Proposed Winnipeg (Radiocommunications) Antenna Systems Policy

Executive Policy Committee

20 May 2015

Academic and work experience

Margaret Friesen

- B.Sc. (Honours – Zoology)
- M.Sc. (Entomology/Toxicology)
- >30 years as a federal government research biologist
- > 2 years, scientific literature on wireless radiation (electromagnetic fields – EMFs) >5,000 references
- 1 week looking at protocols/policies across Canada
- all voluntary

Proposed policy is based on Antenna System Siting Protocol Template CWTA/FCM

Canadian Wireless Telecommunication Association and Federation of Community Municipalities

- Purpose: provide Municipalities with a tool to develop customized protocols
- Replaces the city's previous protocol of 2010

Radiocommunications Antennas across from Pan Am Clinic



ALARA

Not opposed to this technology – very beneficial in our modern society

Want to ensure it is as safe as possible in light of the scientific evidence.

Goal should be

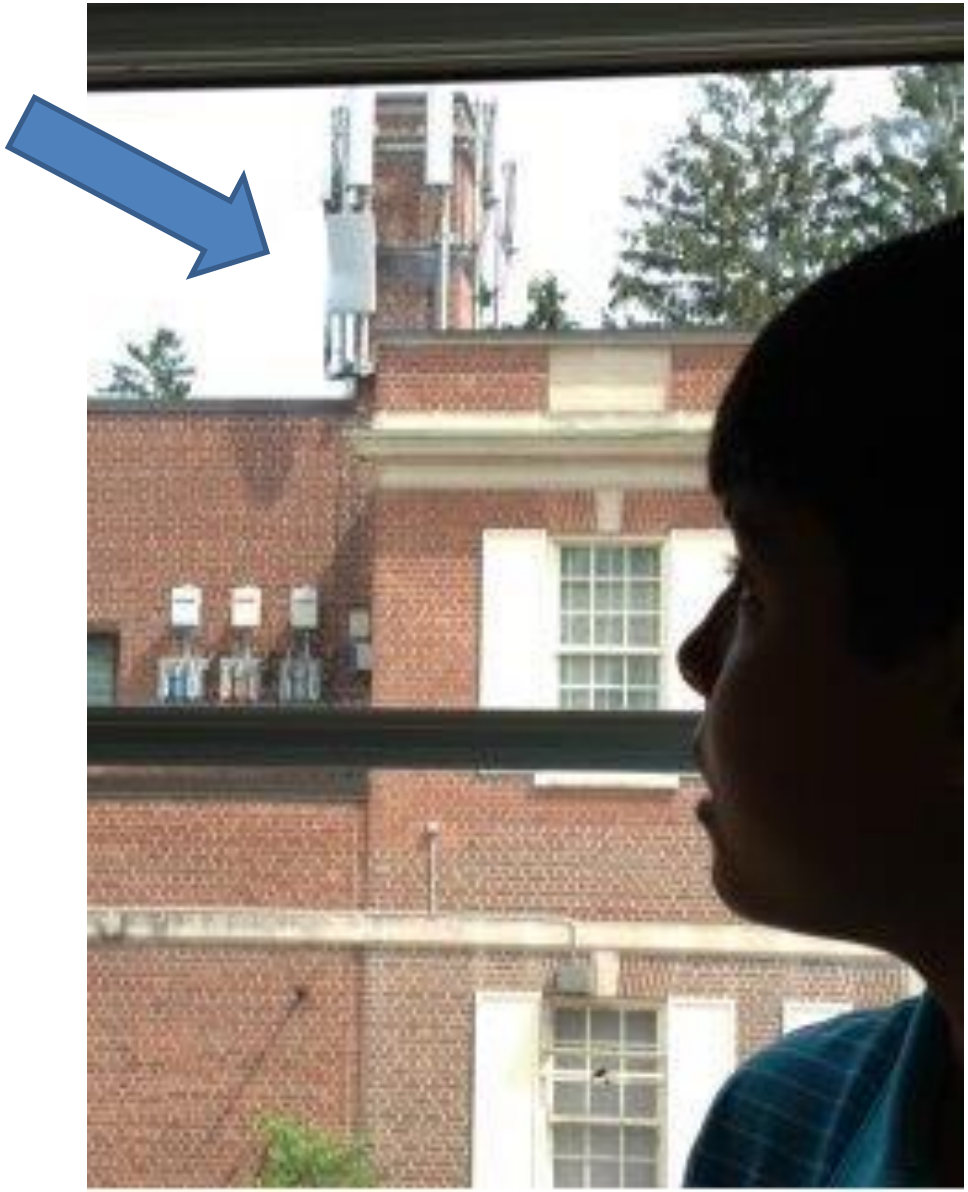
ALARA

As Low as Reasonably Achievable.

City's Challenge

People want this technology. But there is strong scientific evidence of harm to human health at well below current safety guidelines.

People also want to drive fast. But there are speed limits which are in place for public safety and that are further reduced in school zones for special protection of children.



Mathew cell tower, Ontario
– 3 metres (20 feet) from this child's bedroom

This should not be happening.

Overview

1. Jurisdictions: Federal, Provincial, Municipal
2. Safety Code 6 – Parliamentary Standing Committee on Health (HESA) has just completed 3 sessions.
3. “Best practices” from other municipalities
4. Other: CRINS, Lloyd’s London, Property values
5. Proposed policy should be sent back for a rewrite – with objective of maximizing notification and protective measures for the people of Winnipeg

1. Jurisdictions

Federal

Federal

- Industry Canada has final say in approvals and locations of antenna
- It as adopted Health Canada's Safety Code 6 as its standard for “safe exposures”

Provincial

Provincial – no legal jurisdiction but the health care system must bear the costs of illness relating to wireless radiation exposure.

