

# Health Canada and Wind Turbines: Too little too late?

CMAJ • November 28, 2014 • 37 Comments



[\[https://i0.wp.com/cmajblogs.com/wp-content/uploads/2014/11/wind-turbines.jpg\]](https://i0.wp.com/cmajblogs.com/wp-content/uploads/2014/11/wind-turbines.jpg) **Carmen Krogh**, BScPharm (retired), is a peer reviewed IWT *health researcher* and former *Director of Publications* and *Editor-in-Chief* of the CPS.

**R Y McMurtry** is *Professor Emeritus* (Surgery) of Western University (formerly University of Western Ontario). Dr. McMurtry was also an *ADM* at Health Canada 2000-02

Industrial wind turbines (IWTs) are being erected at rapid pace around the world. Coinciding with the introduction of IWTs, some individuals living in proximity to IWTs report adverse health effects including annoyance, sleep disturbance, stress-related health impacts and reduced quality of life. [i] [#\_edn1] , [ii] [#\_edn2] , [iii] [#\_edn3] , [iv] [#\_edn4] , [v] [#\_edn5] , [vi] [#\_edn6] , [vii] [#\_edn7] , [viii] [#\_edn8] , [ix] [#\_edn9] , [x] [#\_edn10] , [xi] [#\_edn11] , [xii] [#\_edn12] In some cases Canadian families reporting adverse health effects have abandoned their homes, been billeted away from their homes or hired legal counsel to successfully reach a financial agreement with the wind energy developer. [xiii] [#\_edn13]

To help address public concern over these health effects Health Canada (HC) announced the *Health Canada Wind Turbine Noise and Health Study* [[http://www.hc-sc.gc.ca/ewh-semt/alt\\_formats/pdf/noise-bruit/turbine-eoliennes/pamphlet-brochure-eng.pdf](http://www.hc-sc.gc.ca/ewh-semt/alt_formats/pdf/noise-bruit/turbine-eoliennes/pamphlet-brochure-eng.pdf)] (HC Study) 2 years ago and brought forth preliminary results November 6, 2014.

Here we briefly comment on the HC Study results and provide some historical context.

Acknowledgement of IWT adverse health effects is not new. The term “annoyance” frequently appears when discussing IWT health effects.

In a 2009 letter the Honourable Rona Ambrose, disclosed:

“Health Canada provides advice on the health effect of noise and low-frequency electric and magnetic fields from proposed wind turbine projects...To date, their examination of the scientific literature on wind turbine noise is that the only health effect conclusively demonstrated from exposure to wind turbine noise is an increase of self-reported general annoyance and complaints (i.e., headaches, nausea, tinnitus, vertigo).” [xiv] [#\_edn14]

In 2009, the Canadian Wind Energy Association ([CanWEA \[http://canwea.ca/\]](http://canwea.ca/) ) sponsored a literature review which acknowledges the reported symptoms such as headaches, nausea, tinnitus, vertigo and state they “... are not new and have been published previously in the context of “annoyance”...” and are the “... well-known stress effects of exposure to noise ...”[xv] [#\_edn15]

In 2011, a health survey of people exposed to IWTs in Ontario reported altered quality of life, sleep disturbance, excessive tiredness, headaches, stress and distress. [xvi] [#\_edn16]

In the same year, CanWEA posted a media release which advised those impacted by wind turbine annoyance stating “The association has always acknowledged that a small percentage of people can be annoyed by wind turbines in their vicinity. ... When annoyance has a significant impact on an individual's quality of life, it is important that they consult their doctor.”[xvii] [#\_edn17]

It turns out it’s not a small percentage of people annoyed by wind turbines. An Ontario Government report concluded a non-trivial percentage of persons are expected to be highly annoyed.

The December 2011 report prepared by a member of CanWEA for the Ontario Ministry of Environment states in the conclusions:

“The audible sound from wind turbines, at the levels experienced at typical receptor distances in Ontario, is nonetheless expected to result in a non-trivial percentage of persons being highly annoyed. As with sounds from many sources, research has shown that

annoyance associated with sound from wind turbines can be expected to contribute to stress related health impacts in some persons.”[\[xviii\]](#) [\[#\\_edn18\]](#)

The World Health Organization (WHO) acknowledges noise induced annoyance to be a health effect [\[xix\]](#) [\[#\\_edn19\]](#) and the results of WHO research “...confirmed, on an epidemiological level, an increased health risk from chronic noise annoyance...”[\[xx\]](#) [\[#\\_edn20\]](#)

HC also acknowledges noise induced annoyance to be an adverse health effect. [\[xxi\]](#) [\[#\\_edn21\]](#) ,[\[xxii\]](#) [\[#\\_edn22\]](#) The Principal Investigator of the recent HC Study also states “noise-induced annoyance is an adverse health effect”. [\[xxiii\]](#) [\[#\\_edn23\]](#)

Canadian Government sponsored research has found statistically significant relationships from IWT noise exposure.

