

WATERSHED FLOODPLAIN COMMITTEE MEETING

Thursday, November 28, 2019

9:30 a.m.

Ball's Falls

Centre for Conservation – Glen Elgin Room

3292 Sixth Avenue, Jordan, ON

A G E N D A

1. WELCOME BY THE CHAIR

2. INTRODUCTIONS

3. ADOPTION OF AGENDA

- a) Addition of items
- b) Change in order of items
- c) Adoption of agenda

4. DECLARATION OF CONFLICT OF INTEREST

5. ADMINISTRATIVE BUSINESS

- a) Approval of Minutes – Watershed Floodplain Committee Meeting
Minutes dated June 13, 2019

Page #1

6. PRESENTATIONS (and/or Delegations)

7. BUSINESS FOR CONSIDERATION

- a) Information Session Round 3 Executive Summary Welland River Floodplain Mapping Update
- b) Welland River Floodplain Mapping Information Sessions Advertisement
- c) Round 3 (October 2019) Welland River Floodplain Mapping Information Session Q & A
- d) Resolution to Recommend Welland River Flood Lines (to be tabled)

Page #5

Page #13

Page #15

8. ADJOURNMENT

**WATERSHED FLOODPLAIN COMMITTEE
MEETING MINUTES**

Thursday, June 13, 2019

3:00 p.m.

Ball's Falls

**Centre for Conservation – Glen Elgin Room
3292 Sixth Avenue, Jordan, ON**

MEMBERS PRESENT:

D. Bylsma (NPCA Board Chair)
S. Beattie
K. Gibson (departed 4:59 p.m.)
B. Greenwood
T. Whalen
L. Aarts
C. Freure
L. Johnson
G. Robins
J. MacLellan

NON-VOTING MEMBERS:

B. Lepard
D. Smith

STAFF PRESENT:

G. Bivol, Interim Clerk
D. Deluce, Senior Manager Planning Review and Regulations
D. MacKenzie, Director, Watershed Management
S. Miller, Senior Manager, Water Resources
G. Wood, Interim NPCA, Interim CAO / Secretary – Treasurer (departed 3:05 p.m.)

OTHERS:

D. Cridland
J. Ingrao
S. van Haren, WSP Consulting

1. WELCOME BY THE CHAIR

The Committee Chair brought the meeting to order at 3:02 p.m. and called on NPCA CAO / Secretary-Treasurer Gayle Wood to make a few comments. Ms. Wood introduced herself and welcomed the members to the meeting. She left the proceedings at 3:05 p.m..

2. INTRODUCTIONS

The Chair called on all attendees to introduce themselves.

3. ADOPTION OF AGENDA

Subsequent to the adoption of the following motion, the Committee thereafter opted to deliberate on Report No: WFPC-02-19 in advance of Report No: WFPC-01-19.

Resolution No WFPC-01-19
Moved by Member Beattie
Seconded by Member Gibson

That the agenda for Watershed Floodplain Committee the dated June 13, 2019 **BE APPROVED.**

CARRIED

4. DECLARATIONS OF CONFLICT OF INTEREST

None declared.

5. ADMINISTRATIVE BUSINESS

- a) Watershed Floodplain Committee Meeting Minutes dated June 13, 2018

Resolution No WFPC-02-19
Moved by Member Gibson
Seconded by Member Greenwood

That the minutes of the Watershed Floodplain Committee Meeting dated June 13, 2018 **BE APPROVED.**

CARRIED

6. PRESENTATIONS

- a) PowerPoint presentation by Steve Miller, NPCA Senior Manager, Water Resources RE: Welland River Backgrounder – The Committee discussed the silt in the river and Ontario Power Generation activities, erosion and blockage of syphon tubes located along the river.
- b) PowerPoint presentation by Steven van Haren, WSP Consulting RE: Welland River Floodplain Mapping Update Report Final Draft – Discussion was heard on the variations observed with previous floodplain mapping. Restrictions on development in the floodplain were discussed.
- c) PowerPoint presentation by David Deluce, NPCA Senior Manager, Planning and Regulations RE: Revised NPCA Floodplain Policies adopted September 2018 – Discussion ensued.