Toronto's specialized Environmental Health clinic is seeing 2-3 new patients per week. Dr. Bray, Medical Director, gave testimony at the HESA hearings.

Municipality

The City of Winnipeg is limited in what it can do but there are a number of ways to maximize its limited influence.

The next few slides will explain why this is important.

2. Safety Code 6

Safety Code 6

Health Canada's guidelines
for "safe" wireless radiation exposure
in 3kHz to 300 GHz range (includes Wi-Fi)

Industry Canada has adopted
Health Canada's Safety Code 6 guidelines for the purpose of protecting the general public.

Safety Code 6

Applies only to workers and visitors to Federally regulated sites.

It does not have the force of law or legislation;

other jurisdictions can opt to adopt Safety Code 6.

For example: Provinces, municipalities and school boards are not legally bound to follow Safety Code 6.

Toronto has safety limits 100x safer than Safety Code 6.

However in the case of antennas, the federal Radiocommunications Act overrides municipal wishes.

Safety Code 6 is not protective

- >50 Canadians MDs supported by >50 international scientists- Letter to Minister of Health (July 2014)

- Canadian Medical Association Journal (May 7, 2015):
- *"Scientists decry Canada's outdated Wi-Fi safety rules"*
- Dr. Hardell is quoted as saying these guidelines are
- *"a disaster to public health"*

- 190 scientists from 39 countries made an appeal to the United Nations to protect humans and wildlife from wireless technology saying some current international guidelines are not protective enough (May 12, 2015)

Frank Clegg – an Industry guy
Former President of Microsoft Canada



CEO of non-profit Canadians for Safe Technology (C4ST)

"A proper evaluation would clearly show that Health Canada is not taking the appropriate action to safeguard the health of Canadians"

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Wireless radiation: an emerging public health issue

Politicians taking leadership:
House of Commons:
Private Members Bill
Labelling of wireless devices e.g.
Cell phones, baby monitors, Wi-Fi routers

Introduced by Terence Young (PC)
Seconded by Libby Davies (NDP Health Critic) and with support from members of the Liberal Party and Green Party

… others…
Thalidomide,
Fetal alcohol syndrome (FAS).