A 2014 review article in the *Canadian Journal of Rural Medicine* reports:

“In 2013, research funded by the Ontario Ministry of the Environment indicated a statistically significant relation between residents’ distance from the turbine and the symptoms of disturbed sleep, vertigo and tinnitus, and recommended that future research focus on the effects of wind turbine noise on sleep disturbance and symptoms of inner ear problems.” [\[xxiv\]](#) [\[#\\_edn24\]](#)

Recently on November 6, 2014, HC posted on its website preliminary results of its HC Study[\[xxv\]](#) [\[#\\_edn25\]](#) . Wind turbine noise “... annoyance was found to be statistically related to several self-reporting health effects including, but not limited to, blood pressure, migraines, tinnitus, dizziness, scores on the PSQI, and perceived stress” as well as related to “measured hair cortisol, systolic and diastolic blood pressure.”

These troubling results come as no surprise. Since at least 2007 HC employees including the Principal Investigator of the HC Study recommended wind turbine noise criteria which they predict will result in adverse health effects. (i.e. result in an increase percentage highly annoyed).[\[xxvi\]](#) [\[#\\_edn26\]](#) ,[\[xxvii\]](#) [\[#\\_edn27\]](#) ,[\[xxviii\]](#) [\[#\\_edn28\]](#)

Then turbines were built and HC spent 2.1 million dollars to find out it appears to have under predicted the impact of IWT noise. HC’s IWT noise criteria does not use a dose

response based on IWT noise but rather road noise. But of course IWTs are not cars and peer-reviewed studies consistently document that IWTs produce sound that is perceived to be more annoying than transportation or industrial noise at comparable sound pressure levels. [xxix] [#\_edn29] , [xxx] [#\_edn30]

IWT noise annoyance starts at dBA sound pressure levels in the low 30s and rises sharply at 35 dBA as compared to road noise which starts at 55 dBA. These findings are further supported by the HC Study's preliminary results. [xxxi] [#\_edn31]

IWT noise characteristics that are identified as plausible causes for reported health effects include amplitude modulation, audible low- frequency noise (LFN), infrasound, tonal noise, impulse noise and night-time noise. [xxxii] [#\_edn32]

The logical solution would be to develop IWT noise criteria which will protect human health but that would present a barrier to wind energy development. Noise limits impacts IWT siting, cost of energy produced [xxxiii] [#\_edn33] and by extension corporate profits. The wind energy industry has actively lobbied governments to be granted IWT noise exposure limits which benefit their industry.

Canadians trying to understand this should be mindful the Government of Canada has invested and distributed significant amounts of public money to attract and support the wind energy industry. [xxxiv] [#\_edn34] , [xxxv] [#\_edn35] , [xxxvi] [#\_edn36] , [xxxvii] [#\_edn37] , [xxxviii] [#\_edn38] , [xxxix] [#\_edn39] , [xl] [#\_edn40] , [xli] [#\_edn41] In addition to providing funding, the Government of Canada in collaboration with wind industry stakeholders has developed the Wind Technology Road Map (Wind TRM) [xlii] [#\_edn42] which Natural Resources Canada defined to be an "...industry-led, government supported initiative that has developed a long-term vision for the Canadian wind energy industry ...". [xliii] [#\_edn43]

Canada's Wind TRM states "Members of the Steering Committee, government and our industry will be using this roadmap to direct the actions that are necessary for Canada to develop its vast wind resources." [xliv] [#\_edn44] HC is a member of the Interdepartmental Wind Technology Road Map Committee [xlv] [#\_edn45] which was created to assist in the implementation of Canada's Wind TRM. [xlvi] [#\_edn46] One of the "key action items" detailed in the Wind TRM calls for Government and Industry collaboration to develop and

maintain government documents that address concerns raised about wind energy projects including that of noise, infrasound and other. [xlvii] [#\_edn47]

Some jurisdictions are trying to take action to protect their residents. For example, several municipalities in Ontario are trying to establish bylaws that protect from IWT noise. In Wisconsin, on October 14, 2014 the Brown County Board of Health unanimously approved a motion to declare the IWTs at a local project a Human Health Hazard. [xlviii] [#\_edn48]

It would appear HC's research effort is too little too late. A non-trivial percentage of Canadians continue to experience adverse health effects. HC now has additional scientific evidence of the "conclusively demonstrated" effects from exposure to IWT noise. It is time for HC to take action to help Canadians maintain and improve their health.

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### 37 thoughts on “Health Canada and Wind Turbines: Too little too late?”



**B Ashbee**

November 28, 2014 at 3:11 pm

It was heartbreaking to a lot of the people suffering when the Health Canada summary was posted implying there was no connection between wind turbine projects and impaired health. The impact and upset of these projects have been vigorously expressed by those living in rural turbine zone communities for years. Independent research and testimony from those impacted are widespread in Canada and internationally. The second most heartbreaking thing is that many of us have lost all faith and trust in both levels of government by authorities who appear to have deemed our lives as not worthy of the safety and humanity that other residents receive.

I cannot understand it.



**Tracy Whitworth (@Phoebe\_Irene)**

November 29, 2014 at 6:54 am

What the Green Energy Act has done to the people of Ontario is criminal.