Resolution No WFPC-03-19
Moved by Member Gibson
Seconded by Member Greenwood

That the following presentations **BE RECEIVED:**

1. The PowerPoint presentation by Steve Miller, NPCA Senior Manager, Water Resources RE: Welland River Backgrounder;
2. The PowerPoint presentation by Steven van Haren, WSP Consulting RE: Welland River Floodplain Mapping Update Report Final Draft; and
3. The PowerPoint presentation by David Deluce, NPCA Senior Manager, Planning and Regulations RE: Revised NPCA Floodplain Policies adopted September 2018.

CARRIED

7. BUSINESS FOR CONSIDERATION

- a) Report No: WFPC-02-19 RE: Welland River Floodplain Mapping Update Public Consultation – The Committee members spoke to the need for public engagement and a preference for scheduling public meetings later in the fall from October onward.

Resolution No WFPC-04-19

Moved by Member Greenwood

Seconded by Member Gibson

1. That Report No. WFPC-02-19 RE: Welland River Floodplain Mapping Update Public Consultation **BE RECEIVED**.
2. That, save and except use of the Riverstone Event Centre, the Watershed Floodplain Committee **APPROVES** the proposed Town Hall meeting locations and Public Consultation format for the review of the Welland Review floodplain.
3. That the Watershed Floodplain Committee **RECOMMENDS** that staff proceed with scheduling the final round of Public Consultation.

CARRIED

- b) Report No: WFPC-01-19 RE: Proposed Watershed Floodplain Committee - Northern Watersheds - Members discussed the need for citizen and stakeholder engagement and the development of standardized procedures for public engagement. Member Gibson left the proceedings at 4:59.p.m. prior to the following vote.

Resolution No WFPC-05-19

Moved by Member Whalen

Seconded by Member Greenwood

1. That Report No. WFPC-01-19 RE: Proposed Watershed Floodplain Committee – Northern Watersheds **BE RECEIVED**.
2. That the Watershed Floodplain Committee **RECOMMENDS** that a new committee be formed regarding the review of floodplain mapping in Grimsby and Lincoln and a new Committee be formed regarding the review of floodplain mapping in St. Catharines.
3. That a new Terms of Reference for each identified proposed Watershed Floodplain Committee **BE DEVELOPED** for Board of Directors approval which includes Board member representation from Grimsby, Lincoln and St. Catharines as well as representatives from those communities to review the updated floodplain mapping in those areas.

CARRIED

8. ADJOURNMENT

The Chair thanked the citizen members. Being no further business, the Watershed Floodplain Committee meeting adjourned with the following motion:

Resolution No. WCF-06-18

Moved by Member Beattie

Seconded by Member Greenwood

That the Watershed Floodplain Committee Meeting **BE HEREBY ADJOURNED** at 5:15 p.m..

CARRIED

Dave Bylsma
Chair

Grant Bivol
Interim Clerk

Executive Summary

In 2015, the NPCA hired WSP Canada (formally MMM Group) to undertake an entirely new floodplain mapping exercise for the main branch of the Welland River from Binbrook Dam to the Niagara River. A comprehensive consultation and engagement process formed an integral part of this project.

Three rounds of public meetings were carried out:

1. Introduction of the project and general questions (February 2016).
2. Technical explanations of the storm contributing to flooding conditions, the way flood water flows down the Welland River, and the potential impacts of various structures within the Welland River on the flood line (June 2016).
3. Presentation of Draft Floodplain Maps (October 2019).

A total of 196 people attended four meetings held in October 2019 to present the draft Welland River floodplain maps to the public and provide a chance for the project team to talk to property owners and interested stakeholders. The key themes that emerged from the questions posed at these meetings are:

- 1) There was little difference between the 1985 flood elevations and the flood elevations calculated in this study.
- 2) What is the impact of the updated flood lines on my property?
- 3) What is the impact of Ontario Power Generation operations?
- 4) What is the impact of the siphons?
- 5) How was the floodplain model constructed, calibrated, and what assumptions were used?
- 6) What does the NPCA's Natural Hazard Policies allow within the floodplain?