Children absorb more radiation than adults



Courtesy Om P. Gandhi and Green America

3x some parts of the brain

10x bone marrow of the skull

700 MHz bandwidth has just been sold. Can penetrate concrete walls

Safety Code 6

Massive failure of Health Canada to revise Safety Code 6 based on the latest science showing harm- and failure to consult with medical specialists and active researchers in the field

May be corrected after recent HESA hearings: March 24, April 23, 28, 2015

Safety Code 6 is not protective

Strong scientific evidence that adverse health effects occur well below Safety Code 6:

Strongest evidence:

cancer and sperm abnormalities/DNA damage

Also many other conditions – our body cells communicate using electrical signals

e.g. heart, brain.

Transcripts of HESA hearings: http://www.c4st.org/HESA2015

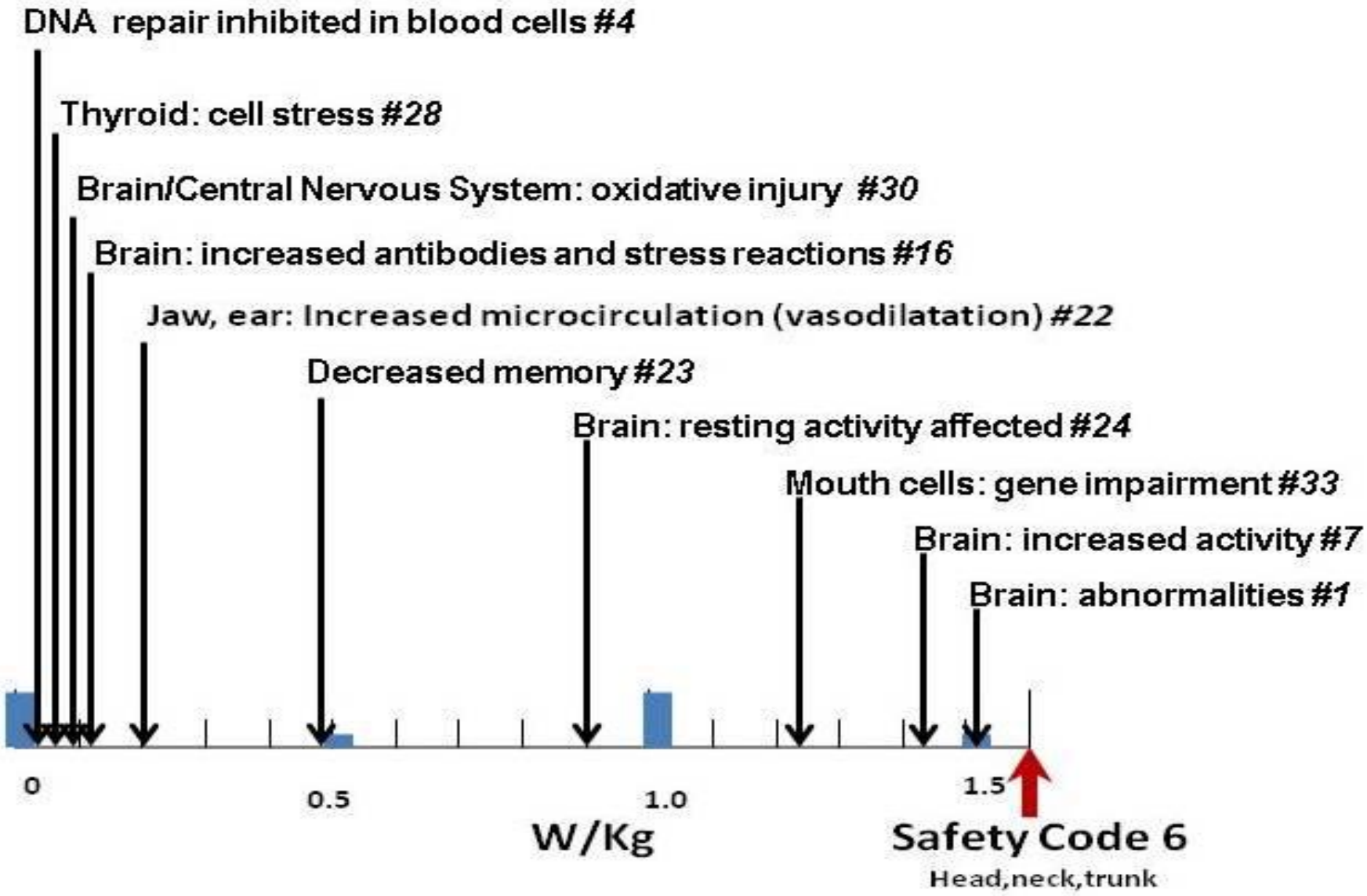
Wireless radiation < Safety Code 6

Possible carcinogen – World Health Organization (2011)

Probable carcinogen – Canadian epidemiologist Dr. Anthony Miller (2014)

Known carcinogen (along with asbestos and cigarette smoke) – Dr. Hardell MD, brain cancer researcher (2014)