What happened to "due diligence"? Our Constitution has as much as been thrown out the window. Shame on our government. Shame on the people of Ontario. The disrespect shown for those who went to war for our country is unacceptable.

It's time Ontarians shed the cloak of ignorance and entitlement and developed a respectable set of values.

Nothing is for free. In the end, we all pay. Those responsible and associated with this act of criminal negligence will be held accountable. The truth will prevail.

Tracy Whitworth



Lorrie Gillis

November 29, 2014 at 8:15 am

After the first round of industrial wind turbines and the accompanying transformer stations went up in rural Ontario, a group of us asked to hear from people (in proximity to the installations) who thought they might be experiencing difficulty. All we had to do was ask. I received a stream of written reports and phone calls weekly, sometimes daily, from people who were suffering terribly with the advent of turbines starting up nearby. Some had been marginalized for speaking up, some still struggled to believe it could be happening to them; that government agencies surely would not have left them in this position. Some sought relief by leaving beloved homes in order to regain health. Some are trapped (often due to financial constraints) with health continuing to fail.

Many who find out a turbine project is slated nearby become aware of the health problems but tell themselves they will be fine because they are strong and healthy.

We will see the start up of several more turbines this December (2014) and I expect there will be another rash of people who find themselves in homes too toxic to live in anymore.

Health Canada could easily have done before and after sampling in any number of areas where turbines are being built and still could since more turbines continue to be approved for erection in this province. It appears that the energy policy overrides the safety and well being of rural residents in this matter. I think that is reflected in statements from Health Canada about industrial wind turbines that are not far from product promotion



Shellie Correia

November 29, 2014 at 10:05 am

I am sorry to say, that the Government has committed a great injustice to the citizens suffering from the effects of the wind turbines far too close to their homes. Had we conducted a study on cigarettes, the same way their study was done on wind turbines, we would have come up with the same erroneous conclusion. No DIRECT health effects.

I have been fighting the Gov't for over 2 years, to acknowledge the harm they will cause my special needs son, if they allow huge industrial wind turbines to be erected surrounding our home, the closest at 550m from our

home. They simply ignore the facts, and after passing me on from Ministry to Ministry, they stop responding, altogether. Completely negligent, on their part.

My son suffers from severe sensory processing issues. The noise emitted from the wind turbines would be very harmful to my son, and all others like him. That is a fact that has already been proven, but, instead of dealing with the situation, they choose to ignore the truth! The government and the wind industry, know that what they are doing is very harmful to a non-trivial percentage of the population. The tragedy is, that in order to avoid accountability, they ignore the issues entirely. That is disgraceful. I will never stop fighting this injustice, on behalf of my son, and all the others suffering needlessly at the hands of our own governments.

People pushing these wind turbines are using the Health Canada Study as a way to justify their irresponsible handling of this situation. This needs to be stopped.....immediately!



Shellie Correia

November 29, 2014 at 10:22 am

I am greatly disappointed in the results of the Health Canada Study, and the way the entire study was handled. It was obviously conducted in a way, that it would benefit the wind industry, and not protect the innocent people suffering from these irresponsibly placed machines. Had we conducted the cigarette studies, the same way they conducted the wind turbine studies, the results would have been the same, NO direct effects, from cigarettes. It is irresponsible for Health Canada to release a study that is being used by the people pushing these wind turbines, to continue to abuse rural residents, with impunity.

I know for a fact, that the noise from wind turbines will harm my son, and others like him. His specialist has written a letter, to support this claim. Joey has severe sensory processing issues, which means that his brain processes noise, much differently, than a "normal" brain. They plan to surround our home with 624 ft, 3MW industrial wind turbines, the largest ever installed in North America. The closest one would be 550m northwest of the center of our home. If they do this, they will cause great harm to my son, who is in his first year of high school, and needs to be able to concentrate, and sleep, in order to succeed.

Health Canada, and the Federal Government need to pull back their study, and retract their opinions, until PROPER, conclusive studies, can be done. A moratorium on these turbines should be enacted, until such a time, as they are able to do this. People everywhere are suffering. It is NOT responsible for our government, to continue to allow this.



Trucker

November 29, 2014 at 11:39 am

The over 30 Environmental Review Tribunals are deciding on the health and safety of people living near the wind turbine developments The Ministry of the Environment have admitted they do not have any medical people on staff when they approve an Industrial Wind Turbine project close to people's homes. Generally

engineers are making health decisions in the absence of Medical Associations Assoc involvement when Industrial Wind Projects receive their Renewable Energy Approval. There is no medical evidence that provided by Wind Turbine Developers as to the Health or safety effects of Industrial Wind Turbines

In addition Dr. Arlene King former Chief Medical Officer of Health for Ontario in her 2010 report said there were data gaps in the effects of Industrial Wind Turbine. She failed on behalf of the Ontario Government and the residents to protect their health and safety. She appealed her Superior Court order refusing to talk about her report further putting the report into question even though Wind Turbine Developers are still using it to say no adverse health effects.

