

Climate Resilient Burlington: Community Responses to Six Surveys Regarding the Draft Plan

Apr. 22 to May 8, 2022



Table of Contents

Table of Figures.....	3
1.0 Background	4
2.0 Comments Provided About the CRB Plan Outside of the Six Surveys	5
3.0 Survey Results	15
3.1 Theme 1: Resilient Built and Natural Infrastructure.....	15
3.1.1 Do you agree with the actions listed within the Infrastructure Design and Life Cycle Management under the Resilient Built and Natural Infrastructure theme?.....	15
3.1.2 Do you agree with the actions listed within Flood Management under the Resilient Built and Natural Infrastructure theme?.....	16
3.1.3 Do you agree with the actions listed within Service Disruption under the Resilient Built and Natural Infrastructure theme?.....	17
3.2 Theme 2: Thriving Natural Environment.....	18
3.2.1 Do you agree with the actions listed within Tree Management under the Thriving Natural Environment theme?	18
3.2.2 Do you agree with the actions listed within Natural Area Management under the Thriving Natural Environment theme?	19
3.3 Theme 3: Health and Well-Being	20
3.3.1 Do you agree with the actions listed within Extreme Heat and Health under the Health and Well-Being theme?	20
3.4 Theme 4: Disaster Resilience	21
3.4.1 Do you agree with the actions listed within Community Capacity Building under the Disaster Resilience theme?	21
3.4.2 Do you agree with the actions listed within Citizen and Business Support Programs under the Disaster Resilience theme?	22
3.5 Theme 5: Strong and Resilient Economy	23
3.5.1 Do you agree with the actions listed within Agriculture under the Strong and Resilient Economy theme?	23
3.5.2 Do you agree with the actions listed within Local Economy under the Strong and Resilient Economy theme?	23
3.6 Survey #6: CRB Citizen Action Checklists and Community Climate Resilience Education Program	25
3.6.1 Are these helpful resources?	25
3.6.2 Did we miss any helpful tips related to climate adaptation or resiliency?	26
3.6.3 Since this program is for the Burlington community, what would you like us to consider including in the Community Climate Resilience Education Program?	27

Table of Figures

Figure 1: Do you agree with the actions listed within Infrastructure Design and Life Cycle Management under the Resilient Built and Natural Infrastructure theme?.....	15
Figure 2: Do you agree with the actions listed within Flood Management under the Resilient Built and Natural Infrastructure theme?.....	16
Figure 3: Do you agree with the actions listed within Service Disruption under the Resilient Built and Natural Infrastructure theme?.....	17
Figure 4: Do you agree with the actions listed within Tree Management under the Thriving Natural Environment theme?	18
Figure 5: Do you agree with the actions listed within Natural Area Management under the Thriving Natural Environment theme?	19
Figure 6: Do you agree with the actions listed within Extreme Heat and Health under the Health and Well-Being theme?	20
Figure 7: Do you agree with the actions listed within Community Capacity Building under the Disaster Resilience theme?	21
Figure 8: Do you agree with the actions listed within Citizen and Business Support Programs under the Disaster Resilience theme?	22
Figure 9: Do you agree with the actions listed within Agriculture under the Strong and Resilient Economy theme?	23
Figure 10: Do you agree with the actions listed within Local Economy under the Strong and Resilient Economy theme?	23
Figure 11: Are these resources helpful?	25
Figure 12: Did we miss any helpful tips related to climate adaptation or resiliency?.....	26
Figure 13: Since this program is for the Burlington community, what would you like us to consider including in the Community Resilience Education Program?	27

1.0 Background

The [draft](#) Climate Resilient Burlington (CRB): A Plan for Adapting to Our Warmer, Wetter and Wilder Weather was posted on the City's engagement portal [Get Involved Burlington](#) on Apr. 22, 2022 and presented to the Environment, Infrastructure and Community Services (EICS) Committee on May 5, 2022 ([EICS-02-22](#)).

The CRB plan was developed through extensive engagement with 49 stakeholders from 12 City departments and 17 community organizations. As outlined in the May 5 staff report [EICS-02-22](#), community members were informed throughout the process on the [CRB project page](#) including a preliminary report presented to EICS Committee in March 2021 ([EICS-03-21](#)), the public launch event in October 2021, and a survey on the vision and principles in October and November 2021. There were also 13 blog posts published at [TakeActionBurlington.ca](#) since March 2021 which referred to the CRB plan.

With respect to the draft CRB plan, community members had the opportunity to provide feedback by:

- Delegating or providing written comments to City Council at the EICS meeting on May 5, 2022
- Responding to surveys about the draft CRB plan related to:
 - o 32 proposed actions within five themes (one survey per theme)
 - o Citizen Action Checklists and proposed future Community Climate Resilience Education Program (one survey)
- Providing comments directly on the draft plan

A total of 94 surveys were completed ranging from 12 to 20 respondents per survey and 25 comments were written directly on the draft CRB plan document via Konveio software. Comments received on the draft plan are presented first followed by the survey results and associated comments.

Feedback about the CRB plan was primarily positive and resulted in minor revisions such as an updated map and minor text changes. Several comments related to matters that were either addressed elsewhere in the CRB plan or were outside the scope of the CRB plan, which is a plan on climate adaptation. When comments were outside the scope of the CRB plan, they predominantly related to climate mitigation, or reducing greenhouse gas emissions, and were already addressed in the [Climate Action Plan](#).

2.0 Comments Provided About the CRB Plan Outside of the Six Surveys

Comment	Response
<p>Pg. i - Regarding the objectives of the CRB plan to ‘focus City efforts on the highest risks where the City can take the lead or play a significant role in managing the risks.’</p> <p>Jeff – This is important. The City has limited resources and needs to prioritize where they will get the biggest bang for the buck.</p>	<p>Thank you for your comment.</p>
<p>Pgs. ii and 2 - Regarding ‘current emissions are tracking close to the RCP8.5 pathway’</p> <p>Jason – This is incorrect. Current emissions are tracking RCP4.5 and SSP2-4.5, not ECP8.5. https://unfccc.int/news/cop26-update-to-the-ndc-synthesis-report https://twitter.com/hausfath/status/1196503375660998661</p> <p>Jason – Do you provide a rationale in the document for using RCP8.5 (now considered an implausible scenario) vs. RCP4.5/SSP2-4.5 (the scenarios we are now most closely tracking?) https://unfccc.int/news/cop26-update-to-the-ndc-synthesis-report</p>	<p>“Current emissions are tracking close to the RCP8.5 pathway” has been removed from the final CRB plan.</p> <p>The rationale for using RCP8.5 is explained on page 2-1 of the CRB Climate Change Vulnerability and Risk Assessment technical report dated December 2021 presented to City Council in May 2022 (EICS-02-22). “When assessing climate-related risks, it is prudent to consider the greatest plausible change scenario relative to the present, which in practice means working with projected changes for Burlington under the RCP8.5 scenario, i.e. the most conservative of global “no climate policy” scenarios.”</p>
	<p>An additional response was provided by our consultant:</p> <p>“Cumulative global emissions up till fairly recently have been tracking with RCP8.5 [see, e.g., Schwalm, C., et al., 2020. PNAS 117 (33)]. But in the near future it does look like global emissions are heading towards a +3°C [2.3°C to 4.1°C] world <i>based on current policies</i> in place, as opposed to the +4.5°C [3.3°C to 5.4°C] world of RCP8.5 [see, e.g., International Energy Agency, 2021. World Energy Outlook]. But if past experience has taught us anything, the unfortunate reality is <i>current policies can be reversed or fail to be effectively implemented</i>. And the “pledges” in National Determined Contributions submitted to the UNFCCC that result in lower levels of future climate change are just that – pledges – there is a risk that the necessary actions to achieve them may not be implemented.</p>

Comment	Response
	<p>In Climate Resilient Burlington, we use RCP8.5 as an “unlikely” worst-case scenario to plan for worst-case outcomes. Some studies [see, e.g., Lenton, T., et al., 2019. <i>Nature</i> 575, 592–595; Lowe, J. and Bernie, D., 2018. <i>Philos. Trans. A Math. Phys. Eng. Sci.</i> 376] suggest that <i>RCP8.5 could be more plausible because some important feedback effects</i> (like the release of greenhouse gases from thawing permafrost) might be much larger than currently estimated by climate models. So, while global emissions may no longer be tracking along RCP8.5, temperatures could still track relatively close to RCP8.5 projections. Furthermore, the level of overlap between RCP8.5 and a world based on current policies (which is still higher than the median projection under RCP4.5) <i>does not render the use of median RCP8.5 projections for worst-case scenario planning as misleading or useless.</i></p> <p>In any event, adaptations should be focused on the near-term (and practically, the RCPs don’t really diverge much until after the 2050s) – addressing current adaptation deficits, building capacity for the long-term, and carefully mainstreaming adaptation into long-lived decisions. Uncertainty over which emissions (and climate change) path the world is actually on is more efficiently accommodated through the adaptation planning decision-making process; not the risk assessment process.</p> <p>Moving forward, the more plausible scenarios (given <i>current policies in place</i>) for climate impact and risk assessments that focus on the second-half of the century are the new IPCC AR6 scenarios, SSP4-6.0 (SSP2-4.5 and SSP3-7.0) for a +3°C world.</p> <p><i>A couple of points to note from a more practical perspective:</i></p> <p>Looking at (mean annual temperature) projections for Burlington for the 2050s and 2060s – the 90th percentile of RCP4.5 overlaps with the median projections under RCP8.5. They don’t totally diverge until the 2070s. So, <i>when assessing risks for mid-century or sooner, using RCP8.5 (or SSP5-</i></p>