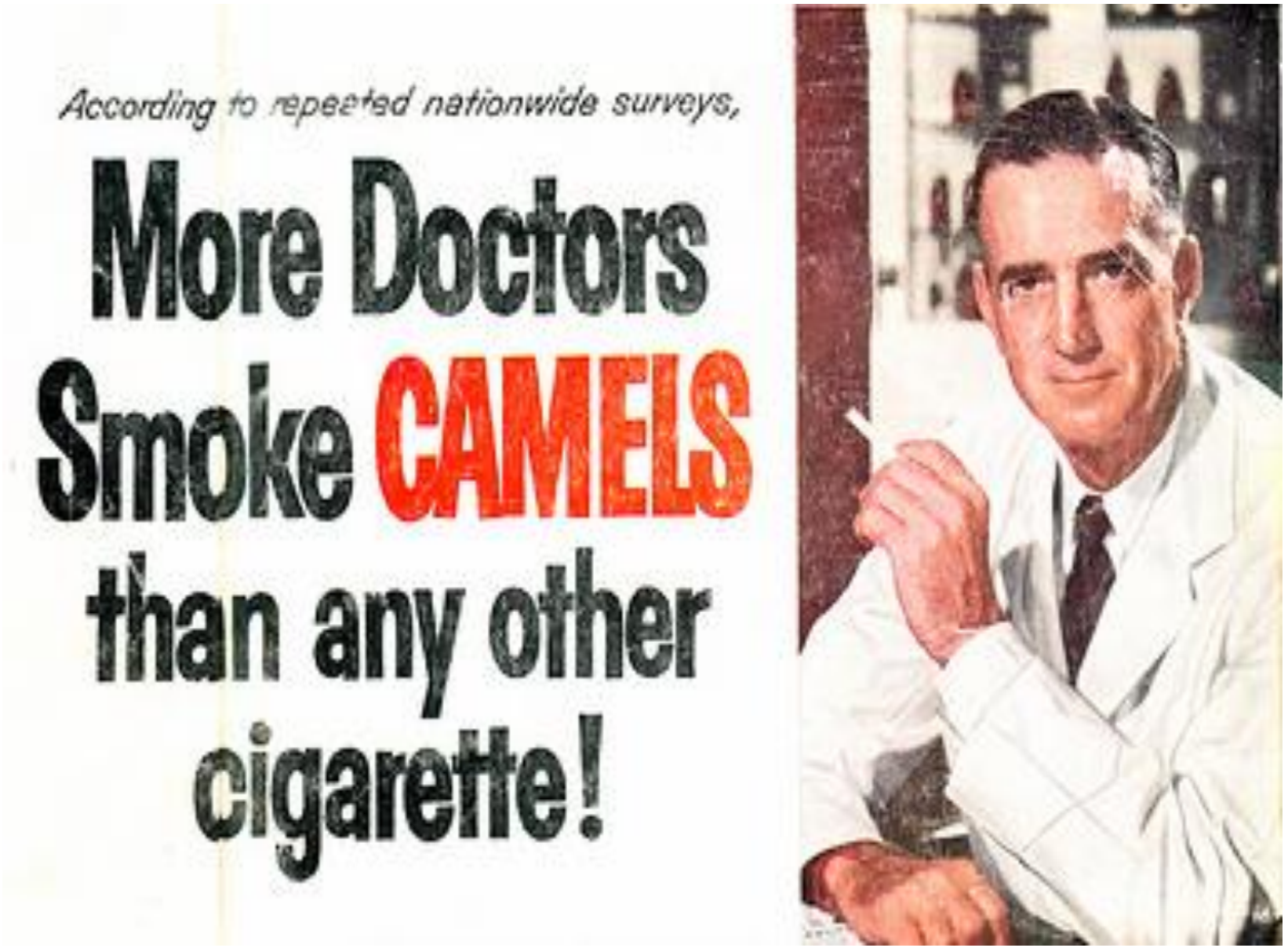
Biological effects < Safety Code 6



Biological effects near antennas

Literature reviewed by Levitt and Lai (2010). *Biological effects from exposure to electromagnetic radiation emitted by cell tower base stations and other antenna arrays.* Environmental Reviews. 18. 369-395.