In addition there are very few doctors trained to diagnose the indirect effects of turbines on their patients. However, a few doctors have advised their patients to leave their homes to get relief from the adverse affects on their health.

There is enough evidence of adverse health effects of noise, low frequency sound and infra-sound causing adverse health effects over many years. I suggest it is up to the Medical Profession to publicize and set up a regime for diagnosis of Wind Turbine Syndrome or what ever the illness is called

The courts in Ontario have identified the lack of a Medical Diagnosis in recent Court Cases as an issue.



**R Jeffery MD**

November 29, 2014 at 12:31 pm

Krogh and McMurtry shed some helpful background light on some issues I have had with the recent Health Canada Study. My main concern has been that the study appears to take limited data which itself is overstated then overextended to reach conclusions that are not supported. This would suggest significant bias. The suspicion of bias is further supported by the way the study results were presented to and by the media. The catchy headline used by most of the media outlets was that the study showed that there were no health effects of IWT's where the exact opposite was closer to the truth. I despair for the truth when it is left to the government and the media.



**bob**

July 31, 2017 at 9:33 am

Does your study compare the negative effects of wind turbines compared to the negative effects of coal and gas plants? Taking into account that 6 million people are downwind of the gas plant in Milton. Kids breathing crap from those plants. None of you anti-wind folks seem to have a problem using power from those plants and polluting the air for millions of kids out at recess....



Richard Mann

November 29, 2014 at 1:13 pm

I first became aware of health issues after reading Carmen Krogh's paper in Canadian Family Physician in May 2013 [1].

I was surprised to find no specifications or guidelines for infra sound (low frequency noise and vibration) from Industrial Wind Turbines. Further, acoustics experts were reporting infra sound, but their concerns were being dismissed by the Ontario Ministry of the Environment and Wind energy proponents. As recently as March 2014, Public Health Ontario dismissed the impacts of infra sound, yet failed to provide any measurements to justify this conclusion [2]. This is truly shocking.

Since August 2013 I have been working with colleagues (Physics, University of Waterloo) to record and measure infra sound from wind turbines. Infrasound measurement is challenging because wind turbines do not operate at a fixed speed. Further, we need a way to isolate a single wind turbine from other turbines and from (random) wind noise. Our method uses an optical telescope fitted with a photodetector to obtain reference blade passage periods, recording these together with the microphone infrasound signal. Using signal processing we are able to isolate the infra sound from a single turbine. We have successfully measured infra sound from several different turbines in Ontario. We have just submitted our work for publication and a draft is available online [3].

I join the many scientists and experts worldwide asking for a thorough investigation of wind turbine noise before more wind turbines are erected in Ontario. In particular, I am looking to Health Canada for guidance on acceptable levels of infra sound exposure in our communities and workplaces.

Richard Mann

Associate Professor (Computer Science)

University of Waterloo.

[1] Roy D. Jeffery, Carmen Krogh, Brett Horner. "Adverse health effects of industrial wind turbines", Canadian Family Physician. May 2013 vol. 59 no. 5 473-475

[2] OEH Seminar: "Don't tell me about the science!" Wind turbines and human health: An emotional topic. Dr Loren Knopper. Thursday, March 20, 2014 08:00 am to 09:00 am  
[http://www.publichealthontario.ca/en/LearningAndDevelopment/Events/Pages/OEH\\_Seminar\\_Wind\\_Turbines\\_Human\\_Health.aspx](http://www.publichealthontario.ca/en/LearningAndDevelopment/Events/Pages/OEH_Seminar_Wind_Turbines_Human_Health.aspx)

[3] J. Vanderkooy and R. Mann. "Measuring Wind Turbine Coherent Infrasound".

Submitted to: Wind Turbine Noise 2015, INCE/EUROPE, Monday 20th April to Thursday 23rd April 2015.

Glasgow, Scotland. A draft is available at: [https://uwaterloo.ca/audio-research-group/sites/ca.audio-research-group/files/uploads/files/coherent\\_wt\\_measurement\\_0.pdf](https://uwaterloo.ca/audio-research-group/sites/ca.audio-research-group/files/uploads/files/coherent_wt_measurement_0.pdf).

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Richard Mann

November 30, 2014 at 4:21 pm

Several plausible mechanisms of action for infra sound from Industrial Wind Turbines have been proposed, including inner ear fluid mechanics, motion sickness and vestibular systems, and vibro-acoustic disease.

A.N. Salt and T.E. Hullar, "Responses of the ear to low frequency sounds, infrasound and wind turbines", Hearing Research 2010, Sept 1; 268(1-2):p.12-21.

Paul D. Schomer, John Erdreich, James Boyle, Pranav Pamidighantam. "A proposed theory to explain some adverse physiological effects of the infrasonic emissions at some wind farm sites". International Conference on Wind Turbine Noise. Denver. August 2013.

Castelo Branco N, Alves-Pereira M. Vibroacoustic disease. Noise and Health. (6):3-20. 2004.

Added 9th December 2014:

Here is one final reference.