Comment	Response
	<p><i>8.5) remains the best choice for plausible worst-case scenario planning.</i></p> <p>Based on the data <i>currently</i> available from Climate Data Canada and the Climate Atlas of Canada, the only choices available for climate impact and risk assessments are RCP8.5, 4.5 and 2.6 (including the 10th and 90th percentiles). Would be nice to have data for a scenario between 4.5 and 8.5, like SSP4-6.0, as 4.5 is still too low for worst-case scenario planning.”</p>
<p>Pg. 1 - Regarding the Introduction.</p> <p>Jeff - The Intact Centre for Climate Adaptation and CSA Group have developed advice for homeowners on protecting their homes from flooding. Should check these out.</p>	<p>The Intact Centre for Climate Adaptation launched a pilot Home Flood Protection Assessment program in Burlington in August 2017, three years after Burlington’s flood. The City has offered various subsidies since then to encourage residents to have their home assessed to help minimize flood risk and/or damage should they be impacted by flooding.</p> <p>Action 4-2 in the CRB plan is to ‘Develop a Community Climate Resilience Education Program focusing on high climate risks.’ The resources noted can be incorporated into the education campaign.</p>
<p>Pg. 1 - Regarding the Introduction</p> <p>Jeff – Without monitoring and reporting of progress over time, the initiative will likely die out.</p>	<p>As noted under the “How will we manage the CRB?” section, staff will report annually to City Council and will renew the plan every five years.</p>
<p>Pg. 2 - Regarding the spatial boundary of the CRB plan.</p> <p>Jeff - Particularly with respect to flooding, the actions of upstream communities can affect what happens in downstream communities. There should be coordination between upstream and downstream communities to ensure communities are not negatively affecting each other. The City should look outside of its boundaries when considering hazards and risks.</p>	<p>We recognize that climate change and its impacts transcend geographic borders. As per page 2 of the CRB Climate Change Vulnerability and Risk Assessment technical report dated December 2021 presented to City Council in May 2022 (EICS-02-22):</p> <p>“There are multiple options used in vulnerability and risk assessments that consider the spatial scope. For practical reasons—in terms of what the City can control and influence—the assessment is largely confined to climate-related hazards that have direct impacts within the City’s boundaries. Within these boundaries, a comprehensive (or ‘community-wide’) approach is adopted, that considers impacts to private property, the local economy, the health and lifestyle of residents,</p>

Comment	Response
	<p>social equity, and natural capital, as well as impacts to public infrastructure, assets and services." It should be noted that Conservation Halton was a key stakeholder bringing a watershed perspective to the process.</p> <p>That being said, there is a commitment to renew the plan every five years and as such can consider upstream actions outside Burlington in the next iteration.</p>
<p>Pg. 2 – Regarding the City of Burlington map.</p> <p>Tom – This map's colour scheme is not colour-blind friendly, from an accessibility point of view, consider revising.</p>	<p>We have updated and tried to simplify the map (one colour for land, one colour for streets, and one colour for the lake) and created more contrast.</p>
<p>Pg. 5 – Regarding example impacts of warmer winters.</p> <p>Jim - Can you add mention to invasive species that survive our warmer winters. An example is the Ash Borer which obviously impacted our tree canopy.</p>	<p>This section includes example impacts and is not meant to be an exhaustive list. That being said, this suggestion was added to the list.</p>
<p>Pg. 9 – Regarding adaptation planning priority consequences taken forward to adaptation planning phase</p> <p>Jeff - Considering the flood event of a few years ago and the impact of flood events on infrastructure, property owners and the delivery of emergency services, I would suggest that stormwater flooding should be a higher risk.</p> <p>Jim - I'm not sure of this ranking. Flooding is listed as low risk but appears prominently and early in the body of the document (on page 6).</p>	<p>The CRB plan identifies the risks associated with our warmer, wetter and wilder weather. It also acknowledges the <i>existing</i> initiatives taking place which help reduce risk (Jim noted how existing flooding initiatives appear prominently earlier in the document).</p> <p>The risk of flooding in the plan is covered under the hazards of wet conditions, stormwater flooding and creek flooding identified as extreme, medium and lower risk respectively through the vulnerability risk assessment process. Since the August 2014 flood, additional resources have been put into flooding related initiatives. Flooding continues to be a top of mind topic for the City of Burlington, Halton Region and Conservation Halton resulting in a lower overall ranked risk. That being said, basement flooding as a result of creek flooding was ranked high and that consequence was also brought forward in the action planning process. All the consequences identified for the wet conditions and stormwater flooding hazards were also considered in the action planning process as they were ranked medium risk or higher.</p>

Comment	Response
<p>Pg. 11 – Regarding “the City should integrate climate-related standards, such as those being developed and enhanced by the Standards Council of Canada, here appropriate to improve Burlington’s community and infrastructure resilience.”</p> <p>Jeff – Agreed. Incorporating external Canadian standards (SCC) that address issues the City doesn't have its own standards for is both efficient from a cost perspective, but also frees up budget for other priorities.</p>	<p>Thank you for your comment.</p>
<p>Pg. 12 – Regarding Action 1-1 “Expand natural asset data and include priority natural assets into Burlington’s Asset Management Plan.”</p> <p>Jeff - The City should conduct a natural asset inventory. MNAI has developed guidance on this subject.</p>	<p>The City along with other partners have been involved with MNAI (Municipal Natural Assets Initiative) for Grindstone Creek and will continue to explore other partnerships in natural asset data collection.</p> <p>As part of the Urban Forest Master Plan we are completing a woodlot management strategy which includes an ecological land classification (ELC).</p>
<p>Pg. 12 – Regarding Theme 1 Resilient Built and Natural Infrastructure</p> <p>Roger - In the infrastructure theme, I have the following input...</p> <ol style="list-style-type: none"> 1. Hard surfaces like parking lots need to be porous, thus absorb water into the soils and ground. 2. More water catchment ponds need to capture storm waters. 3. Buildings need to have green roofs to absorb sun energy. 4. Buildings need to capture and reuse precipitation waters for irrigation and toilet flushing. 5. Buildings need to use geothermal and solar to reduce greenhouse gases, which contribute to atmospheric heat, thus drive more intense storms. 6. The City needs to incentivize conversion from natural gas / oil to heat pumps and solar. 7. The City must not approve expansion of natural gas infrastructure as proposed for Cedar Springs Road by Enbridge. 	<p>The City updated the Sustainable Building and Development Guidelines in Dec. 2021, which are predominantly voluntary as the City does not have the legal authority to require measures beyond those in the building code. However, the following staff directions were approved:</p> <ul style="list-style-type: none"> ... consider the feasibility of including the Sustainable Building and Development Guidelines in the development of the Comprehensive Community Improvement Plan framework; ... advocate to the Province to adopt the highest tiered energy standards following the introduction of the National Energy Code for Buildings 2021 (NECB); and ... draft a business case for the preparation of a green roof by-law and green roof construction standard in 2023. <ol style="list-style-type: none"> 1. Pervious surfaces are captured under #4.3 of the Sustainable Building and Development Guidelines. 2. The City of Burlington currently manages 35 stormwater management ponds throughout the City. These ponds have been designed to reflect the storage requirements of the

Comment	Response
	<p>surrounding area. Directing additional runoff to these facilities can result in an overflow. Established and older neighbourhoods do not have the luxury of available land to build ponds. Therefore, stormwater management in those areas is accomplished by adopting measures that do not rely on pond storage. More information can be found in the City of Burlington's Stormwater Management Design Guidelines.</p> <ul style="list-style-type: none"> 3. Green roofs are captured under #3.11 of the Sustainable Building and Development Guidelines. 4. Water conservation/efficiency system is captured under #4.2 of the Sustainable Building and Development Guidelines. 5. On-site renewable energy is captured under #5.5 of the Sustainable Building and Development Guidelines. Renewable energy is also a program area identified under the Climate Action Plan, approved in 2020. The City has partnered with McMaster University to research best practices and opportunities to support the adoption of renewable energy in Burlington. 6. Under the Climate Action Plan (on climate mitigation/GHG reduction), work is being carried out to develop a Home Energy Efficiency Retrofit project, to make loans of up to \$10,000 available to cover the costs of installation of air source heat pumps and leak sealing. A follow-up report will be presented to City Council in 2023 pending budget approval for the program to outline the details of the program requirements. 7. Pipelines to transport fuel are regulated by the provincial government and federal government if they cross provincial boundaries.
Pg. 12 - Regarding Action 1-3 "Review and if necessary update design standards for City infrastructure to account for future climate conditions in alignment with Federal and Provincial initiatives, and Burlington's net carbon neutral goals."	<p>Please see above response regarding the Sustainable Building and Design Guidelines.</p> <p>Consideration of the City's Sustainable Building and Development Guidelines (checklist) is an item that can be required of an applicant as part of a complete development application. It is common that this requirement is provided to applicants as</p>

