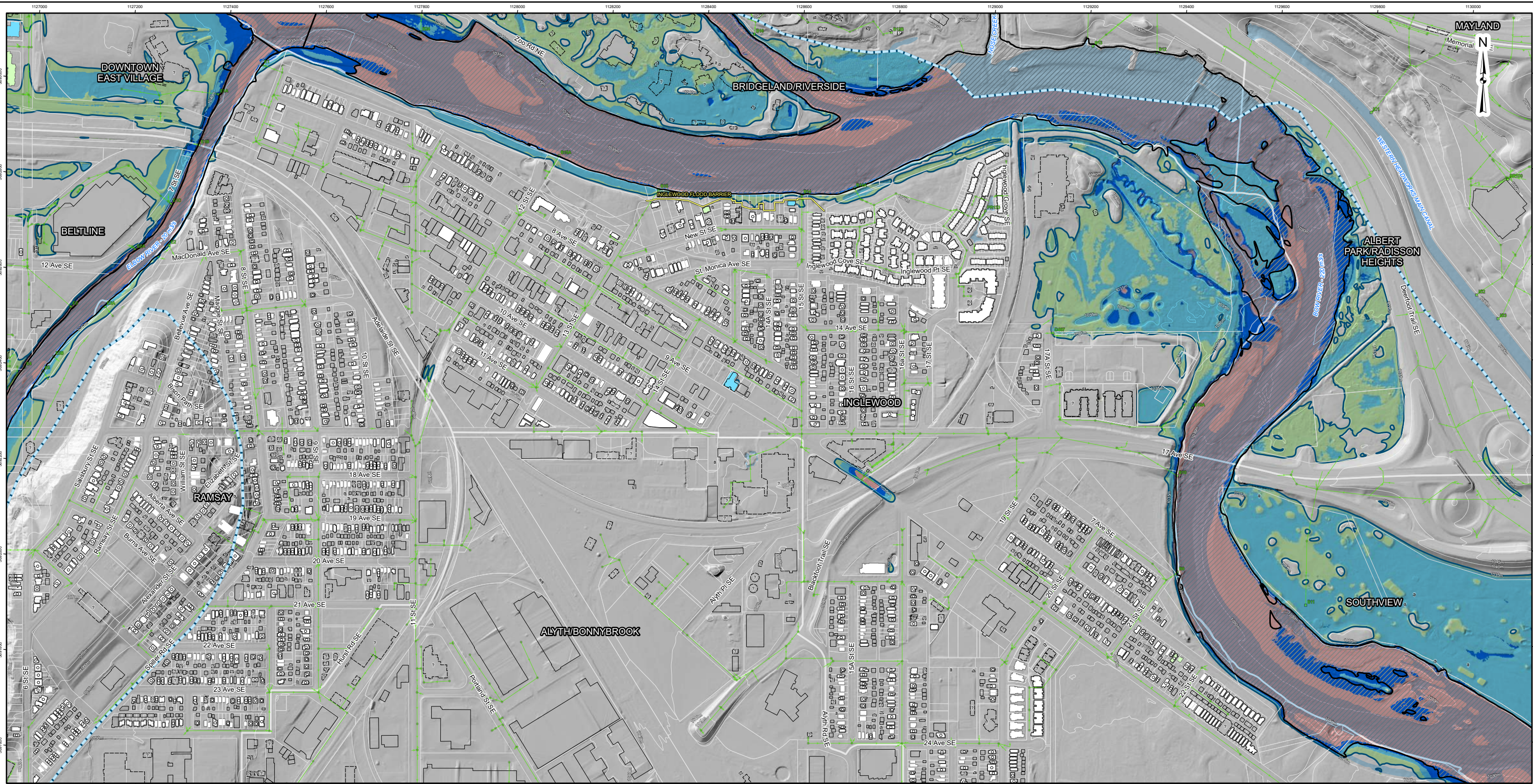
**PROJECT**  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

**PROJECTION**  
NAD 1983 CSRS 3TM 114

**SCALE** 1:8,000    **DATE** 8/14/2026    **AUTHOR** TDA Silva







LEGEND

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FIGURE 9.2  
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ANNUAL HIGH RIVER FLOW  
8 - INGLEWOOD

