



HAMILTON'S CLIMATE ACTION STRATEGY IMPLEMENTATION RESOURCES AND GOVERNANCE

General Issues Committee

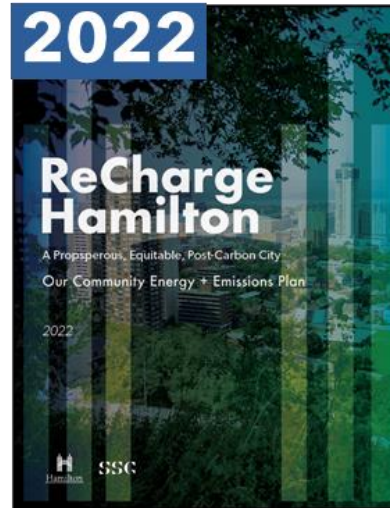
August 8, 2022

Historical Action on Climate Change

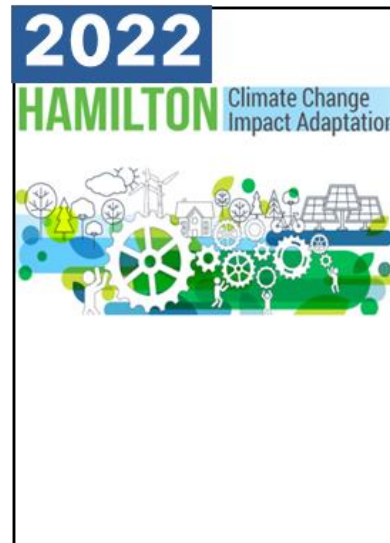
- 2019 – 2021 Tax and Rate **Climate Change positive investments of ~\$57.3 M including:**
 - Bicycle Infrastructure - \$6.46 M
 - Park/Forestry/Tree Planting - \$37.38 M
 - Vehicle/Equipment Electrification - \$596 K
 - Stormwater Flooding and Drainage - \$9.0 M
 - Bay Area Climate Change Council - \$320 K
- **Corporate** total (tCO₂) estimated **reduction of 51% in 2020** based on 2005 baseline*
- **Community** total (tCO₂) estimated **reduction of 40% in 2020** based on 2006 baseline* (based on preliminary utility data provided; subject to change)

*2020 GHG emissions are an anomaly from result of pandemic related shut-downs reducing transportation demand and industrial output. Community-wide emissions across GTHA rose 2% between 2015 and 2019 (Source: <https://taf.ca/gtha-carbon-emissions/>)

Background



**Climate Mitigation –
Community Energy and
Emissions Plan (CEEP)**



**Climate Adaptation –
Climate Change Impact
Adaptation Plan**

Council Direction

General Issues Committee June 1, 2022 (GIC 22-011)

- Directed staff to undertake final public and stakeholder consultations on CEEP and CCIAP and report back to GIC with results.
- Directed staff to report back to GIC on recommended approach for establishing an advisory committee structure for Hamilton's Climate Action Strategy with a deadline of August 8, 2022.
- Directed staff to report back to GIC on a recommended scope, governance and organizations structure, and resourcing for centralized implementation, monitoring and reporting of Hamilton's Climate Action Strategy with a deadline of August 8, 2022.

Recommendations

(a) & b) Recommending approval of Hamilton’s Climate Action Strategy consisting of the two final plans:

- Appendix “C” - ReCharge Hamilton – Our Community Energy + Emissions Plan (CEEP); and
- Appendix “D” - Hamilton’s Climate Change Impact Adaptation Plan

(c) Recommending receiving supporting studies and reports including:

- Appendix “A” – Final Consultation Report;
- Appendix “B” – Costs of Climate Change Report; and
- Appendix “E” – Resource Considerations.

(d) Recommending staff be directed to prepare Draft Terms of Reference for Climate Change Advisory Committee of Council for the 2022-2026 Council Term

Recommendations Cont'd...

(e) Recommending to establish a Climate Change Office within the Planning and Economic Development (PED) Department, and implement following changes:

- I. Create a Director of Climate Change Initiatives position with estimated annual costs of \$215,000 inclusive of salary and non-salary costs (1 permanent FTE); and
- II. Transfer the Senior Project Manager, Public Health Services to the Climate Change Office, with no impact on the levy.

(f) Recommending directing staff to bring forward in 2023 Operating Budget for Council's consideration for the creation of two additional permanent positions within the Climate Change Office

Recommendations Cont'd...

(g) Recommending staff be directed to review function and role of Energy Office within the Energy, Fleet and Facilities Management Division, and any other potential service areas, and report back to Council with any recommended organizational changes for alignment and integration with Climate Change Office.

