



---

Magda Havas, B.Sc., Ph.D.  
Environmental & Resource Studies  
TRENT UNIVERSITY, PETERBOROUGH, ONTARIO, CANADA, K9J 7B8  
**Phone:** (705) 748-1011 ext. 7882, **FAX:** (705) 748-1569, **e-mail** mhavas@trentu.ca

August 20, 2008,

**Re: "Safe" distance from Cell Phone and Broadcast Transmitters**

Mayor Young and Council of Langford,

It is my understanding that you want to know what the "safe" distances are from cell phone and broadcast transmitters. This is a difficult question to answer and depends on the height of towers, number and configuration of antennas, their signal strength, proximity to water, elevation of the surrounding land, as well as the presence of trees and metal structures that could either attenuate or enhance exposure. Also, some scientists believe that, similar to ionizing radiation, there is no "safe" exposure for microwave radiation.

However, if we put these concerns aside for the time being and attempt to estimate "safe" distance based on the best available science we come up with two values. For **cell phone transmitters** the distance beyond which no adverse health effects have been documented is approximately **400 metres**. For **broadcast antennas** the "safe" distance may be in the order of **3.5 to 4 km**.

These distances for cell phone antennas are based on studies from various countries including Germany (Naila Study 2004) and Israel (Wolf et al. 2004) for cancers as well as Spain (Santini et al. 2002) for electrical sensitivity. The values for broadcast antennas are based on studies for both adult and childhood leukemia in Australia (Hocking et al. 1996), UK (Dolk et al. 1997), and Italy (Michelozzi et al. 1998). The levels at which adverse health effects have been reported are orders of magnitude below the Canadian Safety Code 6 Guideline. These "effects" are not psychological as animals (dairy cattle, mice, birds) also respond adversely to the radiation from these antennas.

Based on the available science, placing antennas on high rise buildings, near schools and embedding them in residential communities is an unwise course of action.

Sincerely,  
-Magda Havas