



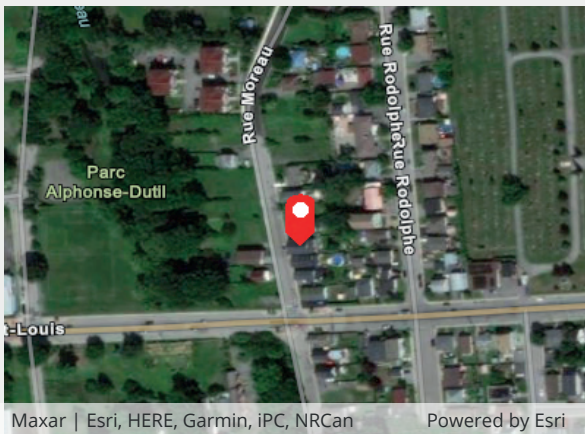
FLOOD RISK ASSESSMENT – DETAILED REPORT

ORDERED BY : **Name of the person**

DATE OF THE REPORT : **January 1, 2021** | REPORT ID : **RD-010121-001**

ADDRESS : **Main Street, QC, Canada**

GEOGRAPHIC LOCATION



Geographical coordinates :

LATITUDE | **45.00000**

LONGITUDE | **-75.00000**

Body of water : **Name of the River**

Distance from this body of water : **DISTANCE**



YOUR RISK LEVEL IS

HIGH

1. YOUR FLOOD RISK LEVEL



WHAT IS THE RISK LEVEL ?

The risk level of this property is assessed by using the probability of flooding in the next 30 years. The property is considered flooded when water hits the building structure.

YOUR RISK LEVEL IS :



HIGH

This property has a high probability of flooding **in the next 30 years**

THE PROBABILITY OF FLOODING
OF THIS PROPERTY IS :

60 % in the next 30 years

46 % in the next 20 years

26 % in the next 10 years

RISK LEVEL SCALE

VERY LOW

The probability of being flooded at least once in the next 30 years is **less than 10%**.

LOW

The probability of being flooded at least once in the next 30 years is **between 10% and 25%**.

MEDIUM

The probability of being flooded at least once in the next 30 years is **between 25% and 50%**.

HIGH

The probability of being flooded at least once in the next 30 years is **between 50% and 75%**.

VERY HIGH

The probability of being flooded at least once in the next 30 years is **over 75%**.

2. FLOOD RISK MAPS

WHAT IS A FLOOD-RISK ZONE ?

Flood-risk zones are areas that are at risk of being flooded due to rising waters. These zones are often defined using flood ratings for various return periods (example: 20 years and 100 years).

WHAT IS A RETURN PERIOD ?

A return period is the probability that a flood will occur every year. For example, a 10-year return period flood has a 1 in 10 (10%) chance of occurring each year. However, this same scenario has a 96% chance of happening in the next 30 years.

Being located in a high return period flood zone represents a low risk in the short term, but it is relatively high in the long term if we consider a longer time horizon. For example, for a 100-year return period, there is only a 1% chance of being flooded each year, but there is a 26% chance of being flooded in the next 30 years.



Risk maps provide visual information on how a flood behaves and how it affects an area. This section of the report presents the maps associated with 8 probable flood scenarios. These maps show different flood return periods (2, 5, 10, 20, 50, 75, 100 and 200 years).

Each map illustrates the extent of flooding, the depth of water, the condition of the building (flooded, isolated, or not flooded), and the accessibility of roads adjacent to the building for the particular flood return period.

This mapping information is very useful to better understand the risks to which the property may be exposed and to better prepare for them if necessary.

RETURN PERIOD – 2 YEARS

This scenario has a **100%** chance of happening in the next 30 years

ROADWAY CONDITIONS

- █ Flooded - Impassable
- █ Flooded - Emergency vehicles only
- █ Flooded - Passable
- █ Not Flooded

DEPTH OF WATER

- Less than 0,25 m
- 0,25 - 0,50 m
- 0,50 - 0,75 m
- 0,75 - 1,00 m
- More than 1,00 m

BUILDING CONDITIONS

- █ Not Flooded
- █ Isolated
- █ Flooded

Maximum water depth at building level:

0 m



Maxar | Esri, HERE, Garmin, iPC, NRCAN

Powered by Esri

2. FLOOD RISK MAPS

RETURN PERIOD – 5 YEARS

This scenario has a **100%** chance of happening in the next 30 years

ROADWAY CONDITIONS

- █ Flooded - Impassable
- █ Flooded - Emergency vehicles only
- █ Flooded - Passable
- █ Not Flooded

