

# Open Water Flood Inundation Map Library

## *Slave Lake Flood Hazard Study*

Submitted to:

**Alberta Environment and Parks**

11th Floor, Oxbridge Building  
9820-106 Street NW  
Edmonton, AB T5K 2J6

Submitted by:

**Golder Associates Ltd.**

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19117529

March 2020

# Distribution List

5 copies: Alberta Environment and Parks

1 copy: Golder Associates Ltd.

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**75-Year Flood Inundation Extent**

**100-Year Flood Inundation Extent**

**200-Year Flood Inundation Extent**

**350-Year Flood Inundation Extent**

**500-Year Flood Inundation Extent**

**750-Year Flood Inundation Extent**

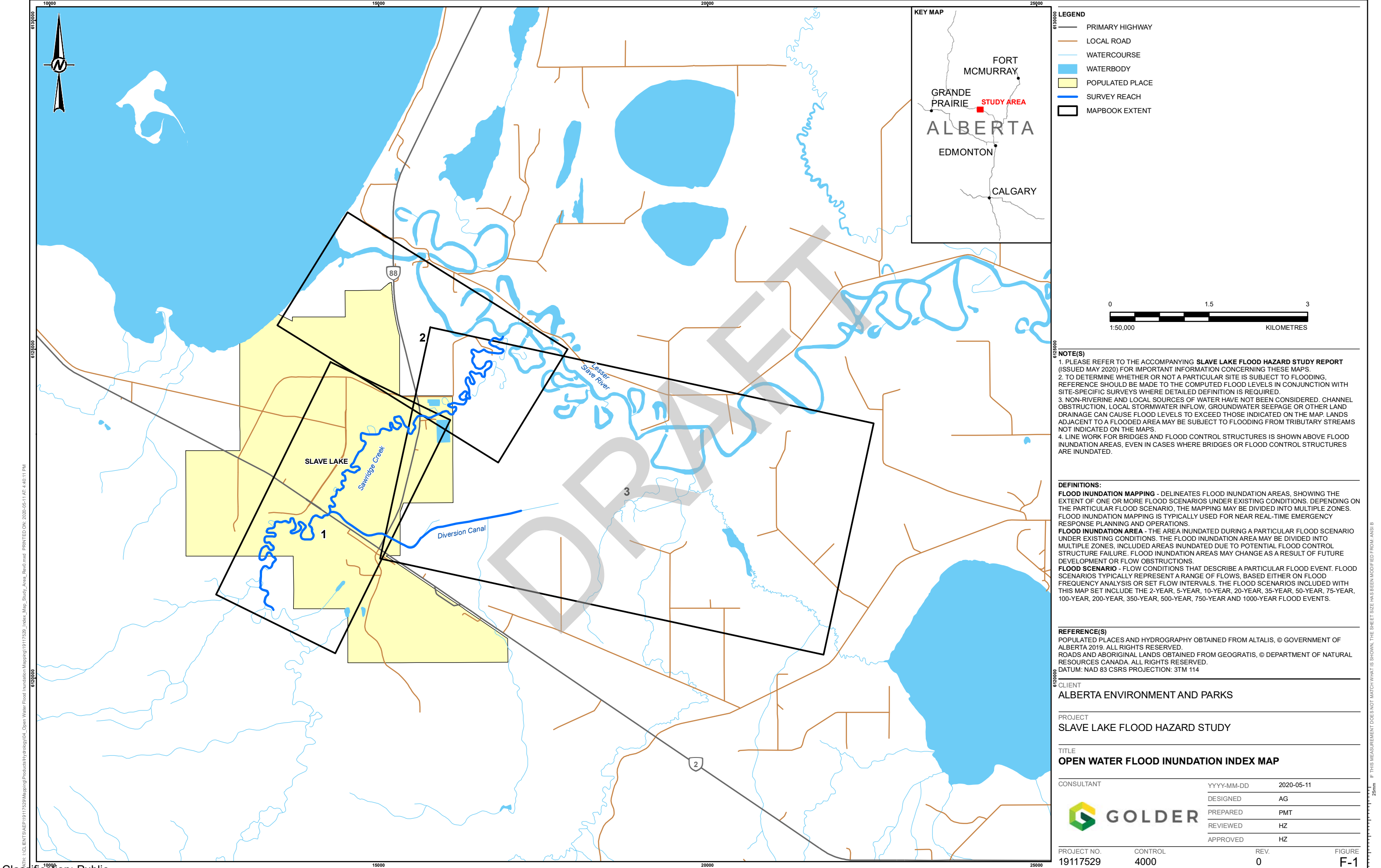
**1,000-Year Flood Inundation Extent**

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# OPEN WATER FLOOD INUNDATION INDEX MAP

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# 2-YEAR OPEN WATER FLOOD INUNDATION EXTENT

Sheet 1 to 3

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**LEGEND**

**CROSS SECTION**

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

**FLOOD CONTROL STRUCTURE**

**HYDRAULIC STRUCTURES**

BRIDGE

**2-YEAR FLOOD INUNDATION EXTENT**

2-YEAR FLOOD EXTENT

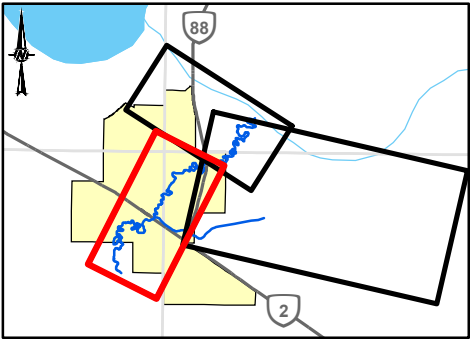
2-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK ABOVE THE DIVERSION CANAL = 39.6 M<sup>3</sup>/S

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 34.3 M<sup>3</sup>/S

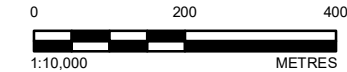
DIVERSION CANAL = 5.27 M<sup>3</sup>/S



SHEET 3 ↓

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AND PARKS

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PREPARED	NB
REVIEWED	HZ
APPROVED	HZ

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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**2-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	1 of 3





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**LEGEND**

— CROSS SECTION

**XS#100** CROSS SECTION NUMBER

**RS 304** RIVER STATION (M)

— STUDY BOUNDARY

➔ FLOW DIRECTION

— LOCAL ROAD

— PRIMARY HIGHWAY

— SECONDARY HIGHWAY

— FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

— BRIDGE

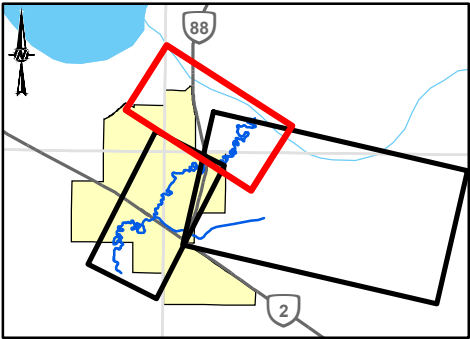
**2-YEAR FLOOD INUNDATION EXTENT**

— 2-YEAR FLOOD EXTENT

— 2-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 34.3 M<sup>3</sup>/S



SHEET 1 & 3 ↓



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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**2-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	2 of 3







# 5-YEAR OPEN WATER FLOOD INUNDATION EXTENT

Sheet 1 to 3

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**LEGEND**

— CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

— STUDY BOUNDARY

➔ FLOW DIRECTION

— LOCAL ROAD

— PRIMARY HIGHWAY

— SECONDARY HIGHWAY

— FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

— BRIDGE

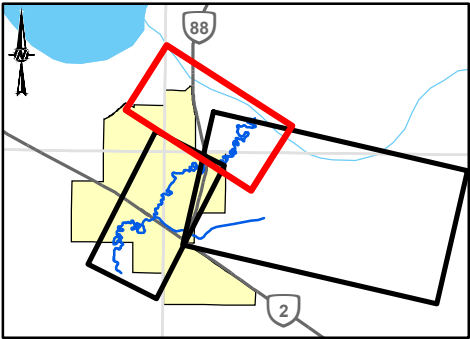
**5-YEAR FLOOD INUNDATION EXTENT**

— 5-YEAR FLOOD EXTENT

— 5-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 52.4 M<sup>3</sup>/S



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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**5-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	2 of 3





**LEGEND**

CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

BRIDGE

**5-YEAR FLOOD INUNDATION EXTENT**

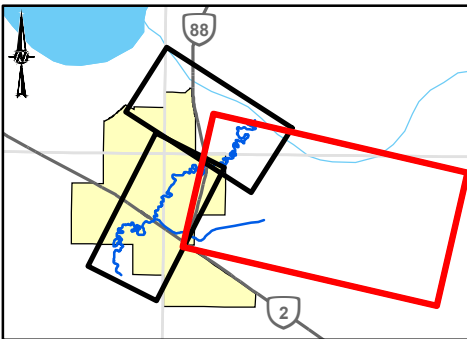
5-YEAR FLOOD EXTENT

5-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

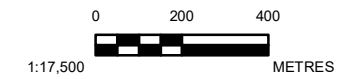
SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 52.4 M<sup>3</sup>/S

DIVERSION CANAL = 29.0 M<sup>3</sup>/S



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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**5-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
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# 10-YEAR OPEN WATER FLOOD INUNDATION EXTENT

Sheet 1 to 3

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**LEGEND**

**CROSS SECTION**

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

**FLOOD CONTROL STRUCTURE**

**HYDRAULIC STRUCTURES**

BRIDGE

**10-YEAR FLOOD INUNDATION EXTENT**

10-YEAR FLOOD EXTENT

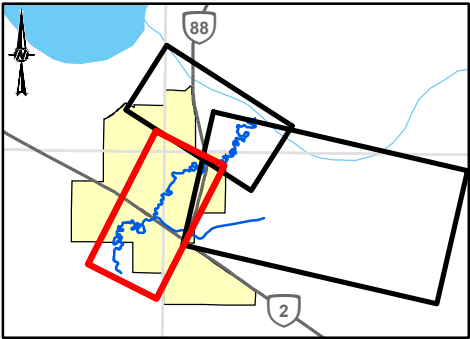
10-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK ABOVE THE DIVERSION CANAL = 118 M<sup>3</sup>/S

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 67.0 M<sup>3</sup>/S

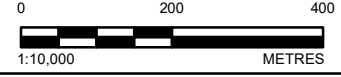
DIVERSION CANAL = 51.0 M<sup>3</sup>/S



SHEET 3 ↓

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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**10-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	1 of 3



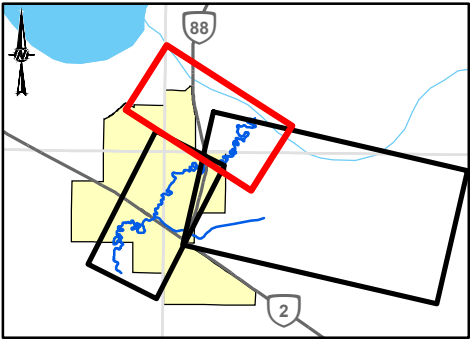
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SHEET 3 ↓

SHEET 1 & 3 ↓

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	CROSS SECTION
	CROSS SECTION NUMBER
	RIVER STATION (M)
	STUDY BOUNDARY
	FLOW DIRECTION
	LOCAL ROAD
	PRIMARY HIGHWAY
	SECONDARY HIGHWAY
	FLOOD CONTROL STRUCTURE
	BRIDGE
10-YEAR FLOOD INUNDATION EXTENT	
	10-YEAR FLOOD EXTENT
	10-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)
DISCHARGE	
SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 67.0 M³/S	



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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
10-YEAR FLOOD INUNDATION EXTENT

PROJECT NO.	CONTROL	REV.	FIGURE
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**LEGEND**

CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

BRIDGE

**10-YEAR FLOOD INUNDATION EXTENT**

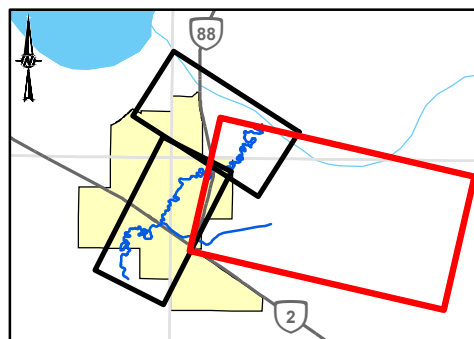
10-YEAR FLOOD EXTENT

10-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 67.0 M<sup>3</sup>/S

DIVERSION CANAL = 51.0 M<sup>3</sup>/S



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2020-05-07  
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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**10-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	3 of 3



