



Date: November 27, 2015

To: Chair and Members, Toronto Board of Health  
via Nancy Martins, Administrator, Toronto Board of Health ([boh@toronto.ca](mailto:boh@toronto.ca))

**Re: HL8.5 Update on Extreme Heat and Maximum Indoor Temperature Standard for Multi-unit Residential Buildings**

The Greater Toronto Apartment Association noted some concerns regarding mandatory air conditioning during the Board of Health meeting on June 29, 2015. The current report raises more concerns.

### **26°C is 78.8°F**

The Medical Officer of Health recommends that staff, “[explore the feasibility of implementing a health-based maximum indoor temperature standard of 26°C for rental multi-unit residential buildings and report back to the Board of Health.](#)”

This is a very low maximum-temperature threshold, and the report indicates that this is the already decided standard.

The report cites the Chicago heatwave from twenty years ago. On July 12-16, 1995, Chicago's temperature was 41°C (106°F). The same New England Journal of Medicine report that the Board of Health cited, recommends that provision of air conditioning, “[in the immediate neighborhood or providing readily accessible transportation to public cooling shelters could help to reduce excess mortality during hot weather.](#)”

Almost all reports agree with Eric Klinenberg, whose post-mortem (Heat Wave: A Social Autopsy of Disaster in Chicago, 2002) assessed the tragedy as the “[literal and social isolation of seniors, the institutional abandonment of poor neighborhoods, and the retrenchment of public assistance programs – contributed to the high fatality rates.](#)” This was a combination of many, largely social issues. Many deaths in Chicago were the result of windows remaining sealed due to the fear of crime.

### **Air conditioning is not a solution**

Urban heat extremes are the result of two distinct phenomena: the Urban Heat Island effect and the global greenhouse effect. Ironically, the waste heat (expelled hot air outside the building) generated by air conditioning as well as the pollutants used to create air conditioning are contributors to the Urban Heat Island effect and global greenhouses. Increasing amounts of waste heat from air conditioning reduces the potential for natural cooling through passive architectural strategies.

In 2015, Larissa Larsen (Urban climate and adaptation strategies. Frontiers in Ecology and the Environment 13) wrote, “another negative consequence of our increasing reliance on mechanical cooling is the widespread potential for a heat emergency, given the potential for the electric grid to fail under stress as it did in the Northeast and Midwest US in August 2003. Stone (2012) has documented an increasing number of brownouts and blackouts over the past decade in the US, in part due to higher temperatures.”

In the same report, Larissa Larsen lists some common adaptation strategies. “Strategies to reduce elevated urban temperatures largely focus on mitigating the UHI effect. These include (1) using cool pavements (light-colored surfacing or permeable pavements); (2) relying on cool roofs (often categorized as “white”, “blue”, or “green” roof strategies to differentiate the approaches); (3) increasing vegetation abundance; and (4) reducing waste heat (Gartland 2008).”

### **Toronto’s apartment residents largely choose not to use air conditioners**

In most apartment buildings, residents are allowed to safely install and use window air condition units. This has been the normal practice for decades. However, the majority of residents have opted not to do so.

The June 29, 2015 Board of Health report summarizes the TPH and Tower Renewal “cool room” 2010 pilot project. A majority (59%) of the residents in the pilot building chose to not install air conditioners. Further, most residents without air conditioners did not use the cool room; many in this pilot preferred shaded outdoor areas, parks or air conditioned public facilities such as a shopping mall.

Again, most apartment residents have chosen to not install air conditioners, and in this pilot most did not utilize the onsite cool room.

### **Mandatory air conditioning at 26°C (78.8°F)**

Mandating mechanical air conditioning for temperatures above 26°C (78.8°F) in more than 300,000 purpose-built apartment units in Toronto would have profound negative environmental consequences, and severely strain the electrical systems within buildings, and the local grid.

Respectfully, this matter should be left as it is – with residents with the individual choice to use (or not use) window air conditioning units. The City should: focus on minimizing social isolation; provide warnings and educate vulnerable residents on how to stay healthy during prolonged heat events; open additional cooling centres in libraries and recreation centres to attract residents; create an urban heat island mitigation strategy.

Regards,



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