DEPTH OF WATER

- Less than 0,25 m
- 0,25 - 0,50 m
- 0,50 - 0,75 m
- 0,75 - 1,00 m
- More than 1,00 m

BUILDING CONDITIONS

- █ Not Flooded
- █ Isolated
- █ Flooded

Maximum water depth at building level:

0 m



RETURN PERIOD – 10 YEARS

This scenario has a **96%** chance of happening in the next 30 years

ROADWAY CONDITIONS

- █ Flooded - Impassable
- █ Flooded - Emergency vehicles only
- █ Flooded - Passable
- █ Not Flooded

DEPTH OF WATER

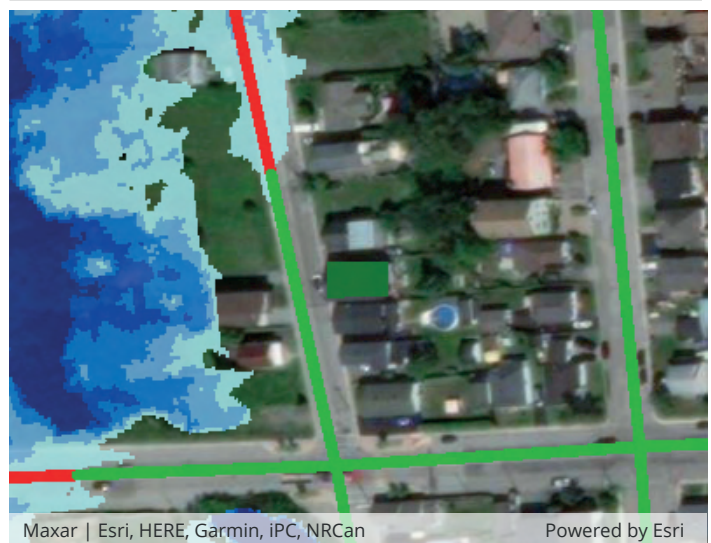
- Less than 0,25 m
- 0,25 - 0,50 m
- 0,50 - 0,75 m
- 0,75 - 1,00 m
- More than 1,00 m

BUILDING CONDITIONS

- █ Not Flooded
- █ Isolated
- █ Flooded

Maximum water depth at building level:

0 m



2. FLOOD RISK MAPS

RETURN PERIOD – 20 YEARS

This scenario has a **79%** chance of happening in the next 30 years

ROADWAY CONDITIONS

- █ Flooded - Impassable
- █ Flooded - Emergency vehicles only
- █ Flooded - Passable
- █ Not Flooded

DEPTH OF WATER

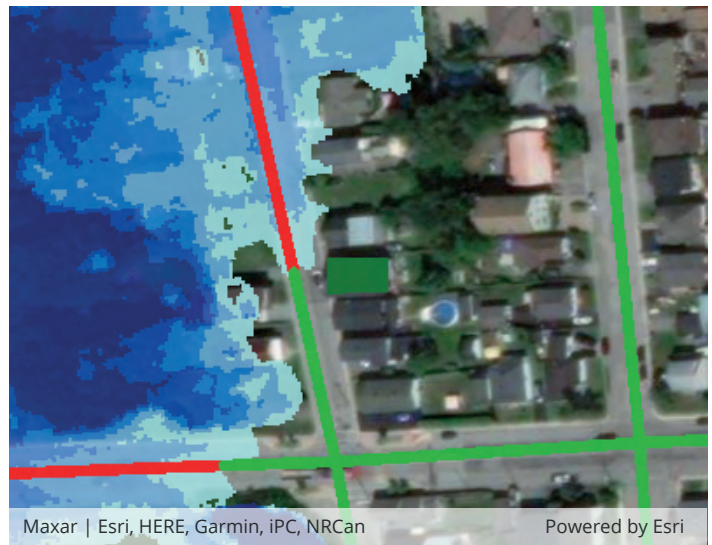
- Less than 0,25 m
- 0,25 - 0,50 m
- 0,50 - 0,75 m
- 0,75 - 1,00 m
- More than 1,00 m

BUILDING CONDITIONS

- █ Not Flooded
- █ Isolated
- █ Flooded

Maximum water depth at building level:

0 m



RETURN PERIOD – 50 YEARS

This scenario has a **45%** chance of happening in the next 30 years

ROADWAY CONDITIONS

- █ Flooded - Impassable
- █ Flooded - Emergency vehicles only
- █ Flooded - Passable
- █ Not Flooded

