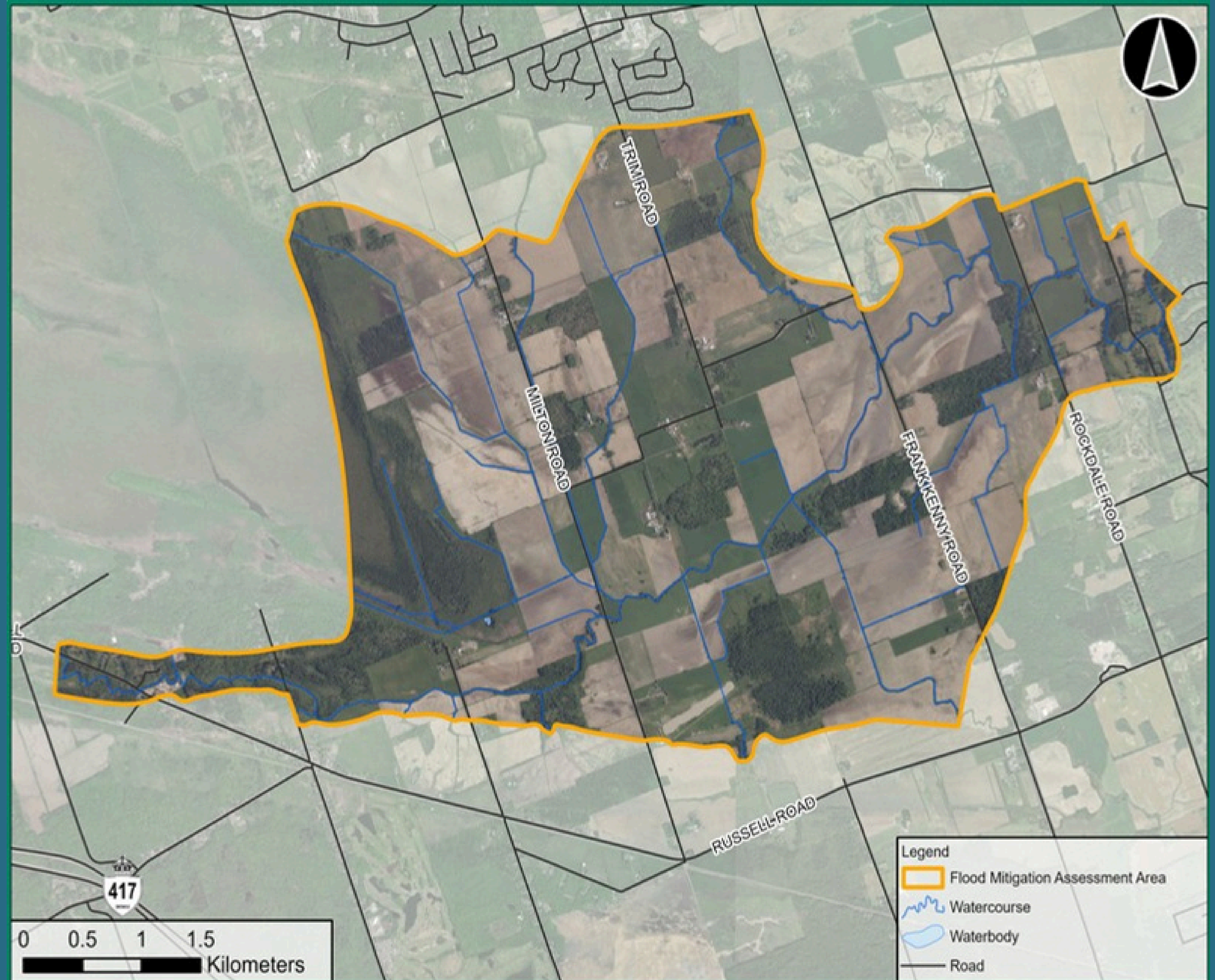
Help Us Identify Flooding Areas in the Bear Brook Watershed



Have you experienced or observed flooding within the Bear Brook Flood Mitigation Assessment Area?

