



**Consultation and Engagement Summary Report:
Killarney Village Risk Assessment and Flood Plain Mapping
June 19th, 2022**





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1 INTRODUCTION

The Municipality of Killarney has retained WSP Canada Inc. to undertake a Risk Assessment and flood plain mapping project for Killarney Village to help the Municipality guide future development, as well as to manage the risk of existing features. The study includes the priority area along the channel and an additional area located to the northwest of the priority area. As part of this project, a Public Information Centre (PIC) was held to provide an opportunity for the public to review the Project Team’s findings, as well as to provide comments and discuss concerns with the Project Team

This PIC was held virtually via Zoom on April 20th, 2022, from 6:00PM-7:30PM.

This document provides a summary of feedback received during the PIC for the Killarney Village Risk Assessment and Flood Plain Mapping project.

If you have any questions or comments regarding this summary, please contact:

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2 PROJECT INFORMATION

Critical municipal infrastructure including the water treatment plant, raw water intake, pumping station, and a sanitary sewage lift station are located along the shoreline within the study area, as well as other public and private infrastructure. In addition to this, the Village has seen considerable development in the past few years with new residential and commercial construction. Georgian Bay has experienced considerable fluctuations in lake-water levels in response to climate conditions, and the highest historical water levels have been recorded in recent years. The Municipality's shoreline infrastructure and those living near the shoreline are currently under threat due to higher water levels, more intense storm waves, and surges due to climate change.

The Municipality of Killarney has retained WSP Canada Inc. to undertake a Risk Assessment and flood plain mapping for Killarney Village to help the Municipality guide future development, as well as to manage the risk of existing features. The study includes the priority area along the channel and an additional area located to the northwest of the priority area. The study area is shown below:



2.1 PURPOSE OF THIS REPORT

The purpose of this report is to summarize the results of the PIC. This summary is intended to capture participant feedback and comments received on the materials presented. Please note that this document is not intended to provide a verbatim transcript of the feedback collected; instead, it outlines how residents and stakeholders within the study area, as well as agencies, were advised of the PIC. It additionally summarizes the key topics of discussion and feedback received during the PIC and the subsequent public commenting period.

3 PUBLIC INFORMATION CENTRE #2

On April 20th, 2022, from 6:00PM-7:30PM, the Municipality of Killarney hosted a PIC for the Risk Assessment and Flood Plain Mapping project for Killarney Village. The goal of this PIC was to provide an opportunity for the public and stakeholders to review the Project Team’s findings, as well as to provide comments and discuss concerns with the Project Team. The feedback collected during this PIC was used to inform the decision-making process for the technical team and informed the next steps for the Municipality.

Due to the COVID-19 pandemic, this PIC was held virtually via Zoom. The presentation was delivered and facilitated by Jeremiah Pariag, the Consultation and Engagement Lead for WSP’s Earth & Environment Team, and questions from the attendees were answered by both WSP and Municipality staff.

Property owners within the study area, stakeholders, and technical agencies were sent a Notice of Public Information Centre via mail and/or email, where email addresses were available. The Notice of PIC described the project background, the purpose, location, and time of the PIC, how to access the PIC, and how to submit comments to the Project Team. The Notice was also published on the Municipality’s website on April 6th, 2022.

A link to a recording of the presentation can be found [here](#). A PDF of the presentation is included in **Appendix A**.