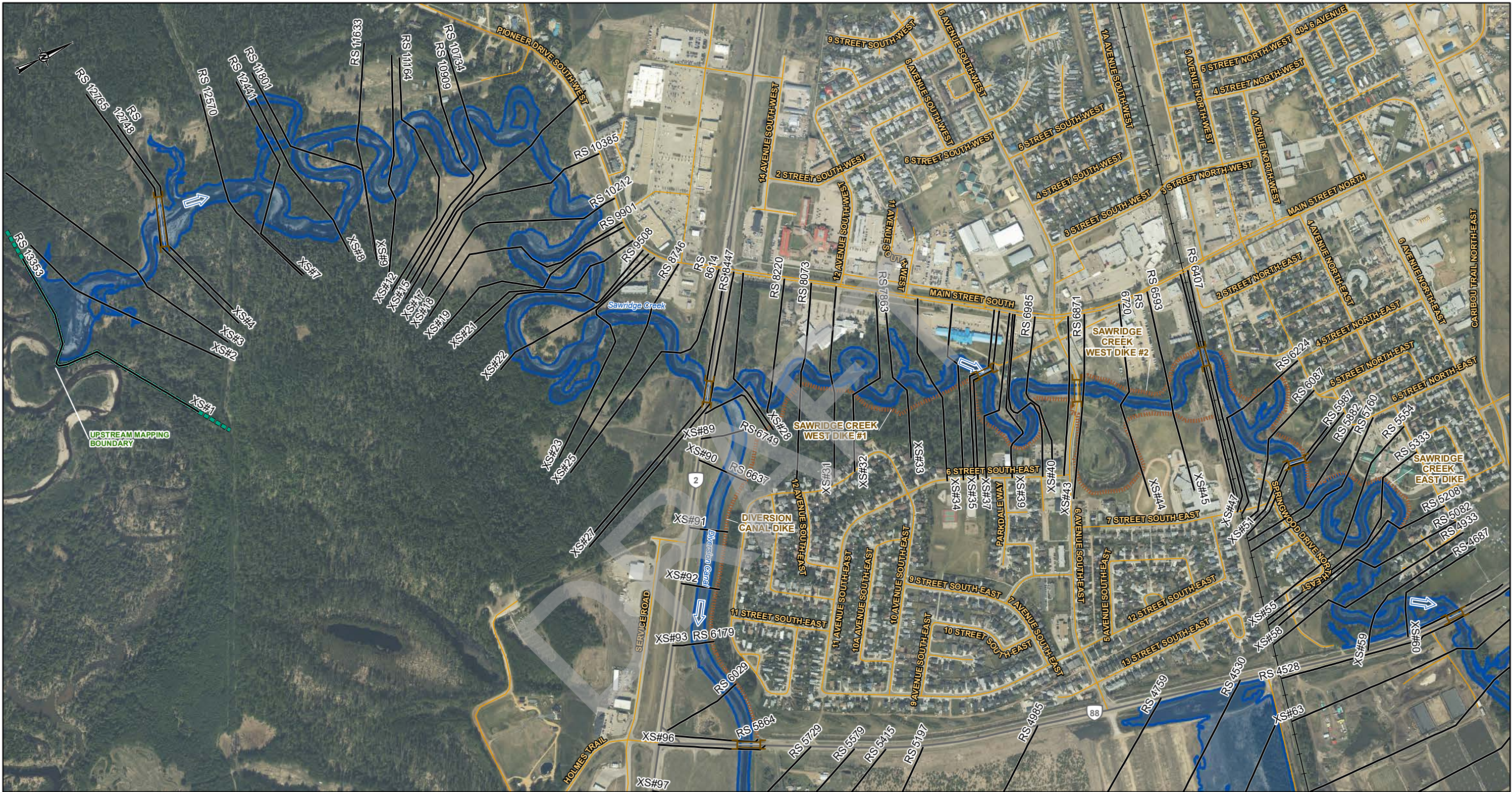
# 20-YEAR OPEN WATER FLOOD INUNDATION EXTENT

Sheet 1 to 3

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CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

BRIDGE

**20-YEAR FLOOD INUNDATION EXTENT**

20-YEAR FLOOD EXTENT

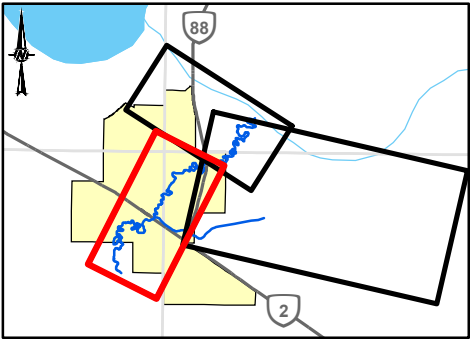
20-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK ABOVE THE DIVERSION CANAL = 159 M<sup>3</sup>/S

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 83.2 M<sup>3</sup>/S

DIVERSION CANAL = 75.8 M<sup>3</sup>/S



**SHEET 3 ↓**

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**PROJECT**

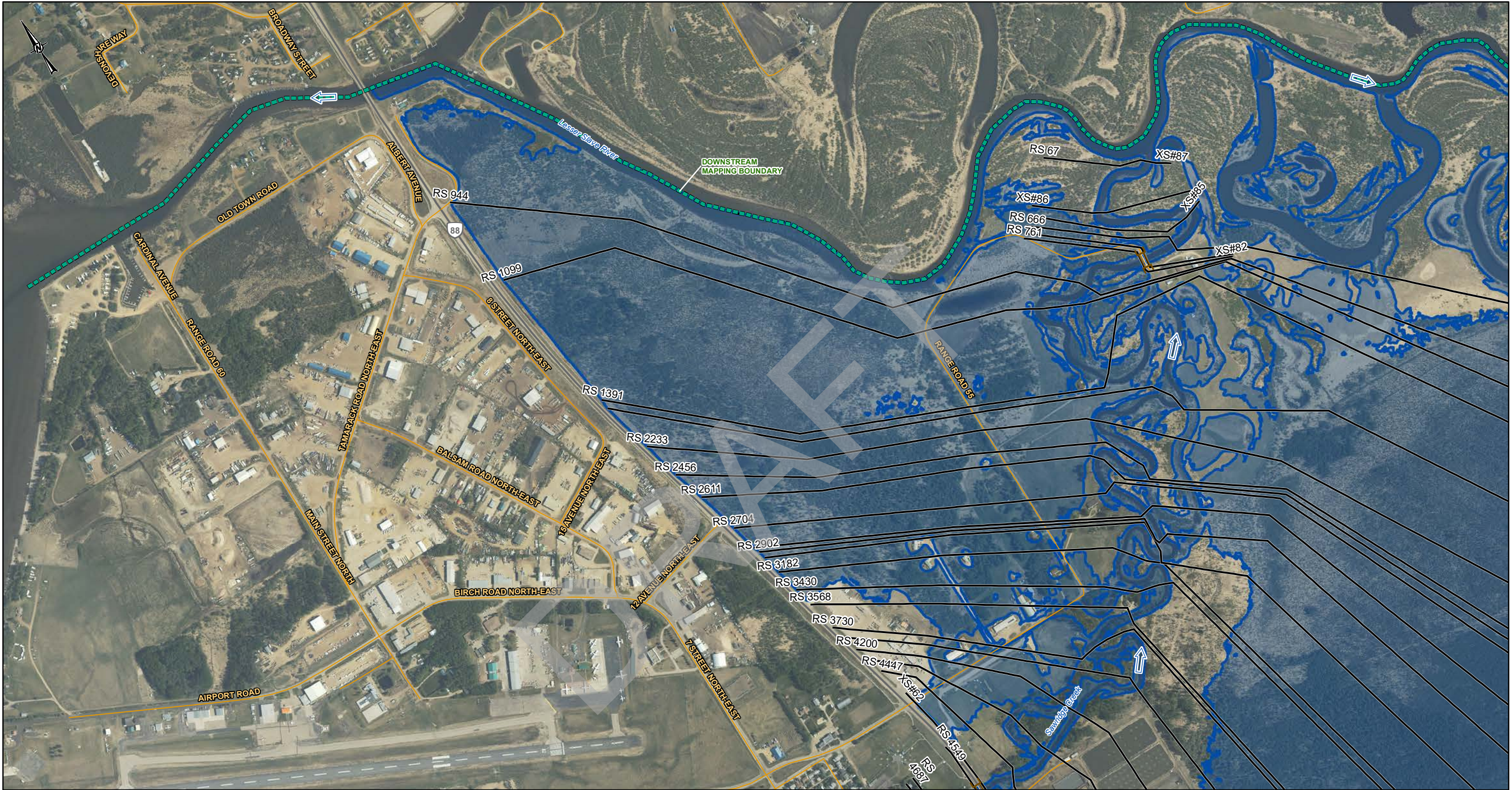
SLAVE LAKE FLOOD HAZARD STUDY

**TITLE**

20-YEAR FLOOD INUNDATION EXTENT

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	1 of 3





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— CROSS SECTION

**XS#100** CROSS SECTION NUMBER

**RS 304** RIVER STATION (M)

— STUDY BOUNDARY

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— LOCAL ROAD

— PRIMARY HIGHWAY

— SECONDARY HIGHWAY

— FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

— BRIDGE

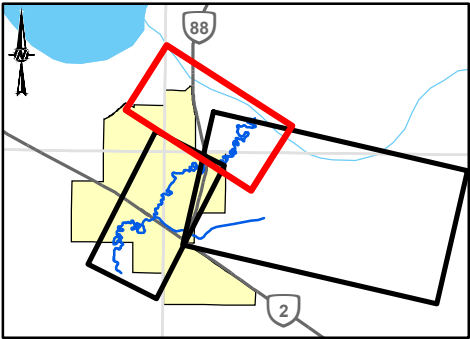
**20-YEAR FLOOD INUNDATION EXTENT**

— 20-YEAR FLOOD EXTENT

— 20-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 83.2 M<sup>3</sup>/S



SHEET 1 & 3 ↓

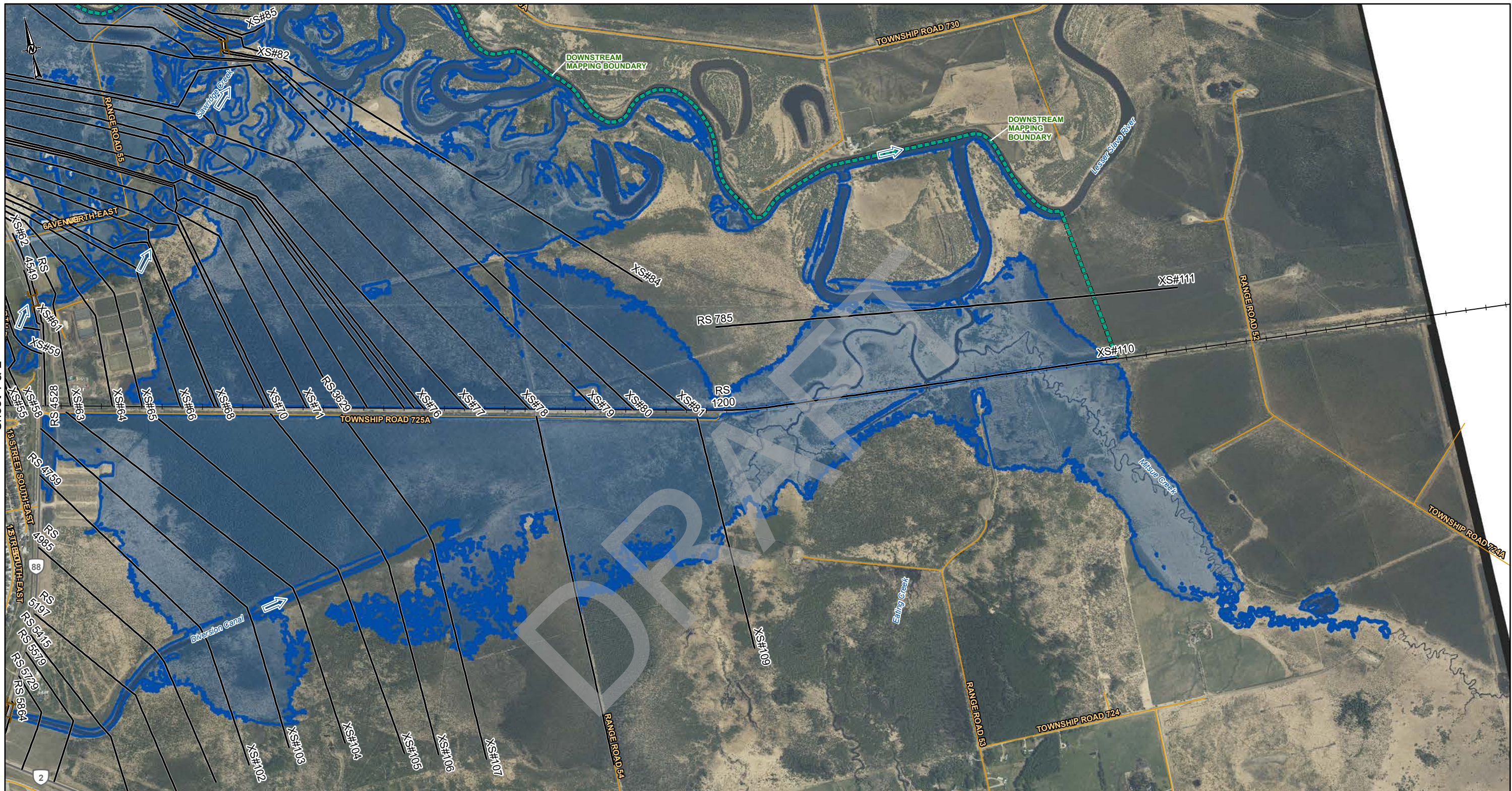


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		REVIEWED	HZ
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PROJECT		SLAVE LAKE FLOOD HAZARD STUDY	
TITLE		<b>20-YEAR FLOOD INUNDATION EXTENT</b>	
PROJECT NO.	19117529	CONTROL	4000
REV.	0		
FIGURE	2 of 3		





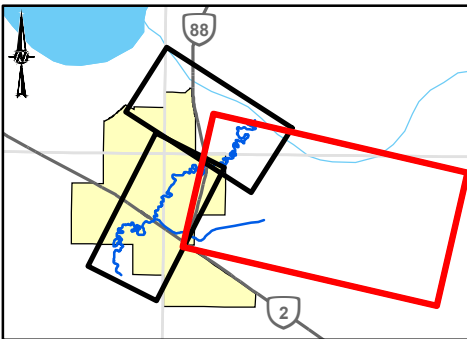
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CROSS SECTION  
XS#100 CROSS SECTION NUMBER  
RS 304 RIVER STATION (M)  
STUDY BOUNDARY  
FLOW DIRECTION  
LOCAL ROAD  
PRIMARY HIGHWAY  
SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE  
**HYDRAULIC STRUCTURES**  
BRIDGE