"Symptoms, Diseases and Aberrant Behaviours Attributed to Wind Turbine Exposure"

Simon Chapman AO PhD FASSA  
Professor of Public Health  
School of Public Health  
University of Sydney  
2013 Australian Skeptic of the Year

Link: <http://ses.library.usyd.edu.au/handle/2123/10501>

The paper contains 236 correspondences received, sorted by health condition.



George Papadopoulos

November 29, 2014 at 8:48 pm

“Too little too late” is a phrase that resonates “very well” with my unfortunate ears. Had the authorities heeded to the early warnings, the impacts of low frequency noise would have been investigated, researched and identified. In particular the scope of harm could have been comprehended better: the problems of low frequency noise do not stop at one or two kilometres.

I had my life turned upside-down three years ago when a wind development went up down the horizon. Individuals like myself do not find wind turbines visually offensive because they do not form part of my immediate landscape. Unlike natural sources of low frequency noise, the ability of wind turbines to emit offensive low frequency noise at great distance is a something I have discussed here: <https://www.wind-watch.org/documents/wind-turbines-and-low-frequency-noise-implications-for-human-health/>

As a consequence I no longer permanently reside at my once peaceful and beautiful rural property. I avoid spending time in regions with significant numbers of wind turbines. I also now find myself sensitised to other low frequency noise sources which was not the case before the local wind farm went up. I was however fortunate to be in circumstances that allowed me to identify that my rumbling “tinnitus” and highly uncomfortable vibrating head sensations were related to low frequency noise and not some mysterious inexplicable condition.



George Papadopoulos

November 29, 2014 at 8:48 pm

Wind turbines create negative reactions, disrupt the comfort of people’s lifestyle and generate claims of noise nuisance and poor health on an international scale.

There is sufficient evidence that wind turbines harm human health. As demonstrated in the article by Krogh and McMurtry, even wind industry funded literature reviews certainly do acknowledge that there is a problem.

The Health Canada document takes a different course by refining the matter of wind turbines and health to a precise legal argument: are wind turbines directly (as opposed to indirectly) responsible for harming human health. The precision of that argument, however, misses the real target: the real goal and purpose of a public health agency is to protect public health, not an industry.

There is no shortage of testimony against this industry with reference to harm to human health, and that testimony is consistent, particularly to low frequency noise intrusion that turns a once peaceful living environment into a sonically unhealthy 24 hour industrial zone of no precedent.



suemac1

November 30, 2014 at 8:22 am

I work directly beside the first Industrial Wind Farm in Ontario, Huron Wind. It was commissioned in November 2002. When I first saw the 5 massive turbines in operation, I thought they looked rather graceful. Within a short period of time, I started developing migraine headaches, nausea, dizziness and visual disturbances ... not making any initial connection to the IWTs. This only happened to me during the daylight hours and mostly through the week and not on the weekends. Driving through the midst of the turbines at night with their alternately blinking red lights causes me to become a bit disoriented as I drive - I find myself drifting L and R as my body wants to respond to the blinking lights all while I try to ignore them and only look at the centre lane ahead of me - this stops when I am beyond their range and back out in the clear - it also happens during the day time because of the movement of the blades - my brain cannot filter out what my eyes are seeing. It was only after seeing several health care providers and while trying to pinpoint the changes in my health, as well as declining quality of ability to sleep that things seemed to narrow in the coincidence of the Industrial Wind Farm and what I experienced. I wasn't entirely sure this was the case. I ended up taking another position at work for 3 years that took me at least 5 km away from the ITWs and the 110 others that sprouted up in the area over. I was almost entirely symptom free from the symptoms (only 2 episodes in 3 years, instead of 2 or more a week) while I worked in the other location. Almost two years ago, I returned to my former work location and had to move my work station location away from the windows (had to move the visual aspect of the IWTs from my line and peripheral vision) to an area where I couldn't see them. I still suffer the symptoms from time-to-time, but certainly not with the frequency I did prior to moving away from the windows - the blinds on the windows weren't much help, either. It seems a shame that it took 12 years for me to get all of this figured out that the common denominator is the IWT. Life before and after them at work is very different for me. Thank goodness I don't have to live with this 24-7 at home, but am also very afraid of the effects the 3 MW turbine that is being constructed as I write this and going up within 550m of my house will bring. The Liberal government through its entirely undemocratic Green Energy Act took away my right to work and live safely in this province and I really did try to embrace and give this form of energy a chance, but I feel I have been duped and damaged by a government that doesn't care and is doing everything it can to save face. Worse yet, my entire former Township of Kincardine is due for another 100+ of these turbines to go up ... there is nowhere safe for me to go!



Raymond Beaudry

November 30, 2014 at 9:04 pm

These projects as witnessed here on Manitoulin Island by the 20,000 acre , 24 turbine,Northland Power MMWLP (Mcleans Mountain Wind Limited Partnership) placed in key habitat divide friends, families, First Nation and Non First Nation Communities.

Fighting the wind industry and government propoganda in support of the push for these projects without the peer reviewed evidence for safe setbacks in the envirnoment has been an uphill battle for those that are impacted at their homes and properties.