Comment	Response
<p>Tom - What can the City do within its jurisdiction to:</p> <ol style="list-style-type: none"> 1. Require higher design standards of developers (i.e., not City infrastructure)? The Sustainable Development and Building Guidelines are too voluntary and frequently dismissed or minimized by developers. For example, there is no requirement to meet the City's net carbon neutral goals. 2. Mandate earlier consideration for sustainability and resilience plans in the development process? 	<p>part of the development pre-consultation process. Other requirements related to sustainable development (i.e. through Official Plan policy) may be identified as part of the pre-consultation process as well.</p>
<p>P. 13 – Regarding Flood Management</p> <p>Jeff - Flood maps for the city should be up to date if they aren't. It's a risk to be using old flood mapping</p> <p>Jeff - Drought conditions may become more prevalent in future. It is easy to forget drought may be a future risk that should be evaluated.</p>	<p>Action 1-7 states “Enhance coordination with partner agencies and higher levels of government to ensure that flood hazard maps and protection measures are up to date to manage flood risks.”</p> <p>In addition, one of the short-term indicators is “percentage of City with future informed climate mapping for creeks” with a target of 95% by 2027. Conservation Halton is currently updating floodplain mapping.</p> <p>The purpose of the CRB Climate Change Vulnerability and Risk Assessment (presented to City Council in May 2022 EICS-02-22) was to prioritize an action plan for the next 10 years, recognizing that we can't tackle everything at once. Currently drought was identified as a lower risk, but this hazard could move up in the rankings when the plan is renewed in five years.</p>
<p>Pg. 15 – Regarding service disruption</p> <p>Jeff - Should also include emergency services impacts. If fire trucks and ambulances can't get to people in need because of flooding, there should be planning done to minimize the risks.</p>	<p>Emergency preparedness planning includes emergency services impacts due to extreme weather. Each year, emergency services are mandated to undergo a Hazard Identification Risk Assessment (HIRA). This is done in collaboration with other City departments and external groups including Halton Region, Conservation Halton, Joseph Brant Hospital, Burlington Hydro, and more.</p>
<p>Pg. 18 - Regarding Action 2-1 “Invest in full tree life cycle management balancing amount of planting and ongoing maintenance to improve tree survival outcomes ...”</p>	<p>The Climate Resilient Burlington plan addresses adapting to climate change.</p> <p>The City already has two plans to address climate mitigation (to reduce greenhouse gas emissions which contribute to climate change):</p>

Comment	Response
<p>Roger - Excuse me for being blunt, but we are in a climate emergency, which require bold, innovative, sometime risky, actions that will make a difference. The urban plan sees only trees as the solution. The largest contributors to climate change in Burlington are transportation and buildings. Greenhouse gases, noxious emissions need to dramatically be reduced. Energy usage needs to be made more efficient, and energy generation needs to move away from fossil fuels; incentivize geothermal and solar power, and electric transportation. Why is the City buying more diesel buses? WRT the rural area... the natural environment provides multiple services for free. The agricultural systems are part of the ecosystems which provide carbon sink, and provide local food sources. With the coming global food crisis, which is threatened by climate change and conflicts, we need our good farmlands to be available to produce all manner of people and animal foods. Stop paving over our scarce prime agricultural lands. The rural Burlington area needs to be preserved as necessary for our grandchildren's health and food security, and the preservation of so many valuable species becoming at risk. The 'natural capital' that our natural flora and fauna provides is critical to our future survival, and quality of life. When will Burlington and Halton establish a permanent natural and agricultural heritage (Greenbelt 2.0) reserve over our remaining open spaces? Urban sprawl, paved surfaces, highways, destruction of wetlands and woodlands will endanger our progeny's quality of life.</p>	<p>1. Corporate Emissions and Energy Management Plan, approved in 2019, to address City buildings and operations 2. Climate Action Plan, approved in 2020, to address community emissions where transportation and buildings were identified as being the largest contributors to greenhouse gas emissions. Both plans are currently in the implementation phase. Under the Climate Action Plan, work is underway to develop an Electric Mobility Strategy and a Home Energy Efficiency Retrofit Project. The City is also working on the Integrated Mobility Plan, a plan which focuses moving people versus moving vehicles. The City continues to work with Regional, Provincial and our Conservation Authority partners to ensure natural heritage and agricultural resources are appropriately identified and protected. This work is ongoing through Halton Region's Regional Official Plan Review (ROPR) and was contemplated through the City's adopted 2020 Official Plan (under appeal). The majority of the rural lands in Burlington are subject to the Greenbelt Plan and the Niagara Escarpment Plan (NEP) which has identified the limits of the NEP as a World Biosphere Reserve. The City of Burlington works with Provincial and Regional partners to ensure the obligations of these plans/designations are upheld through land use planning policy and decisions. The Climate Resilient Burlington plan, if approved, includes actions to: <ul style="list-style-type: none"> • Pursue approval to develop a Burlington Agricultural Plan; • Establish a City-Wide Biodiversity Plan; • Invest in green infrastructure to reduce flood risk, enhance habitat connectivity and support other ecosystem services; </p>

Comment	Response
	<ul style="list-style-type: none"> • Invest and support implementation of the Urban Forest Master Plan; and • Expand natural asset data and include priority natural assets into Burlington's Asset Management Plan
<p>Pg. 20 – Regarding extreme heat and health introduction.</p> <p>Jim - What about the effect of heat and crime? Researchers have found that violent crime increases by 5.7% on days with maximum temperature above 29.4 Celsius (K. Heilmann & M. Kahn, The Urban Crime and Heat Gradient in High and Low Poverty Areas, 2019).</p>	<p>This is not a risk or consequence that was raised during the process but could be considered in future updates if identified by community stakeholders as a problem in Burlington.</p>
<p>Pg. 21 - Regarding Action 3-4: "Explore the feasibility of updating the Property Standards Bylaw to include requirements to keep indoor temperatures from exceeding a maximum threshold."</p> <p>Jason - Good idea. Mandated cold season temperatures should be higher too. 20°C for seniors or other folks with health problems is not warm enough.</p>	<p>Your comment will be forwarded to the Building and Bylaw department, who is the lead on proposed Action 3-4.</p>
<p>Pg. 23 – Regarding community capacity building.</p> <p>Jeff - Promote rain gardens on private properties. They can add value to the properties because they are attractive and can help with flood mitigation.</p>	<p>Promoting rain gardens on private properties can be addressed through a number of proposed actions including:</p> <p>Action 4-2 – Develop a Community Climate Resilience Education Program focusing on high climate risks.</p> <ul style="list-style-type: none"> - Help residents understand climate science, risks, adaptation actions, funding opportunities and relevant City initiatives <p>Action 4-5 – Enhance existing policies, program and education programming for private stormwater management practices</p> <ul style="list-style-type: none"> - Encourage increased permeability on public and private sites <p>Conservation Halton and Halton Environmental Network currently deliver programs to educate residents and community groups to protect and restore natural areas and support the development of rain gardens.</p>

Comment	Response
<p>Pg. 24 – Regarding Action 4-5: Enhance existing policies, programs and education programming for private stormwater management practices</p> <p>Jeff – How successful has downspout disconnection been implemented in the city. This is pretty easy to do and can make a big difference if there are lots of properties that haven't done it.</p>	<p>The downspout disconnection program is offered by Halton Region under their Enhanced Basement Flooding Prevention Subsidy Program. It covers up to 100% of the costs, up to \$500.</p> <p>According to Halton Region staff report PW-40-17, between mid-2015 and mid-2017, there were 1,719 downspouts (1,093 households) disconnected in Burlington as part of the Targeted Downspout Disconnection Program. About 41 per cent of the homes suspected of being connected to the sewer system were disconnected.</p> <p>According to Halton Region staff report PW-08-22, 112 applications were received for the downspout disconnection component of the Enhanced Basement Flooding Prevention Subsidy Program between 2016 and 2021 in Halton.</p>
<p>Pg. 27 - Regarding "Assess the feasibility of sourcing and providing preference to local suppliers in contracts to increase resilience with supply chain disruptions."</p> <p>Tom – Consider as part of a broader "sustainable procurement" program.</p>	<p>Economic Development Burlington who is the lead on action 5-3 will be working with procurement on this item.</p>
<p>Pg. 29 – Assuming this is in reference to indicator "Percentage of prioritized asset categories that have been assessed for future climate impacts." Target: 100% by 2032.</p> <p>Jeff - You need an earlier review and target than 10 years from now</p>	<p>This target refers to Action 1-2 and links to 2021 Burlington's Asset Management Plan. While the current anticipated completion date is 5-10 years, work will begin sooner. Progress will be tracked through annual reporting to City Council.</p>
<p>Pg. 37 - Regarding Citizen Action Checklist: Good Habits</p> <p>"Provide structural support for early growth period of trees (0 to 3 years) to improve long term strength.</p> <p>Tom – Pamphlet received at City of Burlington tree giveaway advised against staking trees. Need consistency in messaging.</p>	<p>We have revised the statement to read:</p> <p>"Check with a professional to see if your new tree needs to be supported in the early years based on the site (high wind area), the tree (bare root, loose root ball), etc."</p>

3.0 Survey Results

3.1 Theme 1: Resilient Built and Natural Infrastructure

- There were 20 responses to the Theme 1 survey.