The tone of all four meetings was cordial. The public appreciated the openness and accessibility of the Project Team. There was no conflict, suspicion, or hostility. NPCA staff attribute this to two factors:

- a) The similarity of the flood elevations between this study and the 1985 study which is widely considered to be the 'baseline' condition.
- b) The extensive public consultation that was undertaken to update the NPCA's Natural Hazard Policies.

This Public Consultation Summary is intended to be circulated to the Flood Advisory Committee and the NPCA Board of Directors to consider when deliberating the formal adoption of WSP's draft Welland River Floodplain Mapping.

1.0 Introduction

The Niagara Peninsula Conservation Authority's (NPCA) legislative mandate as set out in Section 20 of the *Conservation Authorities Act* is to establish and undertake programs designed to further the conservation, restoration, development and management of natural resources. The NPCA fulfills this mandate by advocating and implementing programs that improve the quality of lands and waters within its jurisdiction; contribute to public safety from flooding and erosion; provide for the management of conservation and hazard lands; enhance the quality of life in its watershed by using its lands for regional recreation, heritage preservation and conservation education.

In 2015, the NPCA hired WSP Canada (formally MMM Group) to undertake an entirely new floodplain mapping exercise for the main branch of the Welland River from Binbrook Dam to the Niagara River. The goal of this newly initiated mapping exercise is to engage the community and stakeholders in a process that produces accurate and technically supported flood line mapping. A comprehensive consultation and engagement process forms an integral part of this project.

1.1 About the Consultation

The consultation and engagement program was designed to ensure that property owners know about any potential impact to their property. In addition, it is important that input from property owners and the public is incorporated into the technical process before draft floodplain maps are prepared.

Three rounds of public meetings were planned:

- 1) Awareness of the project and general questions (February 2016).
- 2) Technical explanations of the storm contributing to flooding conditions, the way flood water flows down the Welland River, and the potential impacts of various structures within the Welland River on the flood line. (June 2016).
- 3) Presentation of Draft Floodplain Maps (October 2019).

The meeting format included an informal session at the beginning and at the conclusion of each meeting where participants are able to speak one-on-one with the project team. A formal presentation and facilitated question and answer period formed the basis for the rest of the meeting time.

1.2 Summary of Meeting Dates and Locations

Four meetings were held in October 2019 to present the draft Welland River floodplain maps to the public and provide a chance for the project team to talk to property owners and interested stakeholders. The venues were held in generally the same locations as the first two rounds of public consultation. The presentation at each meeting was the same.

Meetings were held 6:00 pm to 8:00 pm, with a formal presentation at 6:30 pm.

Wednesday October 2, 2019

- Welland International Flat Water Center
16 Townline Road, Welland

Thursday October 10, 2019

- Legends on the Niagara Clubhouse Banquet Room
9561 Niagara Parkway, Niagara Falls

Thursday October 24, 2019

- Wellandport Community Centre
5042 Canborough Road, West Lincoln

Tuesday October 30, 2019

- Caistor Community Centre
1683 Abingdon Road, Caistor Centre, West Lincoln

2.0 Media Campaign

The NPCA Communications staff created a robust social, digital, and print marketing campaign to achieve the following goals:

- a) Increase awareness of the NPCA's Welland River Floodplain Mapping Update project;
- b) Increase attendance at the four Public Information Sessions held across the watershed;
- c) Obtain feedback on the Welland River Floodplain Mapping Update project.

2.1 Print Advertising

A series of print advertisements were scheduled and launched with a variety of media outlets. Each advertisement was modified to include information about the nearest Public Information Sessions. They launched one or two weeks prior to the Information Sessions

taking place in an effort to remain relevant. The advertisements were scheduled as follows:

- Niagara This Week – September 25
- Niagara Falls Review – September 25
- Welland Tribune – September 25
- Farmer's Monthly – October 5
- Niagara This Week – October 15
- Glanbrook Gazette – October 15

2.2 *Direct Mail via Canada Post*

In the last week of September, **12,100 homes** within a 1.0km radius of the Welland River were targeted with a postcard describing the project, the location and times of the Public Information Sessions, and how to provide feedback. Please see Appendix A for a copy of the postcard.