The government has created an illusion that the public has a say in these projects but the opposite is true as legislation is rewritten to override any opposition. Stress and feelings of helplessness occur before the construction even begins.

Once projects are up and running the community divided does not end or heal.

These projects and the implementation process are not in the interest of the greater good.

Even noise complaints filed have no resolution as industry influenced government legislation for noise complaints does not address noise complaint concerns through the noise protocol document.

Below is an example.

Calling the after hours Spills Action Centre (1-800-268-6060) on our 43rd noise complaint from the wind turbines next to our home on Sat. Nov 29th resulted in some interesting information.

The noise complaint included peaking sound modulation, heavy wind shear sounding like low flying jet aircraft noise, with an annoyance of 7 out of 10. I reported it was the first sound one hears when going outside and certainly noticeable.

Mentioned the blades are in the clouds and a humidity of about 100% though the approval was given with the noise models done at 73% which is totally inadequate. As long as they are within their modelling it seems no followup will occur.

Being asked how far the nearest turbine was from our home, which reply was about 8 or 900 meters though we were never informed by the wind industry. I did not mention the other 3 turbines within two kilometers.

The online map the noise study has, has our receptor location number hidden to which I relayed to the MOE. The distance is unknown to ourselves.

The spills rep informed me the local district office addresses the complaints. I asked why Sudbury isn't doing more noise compliance. They have been here twice and not back since. When they came to our home the weather was calm though we could hear the nacelles turning. They also average down their measurements. The conditions were nothing similar to when the complaints was filed.

I informed the spills rep that we were informed the equipment isn't in Northern Ontario to measure compliance under the noise protocol. Also the noise specialist and the local rep could not get their schedules together to do more studies.

This question was asked to the MOE spills rep. Why they are allowing a spill to continue to occur? Clarification was sought as he thought there was another spill.

My reply was a spill, this wind turbine noise spill was reported into the environment and the MOE is allowing it to continue.

NOTE:

The MOE reply was: This reported spill is not a pollutant but is a contaminant that is allowed as per the legislation.

My request for their wind turbine noise complaint process was denied as well as the legislation reference.

Also;

As a note I wish to add that the MOE will not address any complaints to our vacant Managed Forest Woodlot where the turbine 17 was one of three in this project that were given less than recommended provincial setbacks from fencelines with no consultation.

The proponent, though asked through the MOE, will not identify the safe limit on our woodlot for future building outside the 550 m danger zone. Their reply was it would set a precedent.

My next recourse would be to ask the MOE to physically identify the safe zone where one can build which I am sure will be the same result.

The MOE states there is no restriction of a non participating resident to build within a 550 m or 40 db limit danger zone of a turbine. One measurement may be greater than the other.

The MOE also states a resident is allowed to build within the danger setback zone after the turbines are up though they do not issue the build permits.

The township states there is no legislation that does not restrict them from issuing a build permit in that physically unidentified danger zone. Then who would want to.

The safe zone should be identified by the approving authority in my view.

Either way, expropriation has taken place. Injurious affection.

The peer reviewed studies of a safe setbacks should never be allowed to cross fencelines or properties of the lands being leased.



C. McLean

December 1, 2014 at 12:41 pm

My views on the HC report from the perspective of a resident who participated in the study:

- The study wasn't designed to find causal links, this would have required extensive monitoring of more than BP and hair cortisol levels while turbines are running.
- The study was criticized for not addressing this but HC went ahead anyway.
- I did participate in the study and found that many of the questions did not relate to the quality of your health BEFORE turbines arrived.... many of the questions related to your symptoms with the last month.
- The study took place during the summer months which I generally find to have fewer problems with noise.
- The important point was that a Statistically significant exposure-response relationships was found between increasing WTN [Wind Turbine Noise] levels and the prevalence of reporting high annoyance.
  
- noise monitoring took place separately from when the resident was being monitored for sleep quality (during the time one is wearing a wrist monitor supplied in the study)
- the study did establish "annoyance" and this kind of annoyance is not the same kind where it's a problem that one can get over
- The study seems to have an underlying purpose of wanting to establish that it's in people's heads and the problem lies with residents if they have High BP and sleep disturbances
- they did not shut off turbines for a month and allow people to regain their health and then take measurements.
- Many of the questions asked related to quality of life (do you feel depressed, are you happy with your home life etc) In addition many of these same questions tried to link the noise problem with noises coming from other sources like ag. equipment etc.
- I found it offensive that questions asking about body image were included. These kinds of questions felt like they were trying to get into my head
- the study seems to have a purpose of putting a cap on residents' complaints by trivializing ones symptoms.
- I believe the majority of people are always second guessing their symptoms but the question remains why is this happening now
- what many forget is that many who are living with turbines, originally wanted to see this kind of development and are now being labelled as NIMBY's which is so wrong
- It appears from my own collection of reports worldwide on <http://www.illwind.org> the majority are reporting sleep deprivation
- we need to remember that annoyance is linked to health and the study did make that link
- I am not surprised by the HC report because it falls in line exactly with my experiences of dealing with wind energy development for the past 8 years
- My experience has been that when dealing with the wind turbine issue, the wind proponents love to manipulate the message to the public and point fingers – for eg. I'm often told that if I don't want turbines than maybe I would like to have coal or a nuclear plant in my backyard. This point is irrelevant, because wind can never replace the need for coal or nuclear because there is substantial independent evidence, that show how wind energy is so inefficient, so unreliable, so intermittent and so expensive. They cannot replace the need for our conventional forms of energy, and wind provides minimal return on emissions @ very high cost for the investment.
- The message is always so manipulated from the wind industry that people get sucked into the supposed positive effects
- It appears to me from this report that my gov't is not interested in protecting my health, or the health of my