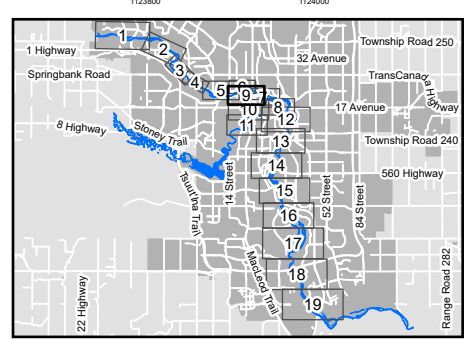
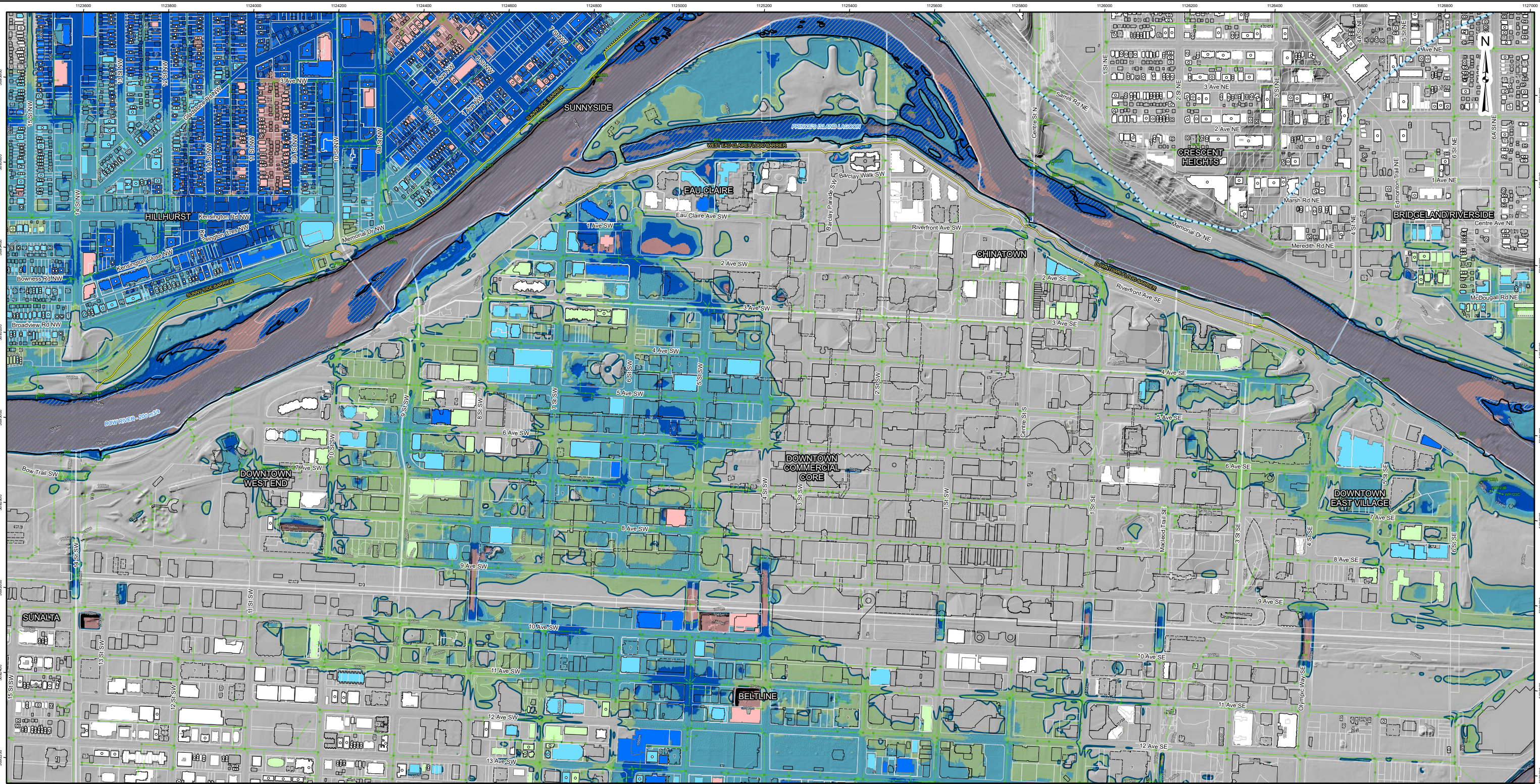
PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114

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







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FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
9 - DOWNTOWN