2.3 *Direct Email*

In the last week of September, all members of the public who provided their email addresses at the first two rounds of the Information Sessions held in 2016 were directly emailed a digital copy of the postcard that was mailed out. In total **276 emails** were sent (this number does not include any emails that were bounced back to the NPCA due to invalid addresses).

2.4 *NPCA Corporate Website*

The NPCA website contained a link to the Welland River Floodplain Mapping Update Project webpage. The project webpage contained the draft floodplain mapping report and associated flood maps, presentations from all three rounds of the Public Information Sessions, and the Public Engagement Summary Reports of the first two rounds of the Information Sessions. The project webpage also contained an area for the public to provide comments which would be directed to a central repository for the NPCA staff to review and provide response.

The analytics from the project webpage indicate that:

- There was a total of **805 visits** to the project webpage;
- The Welland River Floodplain Mapping Update – Draft Report and Maps were downloaded **420 times**;
- There was a total of **0 comments** provided by the public on the webpage.

2.5 Social Media Posts

NPCA Communications staff utilized regularly scheduled social media posts, event listings, and targeted ‘boosting’ of posts to inform the public of the project, the associated webpage and Public Information Sessions. In total, **202 people** responded in some manner to the social media posts.

3.0 Who We Heard From

The meetings were well attended. A sign-in sheet was used to track attendance and to update the project mailing list. Observations from the Project Team indicate that some people chose not to sign in. As such, the total estimated participation is approximately 196 people.

Attendance Summary:

- Meeting #1 (Welland) - 60
- Meeting #2 (Niagara Falls) - 20
- Meeting #3 (Wellandport) - 65
- Meeting # 4 (Caistor) - 51

Total Attendance – 196

Attendees were generally people who owned land in the vicinity of the Welland River. Municipal Councillors from local municipalities attended meetings as did some local municipal staff. Staff from OPG attended a meeting as audience members only. NPCA Board members, the Niagara West Member of Provincial Parliament, and members of the Welland River Flood Advisory Committee were also in attendance.

4.0 What We Heard

We heard during the October 2019 consultations that residents had questions about the location of the updated floodplain on their properties, the impact of the siphons and Ontario Power Generation (OPG) operations, questions about the floodplain model itself, and NPCA Policies. The Question and Answer sessions at each meeting were transcribed and are included in the Appendix B. Every effort was made to capture the intent of the question and the answer provided at the meeting. This material was used by the project team to identify key themes emerging from all four public meetings. The themes are presented below:

4.1.1 What is the Difference Between the 1985 Study and these Draft Updated Flood Elevations?

Right at the beginning of the formal presentation, the facilitator indicated that there was very little change in the 100 year flood elevations between the 1985 study and this current study. Thirteen display boards illustrated both the 1985 and the newly updated floodplains

and highlighted the difference between lands that were removed from the regulated floodplain and lands that were now within it. It was noted that the flood elevations were generally very similar between the two studies, the difference in the location of the flood lines can generally be attributed to more accurate modern mapping.

4.1.2 Is My Property Impacted by the Floodplain?

This was a common question asked by people as they reviewed the display boards. The scale of the display boards sometimes made it difficult to determine the location of the updated floodplain on an individual property. At the first two Information Sessions, staff gave out their contact information for interested landowners to follow-up with after the meeting in order to arrange to receive information about their specific properties. At the last two Information Sessions, staff came equipped with Wi-fi enabled tablets containing digital mapping which allowed landowners during the meeting to inspect the impact to their property. This convenience was greatly appreciated by the public.

