GBF Position Paper on Global Warming

Global Warming

The global science community is clear that human combustion of fossil fuels has warmed our climate. Global Warming is not an abstract threat that will be manifest elsewhere– it is here now, it surrounds us and its impacts including climate change are apparent and negative.

The United Nations has identified climate change as a significant threat that requires immediate actions over the next twelve years in order to protect future generations, species and ecosystems. Researchers conclude that the evidence of human-driven climate change passes the test of scientific certainty. There is only a one in a 3.5 million chance that our current warming is caused by some other reason than human activities.

The evidence of the negative impacts of climate change includes warmer temperatures, more extreme weather, increases in wildfires, melting ice caps, and rising ocean levels. Climate change is contributing directly and indirectly to the loss of biodiversity and the destruction of critical biomes. It is also having an economic impact as seen in climbing insurable losses due to extremes of weather, fires, flooding and droughts.

Environment and Climate Change Canada recently completed a study showing that, while global temperatures have increased 0.8°C since 1948, Canada has seen an increase of 1.7°C – more than double the global average. We know that Canada, by virtue of our climate, our geography and our consumer society, is a large source of greenhouse gases – the ninth highest in the world and in the top three for per-capita emissions.

Implications for Georgian Bay

Georgian Bay is not immune to the impacts of climate change. Summer surface water temperatures in the Great Lakes have increased by 2.5°C since the 1980s, and ice cover has declined by 71% since the 1970s. Wind speeds over the lake have increased by nearly 5% per decade since the 1980s. We can expect warmer temperatures, increases in extreme storms, flooding and droughts with wetter winters (more precipitation as rain) and springs while summer and fall become drier.

More wind and less ice cover means that winter storms are more likely to damage shorelines and docks and will limit safe recreational activities on the Bay in all seasons. Prolonged periods of drought, smaller snow pack and earlier snow melt will threaten our already variable water levels in Georgian Bay.

Prolonged periods of drought will bring more intense forest fires – the 2018 Parry Sound fire is an example. Drought, combined with more intense storms, will threaten the loss of the already thin soil cover around Georgian Bay, while more severe storms will erode more soils, contaminants and nutrients into Georgian Bay and overwhelm aging sewage and storm water systems, discharging dangerous pollutants into our waters.

The Bay will set up seasonal stratification earlier in the year and it will last later in the fall – causing temperature and oxygen stress to cold water fish such as lake trout, cisco and lake whitefish. Warmer

waters and stronger stratification will favour the growth of toxic and unsightly cyanobacteria – blue green algae such as that seen in Sturgeon Bay.

Invasive species will continue moving into our waters, forests and wetlands, displacing native species. Dangerous diseases will take hold or increase - the northward advance of Lyme disease being a prime example.

In the long term, there is the potential for increased pressure for transfers of fresh water from the Great Lakes to other drought prone areas – another potential threat to our water levels.

Our Commitment

Georgian Bay Forever is concerned about the impact of climate change on the Bay. We will do our part to tackle climate change through:

1. Conducting research to better understand the threat that climate change poses to Georgian Bay;

2. Educating the Georgian Bay community about climate change's causes and consequences;

3. Working with volunteers and other organizations to reduce, mitigate and remediate climate change's negative impacts on Georgian Bay; and

4. Encouraging individual, social and political action in order to avoid climate change's worst consequences.

We cannot avoid the consequences of our warming climate but we can take actions to limit the damage, reduce our carbon dioxide emissions and, over the long term, limit the warming of our planet.