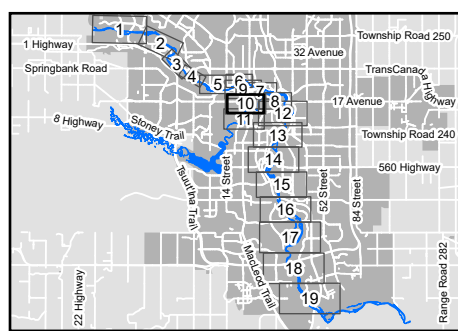
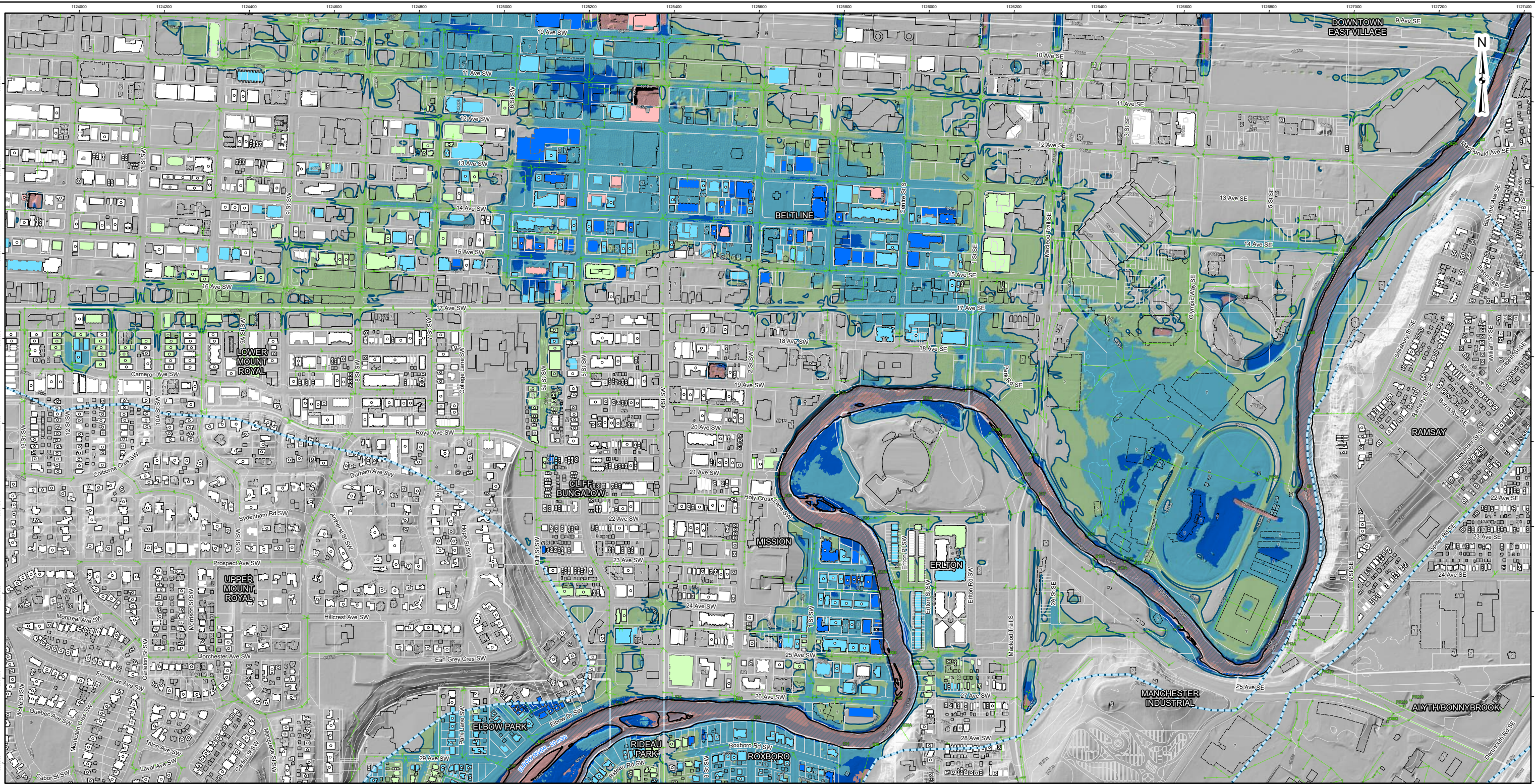
PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114

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







#### LEGEND

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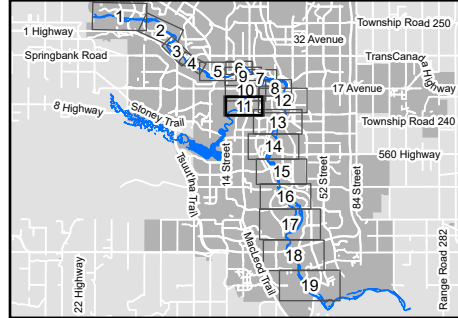
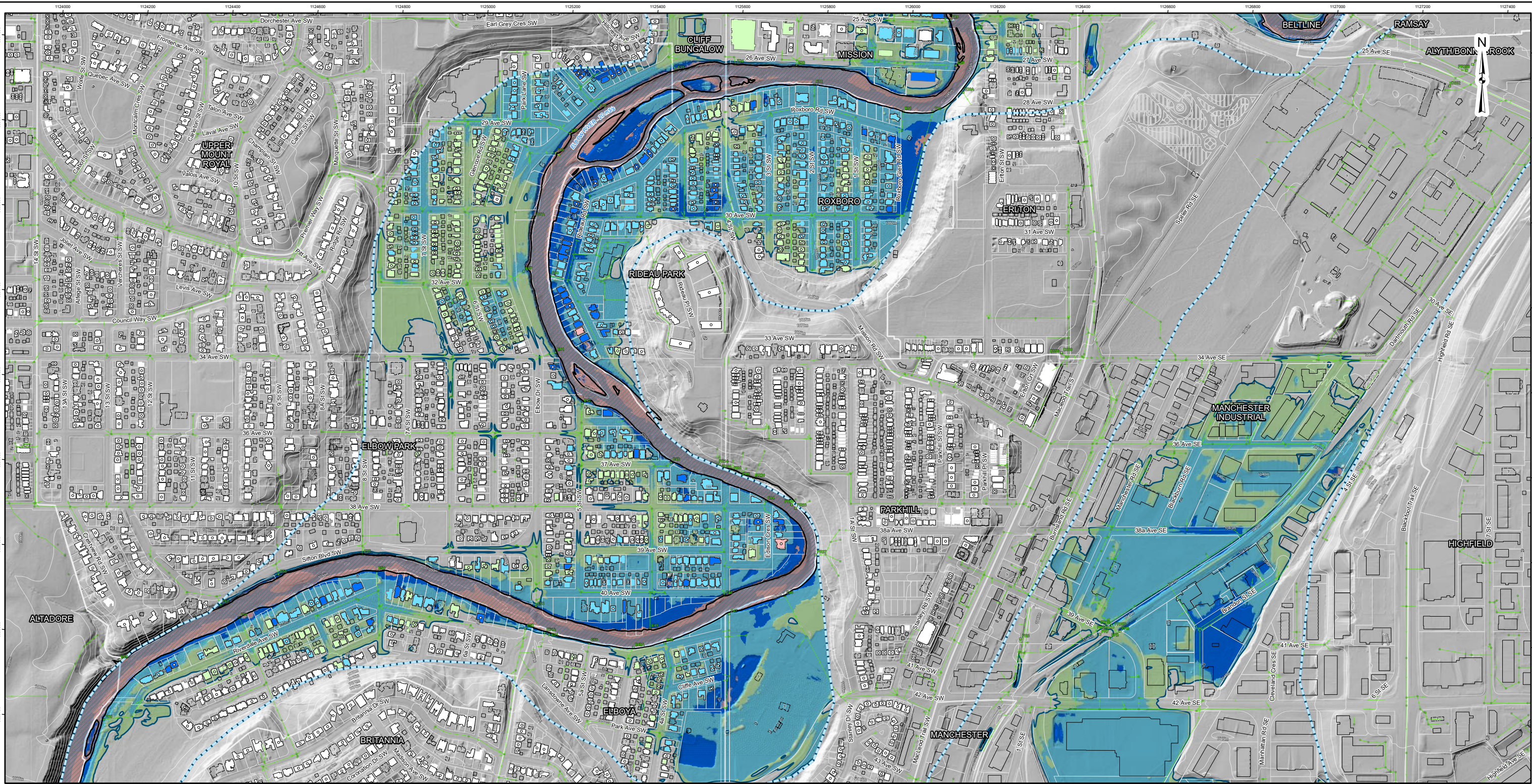
FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
10 - BELTLINE