Your input will help improve our understanding of flood-prone areas and support the development of future flood mitigation solutions in the Bear Brook Watershed.

Using the stickers provided, place a dot on the map to show:

- Where flooding occurred
- The year(s) flooding was observed or experienced

- 2018
- 2019
- 2020
- 2021
- 2022
- 2023
- 2024
- 2025

More details to share?
Please scan the QR code to access the Online Feedback Form

Spring Flooding vs Summer Flooding: What is the Difference?

Spring and summer flooding can affect the landscape differently and lead to different types of damages.

Spring Flooding
(e.g. 100-year floodplain)

1. Larger extent and longer duration
2. Occurs outside the growing season

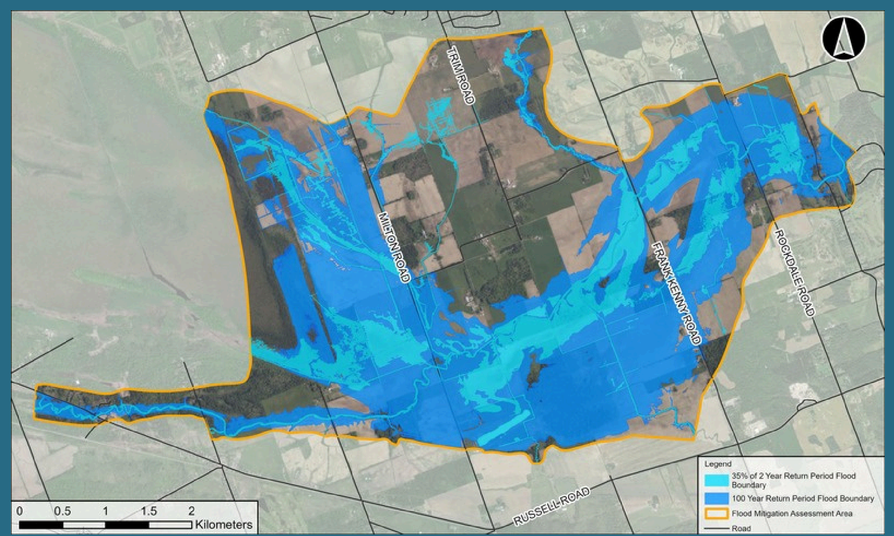
Structural Damages

VS

Summer Flooding
(e.g. 35% of 2-year floodplain)

1. Smaller magnitude flows
2. Occurs during the growing season
3. Directly impacts crops

Crop Losses



While spring flooding may affect larger areas, the most significant economic impacts are often caused by smaller, more frequent summer floods that occur during the crop growing season.

Preliminary Evaluation Criteria

The preliminary evaluation criteria below will be refined and weighted to help identify the preferred solution.

Physical and Natural Environment

- Flood reduction effectiveness
- Reduction in crop losses
- Environmental considerations

Social and Cultural Environment

- Social and community impacts
- Archaeological and cultural heritage impacts

Engineering and Technical Criteria

- Constructability and feasibility
- Regulatory compliance

Economic and Financial Criteria

- Capital cost
- Long-term maintenance cost

Evaluation Criteria: We Want Your Input!

Which of the following criteria should be considered by the project?

Please indicate the importance of each criteria by placing a colour coded sticker within the associated boxes below:

- Flood reduction effectiveness
- Reduction in crop losses
- Environmental considerations
- Long-term maintenance cost
- Social and community impacts
- Archaeological and cultural heritage impacts
- Constructability and feasibility
- Regulatory compliance
- Capital cost

- Most Important
- Important
- Somewhat Important
- Not Important

What is the most important criteria to you?

Please scan the QR code to access the Online Feedback Form:

Potential Flood Mitigation Options: Tell Us What You Think!