neighbours, and family. The language of the report leaves the public to conclude that the symptoms are the result of the residents own fears & anxieties rather than fully investigating why there is this fraction of people who are hurting

-The only reason I see why this is happening is that there is some kind of collusion going on where some are making a lots of money or are so heavily invested into the promotion of "renewable" energy, they cannot backtrack their actions; for fear of reprisals and the requirement for substantial compensations to those who are affected.

-In my everyday conversations with those who are living with turbines, it is clear to me that many have given up hope of ever finding a fair answer to their situation, therefore are instead finding methods to cope by refusing to speak out which allows them to avoid the discomfort of reporting to officials who treat them as having psychosomatic problems.



Sandra Goranson, Chair

December 1, 2014 at 4:46 pm

Impacts of low frequency noise (LFN) on animals have been clinically researched for decades. Results indicate that long term exposure to LFN causes many physical and biological responses in a variety of species. i,ii,iii,iv

Current research and anecdotal reports indicate that the noise emissions from industrial wind turbines are more likely than not leading to birth defects, stillbirths and multiple miscarriages in animals and humans. v,vi

For those concerned about protecting the natural environment from the emissions of wind turbines many have turned to experts such as the World Wildlife Fund and the Audubon Society which strongly urges that wind turbines are not permitted in protected wildlife areas or in Important Bird Area migration corridors.vii ,viii

In Ontario Canada a permit to kill harm and harass endangered Blanding's turtles with the construction and operation of a wind project was revoked by the government of Ontario Environmental Review Tribunal which acknowledged the "serious and irreversible harm" this project would cause. ix

Sadly the Environment Ministry is now challenging in court to overturn this wise decision by its own tribunal in support of the wind company and the wind industry lobby against environmental groups.

The chronic exposure of any living being to the severe and unnatural pulsing emissions radiating from wind turbines has been demonstrated clinically, anecdotally and scientifically to be harmful both physiologically and biologically.x The harm is so severe in some cases that people are driven from their homes while animals are reported to flee up to a 10 km radius of industrial scale turbines.

Such results are critical enough to harm wildlife communities permanently by destroying habitat and fragile ecosystems. The size of the newest wind turbines is up to 600ft in height and an enormous blade sweep. With

this in mind one can only speculate how much more risk will be imposed on all living species too close and too exposed to these emissions.

Sandra Goranson

Chair

Prince Edward County South Shore Conservancy

i <http://archive.defra.gov.uk/environment/quality/noise/research/lowfrequency/documents/lowfreqnoise.pdf>

ii <http://www.ncbi.nlm.nih.gov/pubmed/15190429>

iii <http://apps.szu.cz/svi/cejph/archiv/2006-1-09-full.pdf>

iv <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4158595/>

v DOI 10.2478/pjvs-2013-0096

vi <http://wcfm.org/2014/07/10/denmark-wind-turbines-disrupt-menstruation/>

vii <http://policy.audubon.org/wind-power-overview-0>

viii <http://bst.sagepub.com/content/31/5/377.refs>

ix <http://www.ert.gov.on.ca/english/decisions/index.htm>

x <http://www.batsandwind.org/pdf/baerwald%20et%20al%20current%20biology%202008.pdf>



**B Ashbee**

December 6, 2014 at 1:25 pm

<http://www.scienceadvice.ca/en/assessments/in-progress/wind-turbines.aspx>

"Wind Turbine Noise and Human Health

The Minister of Health, on behalf of Health Canada, has asked the Council of Canadian Academies to assess the evidence as it pertains to a causal association between wind turbine noise and the development of adverse human health effects."

The Minister of Health has asked the CCA to assess the evidence. I do have a concern about possible conflict of interest noting that Mr. Howe of HGC is part of the panel. Mr. Howe is a longstanding member of the Canadian Wind Energy Association, a prominent registered lobby group in favour of wind energy and has also done much work for and paid for by large wind companies.

Mr. Howe and I know each other, as he attended our house and the homes many other people that I have met who are/were having similar problems.

If this is considered an independent review then I think that at least should be stated in his bio.

A thought:

Were the Health Canada team to reach out to those affected, they would bring a wealth of knowledge about the impacts and consequences of flawed regulations and process gaps that this policy holds. With no offense intended, the people who have lived through it and with it because of the imposition of noise, vibration and infrasound are the true "experts".

Along with these experts, are independent researchers who have researched and conducted studies focused on wind energy impacts for the last five and more years. Similar to the victim residents, they too are being left out of the discussion. This valuable information and input is being left untapped.