Also more recent studies.


According to repeated nationwide surveys,
More Doctors
Smoke CAMELS
than any other
cigarette!

3. Best practices

Best practices for whom?

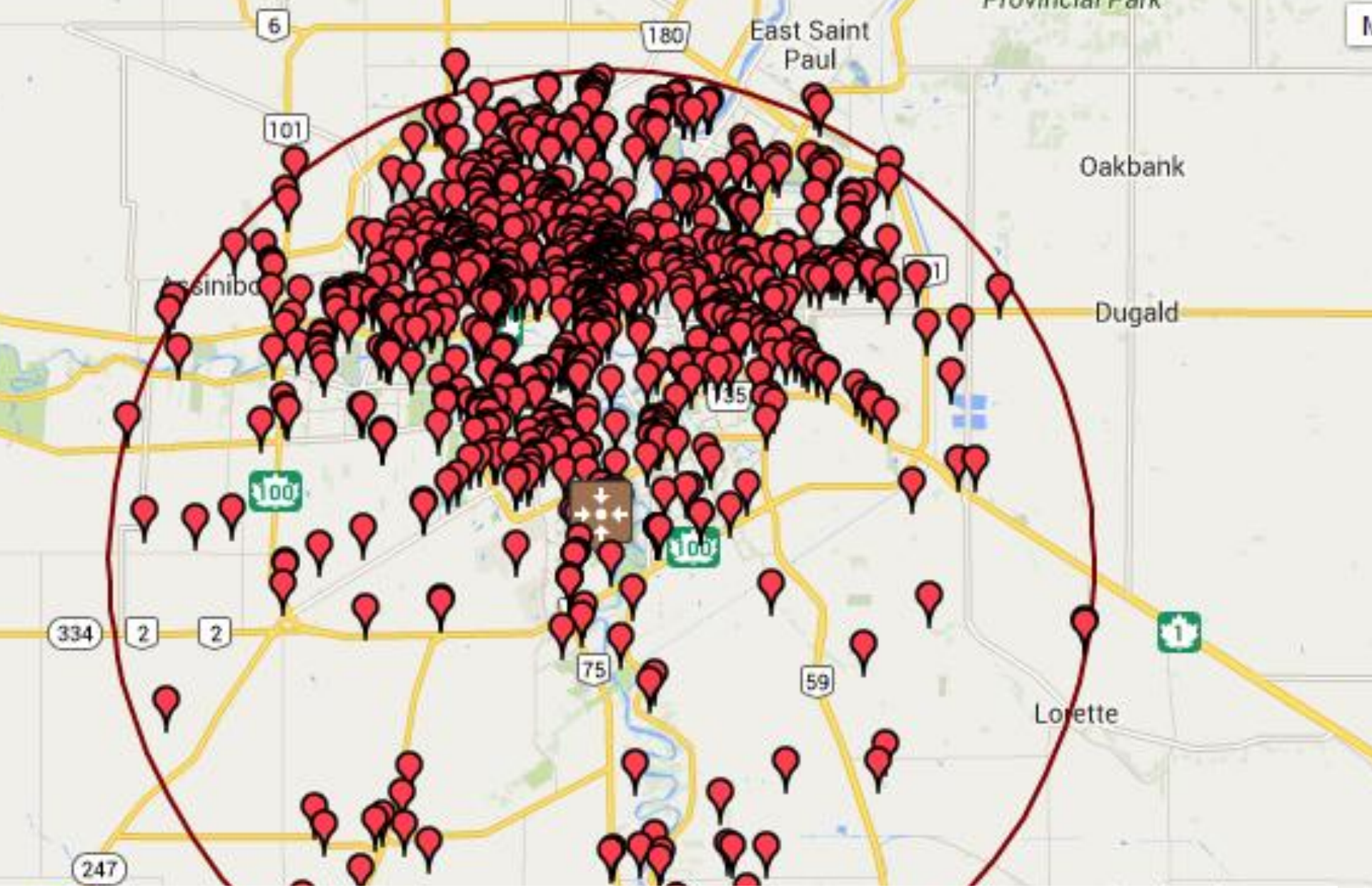
The main stakeholders – people of Winnipeg* – have not been consulted