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
- Pre-1990 Building Construction
- Below Grade Space
- Building Information Missing
- Non-Residential Building / Building Outside Scope
- Parcel
- Community District
- Alluvial Aquifer / Model Domain
- Waterbody
- Manhole
- Outfall
- Storm Network
- 3m Depth Threshold
- Flood Control Structure
- Sunnyside Seepage Collection
- Contours - 5m
- Estimated Depth to Groundwater
  - Below 3m
  - 3m to 2.4m
  - 2.4m to 1.2m
  - 0m to 1.2m
  - Above Ground Surface
- Flood Inundation Area (2-Year)
  - Directly Flooded

NOTES

1. Pre-1990 buildings are more susceptible to groundwater due to lack of reinforcement requirements before 1990. Implementation of reinforcement basement structures may vary since inception of code requirements.
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5. Groundwater depth is compared between the modelled water elevations and the LiDAR data elevation.

DATA SOURCES

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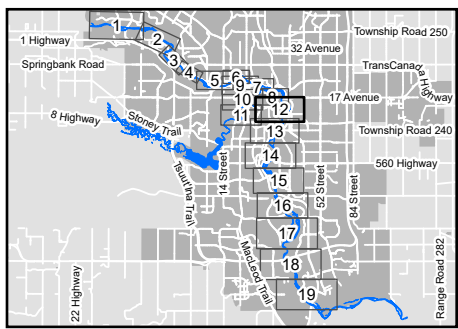
FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
11 - LOWER ELBOW

PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114  
SCALE 1:9,000  
DATE 8/14/2026  
AUTHOR TDaSilva







-  Building Footprint
-  Pre-1990 Building Construction
-  Below Grade Space
-  Building Information Missing
-  Non-Residential Building / Building Outside Scope
-  Parcel
-  Community District
-  Alluvial Aquifer / Model Domain
-  Waterbody

- Manhole
- Outfall
- Storm Network
- 3m Depth Threshold
- Flood Control Structure
- Sunnyside Seepage Collection
- Contours - 5m

Below 3m  
3m to 2.4m  
2.4m to 1.2m  
0m to 1.2m  
Above Ground Surface

 Directly Flooded

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PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114

0 70 140 Meters

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







-  Building Footprint
-  Pre-1990 Building Construction
-  Below Grade Space
-  Building Information Missing
-  Non-Residential Building / Building Outside Scope
-  Parcel
-  Community District
-  Alluvial Aquifer / Model Domain
-  Waterbody

- Manhole
- Outfall
- Storm Network
- 3m Depth Threshold
- Flood Control Structure
- Sunnyside Seepage Collection
- Contours - 5m

### Estimated Depth to Groundwater

- Below 3m  
3m to 2.4m  
2.4m to 1.2m  
0m to 1.2m  
Above Ground Surface

### Flood Inundation Area (2-Year)

- 
- Directly Flooded

## NOTES

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FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
13 - BONNYBROOK