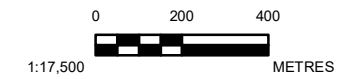
**20-YEAR FLOOD INUNDATION EXTENT**  
20-YEAR FLOOD EXTENT  
20-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**  
SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 83.2 M<sup>3</sup>/S  
DIVERSION CANAL = 75.8 M<sup>3</sup>/S



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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**20-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	3 of 3



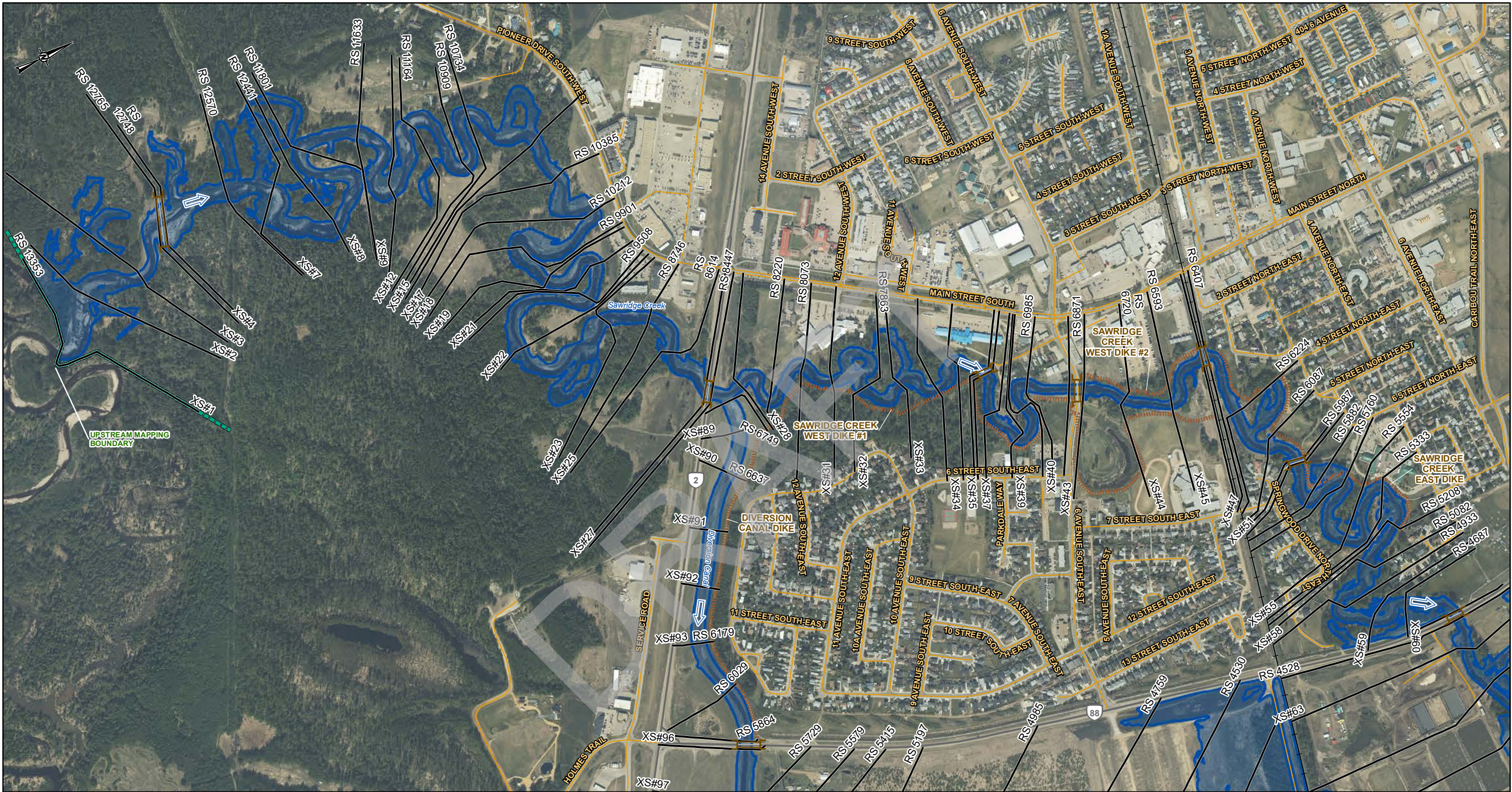
# 35-YEAR OPEN WATER FLOOD INUNDATION EXTENT

Sheet 1 to 3

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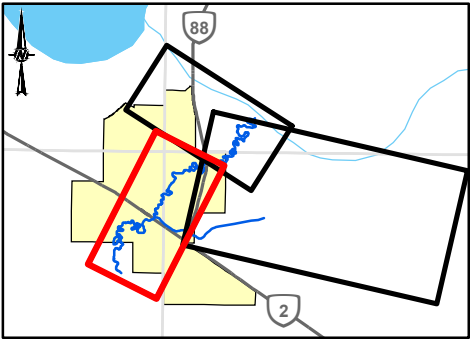


**LEGEND**  
— CROSS SECTION  
XS#100 CROSS SECTION NUMBER  
RS 304 RIVER STATION (M)  
— STUDY BOUNDARY  
➔ FLOW DIRECTION  
— LOCAL ROAD  
— PRIMARY HIGHWAY  
— SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE  
 BRIDGE

**35-YEAR FLOOD INUNDATION EXTENT**  
 35-YEAR FLOOD EXTENT  
 35-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**  
SAWRIDGE CREEK ABOVE THE DIVERSION CANAL = 197 M<sup>3</sup>/S  
SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 98.6 M<sup>3</sup>/S  
DIVERSION CANAL = 98.4 M<sup>3</sup>/S



SHEET 3 ↓



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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**35-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	1 of 3





SHEET 3 ↓

**LEGEND**

— CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

— STUDY BOUNDARY

→ FLOW DIRECTION

— LOCAL ROAD

— PRIMARY HIGHWAY

— SECONDARY HIGHWAY

— FLOOD CONTROL STRUCTURE

— BRIDGE

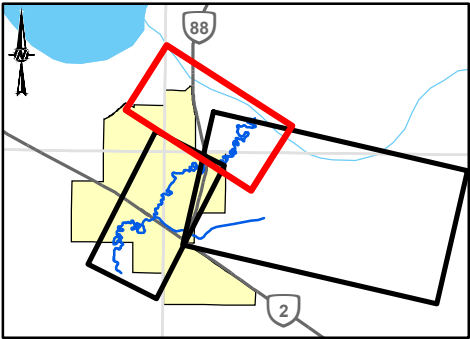
**35-YEAR FLOOD INUNDATION EXTENT**

— 35-YEAR FLOOD EXTENT

— 35-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 98.6 M<sup>3</sup>/S



SHEET 1 & 3 ↓



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AND PARKS

CONSULTANT



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PREPARED	NB
REVIEWED	HZ
APPROVED	HZ

**REFERENCE(S)**  
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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**35-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	2 of 3







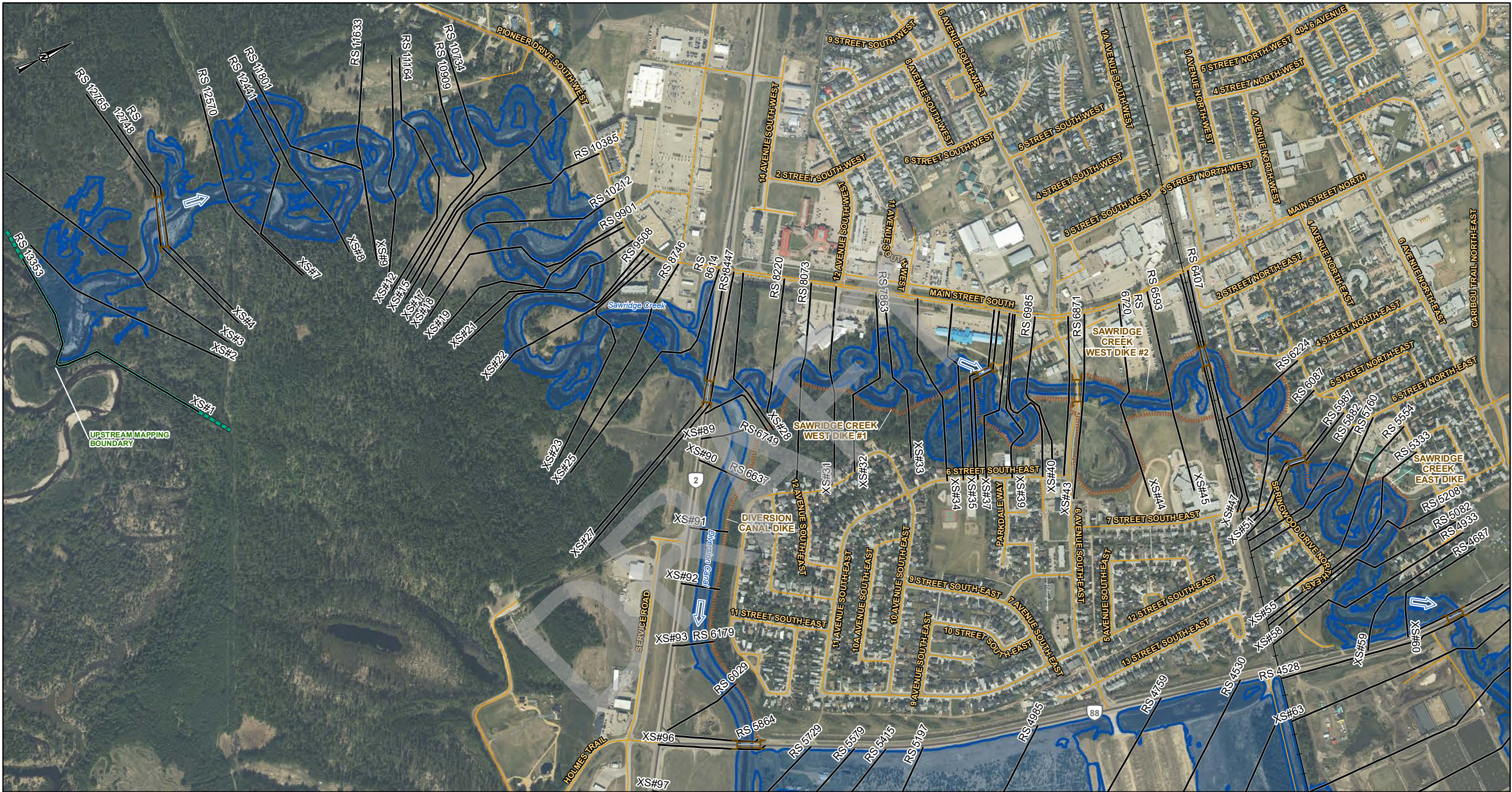
# 50-YEAR OPEN WATER FLOOD INUNDATION EXTENT

Sheet 1 to 3

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**LEGEND**

**CROSS SECTION**

**XS#100** CROSS SECTION NUMBER

**RS 304** RIVER STATION (M)

**STUDY BOUNDARY**

**FLOW DIRECTION**

**LOCAL ROAD**

**PRIMARY HIGHWAY**

**SECONDARY HIGHWAY**

**FLOOD CONTROL STRUCTURE**

**HYDRAULIC STRUCTURES**

**BRIDGE**

**50-YEAR FLOOD INUNDATION EXTENT**

**50-YEAR FLOOD EXTENT**

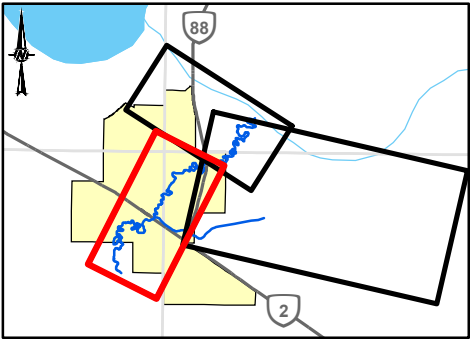
**50-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)**

**DISCHARGE**

SAWRIDGE CREEK ABOVE THE DIVERSION CANAL = 224 M<sup>3</sup>/S

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 110 M<sup>3</sup>/S

DIVERSION CANAL = 114 M<sup>3</sup>/S



SHEET 3 ↓



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PREPARED	NB
REVIEWED	HZ
APPROVED	HZ