•must live with the constant exposure of a ***"possible/probable/known"*** carcinogen and other potential health risks (as heard in recent testimony to HESA.

HESA transcripts: http://www.c4st.org/HESA2015

Over 30 current siting conflicts in Canada





Some Radiocommunications antennas in Winnipeg



Hotspots of signals: Salt Lake City (modelled by Torrens 2008)

It is about health

- La du Bonnet, Manitoba
- Wildwood Community Centre, Winnipeg
- Nova Scotia – Bell Aliant being sued by Edna and Marshall Pettipas, harm and suffering (breast cancer, heart problems)
- West Vancouver Council voted not to endorse Rogers' application to install 3 cell towers along a highway
- City of Chateauguay – Supreme Court of Quebec
- *"Municipalities get say on cell tower placement"*
- (The Lawyer's Weekly July 18, 2014)

It is about health

- 30 cell tower/antenna conflicts across Canada, many others resolved
- –we can learn from them
- Toronto, Dec. 18, 2013:
  - Toronto's *Prudent Avoidance Policy* (100 times safer than SC6) was upheld and put in the contract terms accepted by Rogers Communications for antenna on Toronto city property
  - Motion for free Wi-Fi in city parks and public places was defeated
  - Council passed a resolution to "encourage Health Canada to actively review health evidence ….. and to revise Safety Code 6 to meet international best practices."

It is about health

Other Policies/Protocols: from C4ST website or Town or City site. Lac du Bonnet and Colwood provided by residents

1. **City of Colwood, BC:** Devices that exceed Colwood's power output and power density maximums are discouraged from being on existing structures
2. **R.M. of Lac du Bonnet, MB**: "the ratepayers have concerns regarding health and safety… council is insisting that Telus Communications Inc. use the distance of 1.6 km from any dwellings…"

It is about health

3. Municipality of Lambton Shores, ON: "be it resolved that the council… petitions the Government of Canada to employ the Precautionary Principle in addressing health concerns around the siting of towers by:

… recommending to cellular providers … nationwide plan to relocate all cellular towers that are within 200 m of … daycares…

***4.* Langley, B.C.**: notice in writing… 6x the tower height

It is about health

6**. Town of Milton, ON:** letter of non-concurrence to Industry Canada from the planning and development department: “Although the town does not have the jurisdiction to address health matters relating to the proposal… a significant number of residents provided their concerns ..on the health … those who live nearby and attend daycare.”