(h) Recommending referral of the City of Hamilton's annual contribution of \$160,000 to the Bay Area Climate Change Office to the 2023 Operating Budget for Council's consideration.

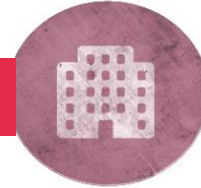
(i) Recommending removal of associated Outstanding Business List Item (OBL) relating to Hamilton's Climate Action Strategy and associated departmental resource considerations for climate mitigation and adaptation.

CEEP: 5 Low-Carbon Transformations for City and Community

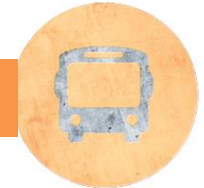
TRANSFORMATION 1: Innovating our Industry



TRANSFORMATION 2: Transforming Our Buildings



TRANSFORMATION 3: Changing How We Move



TRANSFORMATION 4: Revolutionizing Renewables



TRANSFORMATION 5: Growing Green



CCIAP: 4 Theme Areas for Climate Change Impact Adaptation Actions

THEME 1: Built Environment/Systems



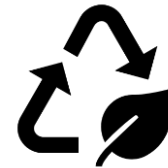
THEME 2: People and Health



THEME 3: Natural Environment, Agriculture and Water

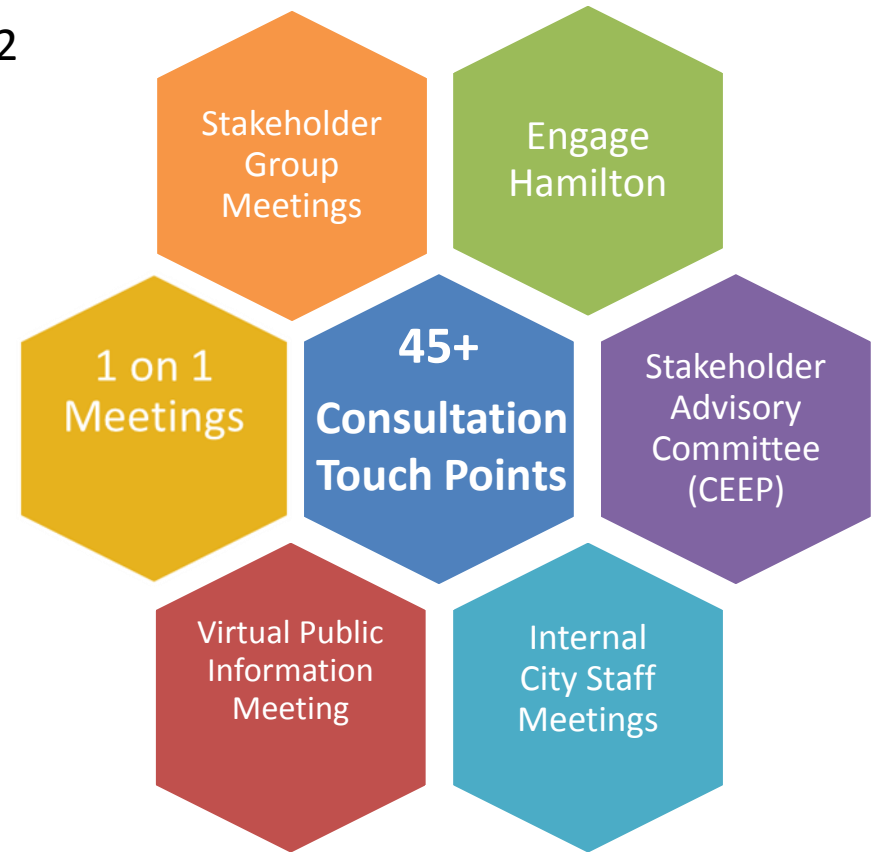


THEME 4: Energy and Economy



Final Engagement and Consultation

- Final engagement period - June-mid July 2022
- Meetings with stakeholders, community organizations and individuals
- General public engagement – virtual
- Internal City staff engagement
- CEEP and CCIAP engagement was tandem where possible
- Implementation and governance-focused



Appendix “A” – Final Consultation Report

What We Heard

On the Climate Action Strategy...

