



# Climate Change Action Town Hall

Hamilton, Ontario

March 3, 2011 – 1 to 5pm

Liuna Station (360 James Street North)



## FACT SHEET: WATER

### Discussion Points

- What do you think we, as a community, could do to deal with water and climate change?
- What is happening in Hamilton on water and climate change?
- How should we move forward and what do we need to have in place?

### Facts

- As our water resources are highly dependent on climate parameters such as air and water temperatures, precipitation, evaporation, snow and ice cover, changes to these parameters will carry significant implications to overall water supplies and their management. For example greater variability in lake levels and stream flows can influence water supply quantity and quality and increases the potential of natural hazard events such as droughts, floods and erosion.
- Water has often been termed the 'life-blood' of the environment. It sustains the human population and is vital for all natural ecosystems. Managing its variability in both quantity and quality has a pivotal impact on Ontario's continued social and economic well being.
- The Great Lakes provide drinking water to 8.5 million Canadians
- The average water levels in the great lakes are expected to decrease and will be more variable as a result of climate change.
- In 1964 low water levels resulted in a \$35 million loss for great lakes shipping and hydro power. 1/3 of municipalities along the lakes had water supply problems
- Drinking water for the city of Hamilton is taken from Lake Ontario and undergoes a series of water treatment processes before ingestion. A lot of energy is needed to treat the water and therefore the more water we waste, the more demand there is and more amount of water needs to be treated. A lot of water is expended when treated water is pumped from the treatment plant to the consumer. This wastage of energy is linked to increased global warming.
- Energy is needed at every step of the way to deliver clean water to a house
- The Hamilton GHG Inventory identified water (in terms of energy used) as accounting for 1% of local emissions.
- Water is needed in electrical generation if they are to run efficiently
- Energy supply will struggle to keep pace with increasing demand linked to increasing population and affluence

- Both water and energy are essential to every aspect of life: social equity, ecosystem integrity and economic sustainability.
- Asphalt & concrete change the water patterns, and prevent water from percolating into the ground. This collected water is then treated at the wastewater treatment plant.
- Lowered lake and river levels predicted by many climate models could have negative impacts on shipping, water intake infrastructure, rural groundwater supply, hydropower generation and shoreline property and lead to degraded water quality as well as ecosystem disruption.
- The population of Hamilton is expected to be 622,000 in 2031.
- Increasing population is analogous with increased demands on infrastructure and resources. It will also affect water supply, water quality, and water treatment.
- The water-use diagram below breaks down consumption patterns into different sectors. The key point is that the increased population predicted for Hamilton will impact all services, including such things as water supply and water treatment.