PROJECT

CALGARY RIVER VALLEYS GROUNDWATER STUDY

## PROJECTION

NAD 1983 CSRS 3TM 114

SCALE 1:12,000

DATE 8/14/2026

AUTHOR TDaSilva

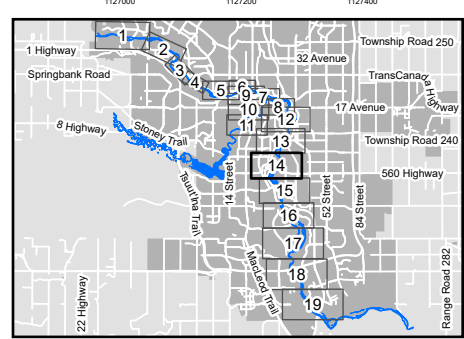
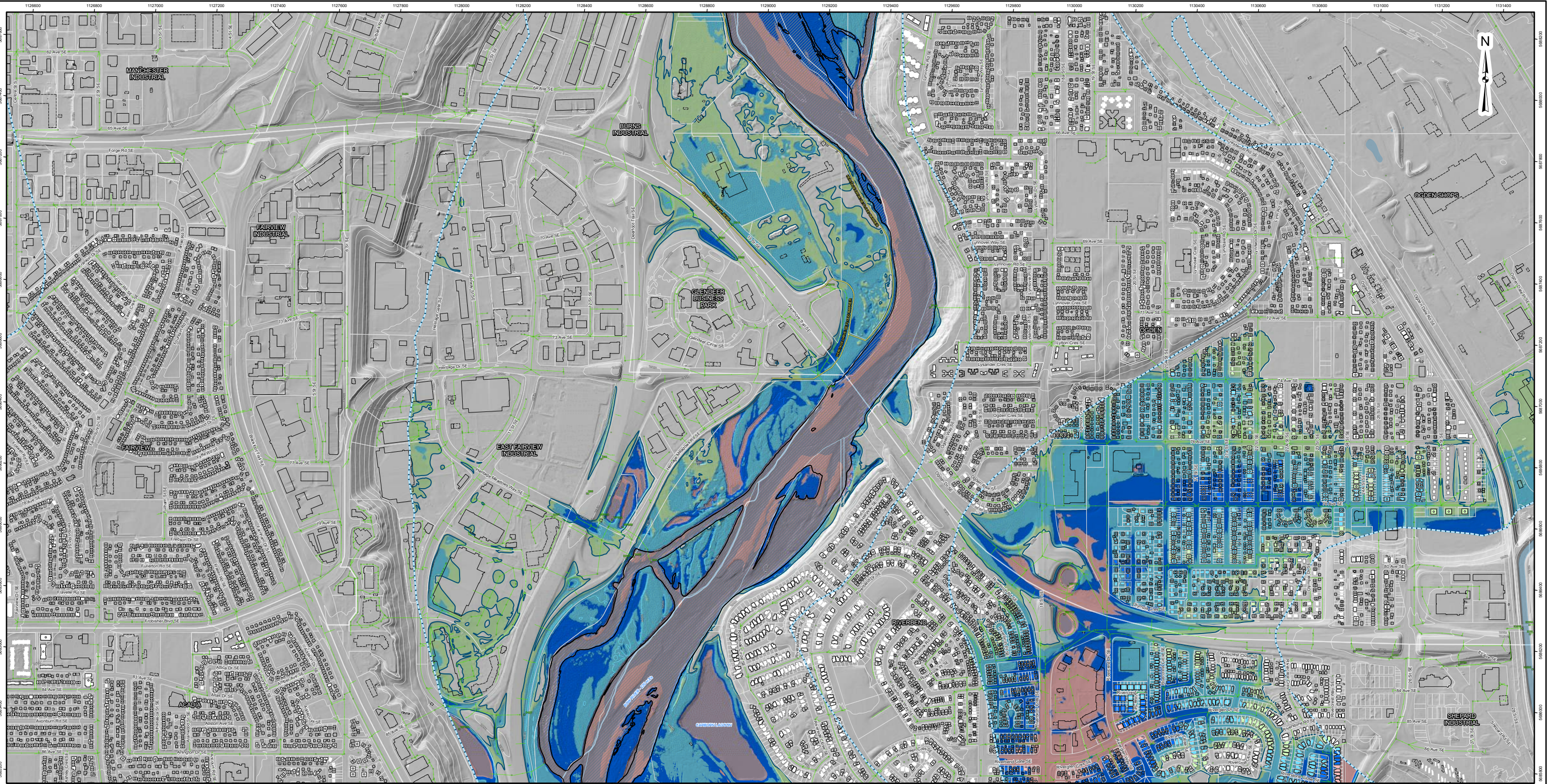


Fluid Domains

**Calgary**







LEGEND

- Building Footprint
- Pre-1990 Building Construction
- Below Grade Space
- Building Information Missing
- Non-Residential Building / Building Outside Scope
- Parcel
- Community District
- Alluvial Aquifer / Model Domain
- Waterbody
- Manhole
- Outfall
- Storm Network
- 3m Depth Threshold
- Flood Control Structure
- Sunnyside Seepage Collection
- Contours - 5m

Estimated Depth to Groundwater

- Below 3m
- 3m to 2.4m
- 2.4m to 1.2m
- 0m to 1.2m
- Above Ground Surface

Flood Inundation Area (2-Year)

- Directly Flooded

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FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
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







-  Building Footprint
-  Pre-1990 Building Construction
-  Below Grade Space
-  Building Information Missing
-  Non-Residential Building / Building Outside Scope
-  Parcel
-  Community District
-  Alluvial Aquifer / Model Domain
-  Waterbody

- Manhole
- Outfall
- Storm Network
- 3m Depth Threshold
- Flood Control Structure
- Sunnyside Seepage Collection
- Contours - 5m