4.1.3 What is the Impact of Ontario Power Generation (OPG)?

OPG has a presence in the area and the Welland River plays a significant role in OPG operations. OPG controls of the water levels and flow in the Lower and Central portion of the Welland River are perceived by many people in the area as having a direct impact on flood events. There is also a strong perception that OPG operations contribute significantly to the level of sedimentation in the Welland River which also impacts the River's flow and ability to respond to flood events.

The study team confirmed that the impact to the Welland River floodplain as a result of the OPG operational regime has been analyzed and quantified as part of this floodplain mapping update. Question was raised about potential changes to OPG operations as a result of maintenance work of the Chippawa Power Canal proposed to be undertaken in 2022-23. The public was informed that the intent of this study is to determine the location of the 100 year floodplain as conditions exist today and will exist after the Canal maintenance work is completed. Once this study is approved, the NPCA can move on to the next step, which is to determine the impact to the approved 100 year floodplain as a result of the OPG Canal maintenance work.

4.1.4 What is the Impact of the Siphons?

The Siphons are perceived to have a significant impact on the Welland River's response to flood events. The public was informed that the New Siphon conveys water very efficiently and was found to be clear of debris during the most recent inspection. The Old Siphon is known to be operating at 70% capacity due to sedimentation. The impact to the floodplain with the Old Siphon operating at 100%, 70%, 50%, and 25% capacity was analyzed and quantified as part of this study.

It is noted that the NPCA is not responsible for clearing the Siphons however these concerns have been passed along to the City of Welland (owners of the Old Siphon) and the St. Lawrence Seaway Management Corporation (owners of the New Siphon).

4.1.5 Floodplain Model

There was great interest in the technical details regarding WSP's Floodplain Model. Many questions were asked at all four Information Sessions regarding how the model is constructed, calibrated, and the types of assumptions that are utilized. The public questioned whether the impacts of climate change were being considered or if storms greater than the 100 year event were analyzed. The Project Team indicated that the intent of this study was only to determine the location of the Regulatory 100 year floodplain in order to help the NPCA better regulate development in order to protect property and lives from the impacts of flooding.

4.1.6 NPCA Floodplain Policies

At each of the four Information Sessions, the public asked questions about what can and cannot be undertaken within the floodplain according to NPCA Policies. NPCA staff answered questions ranging from the placement of fill, the ability to farm within the floodplain, and the ability to reconstruct a house that has burnt down within the floodplain. NPCA staff indicated that the NPCA Hazard Policies had been recently updated in September 2018 after extensive public consultation.

5.0 Next Steps

This Public Consultation Summary is intended to be circulated to the Flood Advisory Committee and the NPCA Board of Directors to consider when deliberating the formal adoption of WSP's draft Welland River Floodplain Mapping.

Appendices

Appendix A: Mailed Notice to Land Owners

Appendix B: Q&A from Public Information Sessions

All of which respectfully submitted:

Steve Miller, P.Eng.
Senior Manager, Water Resources

Darren MacKenzie, C.Tech., rcsi
Director, Watershed Management

WELLAND RIVER FLOODPLAIN MAPPING INFO SESSIONS

You are receiving this notice because you are a property owner in the vicinity of the Welland River. We are looking for your feedback! More information and details on the back.

*As per Ontario Regulation 155/06,
the updated mapped flood lines
may or may not impact what you can
do on your property.*

The NPCA is in the process of updating floodplain mapping along the Welland River. **Your feedback is appreciated.**

- **Draft Report and associated maps can be found at GetInvolved.NPCA.ca**
- **Attend a Town Hall Meeting to learn about the process and what it means for your property**
- **Provide feedback as per details on the back**



NIAGARA PENINSULA
CONSERVATION
AUTHORITY

www.npca.ca | 905.788.3135

WHY FLOODPLAIN MAPPING?

Living near a river has many advantages, but it also exposes people to certain risks. One of the more serious risks is flooding. The impact of floods varies widely, from a minor inconvenience of a wet yard to loss of life.

Managing flood risk starts by identifying the areas of land next to streams and rivers that are flood prone.

The NPCA looks forward to receiving your feedback and working with you as we move through this important project.