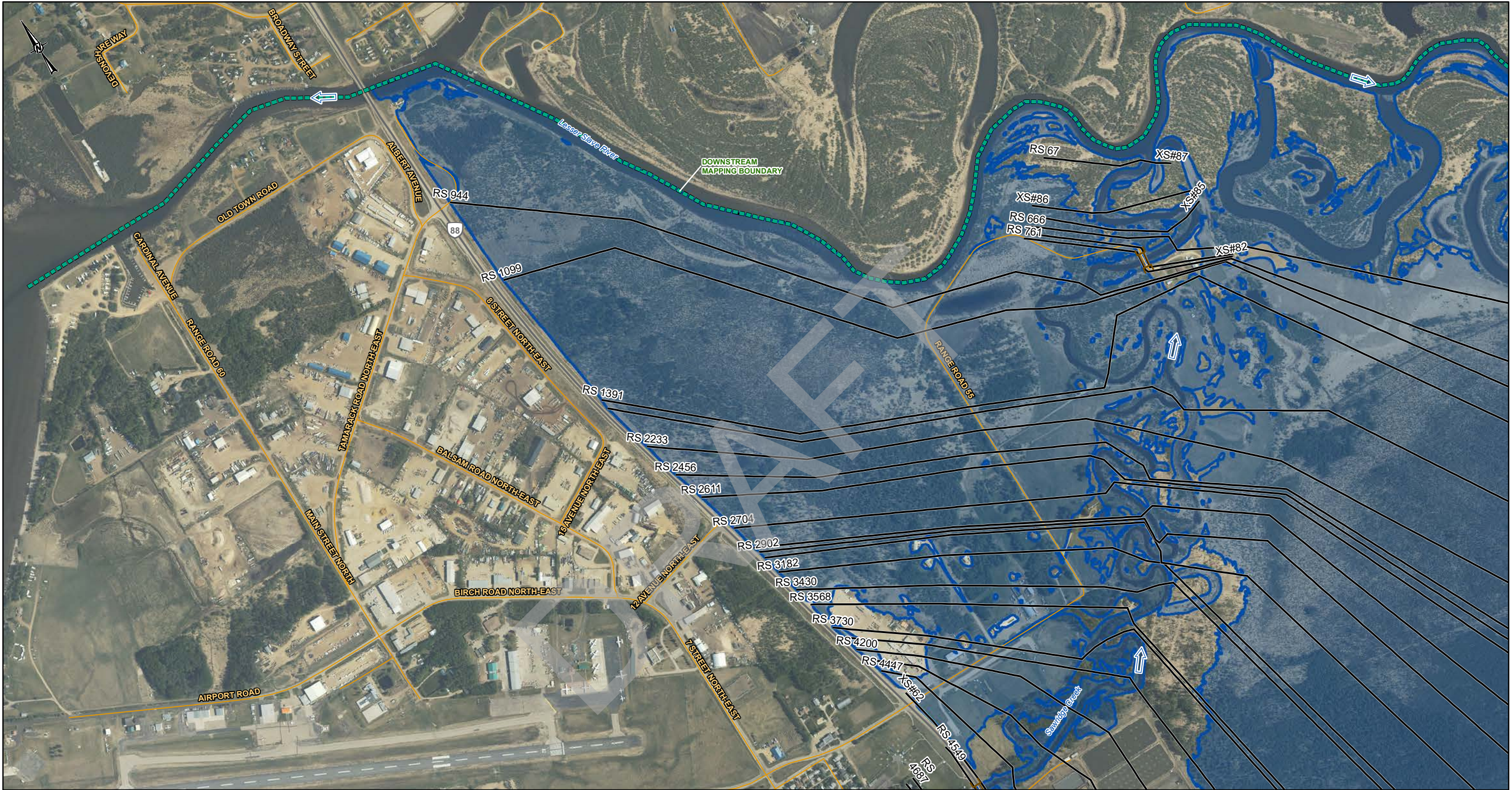
**REFERENCE(S)**  
POPULATED PLACES OBTAINED FROM ALTALIS. © GOVERNMENT OF ALBERTA 2018. ALL RIGHTS RESERVED. ROADS AND INSET WATERBODIES OBTAINED FROM GEOGRATIS. © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED. IMAGERY CAPTURED JULY 2019 BY OGL ENGINEERING FOR THE GOVERNMENT OF ALBERTA. DATUM: NAD 83 CSRS PROJECTION: 3TM 114

PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**50-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	1 of 3





SHEET 3 ↓

**LEGEND**

— CROSS SECTION

**XS#100** CROSS SECTION NUMBER

**RS 304** RIVER STATION (M)

— STUDY BOUNDARY

➔ FLOW DIRECTION

— LOCAL ROAD

— PRIMARY HIGHWAY

— SECONDARY HIGHWAY

— FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

— BRIDGE

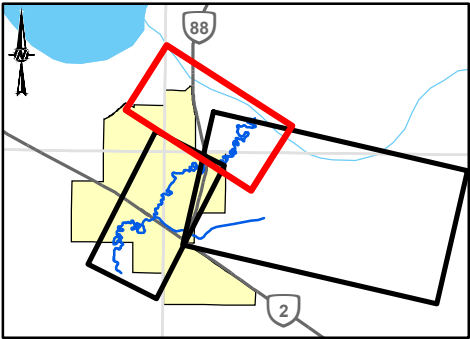
**50-YEAR FLOOD INUNDATION EXTENT**

— 50-YEAR FLOOD EXTENT

— 50-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 110 M<sup>3</sup>/S



SHEET 1 & 3 ↓



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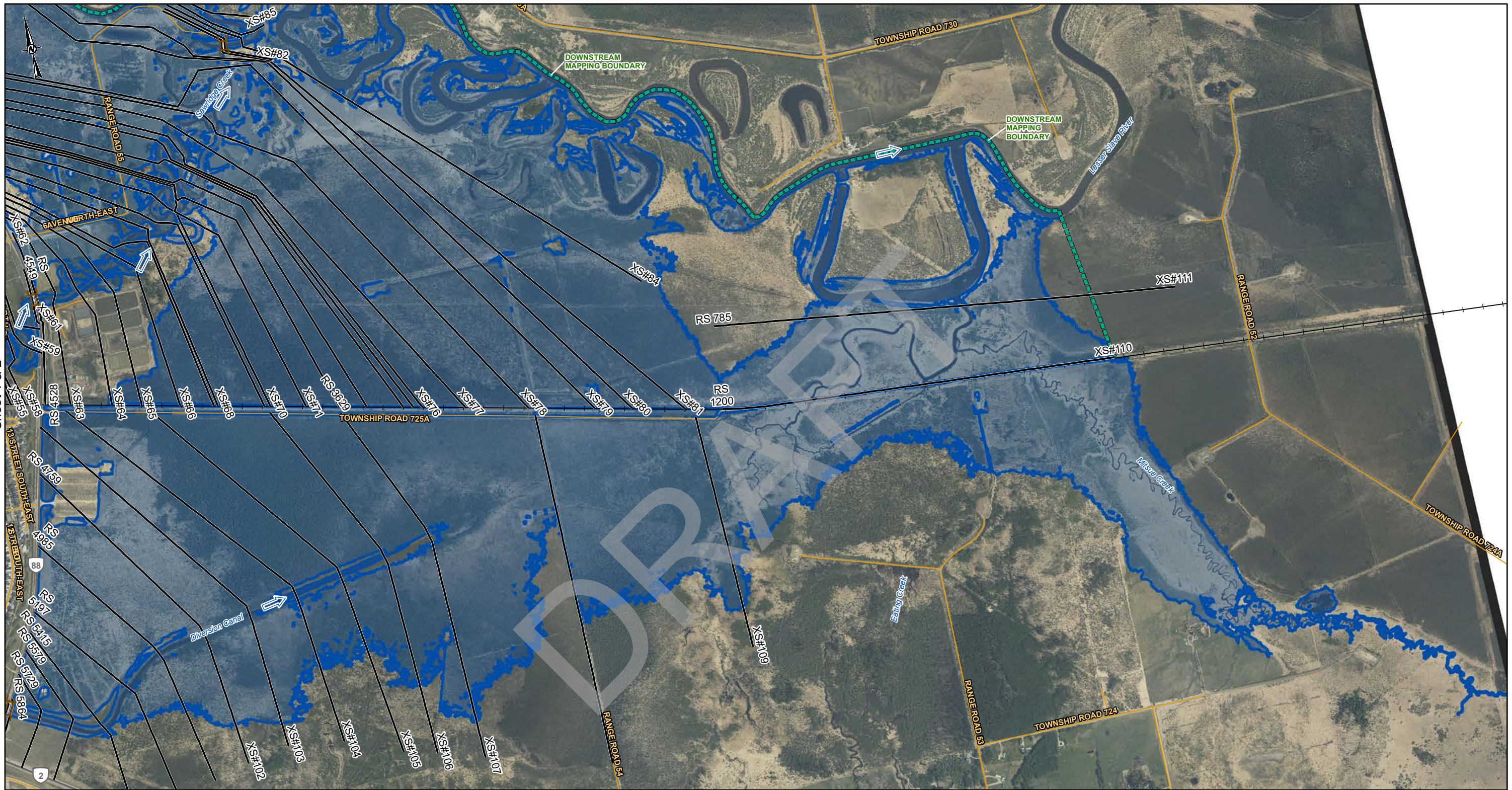
PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**50-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	2 of 3



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**LEGEND**

CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

BRIDGE

**50-YEAR FLOOD INUNDATION EXTENT**

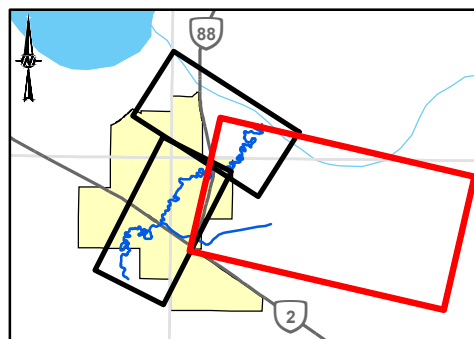
50-YEAR FLOOD EXTENT

50-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

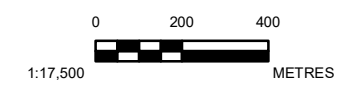
SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 110 M<sup>3</sup>/S

DIVERSION CANAL = 114 M<sup>3</sup>/S



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ALBERTA ENVIRONMENT  
AND PARKS

CONSULTANT	YYYY-MM-DD	2020-05-07
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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**50-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	3 of 3



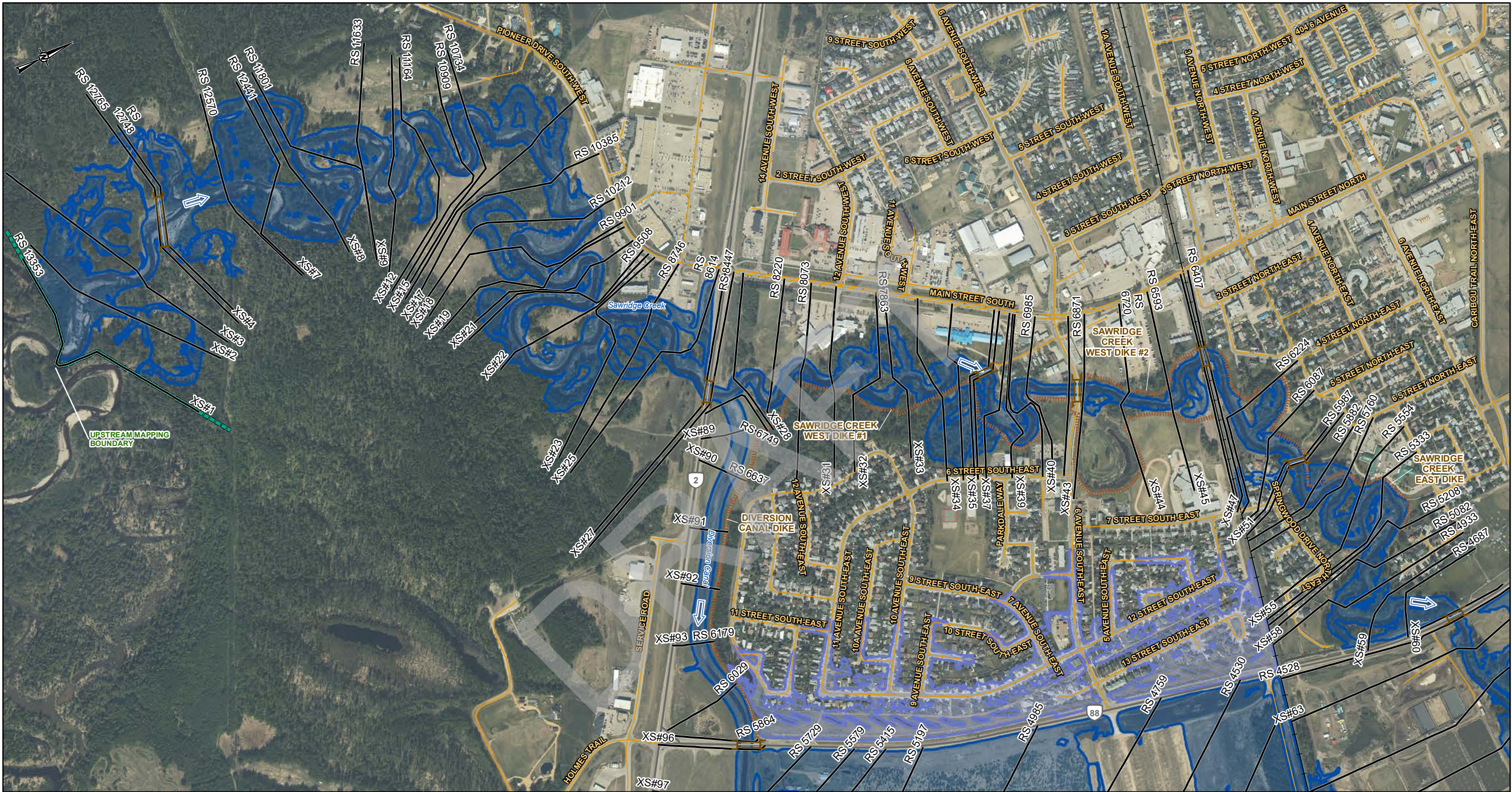
# 75-YEAR OPEN WATER FLOOD INUNDATION EXTENT

Sheet 1 to 3

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**LEGEND**

CROSS SECTION  
XS#100 CROSS SECTION NUMBER  
RS 304 RIVER STATION (M)  
STUDY BOUNDARY  
FLOW DIRECTION  
LOCAL ROAD  
PRIMARY HIGHWAY  
SECONDARY HIGHWAY

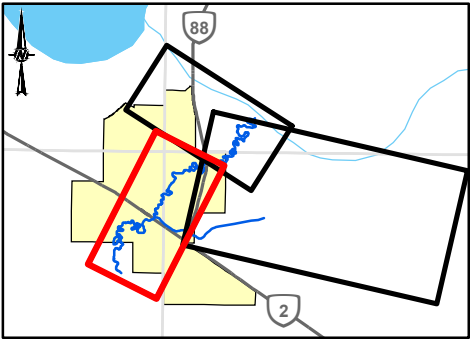
FLOOD CONTROL STRUCTURE  
HYDRAULIC STRUCTURES  
BRIDGE

**75-YEAR FLOOD INUNDATION EXTENT**

75-YEAR FLOOD EXTENT  
75-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK ABOVE THE DIVERSION CANAL = 256 M<sup>3</sup>/S  
SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 123 M<sup>3</sup>/S  
DIVERSION CANAL = 133 M<sup>3</sup>/S