### Estimated Depth to Groundwater

- Below 3m  
3m to 2.4m  
2.4m to 1.2m  
0m to 1.2m  
Above Ground Surface

### Flood Inundation Area (2-Year)

- 
- Directly Flooded

## NOTES

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FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
15 - RIVERBEND / QUARRY PARK

PROJECT

CALTARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION

NAD 1983 CSRS 3TM 114

SCALE 1:12,500

DATE 8/14/2026

AUTHOR TDaSilva

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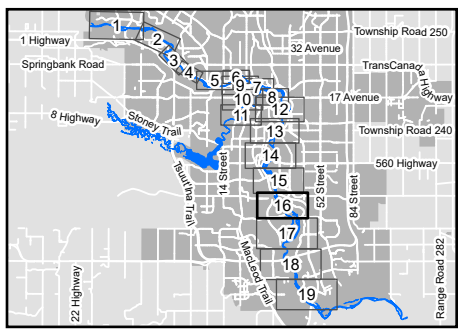
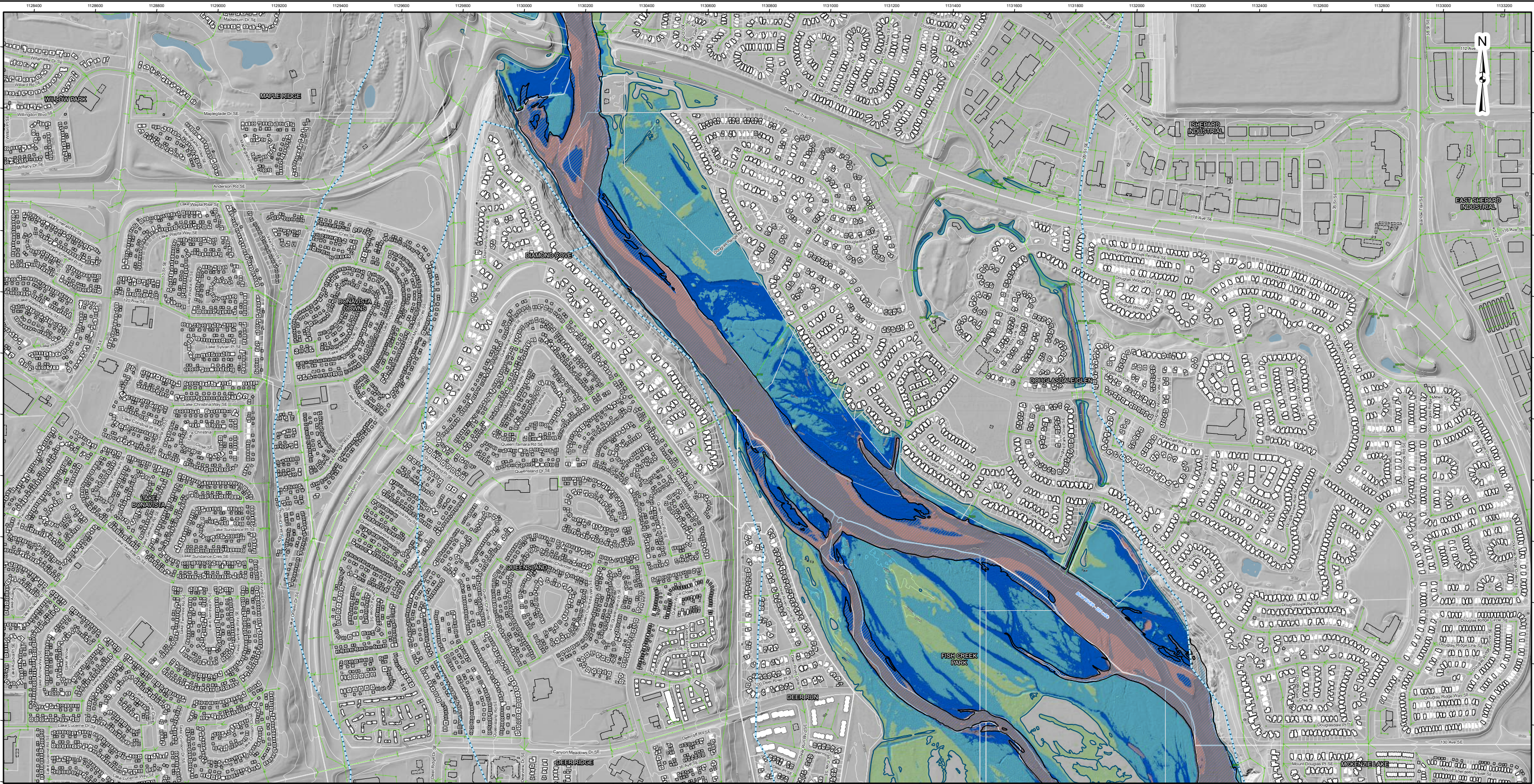


Fluid Domains

**Calgary**







### LEGEND

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- 3m to 2.4m
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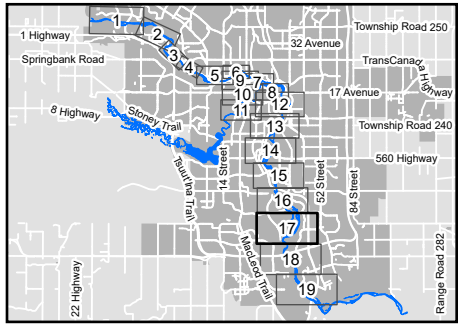
FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
16 - DOUGLASDALE

PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114  
SCALE 1:12,500  
DATE 8/14/2026  
AUTHOR TDaSilva







#### LEGEND

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- Outfall
- Storm Network
- 3m Depth Threshold
- Flood Control Structure
- Sunnyside Seepage Collection
- Contours - 5m

#### Estimated Depth to Groundwater

- Below 3m
- 3m to 2.4m
- 2.4m to 1.2m
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#### Flood Inundation Area (2-Year)

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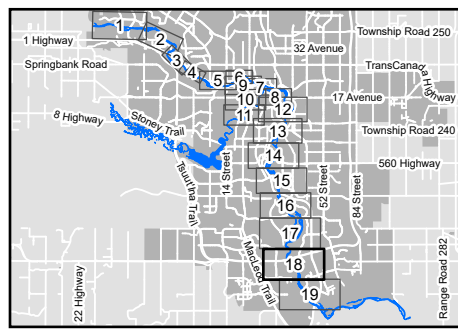
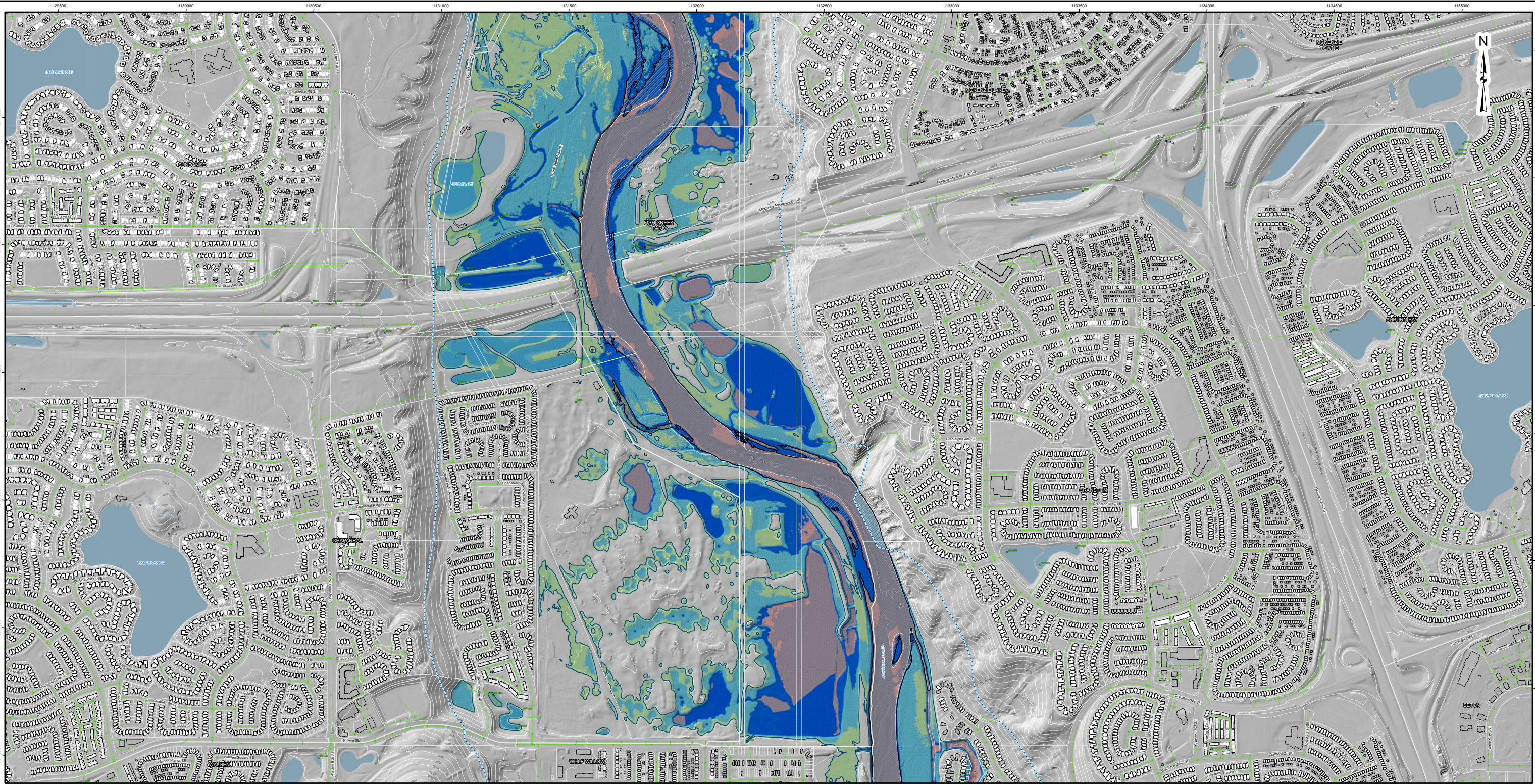
FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
17 - FISH CREEK

PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114  
SCALE 1:15,000  
DATE 8/14/2026  
AUTHOR TDaSilva







#### LEGEND

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- Community District
- Alluvial Aquifer / Model Domain
- Waterbody
- Manhole
- Outfall
- Storm Network
- 3m Depth Threshold
- Flood Control Structure
- Sunnyside Seepage Collection
- Contours - 5m