3.1.1 Do you agree with the actions listed within the Infrastructure Design and Life Cycle Management under the Resilient Built and Natural Infrastructure theme?

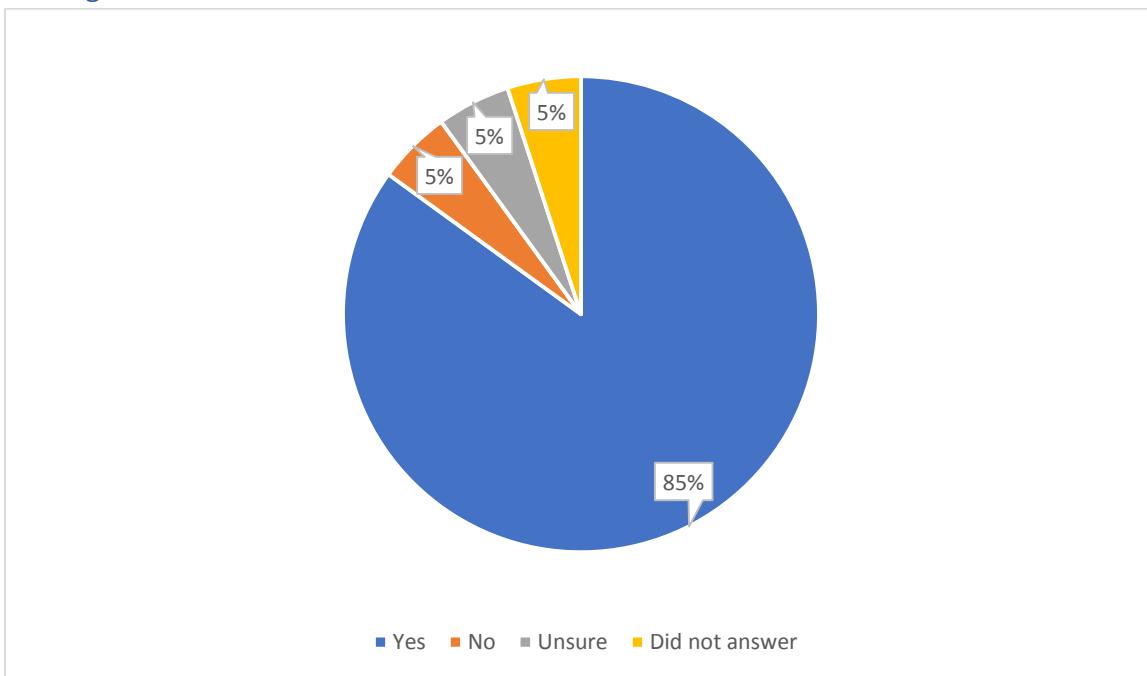


Figure 1: Do you agree with the actions listed within Infrastructure Design and Life Cycle Management under the Resilient Built and Natural Infrastructure theme?

Comment	Response
No – Burlington doesn't need its own net carbon neutral goals, we don't make our own air. Instead a focus of the water management is more needed.	In April 2020, City Council approved a community carbon neutral goal by 2050. The CRB plan includes actions to address flooding.

3.1.2 Do you agree with the actions listed within Flood Management under the Resilient Built and Natural Infrastructure theme?

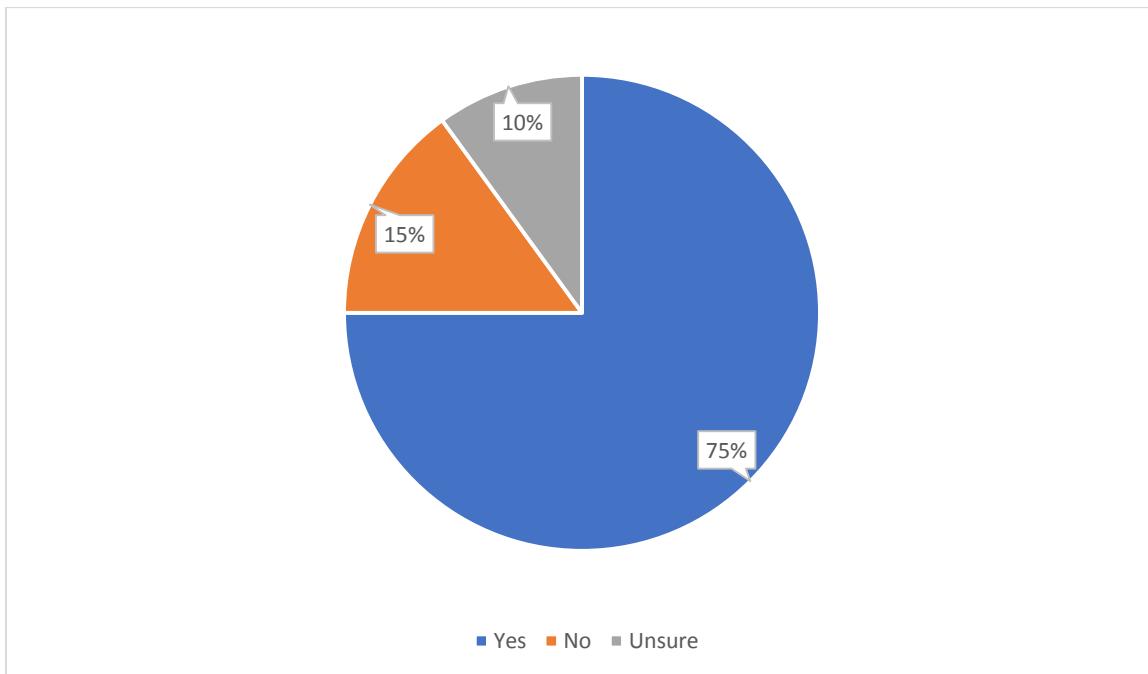


Figure 2: Do you agree with the actions listed within Flood Management under the Resilient Built and Natural Infrastructure theme?

Comment	Response
Unsure - The actions listed are fine, but on the long run a sinking of water levels in the Great Lakes might be a problem, once the US starts using Lake Superior as a major water source for the southern states.	This is beyond the scope of the CRB plan and the City's jurisdiction.
No - Initiate a ravine strategy as part of flood management to naturalize our ravines	A ravine strategy may be considered as part of a proposed city-wide biodiversity plan.
No – It may be too expensive	Reports have shown that making investments to protect ourselves from our changing climate is cheaper than responding to a crisis.
No – No discussion about overland/over street residential flooding that exists/will occur due to past poor City planning practices and enforcement	Streets and parks/greenspaces are part of the stormwater system to convey water during extreme rainfall events. The storm pipes can only carry a certain amount of rainwater. Runoff beyond the pipe capacity has to flow overland (through the streets) to a safer outlet.
Unsure – 1.5 has implications for many property owners and should be undertaken with owners input.	The floodplain mapping update is undertaken with public consultation and feedback. Public Information Centers are held during the course of the study to gather information from the residents/property owners. The results and study

Comment	Response
	findings are shared with the stakeholders before the study is finalized.

3.1.3 Do you agree with the actions listed within Service Disruption under the Resilient Built and Natural Infrastructure theme?