- **Appreciation** for the depth of research and analysis and overall work completed on the plans
- Need to **be bold** in decisions on actions and implementation needs to be accelerated.
- High level of interest in advancing **green building and development standards**
- Many **organizations are excited and willing to contribute** and support actions. Many asked “how can we help?”
- **Natural area protection and tree planting** and tree protection is important for mitigation and adaptation
- Need to pursue **on-going, meaningful engagement** on actions with Indigenous communities

What We Heard

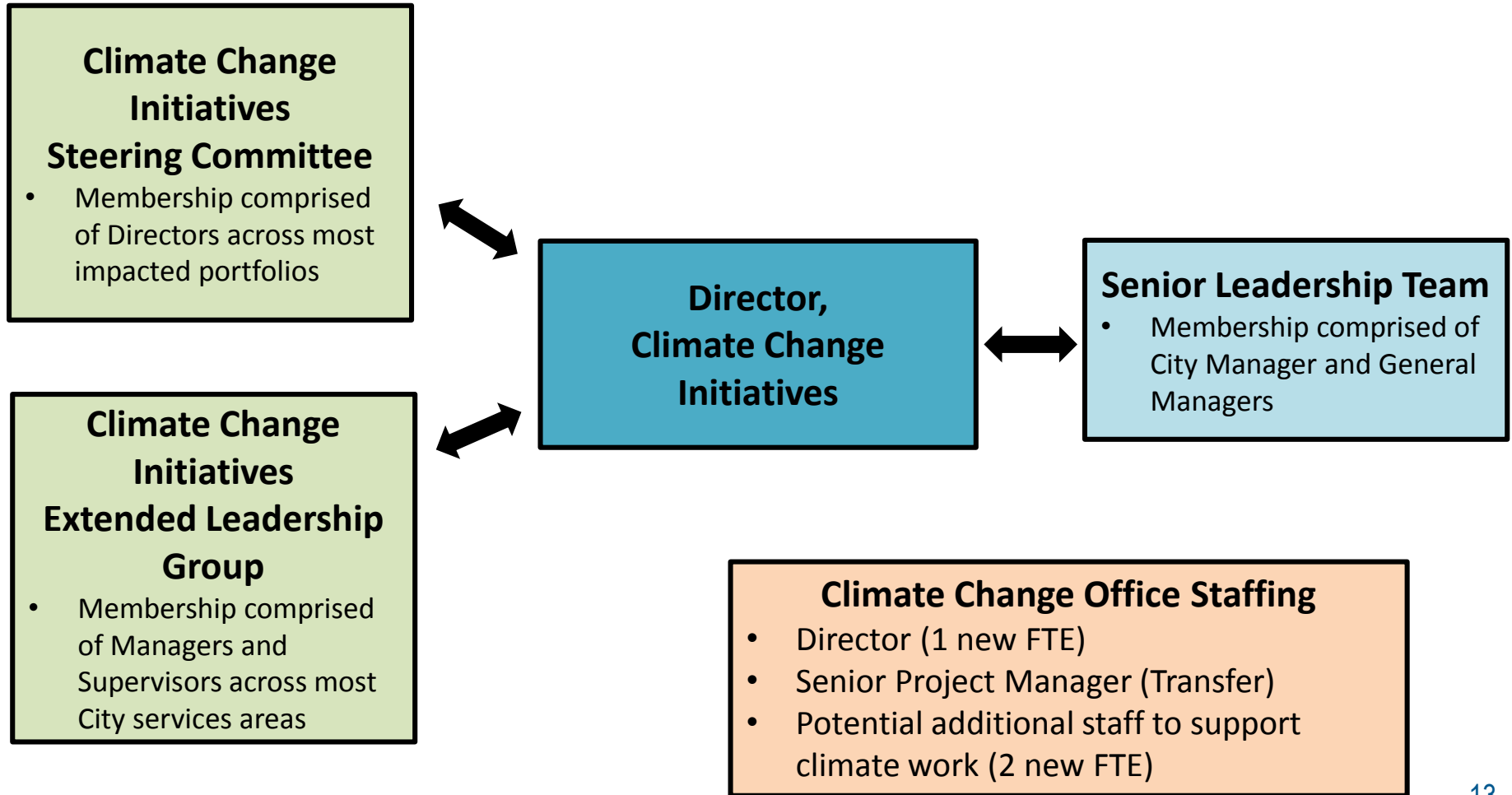
On the Proposed Climate Change Office...

- Relationship between departments and climate change office still needs to be clarified and should have regular connection with department heads.
- Needs to play large role in education and information on actions and have sufficient budget to maintain functions.
- Should have a strong, passionate director and qualified staff.

On the Climate Change Advisory Committee...

- Membership should include representation from community members including BIPOC, equity-seeking communities and have racial and economic diversity.