HOW TO PROVIDE FEEDBACK:

1. Visit getinvolved.npca.ca to submit feedback online
2. Attend a Town Hall Meeting (no registration required)
3. Written comments can be dropped off at our Main Office located at 250 Thorold Road West in Welland

Four meetings will be held in October to provide information about the project and to allow for property owners and interested residents to speak with the project team.

TOWN HALL MEETING DATES:

All meetings will run from 6:00pm to 8:00pm with a presentation beginning at 6:30pm. The presentation at each meeting will be the same.

Wednesday, October 2, 2019

Welland International Flatwater Centre
16 Townline Road, Welland

Thursday, October 10, 2019

Legends on the Niagara Clubhouse Banquet Room
9561 Niagara Parkway, Niagara Falls

Thursday, October 24, 2019

Wellandport Community Center
5042 Canborough Road, West Lincoln

Tuesday, October 29, 2019

Caistor Community Center
1683 Abingdon Road, West Lincoln

Please share with friends and neighbours.

For further discussion:

Steve Miller, P.Eng.,
Senior Manager of Water Resources
smiller@npca.ca
905-788-3135 x 231

ROUND 3 (OCTOBER 2019) WELLAND RIVER FLOODPLAIN MAPPING INFORMATION SESSION Q&A

MEETING #	TOPIC	QUESTIONS	ANSWERS
1, 3, 4	SIPHONS	<p>A) Are the siphons plugged?</p> <p>B) Who owns them?</p> <p>C) Does any mechanism exist to ensure the City of Welland or the Seaway Authority cleans them?</p> <p>D) Was the impact of the siphons on the Hurricane Hazel flood considered?</p>	<p>A) Surveys have indicated that the Old Siphon is 30% plugged and the New Siphon is clean.</p> <p>B) The City of Welland owns the Old Siphon and the St. Lawrence Seaway Authority owns the New Siphon.</p> <p>C) No mechanism exists to force the cleaning of the siphons. However, this study will be used to quantify the impact to the floodplain should the Old Siphon becoming increasingly blocked. This information will be relayed to the City of Welland and the Seaway Authority.</p> <p>D) No. The NPCA's Regulatory flood is the 100 year storm event (approx. 4 inches of rain in 12 hours). The Hurricane Hazel flood event is approx.. 11 inches of rain in 12 hours. This study was undertaken to map the 100 year flood only.</p>
1, 2, 3, 4	ONTARIO POWER GENERATION (OPG)	<p>A) Does the model account for OPG operations?</p> <p>B) How will the proposed Chippawa Power Canal maintenance impact the Welland River Flood lines? Is this floodplain mapping project premature?</p>	<p>A) Yes. The model was run with the water levels of the Niagara River (Grassy Island Pool) at its minimum, average, and maximum operating elevations. The report then quantified the change to the 100 year flood elevation as a result of each starting water level elevation.</p> <p>B) The NPCA understands that OPG proposes to undertake maintenance work on the Chippawa Power Canal in 2022-23. At this time the Canal will be closed and the Welland River will then drain into the Niagara River. The intent of this study is to determine the extent of the 100 year floodplain as conditions exist today and will exist after the Canal maintenance work is completed. Once this study is approved, the NPCA can move on to the next step, which is to determine the impact to the approved 100 year floodplain as a result of the OPG Canal maintenance work.</p>
1, 2, 3, 4	NPCA POLICES	<p>A) Is only 50 cubic meters of fill allowed in the floodplain even if the property is huge?</p> <p>B) Can you still do a Cut and Fill balance?</p> <p>C) If a house burns down in the floodplain, can it be rebuilt?</p>	<p>A) Fill up to 50 cubic meters (approx. 2 dump trucks) may be placed in the floodplain without obtaining a NPCA permit. For fill quantities greater than 50 cubic meters, approval is required to be obtained from the NPCA, no matter the size of the property.</p> <p>B) In order to compensate for fill being placed in a floodplain, the NPCA still allows for a similar volume of lands outside of the floodplain to be cut down. This is known as a 'Cut and Fill Balance'.</p> <p>C) Yes. If a house in the floodplain is destroyed for any reason other than flooding, it may be rebuilt provided it is of similar size.</p>