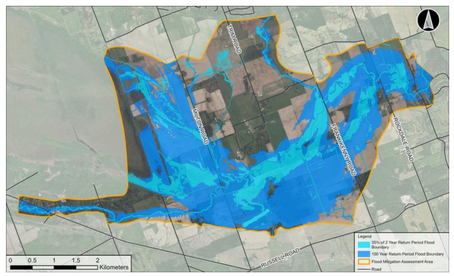
Do Nothing

Pros

- No capital cost
- No construction cost
- Maintains the existing system

Cons

- No reduction in flooding
- Ongoing crop losses
- No improvement to structural risks



Land Use Procurement

Pros

- Reduces long-term flood risk by reducing exposure
- Supports natural floodplain function
- Low maintenance and sustainable

Cons

- High upfront cost
- Does not reduce flood levels
- Requires policy coordination and longer implementation timelines

Culvert & Crossing Upgrades

Pros

- Improves conveyance locally
- Targeted, site-specific improvements
- Reduces upstream flood elevations

Cons

- Limited benefit in flat systems
- May shift flooding downstream
- Single upgrades provide limited benefit

Storage Areas

Pros

- Reduces peak flows (short-duration events)
- Can be used to target agricultural flooding
- Potential to integrate with natural features

Cons

- Ineffective for long-duration, large volume events
- Requires large volumes/area in flat terrain
- Spatial and constructability constraints

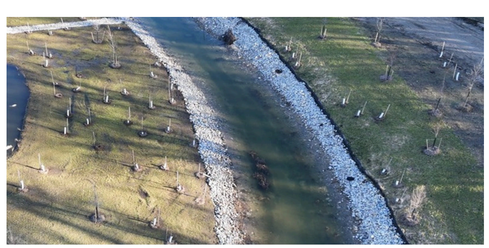
Channel Enlargement

Pros

- Increases conveyance capacity
- Reduces local flooding levels
- Works well in confined systems

Cons

- Limited benefit in flat areas
- Potential environmental impacts
- High cost and disruption



Relief Channels

Pros

- Provides alternative conveyance paths
- Reduces pressure on main channel
- Can redirect flows away from sensitive areas

Cons

- Requires significant space
- May impact adjacent lands
- Complex design and permitting

Dykes

Pros

- Directly reduces flood exposure
- Effective for targeted protection
- Can be designed for specific events

Cons

- Does not reduce flood volume
- May increase flooding elsewhere
- Requires ongoing maintenance and potential pumping

Which Mitigation Option(s) Do You Support?

Scan the QR code to access the Online Feedback Form:

We Want Your Feedback!

Crop Losses: How We Estimated Them

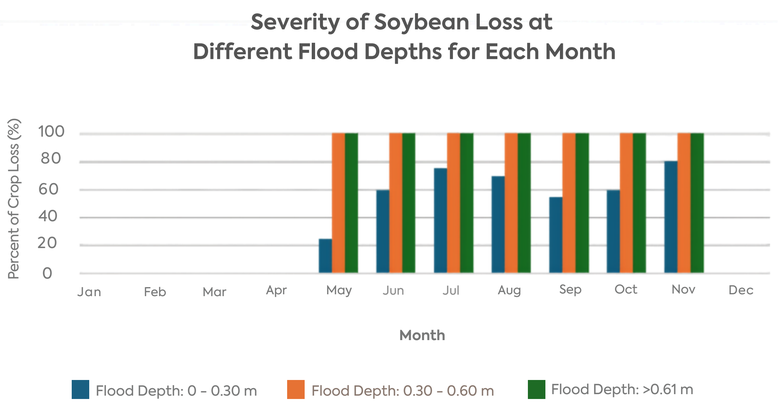
We estimated crop losses using the following formula:

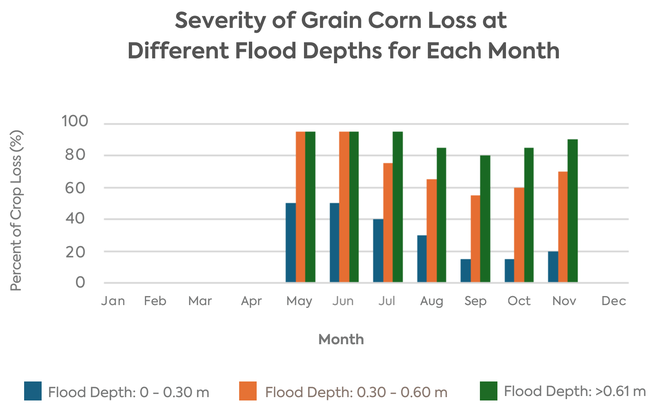
Monthly Crop Losses = ***Damage Factor*** ***X*** ***Monthly Flooded Agricultural Area and Crop Values***

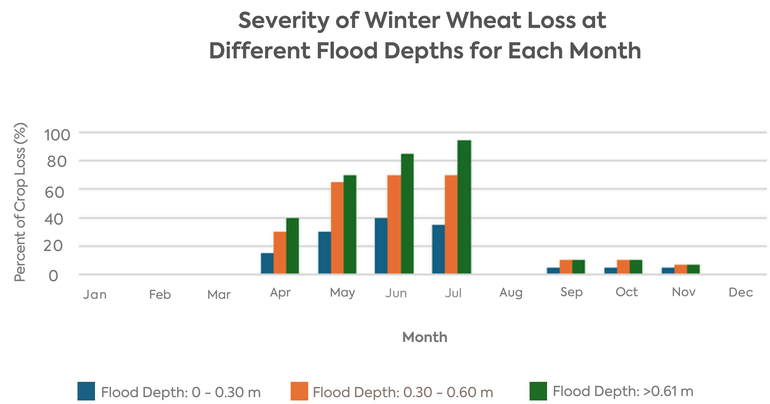
What does this mean?

Monthly Crop Losses =

- *The % of crop I will lose if flooding occurs during a given month*
- *The value of crop ($) exposed to flooding in each month*
- *The likelihood that flooding occurs in each month*