SHEET 3 ↓



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AND PARKS

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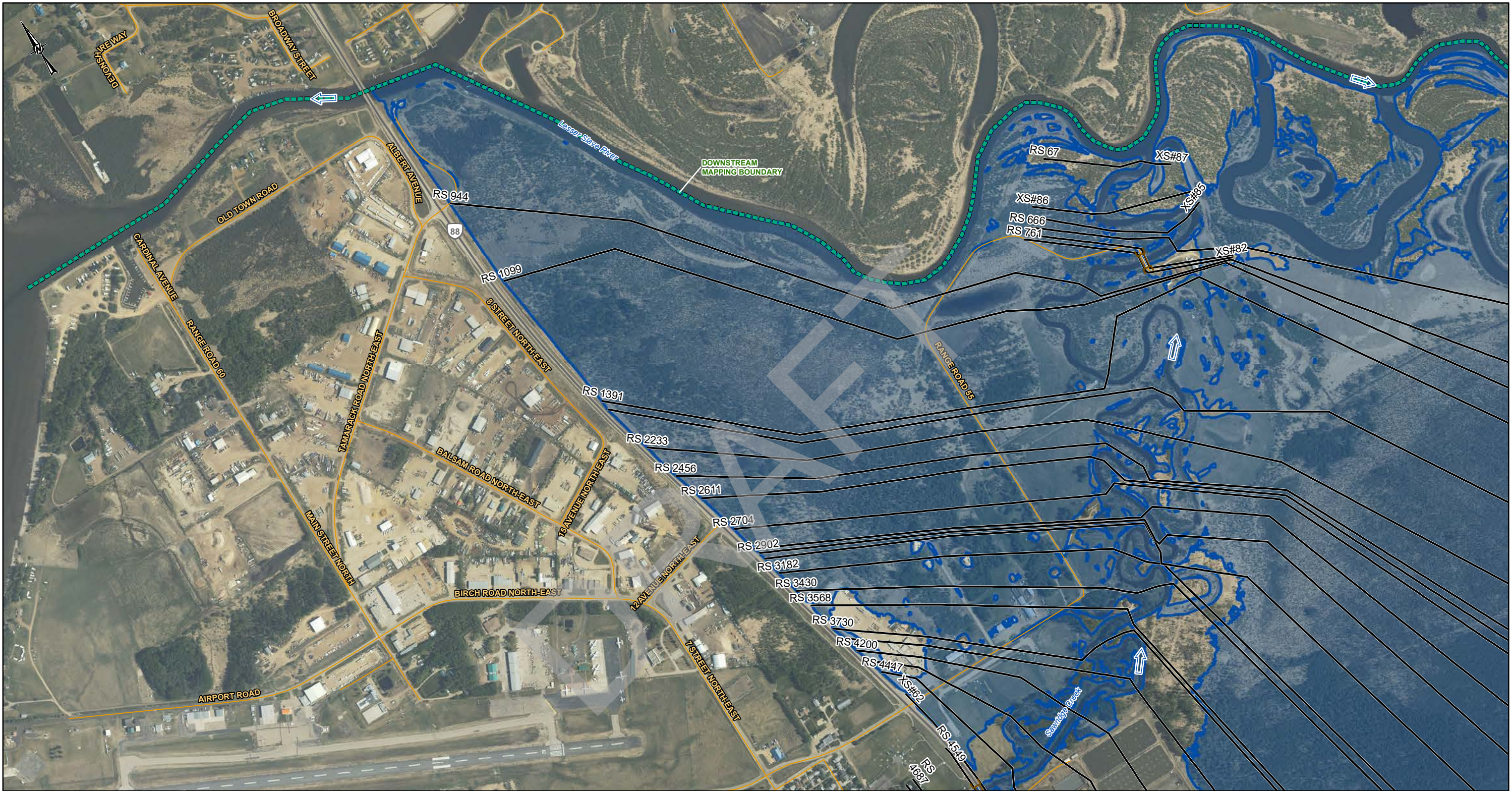
**REFERENCE(S)**  
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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**75-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	1 of 3





SHEET 3 ↓

**LEGEND**

— CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

— STUDY BOUNDARY

➡ FLOW DIRECTION

— LOCAL ROAD

— PRIMARY HIGHWAY

— SECONDARY HIGHWAY

— FLOOD CONTROL STRUCTURE

— BRIDGE

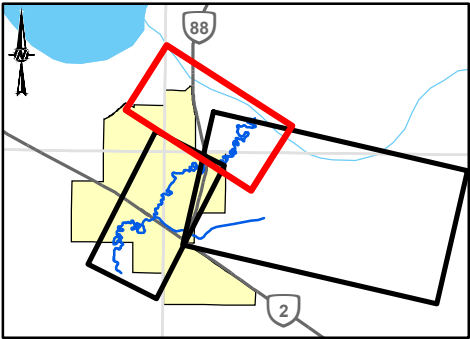
**75-YEAR FLOOD INUNDATION EXTENT**

75-YEAR FLOOD EXTENT

75-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 123 M<sup>3</sup>/S



SHEET 1 & 3 ↓



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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**75-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	2 of 3





**LEGEND**

CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

BRIDGE

**75-YEAR FLOOD INUNDATION EXTENT**

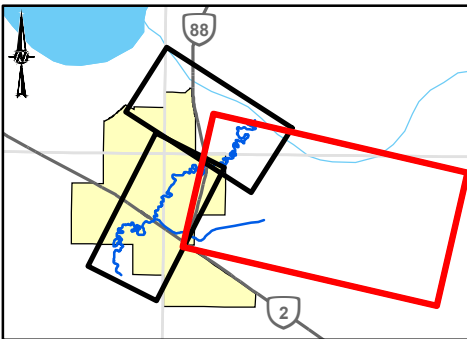
75-YEAR FLOOD EXTENT

75-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

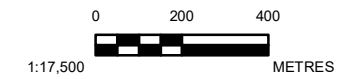
SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 123 M<sup>3</sup>/S

DIVERSION CANAL = 133 M<sup>3</sup>/S



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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**75-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	3 of 3



# 100-YEAR OPEN WATER FLOOD INUNDATION EXTENT

Sheet 1 to 3

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SHEET 3 ↓

**LEGEND**

— CROSS SECTION

XS#85 CROSS SECTION NUMBER

RS 552 RIVER STATION (M)

— STUDY BOUNDARY

→ FLOW DIRECTION

— LOCAL ROAD

— PRIMARY HIGHWAY

— SECONDARY HIGHWAY

||||| FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

— BRIDGE

**100-YEAR FLOOD INUNDATION EXTENT**

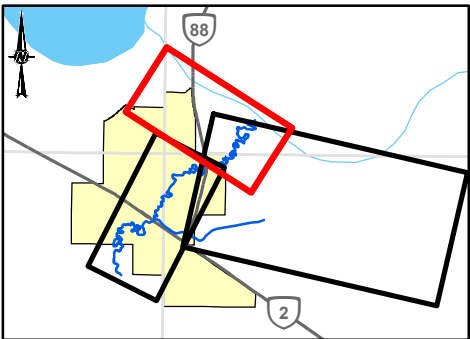
100-YEAR FLOOD EXTENT

100-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 133 M<sup>3</sup>/S

SHEET 1 & 3 ↓



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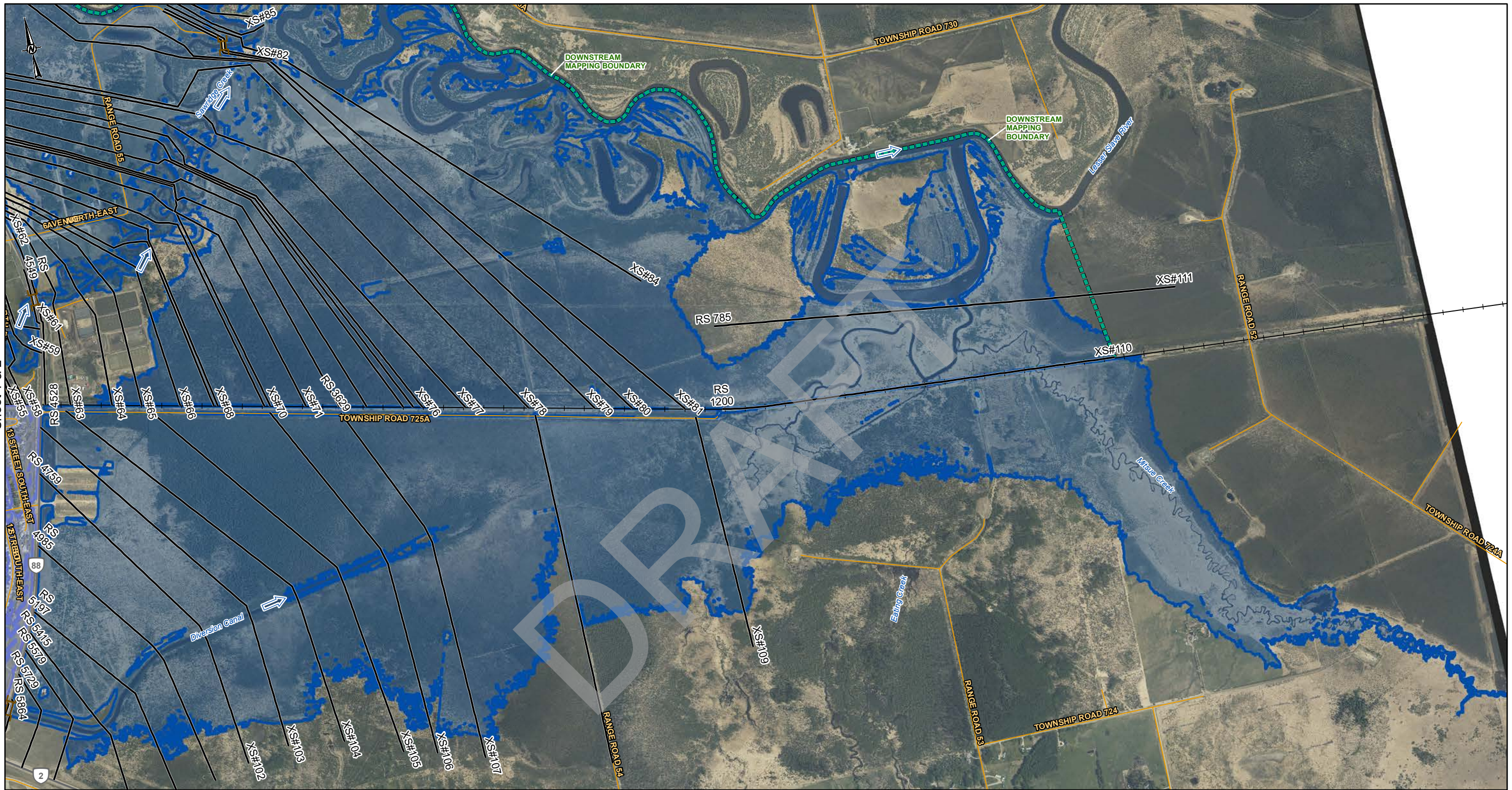
**REFERENCE(S)**  
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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**100-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	2 of 3





**LEGEND**

CROSS SECTION

XS#85 CROSS SECTION NUMBER

RS 552 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE

BRIDGE

**100-YEAR FLOOD INUNDATION EXTENT**

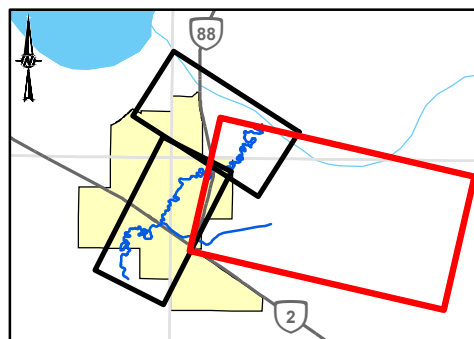
100-YEAR FLOOD EXTENT

100-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 133 M<sup>3</sup>/S

DIVERSION CANAL = 148 M<sup>3</sup>/S



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NB  
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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**100-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	3 of 3