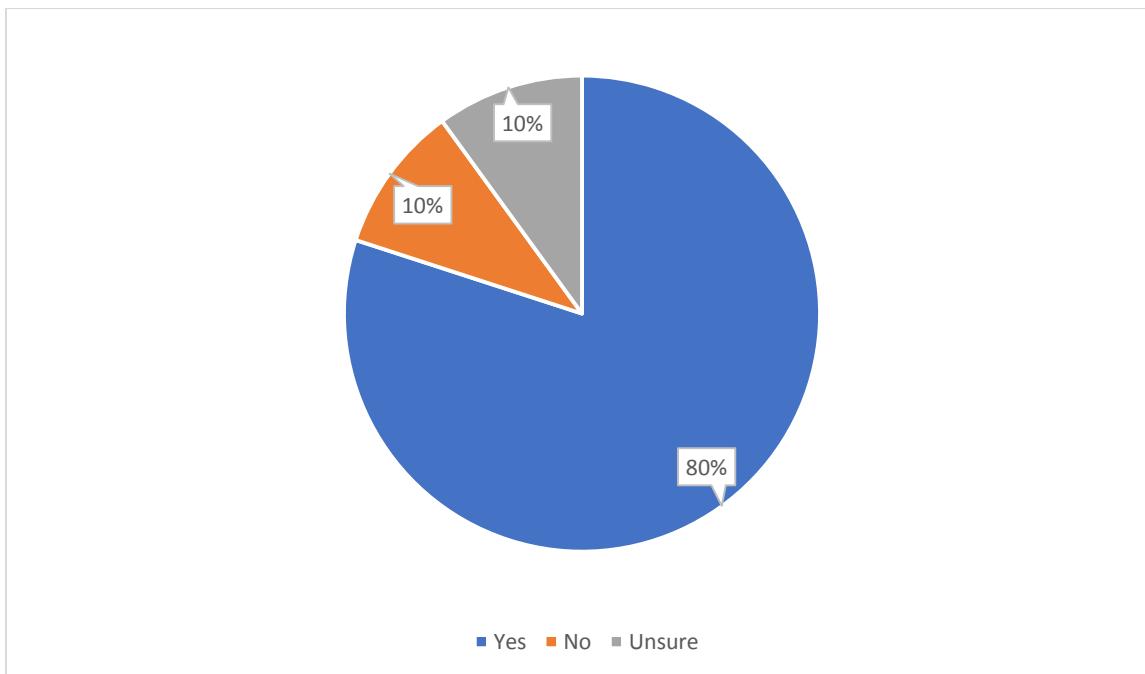


Figure 3: Do you agree with the actions listed within Service Disruption under the Resilient Built and Natural Infrastructure theme?

Comment	Response
No - Invest in a new service standard for city-wide tree pruning in the urban and rural environments	The Forestry section has an established level of service for tree pruning within the urban boundary. All trees are inventoried once every 7 to 10 years, and proactive pruning is completed on the same timeframe. This includes the removal of deadwood, structural pruning, as well as clearance over roadways, sidewalks, and buildings. Over the past few years, we have seen (qualitatively) a reduction in partial and/or whole tree failures. There are a number of variables that affect this, one of which is proactive maintenance.
Unsure - I don't know enough about the topic or the plan to agree or disagree	n/a
No – It may be too expensive	Reports have shown that making investments to protect ourselves from our changing climate is cheaper than responding to a crisis.

3.2 Theme 2: Thriving Natural Environment

There were 20 responses to the Theme 2 survey.

3.2.1 Do you agree with the actions listed within Tree Management under the Thriving Natural Environment theme?

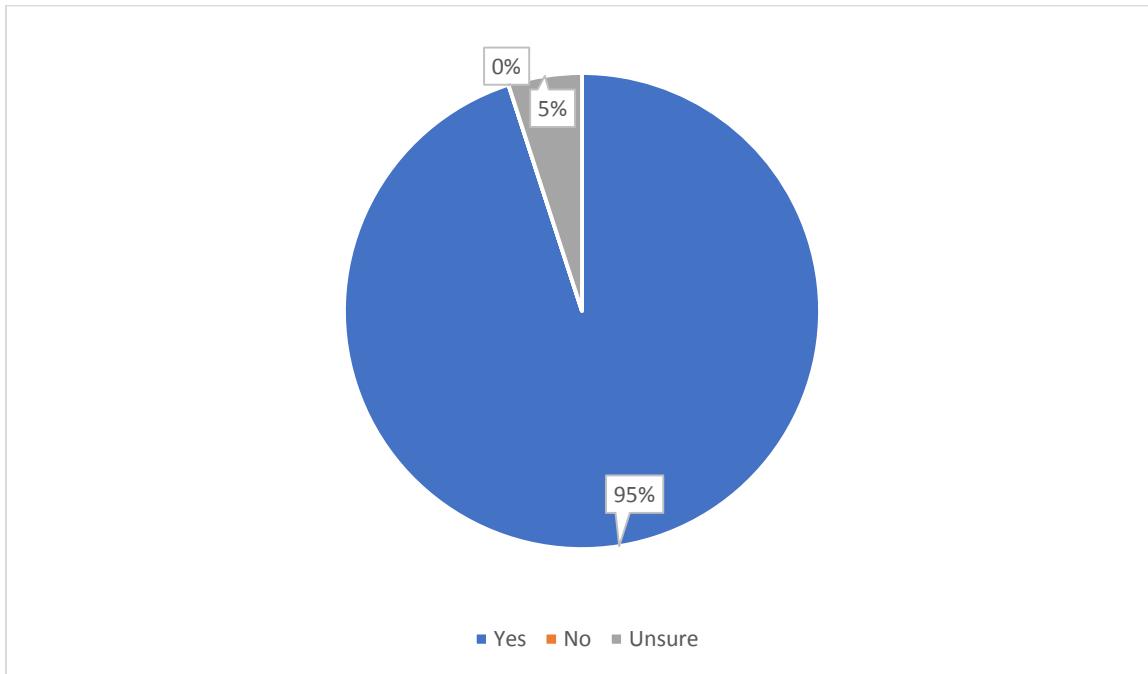


Figure 4: Do you agree with the actions listed within Tree Management under the Thriving Natural Environment theme?

Comment	Response
Unsure – The Tree Bylaw should consider that some extensive tree pruning or removal on private property is required to protect people and property	The bylaw is designed to allow residents to protect themselves and their property by mitigating risk on their property. To that end, dead, terminally defective, and high-risk trees are all exempt of permit fees and compensation requirements. Permits are still required for tracking purposes, but no fees are collected.

3.2.2 Do you agree with the actions listed within Natural Area Management under the Thriving Natural Environment theme?

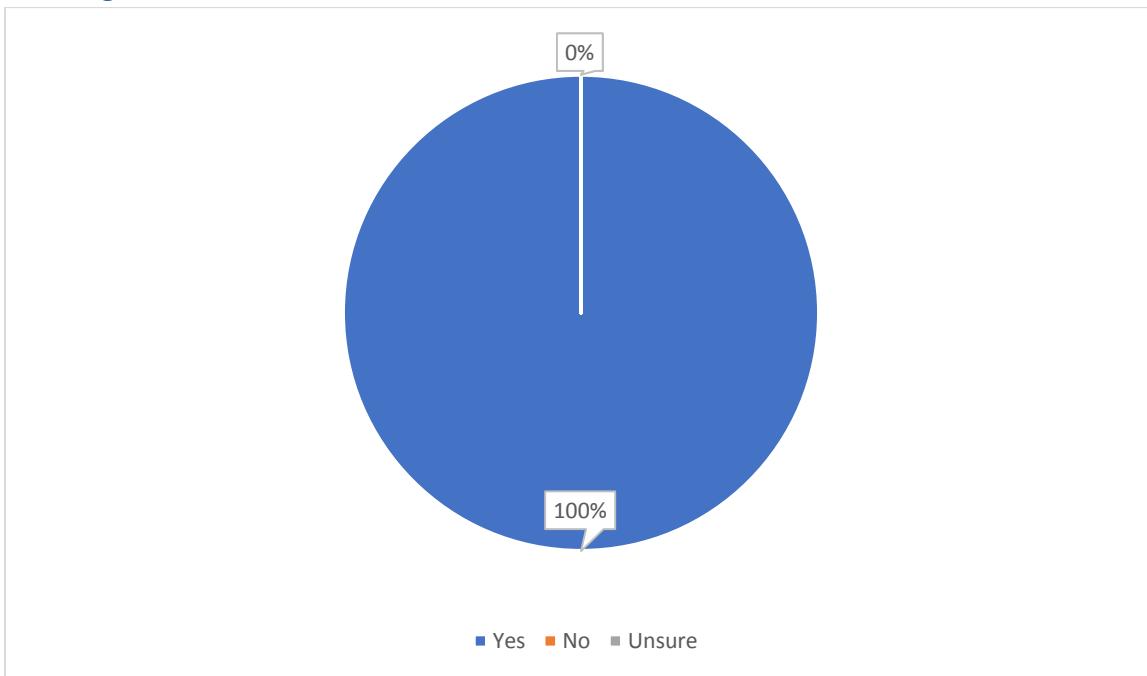


Figure 5: Do you agree with the actions listed within Natural Area Management under the Thriving Natural Environment theme?

3.3 Theme 3: Health and Well-Being

There were 14 responses to the Theme 3 survey.