7. **City of Mississauga, ON:** Resolution passed 18 January 2012, “Notification to citizens by registered mail”; Recommendation by Commissioner of Planning (23February2012): “Situations may arise where the city may want a peer review by a specialist or consultant, such as a radio frequency engineer…”

It is about health

8. Oakville, ON: Siting on town-owned land- Any request to install a Radiocommunications facility on lands owned by the Town shall be made … and subject to Council Approval

9. City of Toronto, ON: Site Selection- ..maximizing distance from Neighbourhoods and apartment neighbourhoods; maximizing distance from Centres; avoiding sites containing sites within Parks and Open spaces …; Procedure for Public consultation – Upon receipt of an application… city staff will consult with the Local Ward councillor to determine if it is necessary to expand the notification area"

4. Other

Canadian Radiocommunications Information and Notification Service (CRINS)

A free-to-the city service out of Ontario.

Has been engaged by >200 municipalities across Canada including Guelph (recommended by city staff), Fredericton and Brandon (pleased with the service they have received)

Todd White, P. Eng. Is willing to present before the Property and Development Committee and City staff

Lloyd's of London

- Will not insure cell phone companies or any wireless device. Liability may fall on the landowner.
- Or Wi-Fi in schools

http://thebridgenewsservice.com/2015/02/26/school-boards-left-on-the-hook-for-wi-fi-injuries/

Property Values - Lawsuits

Re. property values. As the property base reduces, the tax base is eroded so the city ends up with less. Lawsuits are starting in the US and some are in the planning phases in Canada.

http://emfsafetynetwork.org/jury-awards-vermont-couple-1million-in-cell-tower-lawsuit/

https://sites.google.com/site/nocelltowerinourneighborhood/home/decreased-real-estate-value

http://electromagnetichealth.org/electromagnetic-health-blog/survey-property-desirability/

http://www.realtor.org/field-guides/field-guide-to-cell-phone-towers

5. Needs a rewrite

The City is the voice for Winnipeggers' health concerns

- Footnote 2, page 3: "The City does not assess any submission for an Antenna System with respect to health and radiofrequency exposure issues …"
- Why is the City tying its own hands in this matter ?
- **THIS STATEMENT SHOULD BE REMOVED.**
- Nothing in the Radiocommunications Act or CPC2-0-03 says that a municipality shall not consider submissions with health concerns
- Other municipalities and their municipal officials have been strong advocates to Industry Canada and Health Canada for health concerns expressed by their citizens.
- **No policy/protocol that I looked at had a similar statement.**

Put back in

Ecologically significant natural lands
=*sensitive lands* in the City Winnipeg Charter Act
****REMOVED AND SHOULD BE PUT BACK IN****
A number of studies show wildlife is affected by radiofrequency radiation:
<u>European robin study:</u> particularly solid study showing this specie's navigation abilities are disturbed by ambient radiofrequency exposure (Nature 2014)
Also studies showing behavioural disturbances in honey bees, ants, frogs and other wildlife (Balmori 2009, Friesen 2014).

Additional suggestions

1. Title: insert **Radiocommunications** before Antenna
   (is under the Radiocommunications Act)
1. Post notice of applications on the City of Winnipeg and Councillor's website
3. Investigate using power output of antennas to establish prescribed distance for notification

Leadership with Foresight

Wireless radiation exposure: distance is our friend.

Maximize distances:

for daycares, elementary schools, hospitals and for those with electromagnetic hypersensitivity.

<u>Guiding principles:</u>

Precautionary Principle

– err on the side of caution

Strive for ALARA

– As Low as Reasonably Achievable

Leadership with Foresight

- I began by mentioning that we have speed limits even though many people want to drive faster.
- We need some traffic control principles applied here to control the now almost unfettered deployment of this odourless, invisible pollutant.
- The City has policies and regulations in place for other environmental pollutants and similar measures are needed here.
- Also needed are "white or quiet zones" with low wireless radiation where people who are adversely affected can go for respite.