New Climate Change Office

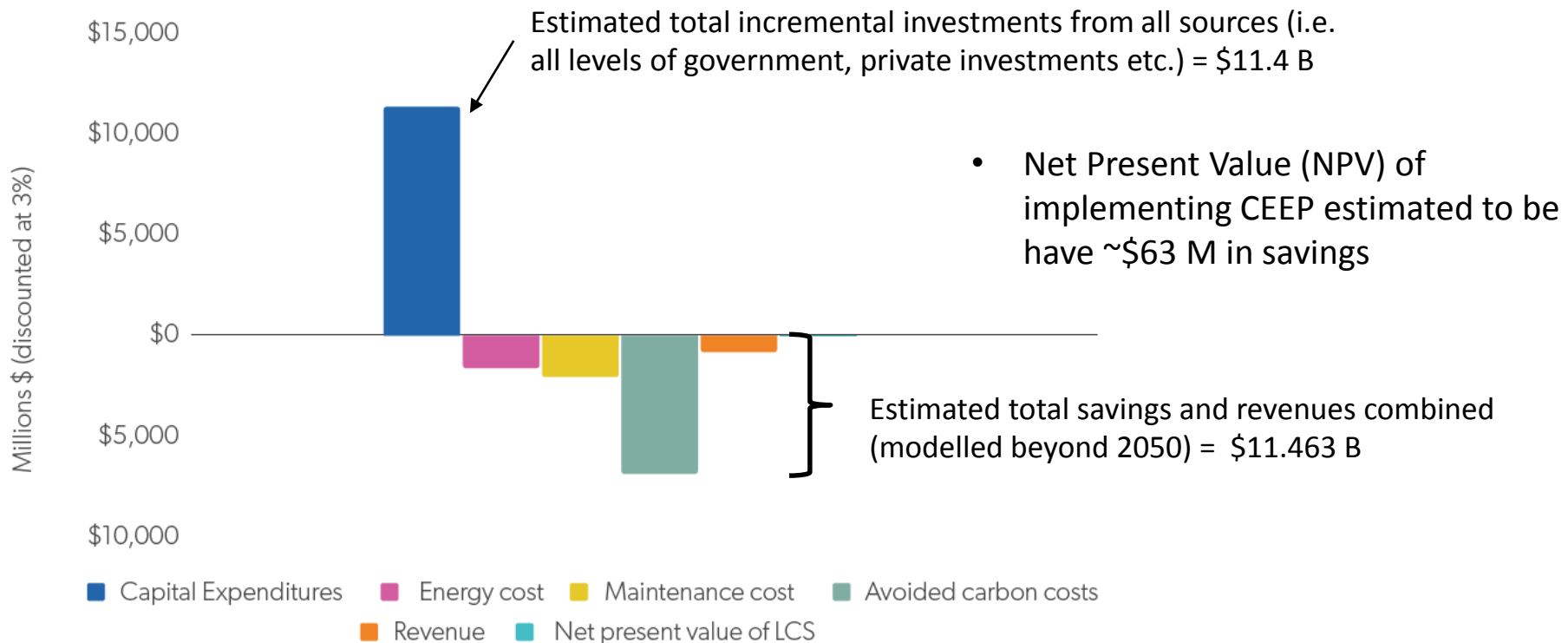


Climate Change Advisory Committee of Council

- Advisory Committee to Council
- Representative of Hamilton's diversity with equity and inclusion embedded through-out
- Terms of Reference to be developed for 2022-2026 Council Term
- Supported by Climate Change Office