DEPTH OF WATER

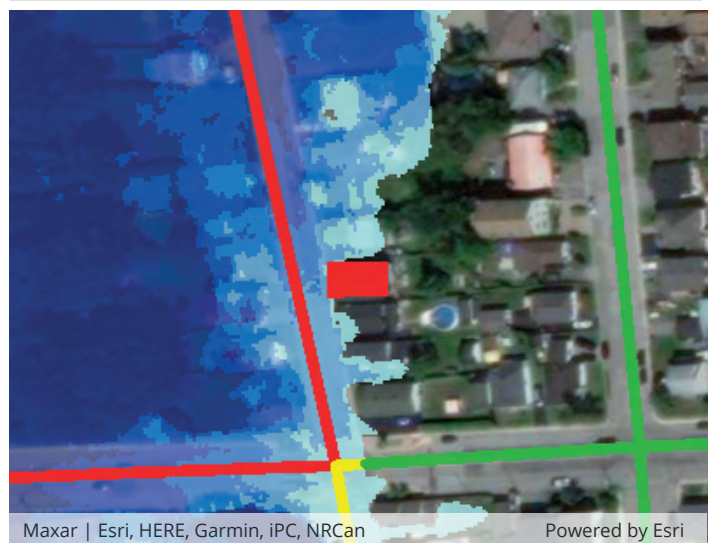
- Less than 0,25 m
- 0,25 - 0,50 m
- 0,50 - 0,75 m
- 0,75 - 1,00 m
- More than 1,00 m

BUILDING CONDITIONS

- █ Not Flooded
- █ Isolated
- █ Flooded

Maximum water depth at building level:

0,50 m



2. FLOOD RISK MAPS

RETURN PERIOD – 75 YEARS

This scenario has a **33%** chance of happening in the next 30 years

ROADWAY CONDITIONS

- Flooded - Impassable
- Flooded - Emergency vehicles only
- Flooded - Passable
- Not Flooded

DEPTH OF WATER

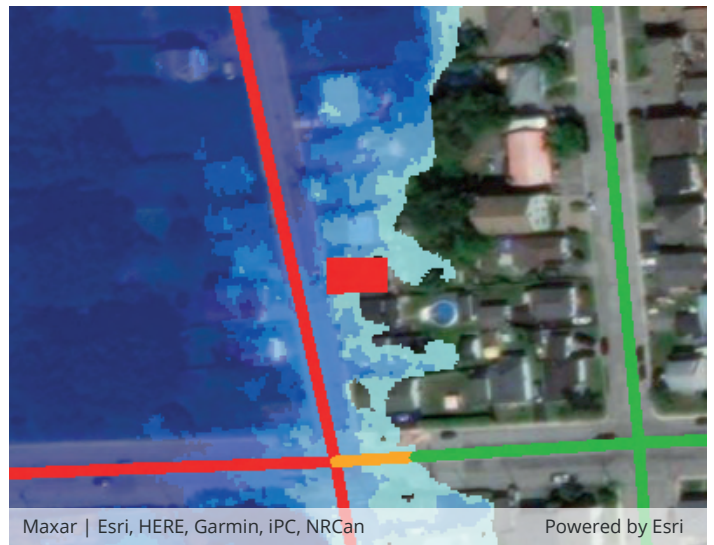
- Less than 0,25 m
- 0,25 - 0,50 m
- 0,50 - 0,75 m
- 0,75 - 1,00 m
- More than 1,00 m

BUILDING CONDITIONS

- Not Flooded
- Isolated
- Flooded

Maximum water depth at building level:

0,70 m



RETURN PERIOD – 100 YEARS

This scenario has a **26%** chance of happening in the next 30 years

ROADWAY CONDITIONS

- Flooded - Impassable
- Flooded - Emergency vehicles only
- Flooded - Passable
- Not Flooded