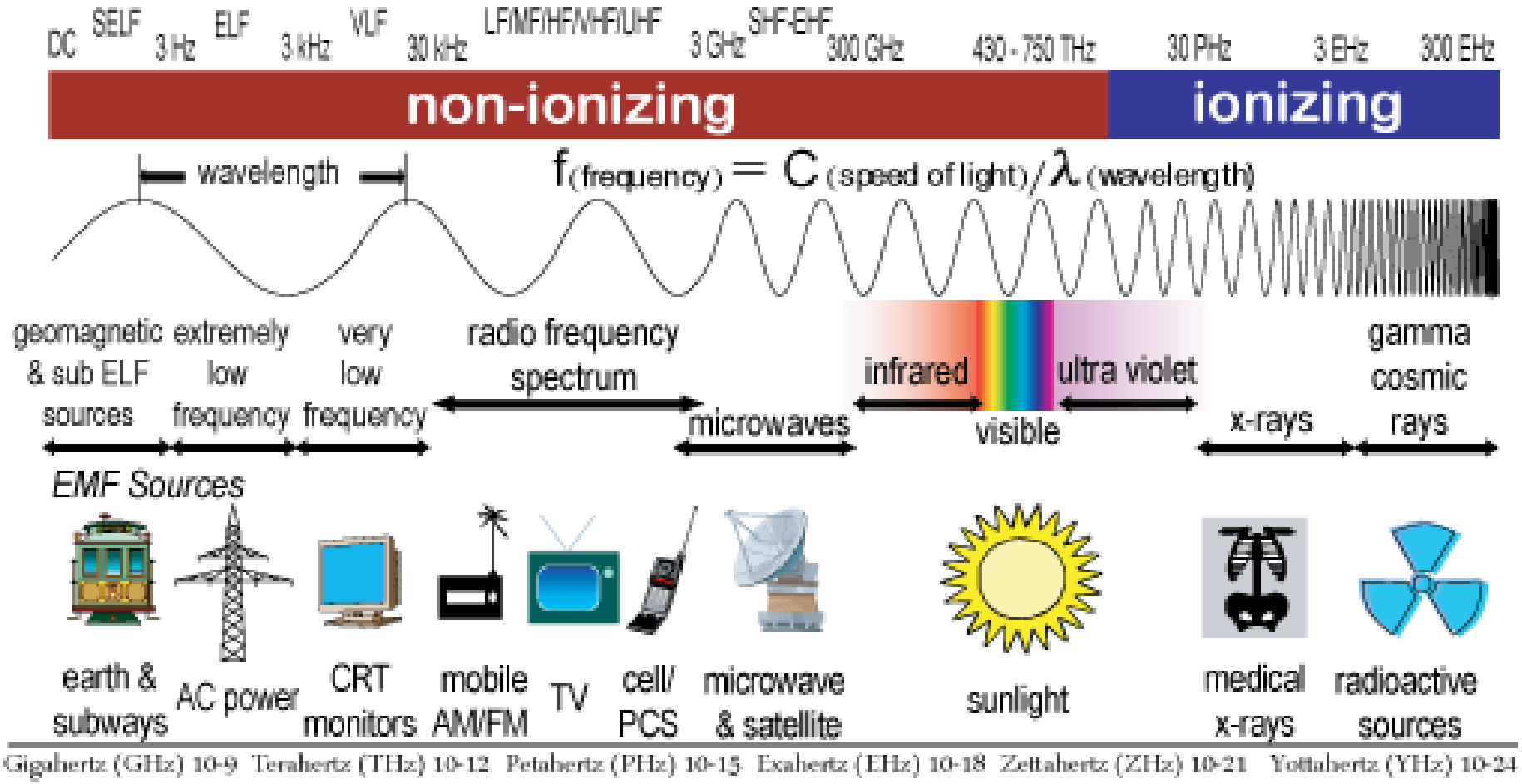
Proposed policy needs further revision

- The proposed policy should be sent back for a revision– with the primary objective of maximizing measures for the benefit of people of Winnipeg, the most important stakeholders.

End of Presentation

Thank you

THE ELECTROMAGNETIC SPECTRUM



Gigahertz (GHz) 10-9 Terahertz (THz) 10-12 Petahertz (PHz) 10-15 Exahertz (EHz) 10-18 Zettahertz (ZHz) 10-21 Yottahertz (YHz) 10-24