3.3.1 Do you agree with the actions listed within Extreme Heat and Health under the Health and Well-Being theme?

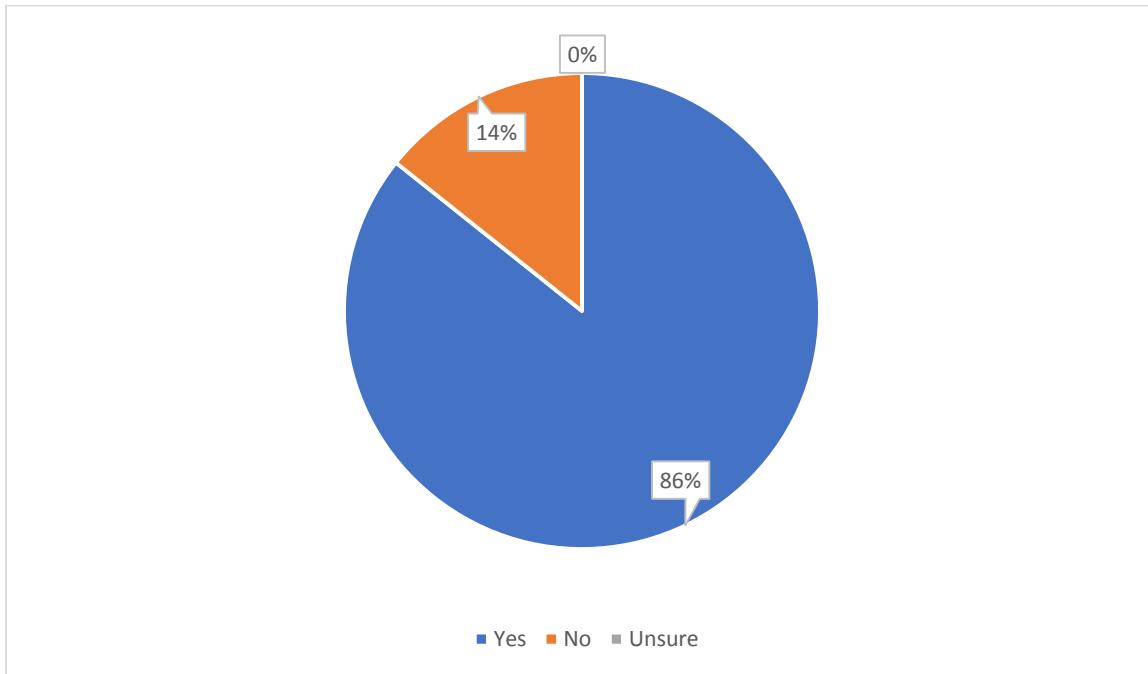


Figure 6: Do you agree with the actions listed within Extreme Heat and Health under the Health and Well-Being theme?

Comment	Response
No - Make better house insulation mandatory to builders and developers	The City does not have the legal authority to require measures beyond those in the building code.
No - Invest in extending hours of operation for facilities that provide cooling during the summer months	This will be addressed as part of action 3-2 “Identify gaps in public space cooling by assessing utilization of current cooling facilities and identifying the type of cooling supports and accessibility needs of the community especially for vulnerable populations.”

3.4 Theme 4: Disaster Resilience

There were 14 responses to the Theme 4 survey.

3.4.1 Do you agree with the actions listed within Community Capacity Building under the Disaster Resilience theme?

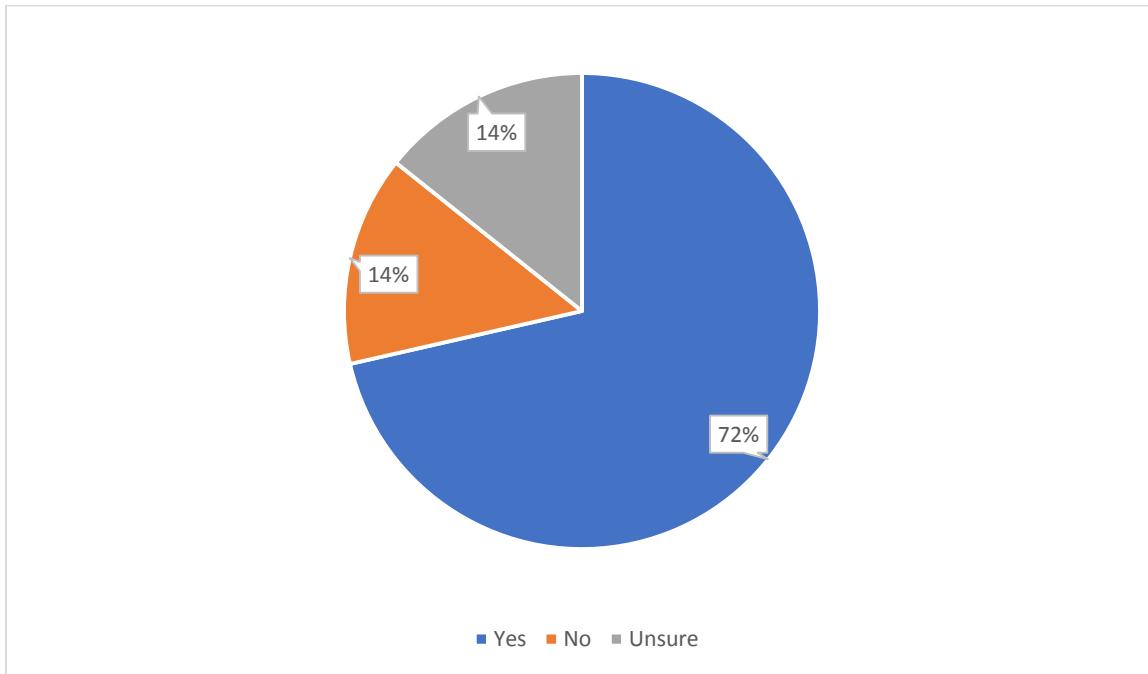


Figure 7: Do you agree with the actions listed within Community Capacity Building under the Disaster Resilience theme?

Comment	Response
No - I think government needs to stay out of peoples lives. If people want to go green they will and they do not need to be educated on this. If council is so worried about the climate maybe it should look at the garbage that is in open spaces around the city that has not been cleaned up.	The purpose of the actions within this theme is to provide information and support for increased resiliency.
Unsure - The ideas are good but in the end what is the cost implication of all this- does that mean higher taxes while inflation eats our savings?	Reports have shown that making investments to protect ourselves from our changing climate is cheaper than responding to a crisis. The purpose of the actions within this theme is to provide information and support for increased resiliency. For example, in many cases homeowners just need to spend a few hours over a weekend with minimal cost to implement some changes to reduce their risk of flooding.
No - Create a Community Green Fund similar to the Neighbourhood Matching Fund	Green initiatives are currently considered under the Neighbourhood Matching Fund.
Unsure - I'm not sure about the education component. Climate science is complicated and	This action was developed based on community feedback on the late 2021 survey on vision, principles and climate impacts and actions

Comment	Response
on-going. What is the concrete objective of this component? Is it worth the resources?	(presented to City Council in May 2022 via report EICS-02-22) where several residents noted wanting increased information about climate change and how to prepare for its impacts. (Appendix B of staff report EICS-02-22)

3.4.2 Do you agree with the actions listed within Citizen and Business Support Programs under the Disaster Resilience theme?

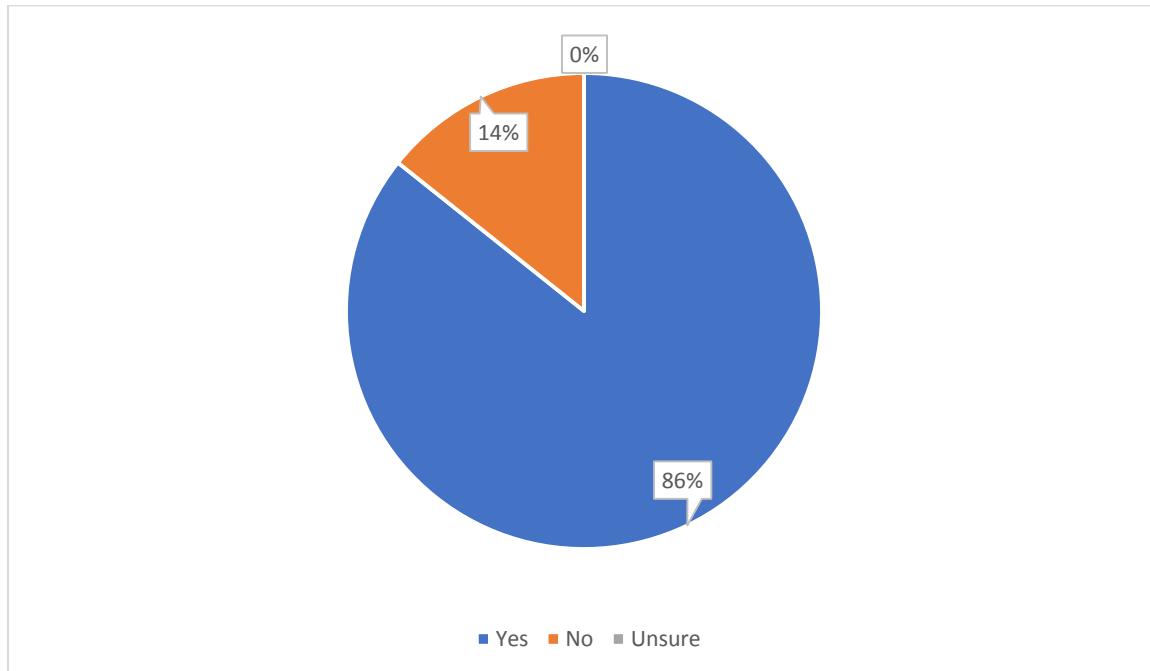


Figure 8: Do you agree with the actions listed within Citizen and Business Support Programs under the Disaster Resilience theme?