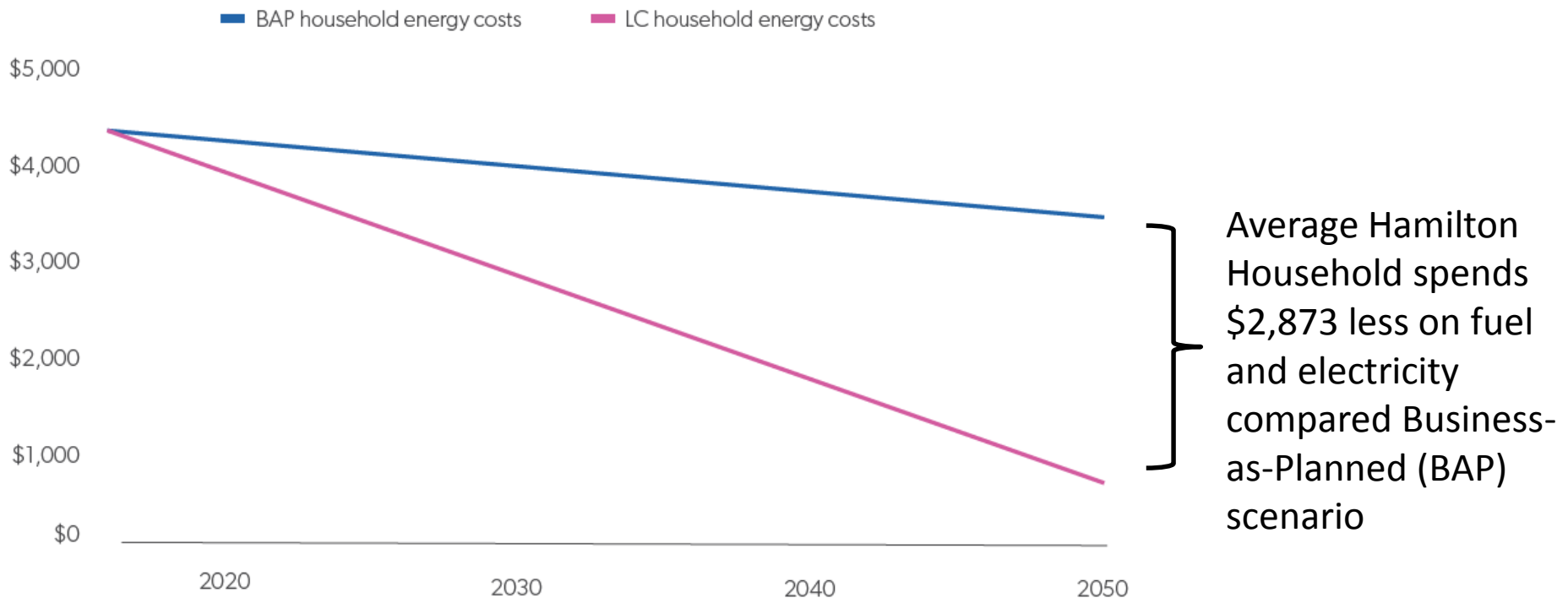
Economic and Financial Analysis - CEEP

Figure 7. Present values of net-zero scenario costs, savings, and the net present value of the scenario (Adapted from Appendix “C” p. 79)



Economic and Financial Analysis - CEEP

Figure 7. Average annual household energy costs in the net-zero and business-as-planned scenarios, 2021-2050 (Adapted from Appendix “C” p. 82)



Climate Change Costs to Canadian Communities - CCIAP

ICLEI Canada developed a municipal, provincial and national assessment and research report as Appendix “B” on 4 (of the 13) climate risks Hamilton is likely to experience:

RISK 1: Increasing frequency of extreme precipitation events leading to overland flooding and damage to buildings and homes

Related Cost to this Risk:

- Climate change projected to add an **additional \$47 B** in operating and maintenance costs to Ontario buildings and facilities by end of the century (The Financial Accountability Office of Ontario Report) (Appendix “B” p. 16)

RISK 2: Increasing temperature and precipitation leading to increased replacement and maintenance cost of roads and transportation infrastructure

Related Costs to this Risk:

- Temperature-related damage is projected to be the costliest of climate impacts on transportation infrastructure, accounting for 87% of expected costs (Ness et al., 2021).
- At the municipal level, projections indicate climate change-induced damage to road maintenance and repairs could cost an **additional \$3.1 B annually** by 2050 (CICC, 2021) (Appendix “B” p. 27)

Climate Change Costs to Canadian Communities - CCIAP Cont'd...

RISK 3: Increasing frequency of extreme precipitation events leading to overland flooding and loss of local business and public services.

Related Cost to this Risk:

- Estimated across Canada there are over 5,000 healthcare centres across Canada (1,440 in Ontario) at risk of flooding that can disrupt medical supply chains and critical services (Clark et al., 2021)
- In 2013 Alberta floods estimated workforce was unable to work over two-weeks; equivalent of **5.1 M hours of lost work and \$601 M of lost economic output** (Sawyer et al., 2020) (Appendix “B” p. 33)

RISK 4: Increasing frequency of extreme heat resulting in negative health outcomes, particularly to vulnerable populations, from reduced air-quality and increased heat-stress.

Related Costs to this Risk:

- In Quebec there are estimates of health expenditures attributed to climate change (e.g. increased vector-borne diseases, extreme heat events and aeroallergens) at **just under \$1 B over 50 years** through 2065. (Boyd & Markandya, 2021).
- Climate change can increase mental health stressors (e.g. grief, worry, anxiety etc.) and some medications including those for schizophrenia, increase heat sensitivity and likelihood of negative health outcomes (Government of Canada, 2011) (Appendix “B” p. 39)



Hamilton

THANK YOU