# 200-YEAR OPEN WATER FLOOD INUNDATION EXTENT

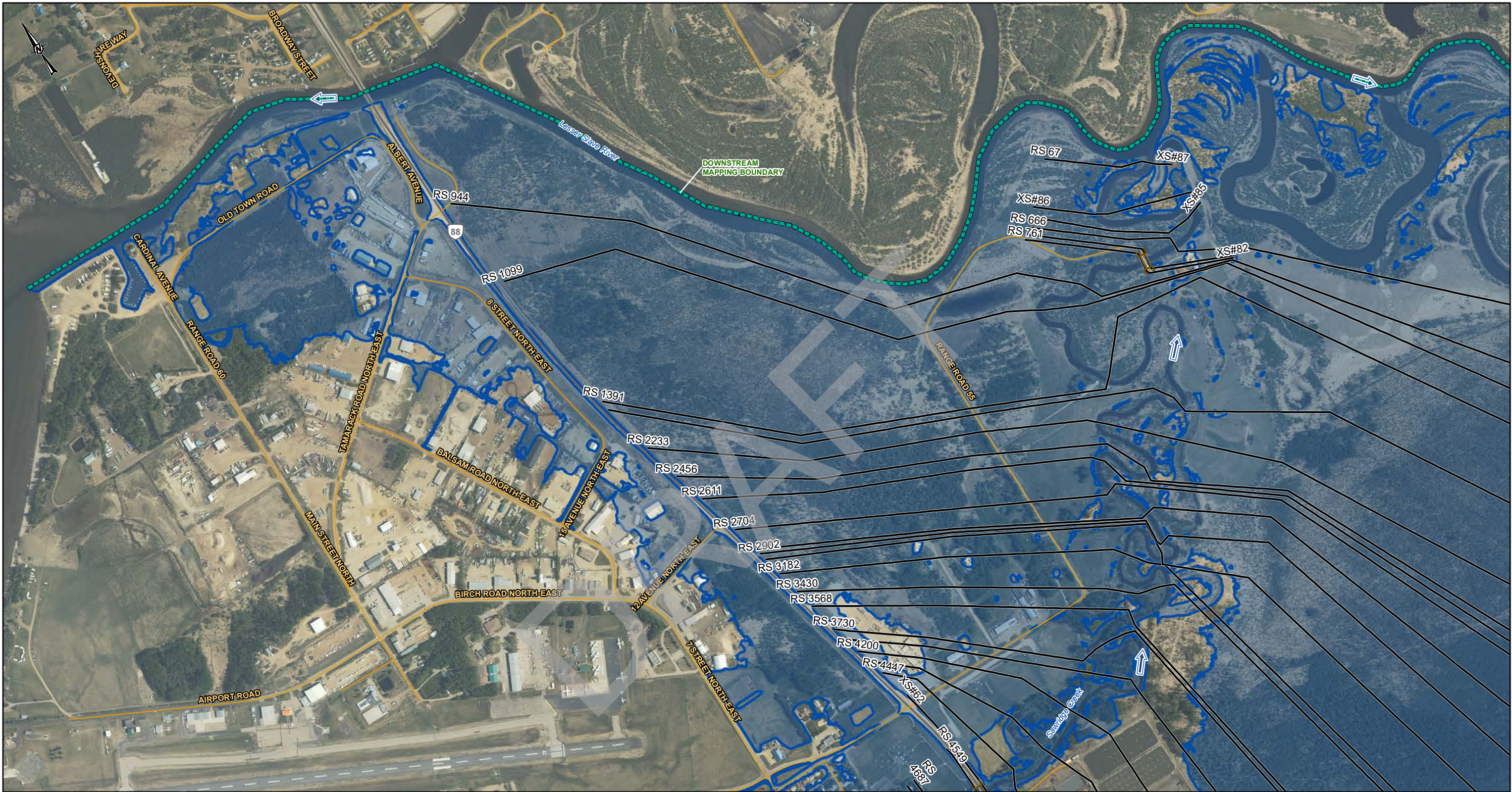
Sheet 1 to 3

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SHEET 3 ↓

**LEGEND**

— CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

||||| FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

BRIDGE

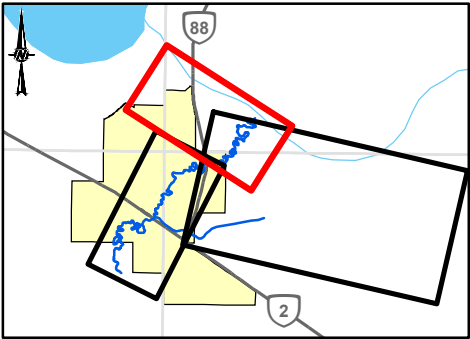
**200-YEAR FLOOD INUNDATION EXTENT**

200-YEAR FLOOD EXTENT

200-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 159 M<sup>3</sup>/S



SHEET 1 & 3 ↓



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AND PARKS

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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**200-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	2 of 3



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**LEGEND**

CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

BRIDGE

**200-YEAR FLOOD INUNDATION EXTENT**

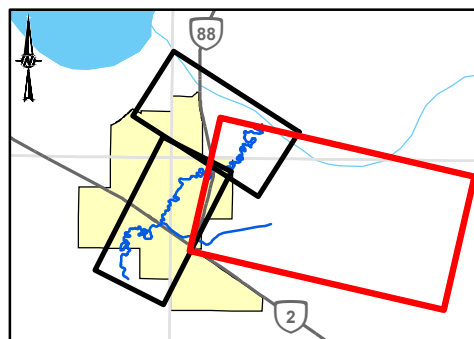
200-YEAR FLOOD EXTENT

200-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

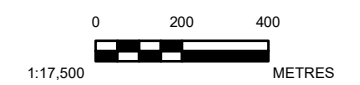
SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 159 M<sup>3</sup>/S

DIVERSION CANAL = 185 M<sup>3</sup>/S



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ALBERTA ENVIRONMENT  
AND PARKS

CONSULTANT	YYYY-MM-DD	2020-05-11
	DESIGNED	AG
	PREPARED	NB
	REVIEWED	HZ
	APPROVED	HZ



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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**200-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	3 of 3



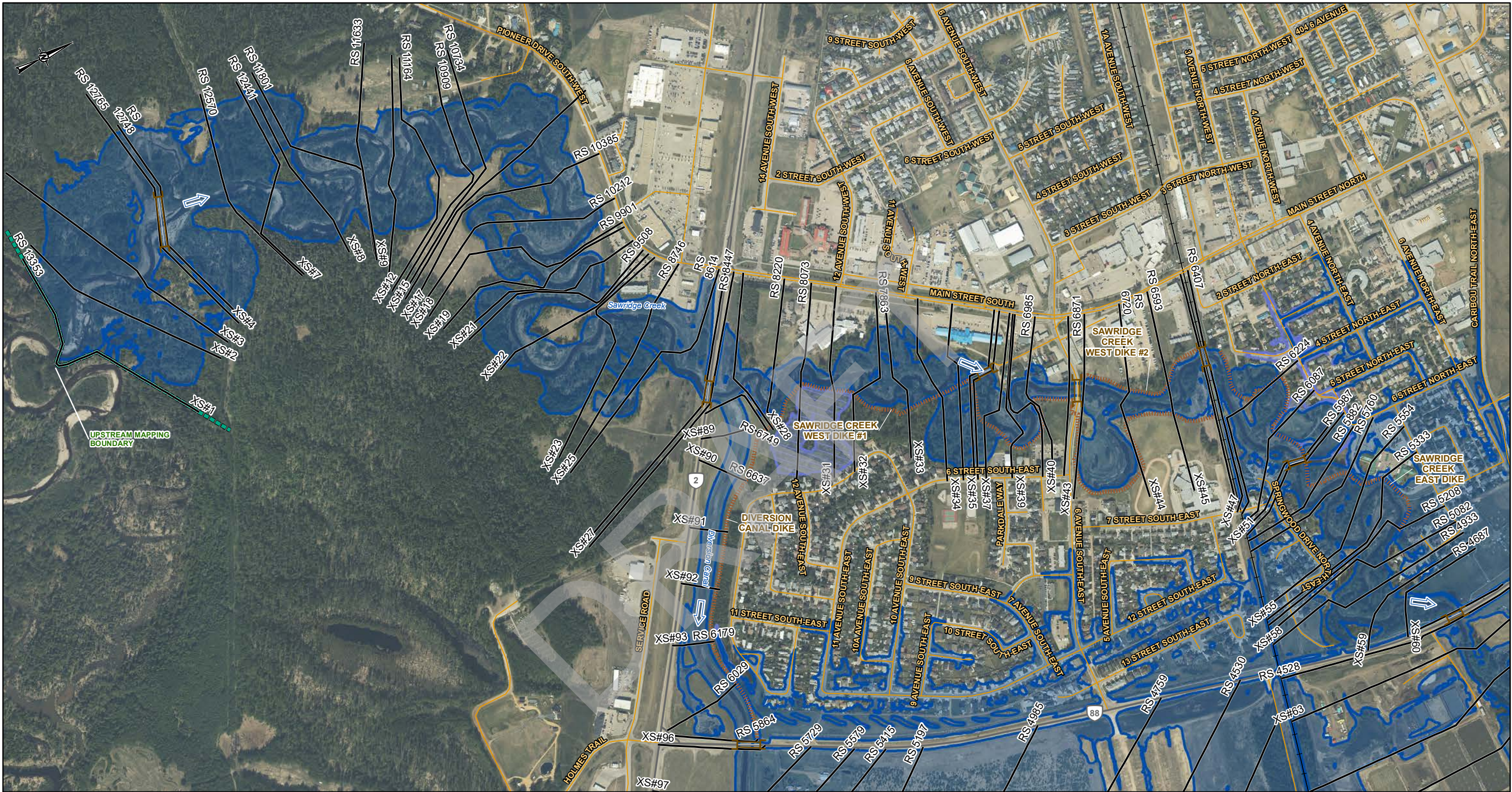
# 350-YEAR OPEN WATER FLOOD INUNDATION EXTENT

Sheet 1 to 3

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**LEGEND**

**CROSS SECTION**

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

**FLOOD CONTROL STRUCTURE**

**HYDRAULIC STRUCTURES**

BRIDGE

**350-YEAR FLOOD INUNDATION EXTENT**

350-YEAR FLOOD EXTENT

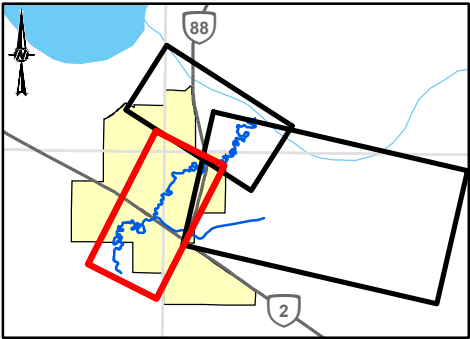
350-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK ABOVE THE DIVERSION CANAL = 402 M<sup>3</sup>/S

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 182 M<sup>3</sup>/S

DIVERSION CANAL = 220 M<sup>3</sup>/S



SHEET 3 ↓

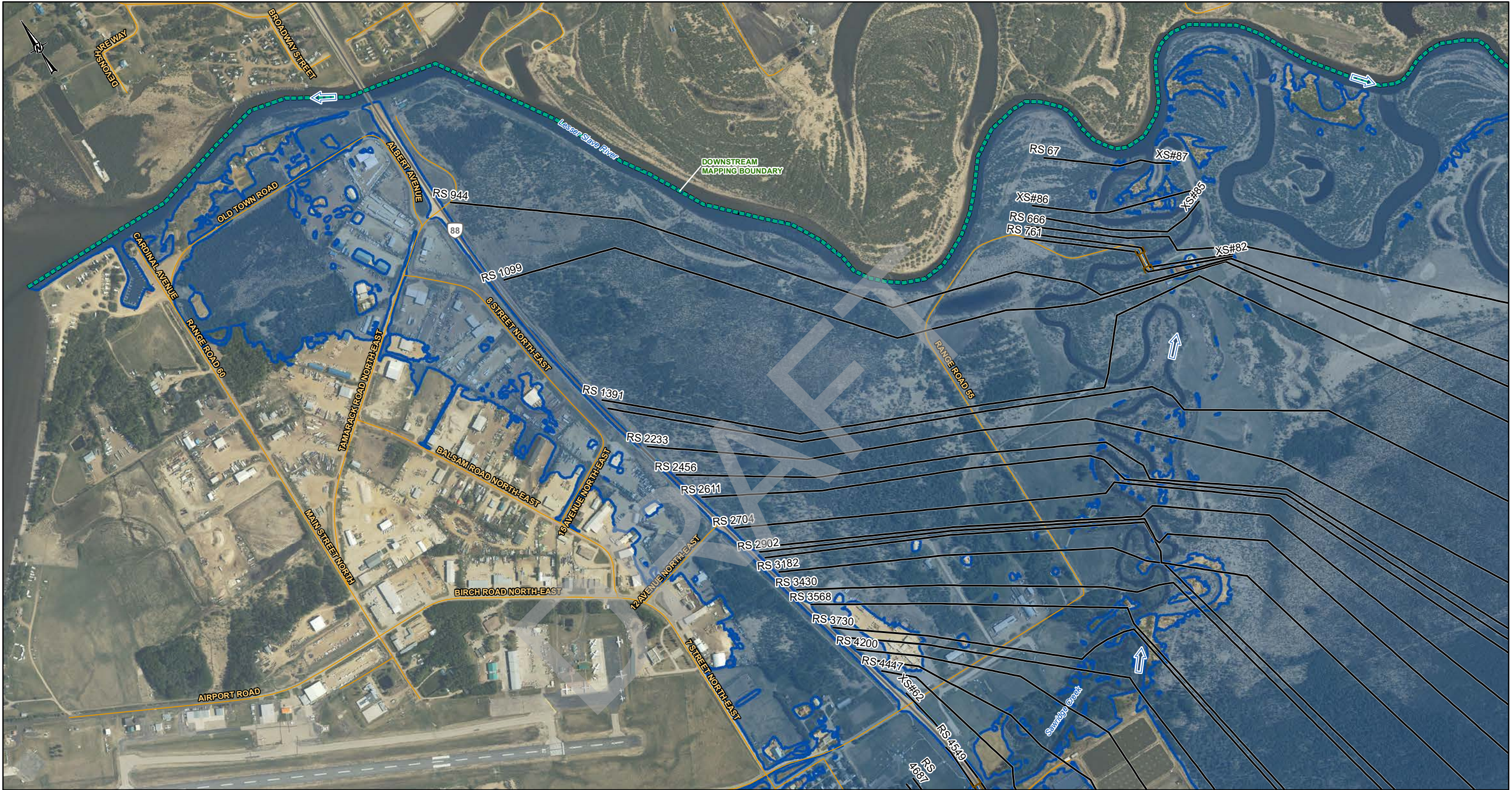


CLIENT	ALBERTA ENVIRONMENT AND PARKS	
CONSULTANT	YYYY-MM-DD	2020-05-11
	DESIGNED	AG
	PREPARED	NB
	REVIEWED	HZ
	APPROVED	HZ