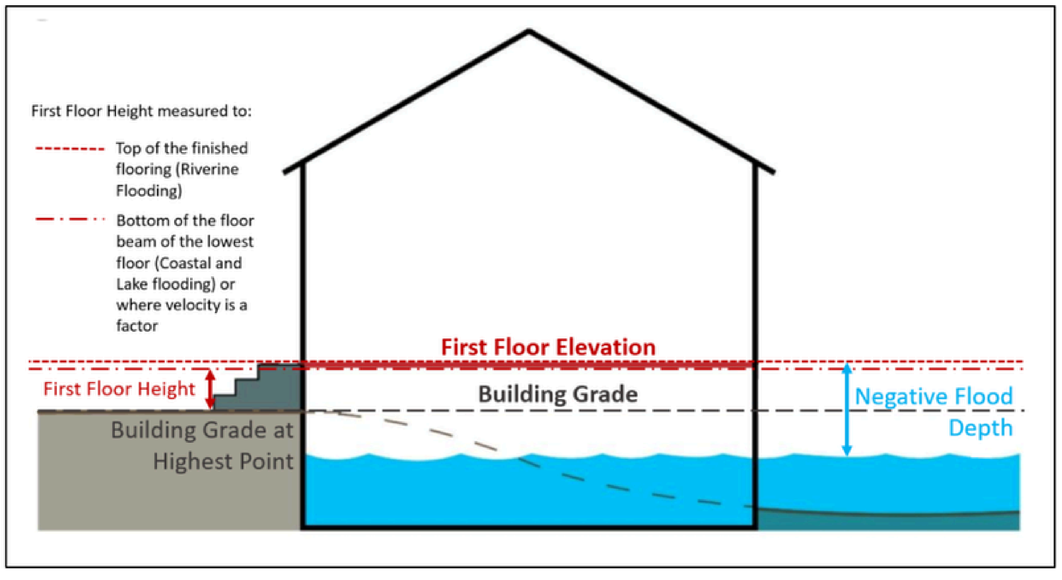


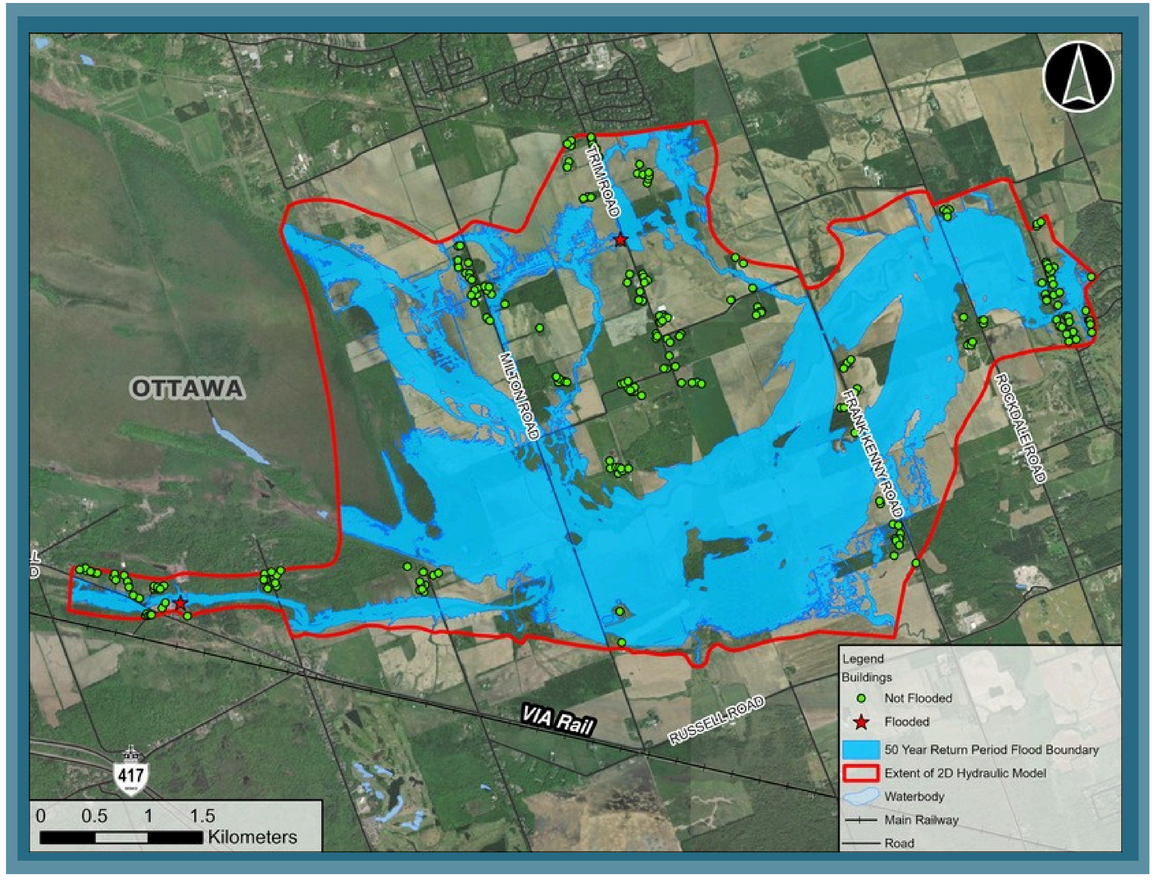
Structural Damages: How We Estimated Them

Structural damages were estimated using the following procedure:

Identify the structures within the floodplain → Calculate the flood depth inside of the buildings → Assign the stage-damage curves for residential/commercial → Calculate the direct damage to the structure

In accordance with standard procedures, direct damages can be applied to buildings once the flood depth reaches the finished floor elevation (i.e. for riverine flooding).





Large events that occur mostly in the spring when crops are typically not present, are the most likely to lead to structural damages.

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Next Steps

Thank you for attending!

Still have questions?

Contact the project team directly at:

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South Nation Conservation de la Nation Sud

AECOM

Ottawa

Online feedback is open until June 22, 2026

Please scan the QR code below or visit nation.on.ca/consultations

We Want Your Feedback!