3.1 PIC #1 Q&A SUMMARY

Question / Comment	Answer
The Sudbury East Planning Board noted that this project will be largely beneficial to planning in the community.	This comment has been noted by the Project Team.
What will be the next step for this project in terms of flood plain mapping and the potential policy outcomes?	WSP’s objective is to complete the flood plain mapping and complete a risk assessment. Following this, a Final Report will be provided to the Municipality. The mapping will be provided to the Municipality in a GIS format as well. Policy outcomes are not within the scope of this project.
What is the timing for the Final Report to be completed?	The Final Report will be submitted to the Municipality by the end of April 2022.
The Sudbury East Planning Board noted that they would need to receive the Final Report.	This comment has been noted by the Project Team.
Will flood plain mitigation measures be included in this project?	Flood plain protection measures will not be considered as part of this project. This can be considered by the Municipality on a development-specific basis.
What information was used to complete this study?	<p>WSP’s approach included using current standards and best available information, including historical water-level data, storm data, and meteorological data from NOAA. Using this information, WSP completed several state-of-the-art models.</p> <p>Please note that to determine flood levels, data would be required on recorded storm surges and wave levels. This data was not available; however, WSP’s models would have supplemented this data.</p>
If a storm surge comes in, will the water intake system or transfer station be at risk? This is critical infrastructure for the Municipality.	WSP noted that the next step of this project includes the Risk Assessment, which will consider impacts to critical infrastructure. This will be outlined in the Final Report.
Will the Municipality use this project to inform policies and guidelines for future development?	The Municipality noted that once the Final Report is complete, this question will be referred to Council.

What will the impact be on existing developments?	The Municipality noted that once the Final Report is complete, this question will be referred to Council.
Will these findings be incorporated into the Official Plan?	The Municipality noted that once the Final Report is complete, this question will be referred to Council.
Will these findings be incorporated into the Zoning Bylaw?	The Municipality noted that once the Final Report is complete, this question will be referred to Council.
Will there be future public consultation for flood protection in Killarney Village?	The Municipality noted that once the Final Report is complete, this question will be referred to Council.
Will land and building owners need to implement protection measures? If so, who would determine the need for these protection measures?	The Municipality noted that once the Final Report is complete, this question will be referred to Council.
The Sudbury East Planning Board noted that they would like to receive the floodplain mapping as soon as possible as the Official Plan is nearing completion, and it would be beneficial to include this mapping.	This comment has been noted by the Project Team.
The Sudbury East Planning Board noted that policy outcomes based on this work would be recommended.	This comment has been noted by the Project Team.
Can these findings be extrapolated for other areas within the Municipality?	WSP noted that storm surges are site-specific. Due to this, the findings from his study cannot be applied to other areas of the Municipality; however, it could provide some high-level indications for planning purposes, depending on proximity.

4 ADDITIONAL COMMENTS

The following additional comments were received through the duration of the study:

Date	Source	Question / Comment	Answer
April 5 th , 2022	Resident	<p>As mentioned in the attached NDMP, the water levels in the Great Lakes more broadly and Lake Huron/Georgian Bay and Killarney Channel more particularly rise and fall over time. When you examine the water level charts over the last 100 years, you will note there is a fairly regular rhythm or pattern to the increases and decreases. There were political accusations a while back about the US Marine Corps allegedly removing baffles from the St. Clair River when the “Stop the Drop” campaign was in full force, but my conclusion after a lot of reading on this matter is that it is a natural cycle for water levels to increase and decrease over time. This is a good overview of the natural reasons for increases and decreases in water levels in the Great Lakes: https://www.ijc.org/en/labc/watershed/faq/3. There are also more localized reasons for lake level changes like wind direction, wind speed and air pressure which can cause water level to rise or drop in the channel by more than 12” within hours. We had this experience when building our main fuel dock, however, the medium and longer-term changes in water level are primarily driven by natural weather causes as far as I can tell.</p> <p>Lake levels have significantly increased since their most recent low point in 2013 to a recent high point in 2020. However they have since receded considerably (approximately 3 feet lower in the past year alone). Here are a few references discussing the older drops (1999-2014) and the more recent significant drops from the recent near highs:</p>	<p>Water levels in Georgian Bay/Lake Huron fluctuate in three different time scales: short-term, long-term, and annually. The primary cause of long-term and annual lake water fluctuations is variations of the net basin supply, which is the net amount of water entering a lake’s basin through inflows, runoffs, precipitation over lake outflows, and evaporation. Short-term water level variations occur over a period of hours or days, typically due to high wind effects when storm systems pass over the area.</p> <p>Several studies provide predictions on changes of Lake Huron water levels, ice cover conditions, and storm frequency under various Representative Concentration Pathways (e.g., RCP8.5, RCP4.5 and RCP2.6). Newer model-based projections of lake level indicate a central tendency toward small drops in lake levels to the end of the 21st century, with appreciable</p>