ROUND 3 (OCTOBER 2019) WELLAND RIVER FLOODPLAIN MAPPING INFORMATION SESSION Q&A

		D) Why are farmers allowed to plant in the floodplain?	D) The act of farming crops is an activity that does not impede the conveyance of flood flows. The NPCA acknowledges that it has received complaints that some farm activities are undertaken in such a way that large amounts of sediment are transported into the Welland River. In response to this, the NPCA has reimplemented our Restoration Program that works with landowners and farmer to plant buffers or wetland in an attempt to mitigate this sediment transport into the Welland River.
1, 2, 3, 4	FLOODPLAIN MODEL	<p>A) Was there a difference in the floodplain between the 1985 study and this study?</p> <p>B) What is a Sensitivity Analysis? Please explain.</p> <p>C) Was Climate Change considered?</p> <p>D) How do you Calibrate the model?</p> <p>E) Do you conduct field surveys?</p> <p>F) Does the model account for an increase in runoff off the land when the ground is frozen.</p> <p>G) How do you compensate for silt in the Welland River over time?</p> <p>H) Is the impact of dense vegetation in the floodplain taken into account in the model?</p> <p>I) Does the model account for flooding due to Ice Jams?</p>	<p>A) This study update was conducted using the same methodology as the 1985 study, albeit with 30 additional years of climate data, better mapping, computer models, and computer power. Taking all this into account, the calculated flood elevations are very similar between the two studies. The differences in the location of the flood lines can generally be attributed better modern mapping.</p> <p>B) In an effort to calibrate a floodplain model (i.e. have the calculated water levels and flows closely match actual observed water levels and flows at stream gauge stations), some of the input parameters are adjusted. Some parameters affect the calculated results far more than others. A Sensitivity Analysis is undertaken to determine the critical input parameters that a modeller must focus on in order to achieve the best possible correlation between the calculated results and real life observations.</p> <p>C) No, climate change was not considered. The goal of this study was to determine the extent of the Regulatory 100 year storm event along the Welland River.</p> <p>D) Once the floodplain model is created, real life storm events are input into the model in order to try to closely replicate the water levels and flows that are recorded at actual stream gauge stations. Input parameters are adjusted in order to achieve the best possible correlation.</p> <p>E) Yes, all the bridge and culvert crossing were surveyed in the field.</p> <p>F) Yes, the model has been adjusted to account for the ambient conditions that exist for the time of the year that the storms used to calibrate the model occur.</p> <p>G) It is good practice to update floodplain maps on a regular basis in order to account for any changes that might occur (i.e. culver or road reconstruction, change in channel profile due to silt accumulation or erosion, etc.). The timing of the update is generally dependant on how fast things are changing in the watershed.</p> <p>H) Yes, the condition of the floodplain along the entire river is analyzed and coded into the model. Some areas of the floodplain are heavily vegetated, or contain farm fields, or urban areas. All of this is accounted for.</p>

ROUND 3 (OCTOBER 2019) WELLAND RIVER FLOODPLAIN MAPPING INFORMATION SESSION Q&A

		J) Why was the storm event of February 2009 used to calibrate the model?	<p>I) No, the intent of this study was to determine the extent of flooding as a result of the Regulatory 100 year storm event. Flooding due to Ice Jamming is a very specific and localized occurrence that would warrant it's own study.</p> <p>J) The February 2009 storm event was used because of the availability of high quality data for this event.</p>
2	COMPENSATION	A) If my land is floodplain do I get compensation?	A) Presently, the only mechanism that exists is for the landowner to attempt to petition their municipality for a reduced tax rate since the lands are now deemed to be 'Hazard'.
4	FLOW AUGMENTATION	A) Is water flow introduced into the Welland River?	A) Yes, water from the Binbrook Dam is released and it is partially impounded by the Port Davidson Weir in order to ensure that there is always water in the Upper Welland River.