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<b>PROJECT</b> SLAVE LAKE FLOOD HAZARD STUDY			
<b>TITLE</b> 350-YEAR FLOOD INUNDATION EXTENT			
PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	1 of 3



\\01\clients\slake\19117529\Mapping\Products\Hydrology\04\_Open Water Flood Inundation Mapping\19117529\_350yr\_inundation\_Bed\_20200511.mxd PRINTED ON: 2020-05-11 AT: 3:59:43 PM



SHEET 3 ↓

**LEGEND**

— CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

— STUDY BOUNDARY

→ FLOW DIRECTION

— LOCAL ROAD

— PRIMARY HIGHWAY

— SECONDARY HIGHWAY

||||| FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

— BRIDGE

**350-YEAR FLOOD INUNDATION EXTENT**

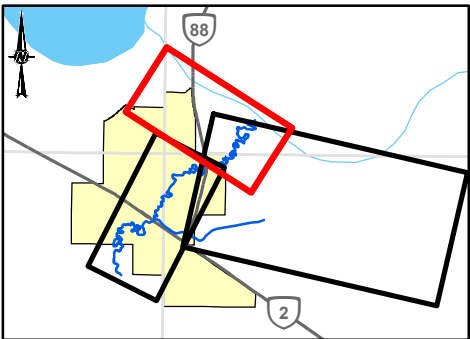
350-YEAR FLOOD EXTENT

350-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 182 M<sup>3</sup>/S

SHEET 1 & 3 ↓



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PREPARED	NB
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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**350-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	2 of 3



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**LEGEND**

CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

BRIDGE

**350-YEAR FLOOD INUNDATION EXTENT**

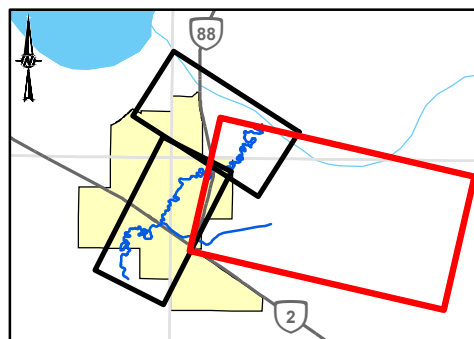
350-YEAR FLOOD EXTENT

350-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 182 M<sup>3</sup>/S

DIVERSION CANAL = 220 M<sup>3</sup>/S



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PROJECT

SLAVE LAKE FLOOD HAZARD STUDY

TITLE

**350-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	3 of 3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B 25mm



# 500-YEAR OPEN WATER FLOOD INUNDATION EXTENT

Sheet 1 to 3

DRAFT











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**LEGEND**

CROSS SECTION

FLOOD CONTROL STRUCTURE

HYDRAULIC STRUCTURES

BRIDGE

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

**500-YEAR FLOOD INUNDATION EXTENT**

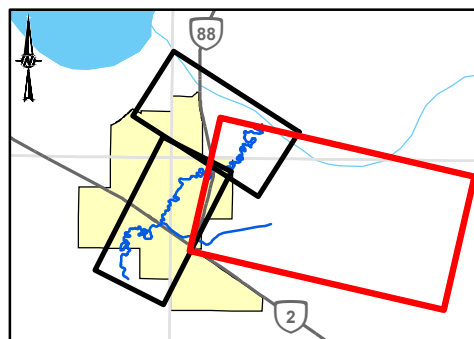
500-YEAR FLOOD EXTENT

500-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

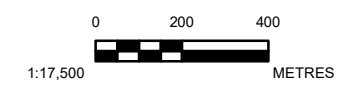
SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 200 M<sup>3</sup>/S

DIVERSION CANAL = 241 M<sup>3</sup>/S



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AND PARKS

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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

<b>TITLE</b> 500-YEAR FLOOD INUNDATION EXTENT			
PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	3 of 3



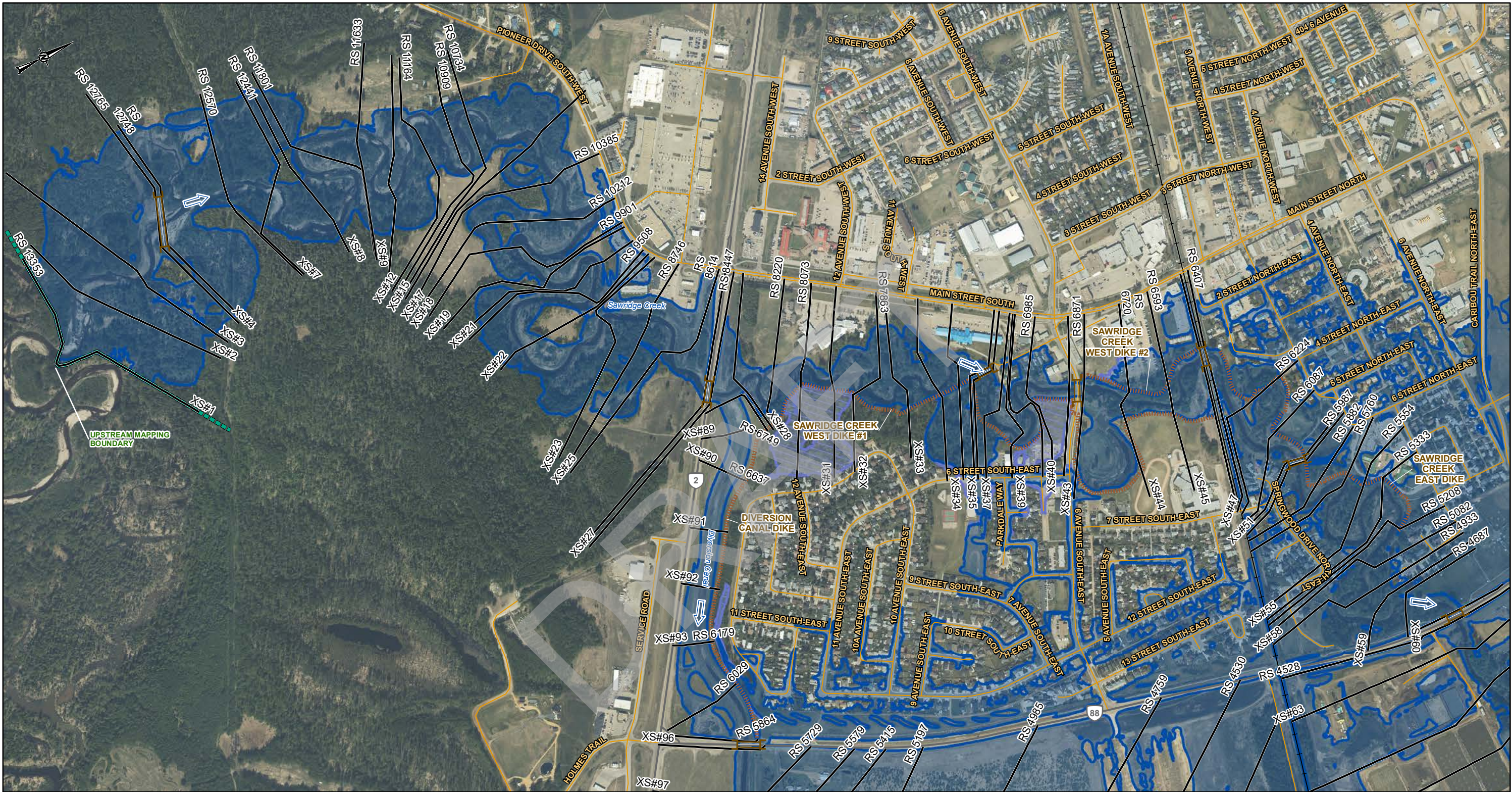
# 750-YEAR OPEN WATER FLOOD INUNDATION EXTENT

Sheet 1 to 3

DRAFT



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**LEGEND**

**CROSS SECTION**

**XS#100** CROSS SECTION NUMBER

**RS 304** RIVER STATION (M)

**STUDY BOUNDARY**

**FLOW DIRECTION**

**LOCAL ROAD**

**PRIMARY HIGHWAY**

**SECONDARY HIGHWAY**

**FLOOD CONTROL STRUCTURE**

**HYDRAULIC STRUCTURES**

**BRIDGE**

**750-YEAR FLOOD INUNDATION EXTENT**

**750-YEAR FLOOD EXTENT**

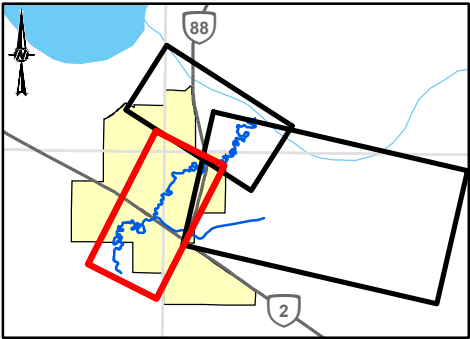
**750-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)**

**DISCHARGE**

SAWRIDGE CREEK ABOVE THE DIVERSION CANAL = 490 M<sup>3</sup>/S

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 223 M<sup>3</sup>/S

DIVERSION CANAL = 267 M<sup>3</sup>/S



**SHEET 3 ↓**

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**CONSULTANT**

GOLDER

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**PROJECT**

SLAVE LAKE FLOOD HAZARD STUDY

**TITLE**

750-YEAR FLOOD INUNDATION EXTENT

**PROJECT NO.**

19117529

**CONTROL**

4000

**REV.**

0

**FIGURE**

1 of 3

**DATE**

2020-05-11

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SHEET 3 ↓

**LEGEND**

— CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

— STUDY BOUNDARY

➡ FLOW DIRECTION

— LOCAL ROAD

— PRIMARY HIGHWAY

— SECONDARY HIGHWAY

||||| FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

— BRIDGE

**750-YEAR FLOOD INUNDATION EXTENT**

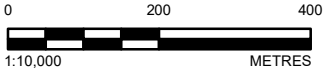
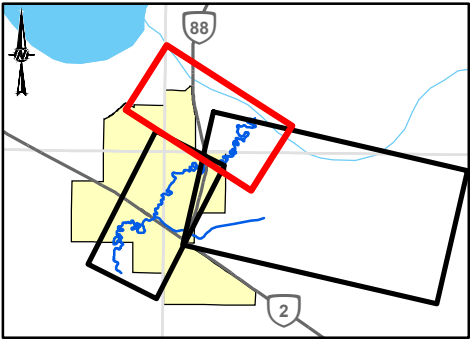
750-YEAR FLOOD EXTENT

750-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 223 M<sup>3</sup>/S

SHEET 1 & 3 ↓



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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**750-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	2 of 3



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**LEGEND**

CROSS SECTION

XS#100 CROSS SECTION NUMBER

RS 304 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

BRIDGE

**750-YEAR FLOOD INUNDATION EXTENT**

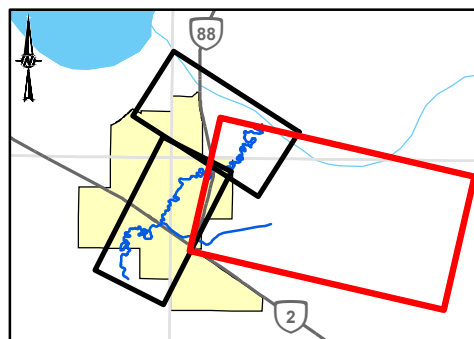
750-YEAR FLOOD EXTENT

750-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

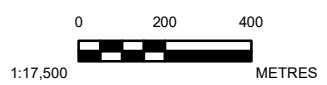
SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 223 M<sup>3</sup>/S

DIVERSION CANAL = 267 M<sup>3</sup>/S



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AND PARKS

CONSULTANT	YYYY-MM-DD	2020-05-11
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	PREPARED	NB
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	APPROVED	HZ



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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**750-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	3 of 3



