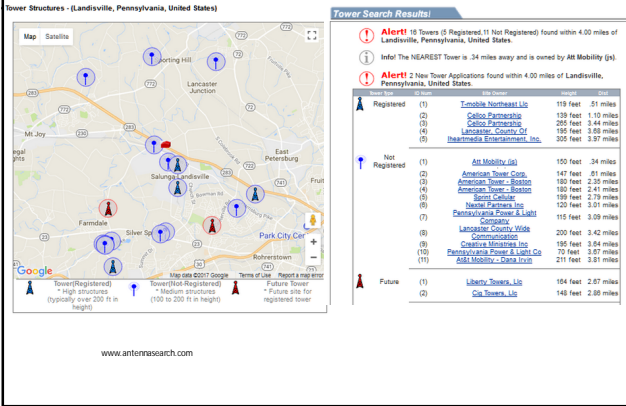
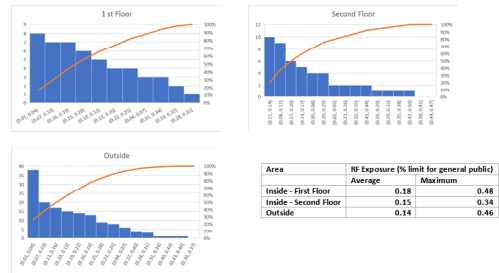


## Communications towers are commonplace

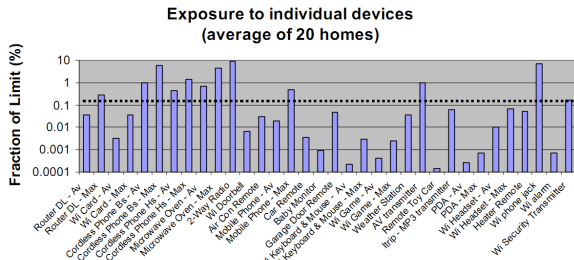


## RF Fields in and surrounding the schools will be far below US exposure limits

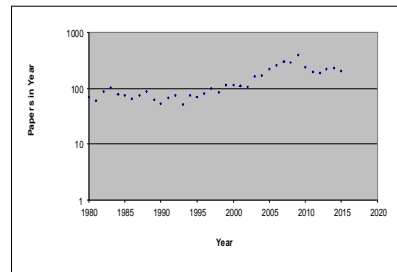


Landisville Middle School Measurements  
Dugan 9/28/17

## RF exposure at school will be comparable to those encountered in everyday life



## Thousands of studies on bioeffects, health and safety of RF energy



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## Peer Reviewed Publications -- RF

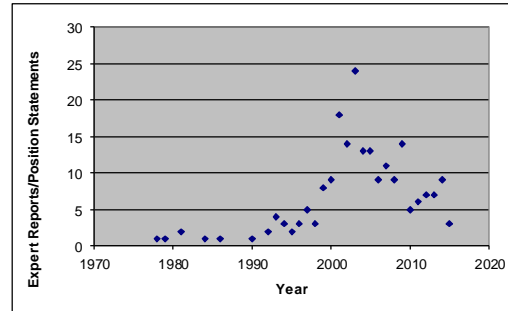
Study Type	Published
Epidemiology	521
Human	413
Animal/In Vivo	1245
In Vitro	576
Other/Misc	672
<b>Total</b>	<b>3247</b>

<http://ieee-emf.com/> (04/16)

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## Expert reviews under official auspices



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## A Typical Conclusion

2012 HPA (UK) "Health Effects from Radiofrequency Electromagnetic Fields. Report of the Independent Advisory Group on Non-ionising Radiation"

"...In summary, although a substantial amount of research has been conducted in this area, **there is no convincing evidence that RF field exposure below guideline levels causes health effects in adults or children.**"

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2012 Expert Committee appointed by the Norwegian Institute of Health, commissioned by the Ministry of Health and Care Services and the Ministry of Transport and Communications :

"The knowledge base in this health risk assessment provides **no reason to assert that adverse health effects will occur from the typical public exposure.**

...

"**Exposure from base stations and radio and television transmitters is significantly lower than from using a mobile phone and the available data do not suggest that such low exposure could increase the risk of cancer.**"

...

"**There is negligible uncertainty in the risk assessment associated with other sources, such as base stations, wireless networks, television transmitters and the use of mobile phones by other individuals.**"

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Swedish Radiation Protection Authority (2015)

**"In line with previous studies, new studies on adult and childhood cancer with improved exposure assessment do not indicate any health risks for the general public related to exposure from radiofrequency electromagnetic fields from far-field sources, such as base stations and radio and TV transmitters. There is no new evidence indicating a causal link to exposure from far-field sources such as mobile phone base stations or wireless local data networks in schools or at home."**

### Evaluations of International Expert Group Reports on the Biological Effects of Radiofrequency Fields

Luc Verschaeve  
Scientific Institute of Public Health and University of Antwerp, Belgium

- Evaluated 33 expert reviews of which these are some of the most important

Study	Subject	Expert group	Method	Quality	Score
ICNIRP, 2009	RF- Epidemiology, animals & in vitro studies	+++	++	++++	10
SCENIHR, 2009	RF-ELF-IF-Static fields ; Epidemiology, in vitro & in vivo studies	+++	++	++++	10
Dutch Health Council (2009)	RF- Epidemiology and experimental human studies	+++	++	++++	10
SSI (IEG), 2009	RF - Epidemiology and in vitro & in vivo studies	++	+	++++	8
EFRAN, 2010	RF - Epidemiology and in vitro & in vivo studies	++	++	++++	9
EDUMED, Latin American Expert Group, 2010	RF- epidemiology, experimental human, in vitro & in vivo studies	+	++	++++	8
BIOINITIATIVE, 2007/2010	RF-ELF- epidemiology, experimental human, in vitro & in vivo studies	+	+	+	3
AFSSET, 2010	RF- especially blood-brain barrier, epidemiology and psychosocial and cultural aspects	+++	++	++++	9
IARC, 2011	RF- studies on cancer and cancer related aspects (epidemiology, in vitro & in vivo studies)	+++	++	++++	10

Table 4. Evaluation of a number of important expert Group reports based on well defined criteria (cf. Table 3).

### Exception to the "Vast Majority"

Health Council of the Netherlands  
The Minister of Housing, Spatial Planning and the Environment (VROM) (2008)



**"The BioInitiative report is not an objective and balanced reflection of the current state of scientific knowledge. Therefore, the report does not provide any grounds for revising the current views as to the risks of exposure to electromagnetic fields."**

### Conclusions

- RF exposure levels in and near the schools are a very tiny fraction of US and international exposure limits
- There is a very broad consensus among major health agencies that
  - no hazard has been shown from RF exposures below international (IEEE) and US (FCC) limits
  - There has been no observable change in agency views caused by the IARC 2B classification in 2011
  - Agencies agree that "more research is needed" -- mostly with respect to mobile phones (not base stations)
- Some level of public controversy  
My recommendation is that the School Board accept these expert group statements as indicating consensus of the scientific community and the best available advice concerning the (lack of demonstrable or foreseeable) health hazards from the base stations.