#### Estimated Depth to Groundwater

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- 3m to 2.4m
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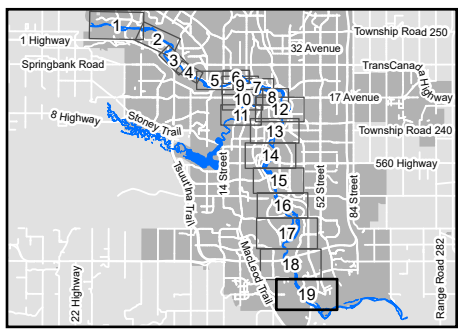
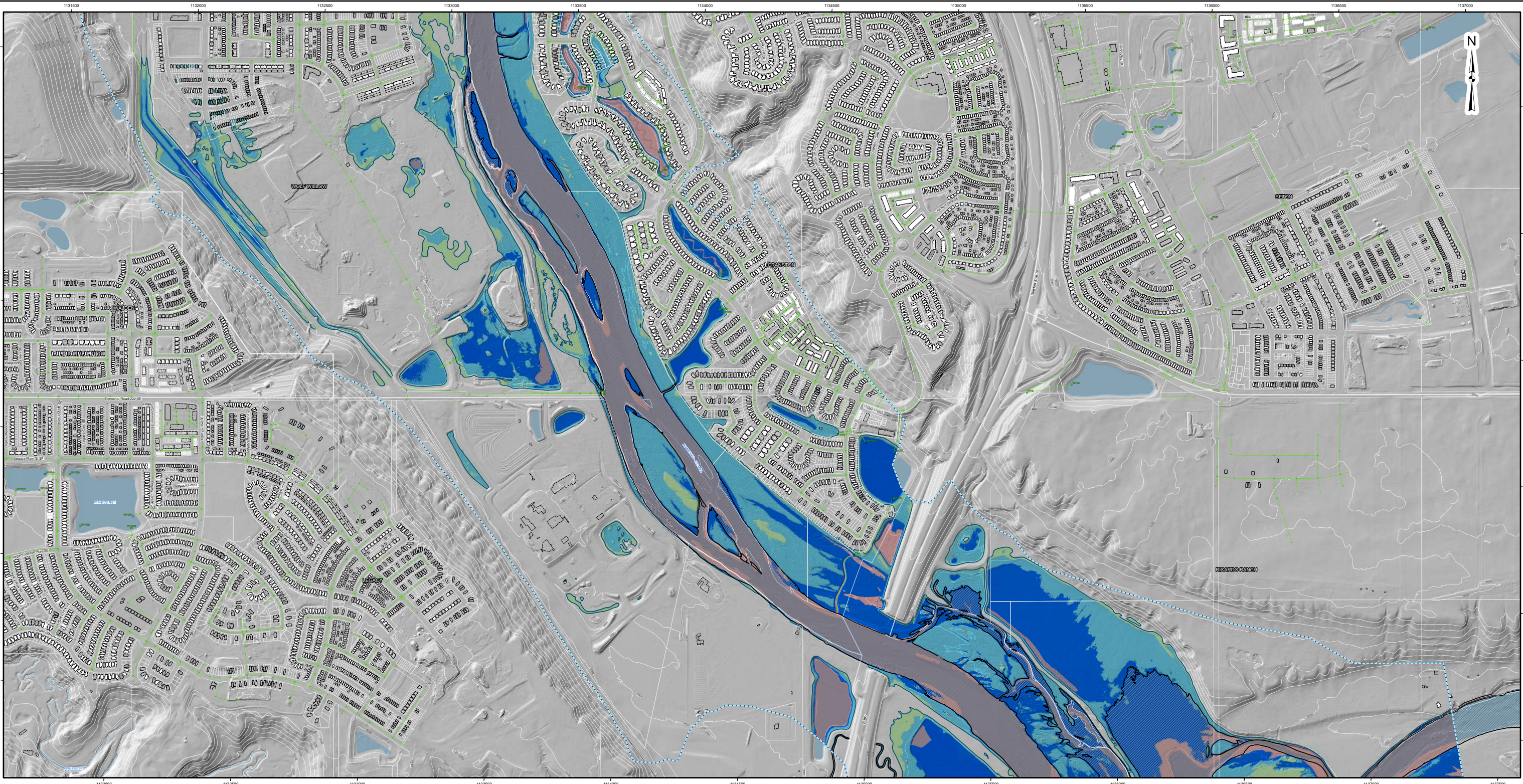
FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
18 - SOUTH STONEY TRAIL

PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114  
SCALE 1:15,000  
DATE 8/14/2026  
AUTHOR TDaSilva







### LEGEND

- Building Footprint
- Pre-1990 Building Construction
- Below Grade Space
- Building Information Missing
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FIGURE 3.2  
GROUNDWATER DEPTH & BUILDING RISK FACTORS (P90)  
ANNUAL HIGH RIVER FLOW  
19 - PINE CREEK / CRANSTON

PROJECT  
CALGARY RIVER VALLEYS GROUNDWATER STUDY

PROJECTION  
NAD 1983 CSRS 3TM 114  
SCALE 1:15,000  
DATE 8/14/2026  
AUTHOR TDaSilva