Comment	Response
No - You should not tell people what to do with their properties. If they want to have refits they will.	The purpose of the actions within this theme is to provide information and support for increased resiliency.
No - Do not burden Stormwater removal onto citizens. It's the city's problem, paid for by our tax system.	The purpose of the actions within this theme is to provide information and support for increased resiliency. Responsible and best management practices on private property will reduce the burden on the existing municipal drainage systems.

3.5 Theme 5: Strong and Resilient Economy

There were 14 responses to the Theme 5 survey.

3.5.1 Do you agree with the actions listed within Agriculture under the Strong and Resilient Economy theme?

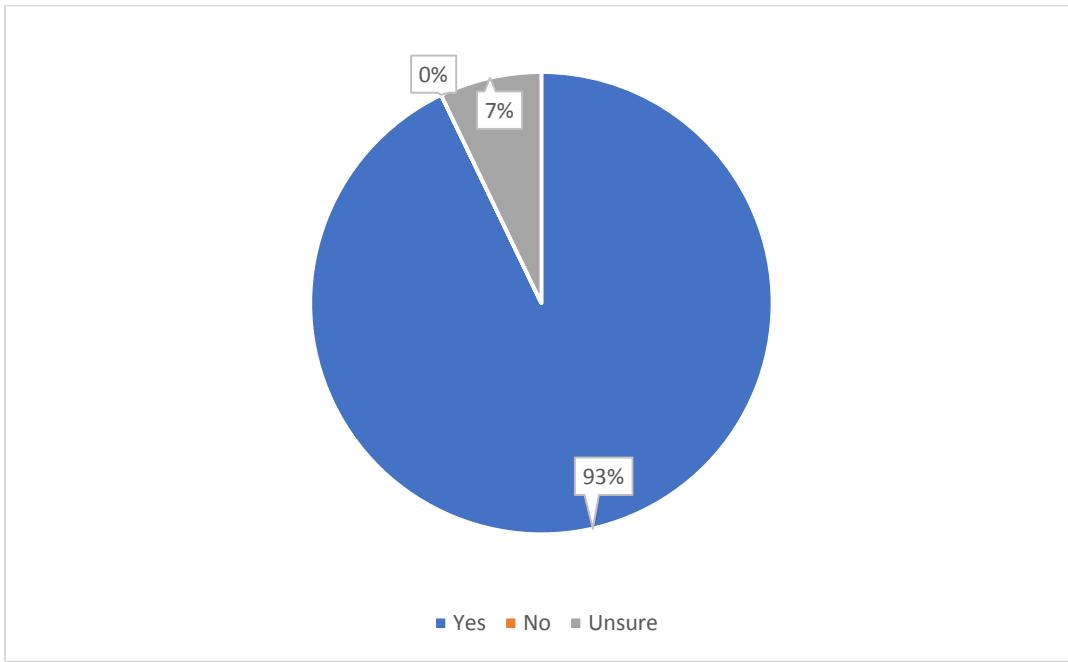


Figure 9: Do you agree with the actions listed within Agriculture under the Strong and Resilient Economy theme?

3.5.2 Do you agree with the actions listed within Local Economy under the Strong and Resilient Economy theme?

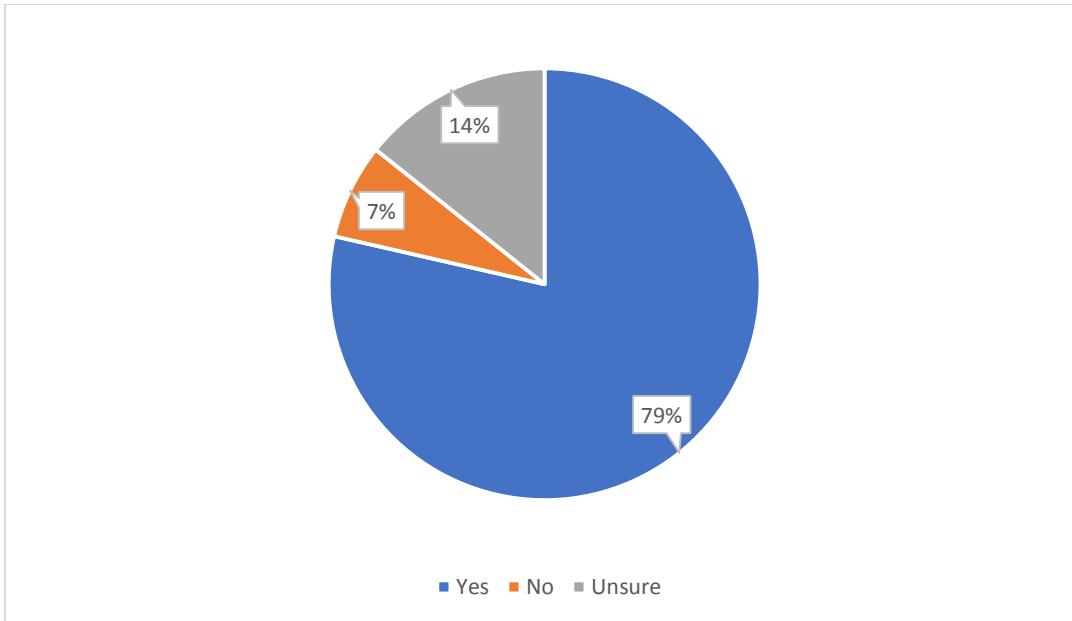


Figure 10: Do you agree with the actions listed within Local Economy under the Strong and Resilient Economy theme?

Comment	Response
Unsure - The goal is correct but it might be better handled by Halton Region of the Province	We will add Halton Region under "Community Connections" though please note that the City and Region procure different services. The City is a member of a joint purchasing co-op with different local public sector partners including Halton Region and local school boards. This project though, should it be pursued, will likely initially be piloted locally.
No - I just don't see this initiative accomplishing the hoped-for goals. Maybe some specific scenarios would make it clearer	The Province announced a similar initiative in March 2022 called the Building Ontario Business Initiative giving preferred access to Ontario suppliers when the Province is doing the procurement. The backgrounder included three examples on the economic spinoffs and benefits of procuring local rather than just competing purely on price such as fair wages, stricter environmental standards and safe working environments. They also identified encouraging long-term sustainability and growth in Ontario-based industry promoting innovation through research and development and strengthening Ontario's supply chain resiliency to better prepare our province for potential future emergencies.
Unsure – what will the inflationary cost of some local sourced supply chains?	As noted above, there are many benefits that can be gained from locally sourced supply chains including better wages and working conditions as well as environmental standards and stronger supply chain resiliency.

3.6 Survey #6: CRB Citizen Action Checklists and Community Climate Resilience Education Program

There were 12 responses to this survey.

3.6.1 Are these helpful resources?

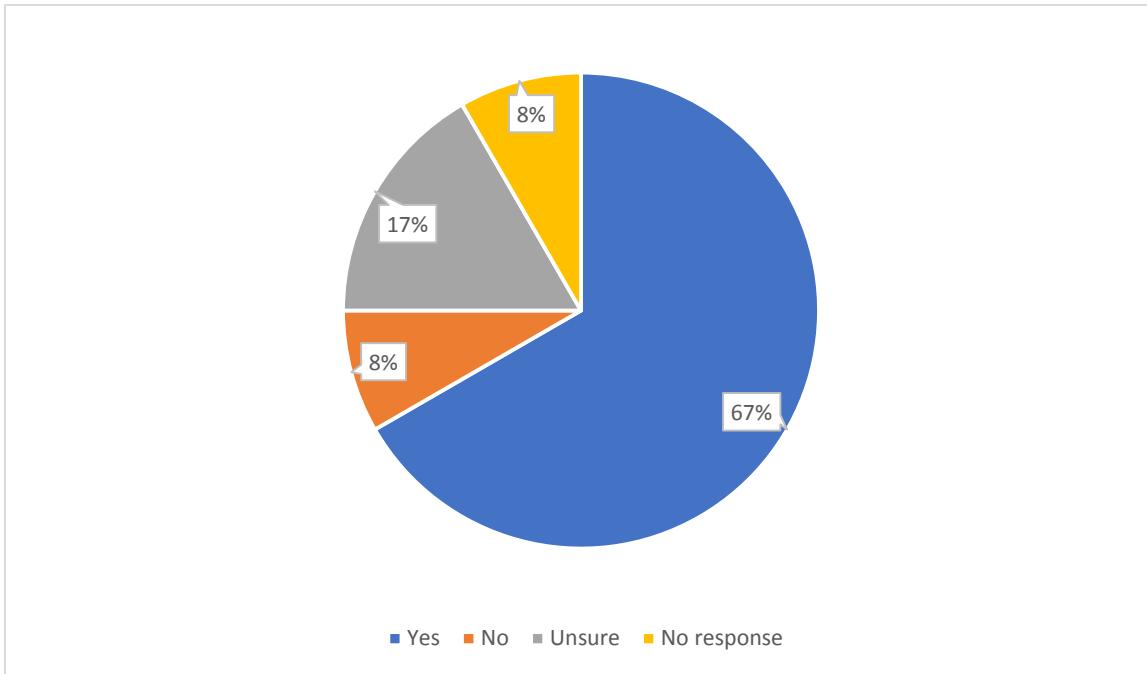


Figure 11: Are these resources helpful?