DEPTH OF WATER

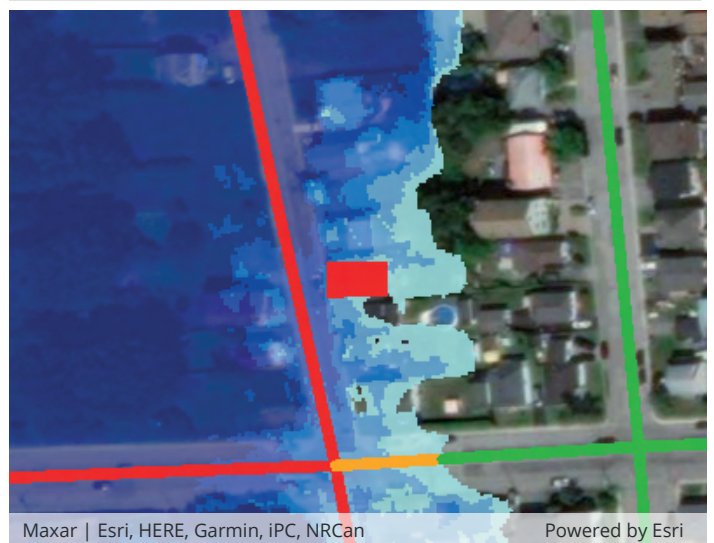
- Less than 0,25 m
- 0,25 - 0,50 m
- 0,50 - 0,75 m
- 0,75 - 1,00 m
- More than 1,00 m

BUILDING CONDITIONS

- Not Flooded
- Isolated
- Flooded

Maximum water depth at building level:

0,85 m







2. FLOOD RISK MAPS






RETURN PERIOD – 200 YEARS

This scenario has a **14%** chance of happening in the next 30 years




ROADWAY CONDITIONS

-  Flooded – Impassable
-  Flooded – Emergency vehicles only
-  Flooded – Passable
-  Not Flooded

DEPTH OF WATER

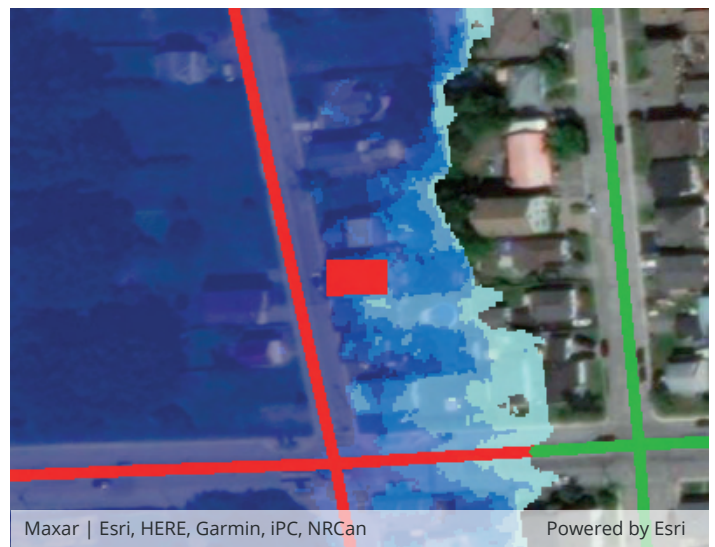
-  Less than 0,25 m
-  0,25 – 0,50 m
-  0,50 – 0,75 m
-  0,75 – 1,00 m
-  More than 1,00 m

BUILDING CONDITIONS

-  Not Flooded
-  Isolated
-  Flooded

Maximum water depth at building level:

1,30 m



These risk maps are looking to improve the understanding and knowledge of the flood risk for this property. With this knowledge, it is possible to take appropriate measures to protect the people and property in this building.



The following section of this report presents recommendations for protective measures to address the different flood scenarios presented above.

3. FLOOD PROTECTION MEASURES

Temporary protection measures

Sandbags are the most commonly used flood protection measure. They are a simple and effective way to prevent or reduce flood damage. Although sandbags do not guarantee watertightness, they are a proven method of protection to limit costly water damage. Sand is an easy material to fill and shape and becomes heavier when saturated with water. Sandbags should be stacked to form a barrier against high water. They should not be completely full. This allows them to conform to the shape of adjacent bags and hold their position better. It is recommended that a flexible polyethylene membrane be inserted between the bags exposed to water to prevent seepage.

Similar to sandbags, many commercial solutions are becoming available to protect against flooding. These are temporary flood barriers that vary in features depending on the model. These barriers are considered the alternative to sandbags.

The information below is an indication of some possible protective measures to limit the impacts of flooding on this property.

Return period	Number of sandbags	Length of the barrier (m)	Height of the barrier (m)
2 years	0	0	0
5 years	0	0	0
10 years	0	0	0
20 years	0	0	0
50 years	380	42	0,8
75 years	649	58	1
100 years	847	67	1,1
200 years	1431	75	1,6



FOR MORE DETAILS ON THE METHODOLOGY USED TO PRODUCE THIS REPORT:



CONSULT OUR METHODOLOGY

DO YOU HAVE ANY QUESTIONS? DO YOU HAVE SPECIFIC NEEDS?



CONTACT US

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