

Infrastructure

Impacts of Climate Change in Relation to Infrastructure

Participants identified a number of climate change impacts and/or risks that the Hamilton community is already experiencing or might experience in the future in relation to infrastructure. The table to the right summarizes key trends that emerged during the conversation.

The detailed feedback reported from the conversation is summarized below:

- *Water quality*
 - Sewage over-flow into homes and waterways (e.g. Harbour)
 - Unsafe water conditions
 - Increased extreme storm events causing water quality issues bio solid spreading on agriculture fields
 - Water management system
- *Changing maintenance requirements*
 - Infrastructure wears out faster
 - Increased costs from maintenance and repairs
 - Freeze/thaw breakage
 - Sinkholes
 - Physical damage to electric system caused by extreme weather
- *Flooding*
 - Bridge safety with regards to flooding under increased extreme storm events
 - Drowning and injuries from flooding
- *Infrastructure capacity*
 - Combined storm and sewer systems in older parts of Hamilton more at risk from extreme precipitation
 - Electrical supply capacity
 - Do we have the capacity and infrastructure in the province to switch to all electric?
 - Centralized systems – higher risk
 - Vulnerability of electric system to outage due to extreme weather
- *Impact of sprawl on infrastructure*
- *Impact on natural environment*

Key Trends

- Water quality
- Changing maintenance requirements
- Flooding
- Infrastructure capacity
- Impact of sprawl on infrastructure
- Impact on natural environment

Vulnerability from an Infrastructure Perspective

Participants discussed who and what is most vulnerable to the impacts of climate change from an infrastructure perspective, outlining that everyone is vulnerable. Everyone is dependent on the physical structures that support the Hamilton community and therefore are vulnerable to any disruptions caused from climate change. Participants also noted that our homes, buildings and social institutions are vulnerable as they are connected to municipal infrastructure systems.

Who or what is most vulnerable to the impacts of climate change?	
Who <ul style="list-style-type: none"> • Everyone • Low income residents (repair costs) 	What <ul style="list-style-type: none"> • Homes/buildings connected to municipal storm sewer system • Homes/buildings connected to drinking water system • Institutions who are required to do retrofits • CN rail crossing over Spencer Creek

Opportunities from an Infrastructure Perspective

Participants discussed opportunities that present themselves from an infrastructure perspective as it relates to climate change. The table to the right summarizes key trends that emerged during the conversation.

The detailed feedback reported from the conversation is summarized below:

- *Encourage perception of natural environment as infrastructure*
 - Tree canopy as part of infrastructure – we need to frame the conversation so that these assets are seen as ‘infrastructure’
 - Increase perception of the value of parks as infrastructure (trees, wildlife corridors for birds, pollinators, etc.)
 - Plant more trees
 - Tree protection by-laws
 - Natural heritage expansion
 - Use green space to manage stormwater (i.e. green infrastructure)
 - Use natural systems for storm water retention
- *Implement policies to encourage change*
 - By-law changes
 - Some improvements could be forced by municipal policy rather than be volunteering

Key Trends
<ul style="list-style-type: none"> • Encourage perception of natural environment as infrastructure • Implement policies to encourage change • Offer incentives • Invest in active transportation and electric vehicle infrastructure • Support intensification • Inventory infrastructure capacity • Engage with the community

- Mitigation and adaptation should be mandated
- Enforce de-paving and permeable paving (e.g. by-laws on new construction)
- *Offer incentives*
 - Incentivize/motivate and mandate development of brownfields before expanding the urban boundary
 - “Parks in lieu of parking” – offer incentives to put in parks instead of parking lots
 - Local improvement loans for home owners (loans from municipality that come from municipal taxes)
- *Invest in active transportation and electric vehicle infrastructure (the DASH)*
- *Support intensification*
- *Inventory infrastructure capacity (under current climate and future climate)*
- *Engage with the community*