Comment	Response
Unsure - I don't need to know what climate change will do to the community. I believe that climate change is real but to be honest until the large admitters like US, China and India cut back on their emissions what we do will not do anything. This is just a dooms day scenario to scare people to change.	The CRB plan is not about reducing greenhouse gas emissions (that's in the Climate Action Plan) but rather about preparing for our warmer, wetter and wilder weather to reduce our risk. Proactive risk preparedness versus reactive disaster response.
No – (Note: person didn't elaborate why they selected 'no' but in the next question about whether we missed helpful tips, they also said 'no' we didn't miss helpful tips).	n/a
Unsure – didn't read	n/a

3.6.2 Did we miss any helpful tips related to climate adaptation or resiliency?

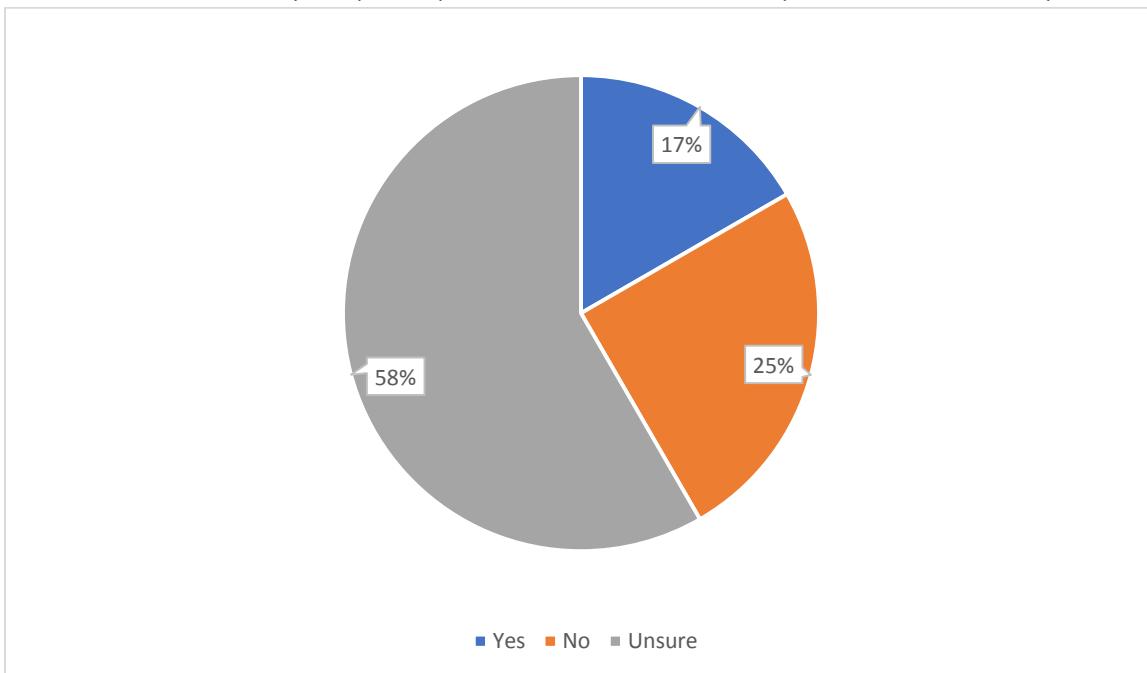


Figure 12: Did we miss any helpful tips related to climate adaptation or resiliency?

Comment	Response
Yes - People must be incentivized to retrofit their HVAC systems to reduce fossil fuel consumption.	This is associated with the Climate Action Plan, to reduce fossil fuel consumption. Work is progressing towards developing a Better Homes Burlington Home Energy Efficient Retrofit Project to reduce household emissions through the use of heat pumps and air sealing. Staff will submit a budget proposal for 2023.
Yes (Person didn't elaborate)	n/a

3.6.3 Since this program is for the Burlington community, what would you like us to consider including in the Community Climate Resilience Education Program?

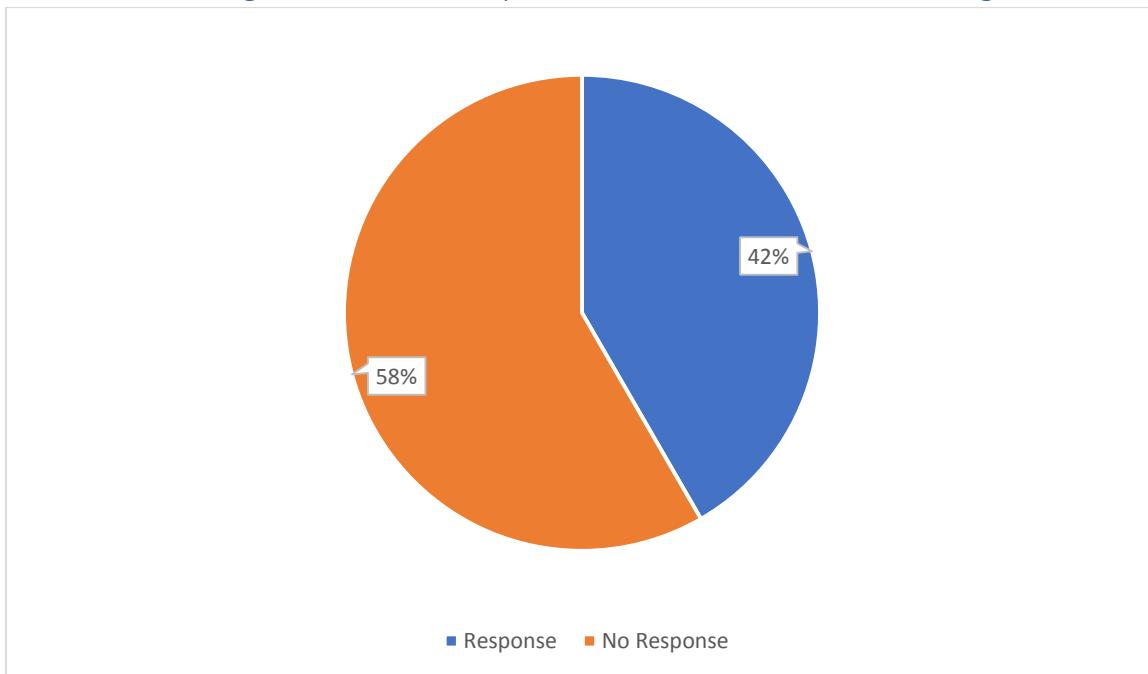


Figure 13: Since this program is for the Burlington community, what would you like us to consider including in the Community Climate Resilience Education Program?

Comment	Response
Climate science is highly controversial, there are not that many short term high risks. The media does a great job scaring us on a daily base, don't start doing the same.	A few of the local short-term high risks include impacts from intense rain leading to flooding; extended heat waves (especially for those without air conditioning when nighttime temperatures do not drop below 20°C) leading to increased illness and death; and high wind events resulting in downed trees, powerlines, truck rollovers, etc. resulting in shutting down streets, power disruptions, etc. to name a few.
Get the federal government to fund these vital Climate Change activities so it is run as a national program and not just as a local Burlington initiative.	Municipalities regularly advocate for support from higher levels of government for such transboundary issues through organizations such as the Federation of Canadian Municipalities. Having both a Climate Action Plan (on climate mitigation/reducing greenhouse gas emissions) and Climate Resilient Burlington: A Plan for Adapting to Our Warmer, Wetter and Wilder Weather will situate us well should federal funding initiatives be announced for municipalities.
Solid, practical examples of actions that are freely available to "average" citizens.	Thank you for our comment.

Comment	Response
<p>We're in one of the lowest climate risk areas in the world here. By all means tell citizens what actions the city is taking to mitigate and adapt but I worry about the risks of this region being exaggerated.</p>	<p>City staff promote what the City is doing regarding climate change initiatives through the Take Action Burlington blog at TakeActionBurlington.ca, on the climate change page of the City's environment website at burlington.ca/environment, through project specific pages at GetInvolvedBurlington.ca and through reports to City Council.</p> <p>At the October 2021 CRB project launch, keynote speaker David Phillips, Senior Climatologist of Environment and Climate Change Canada, "by 2060 or 2065, Burlington will inherit the climate of 600 km to the south (Louisville Kentucky or Nashville Tennessee), which is important as the US gets the most severe weather than any other country on the planet."</p>
<p>Add more trees to parks including Spencer Smith, people need more shade and it provides more habitat for animals. Add pollinator gardens and ensure city practices promote increasing spaces to promote population growth in our communities.</p>	<p>We advocate for the 'right tree, right place, right way'. Trees are incredibly valuable in our parks and natural heritage system in general, but we must also be cognizant of other land uses, including active recreation and festivals/events. We consider these factors while planning for tree planting locations so that new trees are not destroyed, and the City's parks systems can be fully utilized.</p>