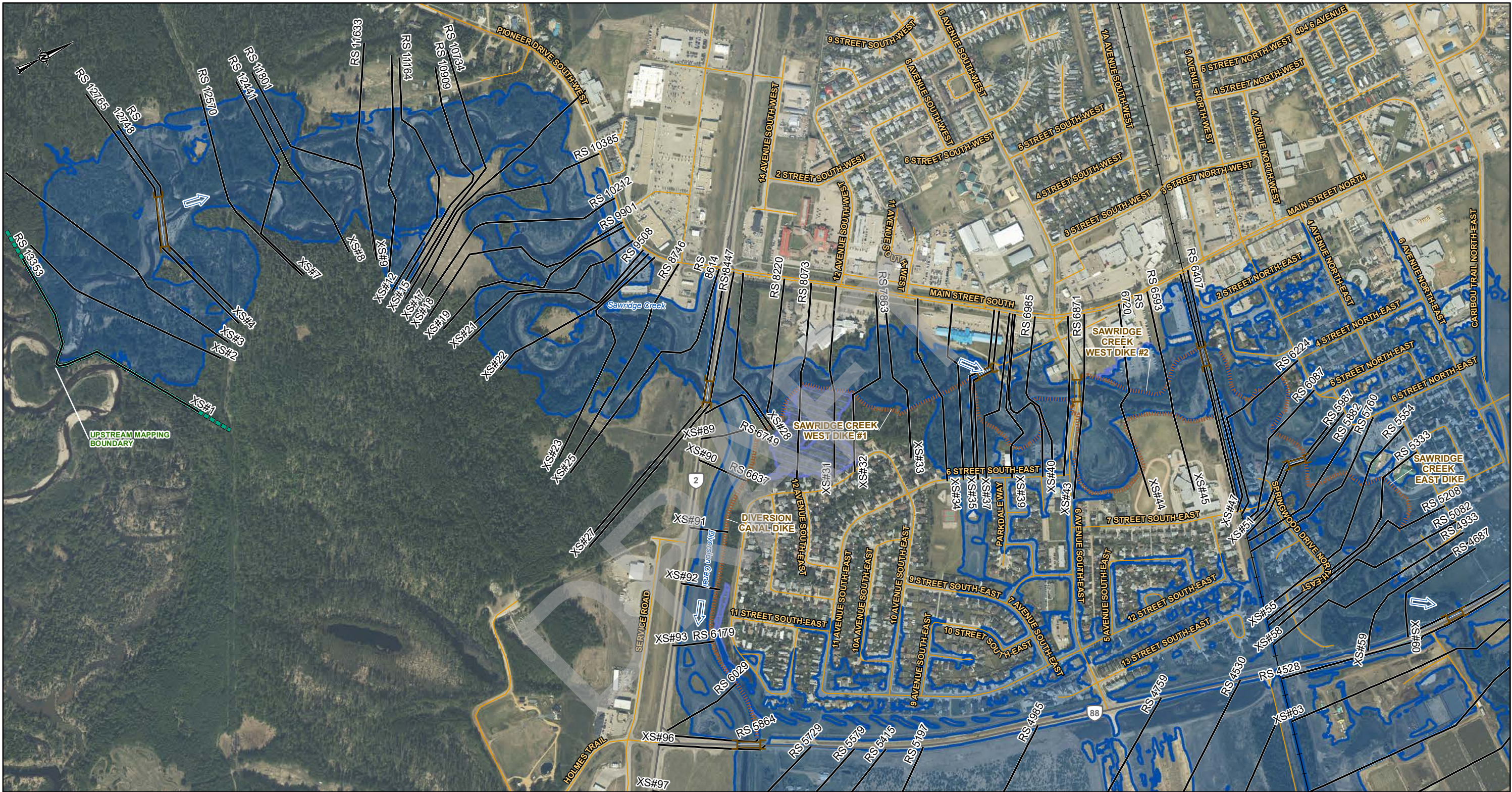
# 1,000-YEAR OPEN WATER FLOOD INUNDATION EXTENT

Sheet 1 to 3

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**LEGEND**

CROSS SECTION

XS#85 CROSS SECTION NUMBER

RS 552 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE

BRIDGE

**1000-YEAR FLOOD INUNDATION EXTENT**

1000-YEAR FLOOD EXTENT

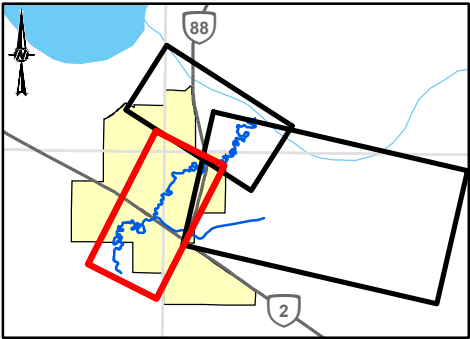
1000-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK ABOVE THE DIVERSION CANAL = 526 M<sup>3</sup>/S

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 239 M<sup>3</sup>/S

DIVERSION CANAL = 287 M<sup>3</sup>/S



SHEET 3 ↓



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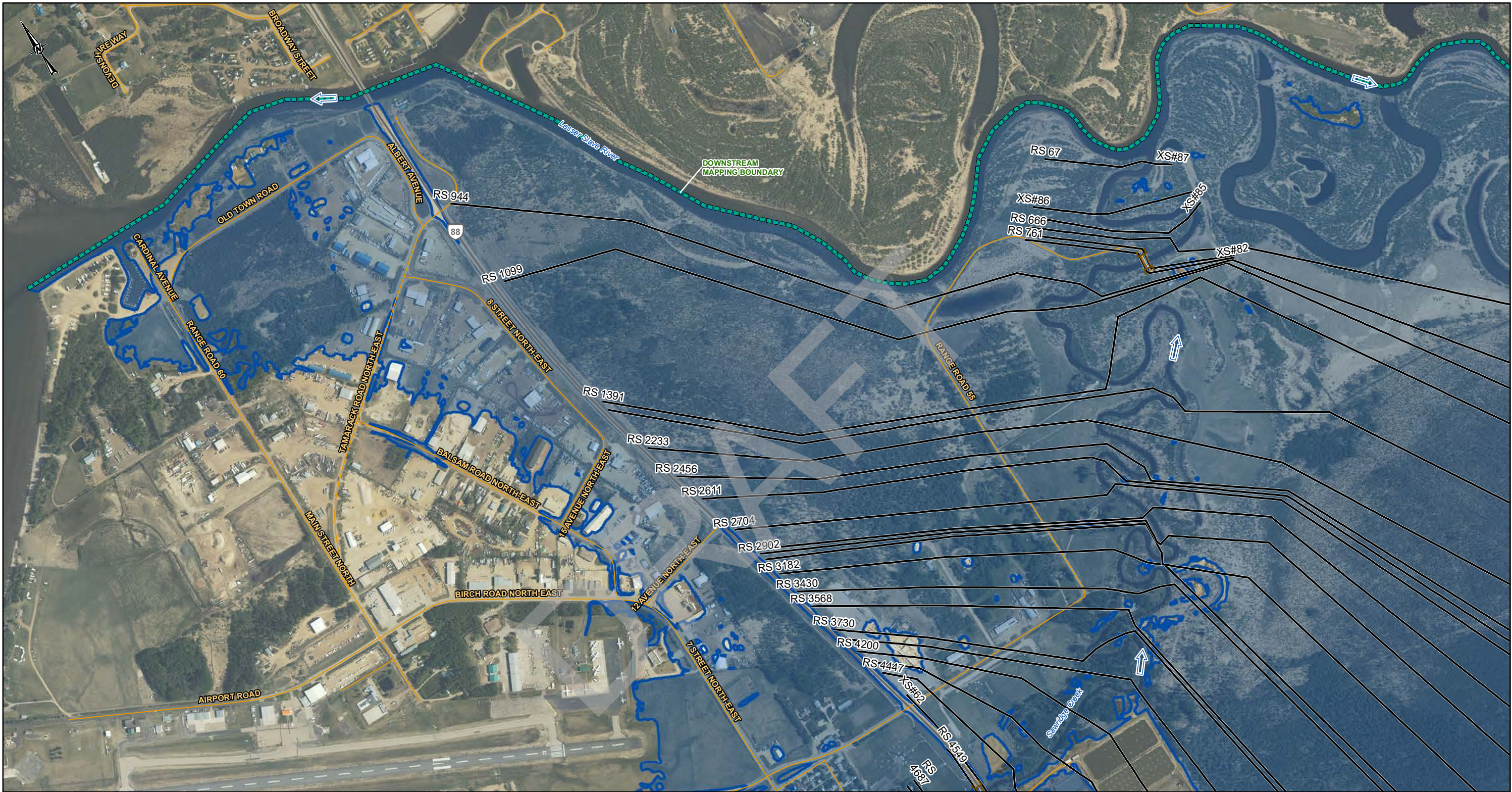
**REFERENCE(S)**  
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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**1000-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	1 of 3





SHEET 3 ↓

**LEGEND**

— CROSS SECTION

XS#85 CROSS SECTION NUMBER

RS 552 RIVER STATION (M)

— STUDY BOUNDARY

➔ FLOW DIRECTION

— LOCAL ROAD

— PRIMARY HIGHWAY

— SECONDARY HIGHWAY

— FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

— BRIDGE

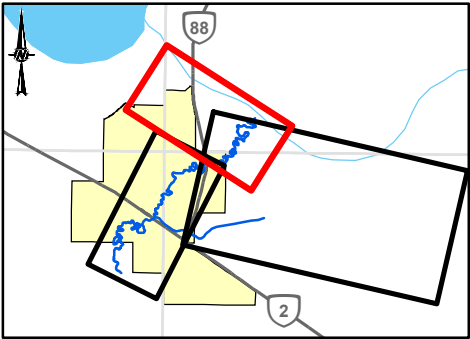
**1000-YEAR FLOOD INUNDATION EXTENT**

1000-YEAR FLOOD EXTENT

1000-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 239 M<sup>3</sup>/S



SHEET 1 & 3 ↓



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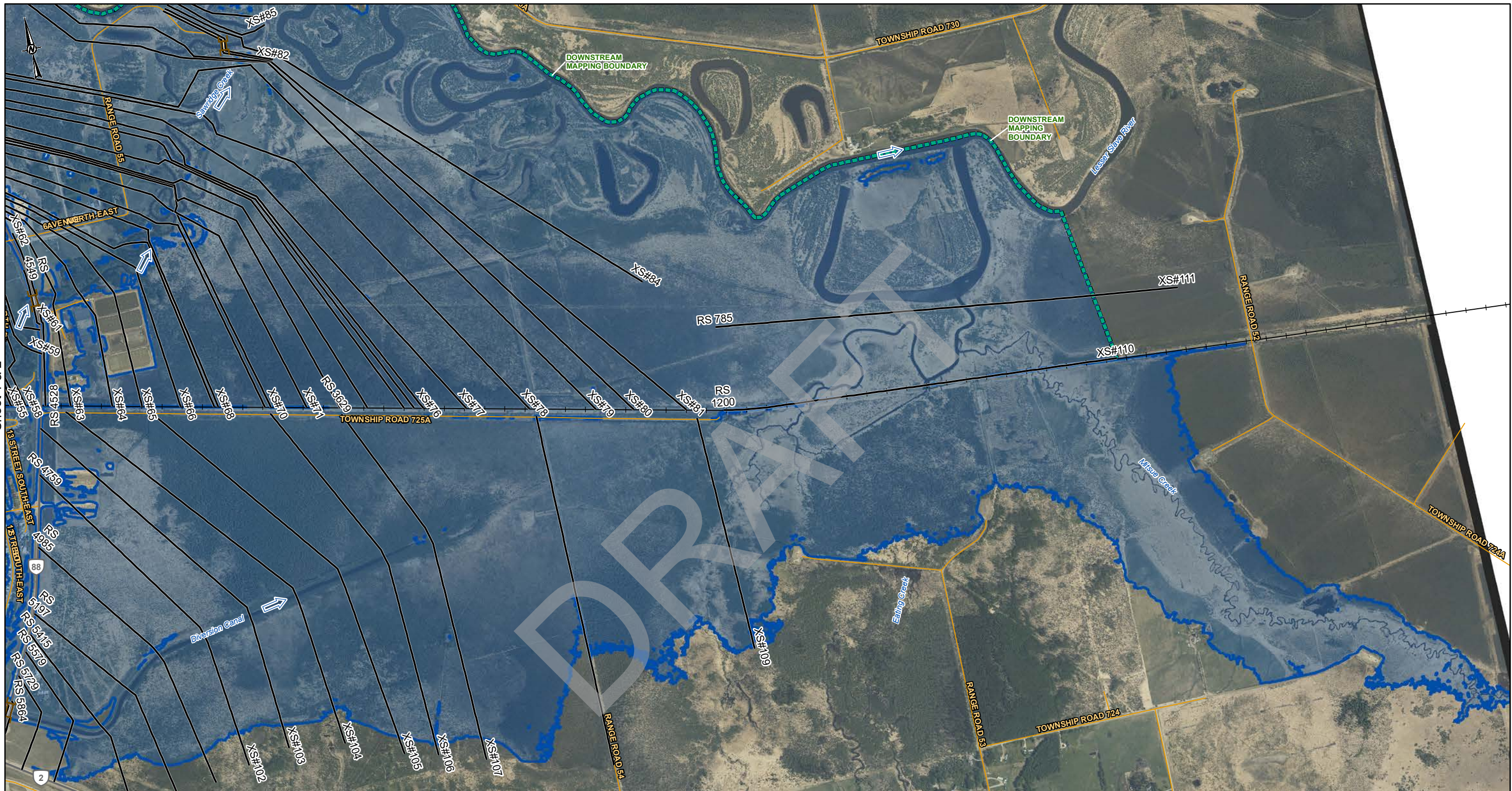
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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**1000-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	2 of 3





**LEGEND**

CROSS SECTION

XS#85 CROSS SECTION NUMBER

RS 552 RIVER STATION (M)

STUDY BOUNDARY

FLOW DIRECTION

LOCAL ROAD

PRIMARY HIGHWAY

SECONDARY HIGHWAY

FLOOD CONTROL STRUCTURE

**HYDRAULIC STRUCTURES**

BRIDGE

**1000-YEAR FLOOD INUNDATION EXTENT**

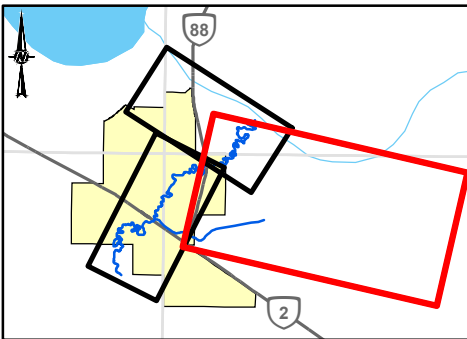
1000-YEAR FLOOD EXTENT

1000-YEAR FLOOD EXTENT (FLOOD CONTROL STRUCTURE FAILURE)

**DISCHARGE**

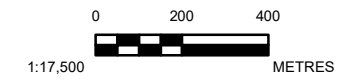
SAWRIDGE CREEK BELOW THE DIVERSION CANAL = 239 M<sup>3</sup>/S

DIVERSION CANAL = 287 M<sup>3</sup>/S



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AND PARKS

CONSULTANT



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DESIGNED	AG
PREPARED	NB
REVIEWED	HZ
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PROJECT  
SLAVE LAKE FLOOD HAZARD STUDY

TITLE  
**1000-YEAR FLOOD INUNDATION EXTENT**

PROJECT NO.	CONTROL	REV.	FIGURE
19117529	4000	0	3 of 3



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