		<p>https://www.cbc.ca/news/canada/thunder-bay/lake-superior-water-levels-1.6320787</p> <p>https://thenarwhal.ca/lake-ontario-water-levels-2021/</p> <p>https://www.scientificamerican.com/article/water-levels-of-the-great-lakes-are-declining/</p> <p>I think we have to be careful of alarming statements like this: “The Municipality’s shoreline infrastructure and those living near the shoreline are currently under threat due to higher water levels, more intense storm waves, and surges due to climate change.” given the natural cycle of rise and fall of the water levels.</p> <p>When we were building Canada House, we looked into the lake levels for the last 100 years to ensure the floor of the basement of Canada House was located higher than the highest water level over the last 100 years. While July 2020 was the most recent high water mark, it was still lower than the high water mark over the past 100 years which was in 1986. This is a good resource for identifying the patterns of rise and fall of water levels on the Great Lakes: https://www.tides.gc.ca/en/monthly-water-level-bulletin-great-lakes-and-montreal-harbour#means.</p> <p>I am attaching the Monthly and Yearly Mean Water Levels chart for the Great Lakes which shows the lake levels in each of the Great Lakes from 1918 to 2014. I have inquired with The Canadian Hydrographic Service about obtaining an up-to-date version and will forward upon receipt of it. You can clearly see that there is a fairly regular pattern to the rise and fall of the lake level with the lowest lake levels recorded in 1964 and 2013 and the highest lake levels in 1986 and 2020 for Lake Huron.</p>	<p>probability of small rises in lake levels.</p>
<p>April 11th, 2022</p>	<p>Sudbury East</p>	<p>Can you forward our office the link so I can join the meeting virtually?</p>	<p>A link was provided for the Sudbury East Planning Board to attend the meeting.</p>

	Planning Board		
May 9 th , 2022	Resident	Can you verify that Map 1 (100-year Still Water Level) shows the maximum possible extent of flooding in the Village?	The 100-Year Still Water Level map shows the flooding extent that would have 1% chance of happening in any given year.
May 9 th , 2022	Resident	What is meant by “Still Water Level”? Does this mean that this would be the highest possible water level over the next 100 years, but that it does not take winds and storm surges into consideration?	<p>The term ‘Still Water Level’ refers to the Water level defined by static water level plus storm surge.</p> <p>The term ‘Static Water Level’, known as well as ‘Lake-Wide Water Level’, is the water level of the lake with no wind or wave disturbance.</p> <p>The 100-Year Still Water Level includes wind and storm effects, but not wave effects.</p> <p>The 100-Year Still Water Level has a 1 in 100 chance (1% probability) of happening in any given year.</p>
May 16 th , 2022	Hydro One	<p>Thank you for sending us notification regarding (Killarney Village Risk Assessment and Flood Plain Mapping). In our preliminary assessment, we have confirmed that Hydro One has existing distribution assets within your study area.</p> <p>At this time, we do not have sufficient information to comment on the potential resulting impacts that your project may have on our infrastructure. As such, we must stay informed as more information becomes available so that we can advise if any of</p>	This comment has been noted by the Project Team.

		<p>the alternative solutions present actual conflicts with our assets, and if so; what resulting measures and costs could be incurred by the proponent. Note that this response does not constitute approval for your plans and is being sent to you as a courtesy to inform you that we must continue to be consulted on your project.</p> <p>Hydro One must be consulted during all stages of your project. Please ensure that all future communications about this and future project(s) are sent to us electronically to [email redacted]</p>	
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