After personally having lived with the noise - the loud, cyclical nature of the noise, the vibration that penetrated our home and the infrasound that made us sick and drove us from our home (we are just one of many families) I find it astonishing that Health Canada, the Ministers of Health Canada and Ontario, the Premier of Ontario and the Prime Minister are not interested in talking with the people affected who have been reaching out for many years. The thousands of complaints lodged in Ontario alone have never been reviewed and yet project approvals continue. This should be of concern to all Canadians.

Many people that have already been affected have been asking to participate to share our experience with the hopes of saving others the same fate.

It is pretty frustrating that we have no meaningful voice.

Rest assured, the emissions from wind turbines show no bias when it comes to affecting the health of living beings in their path including the most vulnerable - those already dealing with pre-turbine health challenges, seniors, children, our pets and livestock.



**P. Crawley**

December 8, 2014 at 11:32 am

The Health Canada Wind Turbine Noise and Health Study results imply that the 33 industrial wind turbines erected within a 3 km radius of our home did not really negatively affect the lives of the people in my family. The headaches, sleeplessness, nausea etc. that started after the turbines were turned on and that disappeared when we were away from the turbines are proof to us that the audible noise, low frequency noise and infrasound ruined our lives for 3 years. After 3 years of asking for, of begging for help, our only option was to leave our home in the country. Once the turbines started whirling, our home in the quiet country was

transformed to a house, a building in a noisy industrial area where we could no longer live in the healthy environment that once was our home. We left that beautiful quiet country house previously surrounded by soothing nature sounds. The countryside was transformed to a factory, an industrial wasteland of noisy, sickening industrial wind turbines.

My mother, in her 80's, lived with us and after about 18 months had to move away to live by herself in a one - bedroom apartment. In her presence, we were very careful not to discuss the problems caused by the turbines but one morning she told us that she was having trouble sleeping and that she could not figure out why her bed was vibrating. She thought that there were earthquakes in the area. As a family, we decided that it was best for her to move away. Her bed in her apartment does not vibrate and she sleeps well.

When the turbines were turned on and our problems began, I was confident that I simply needed to contact the authorities and the glitches with the turbines would be fixed. I was so wrong! After over 400 complaints via telephone, email and Canada Post, to various Provincial Ministers, to the Spills Action Centre, to various Federal Ministers, to the Ontario Premier, to the Federal Premier to the MOE, to the Federal and Provincial Health Ministers and to the turbine corporation...there was no real help.

By chance, I saw Minister of Health Leona Aglukkaq at the Yellowknife Airport in July 2011. I approached her and was hopeful that if she could see that there are real people like myself living in Ontario who are suffering because of the Industrial Wind Turbines, that she would surely provide help or at least advice of what to do to make it so that we could once again live in a healthy environment called home. I was told to contact her office and when I explained that her office had been contacted numerous times she visibly became uncomfortable and said that she would not discuss the matter with me. Here are snippets of a follow up letter I sent to her afterwards: "I am not sure if you remember but I am the person who met you at the Yellowknife Airport on July 9, 2011. After introducing myself to you, I brought up the topic of Industrial Wind turbines and it was clear that you did not wish to discuss the subject... I have not had success in getting answers to my questions nor in getting solutions to solve my health concerns and problems from the Ontario government nor from the Federal Government... This is a very serious issue for many Ontarians and Canadians and one that needs to be addressed now to protect the health of those who have been forced to live near these turbines...I thought that if you could look into my eyes, you could see that there are real people and families that are negatively affected by turbines. My family is as important to me as yours is to you... Please take the time to read this email carefully and please give it your attention as soon as you can. People are suffering now. Also, please take the time to respond to my request. It would be wonderful if you could find the time to meet with me for a few minutes. I could meet with you anywhere or anytime at your convenience. I have read your biography online and you have done such wonderful things to help protect human beings in the past, please take the time to protect human beings from the negative health effects of Industrial Wind Turbines..." On July 15, 2011 someone in her office sent this: 'Confirmation of e-mail received.'

The Health Canada Wind Turbine Noise and Health Study is not helping those in need. In my opinion, the people making the decisions in this study are suggesting that this did not really happen to my family and me and that it is not happening to others, contrary to the inconvenient truths that have been presented to them, and to the list I mentioned above, within the last several years. Perhaps they are suggesting that it is ok to have this happen to innocent people. It is too late for my family and me and now it seems that the lives of those still suffering are not worth saving.

It is my understanding that The Council of Canadians should be independent but in my opinion, there is perceived conflict, as Brian Howe is a member. He is an acoustician who is a member of CanWEA, and has

worked for many years for the wind industry. Why is there a peer review after the public release of the study instead of before? As I see it, industry and corporations are afforded more rights than individuals. Why must Industrial Wind Turbines continue to harm so many? They are truly ruining the lives of so many.



Linda J Rogers NP-PHC

December 22, 2014 at 11:15 am

There is something very wrong with an energy policy that allows installation of power generation complexes which have resulted in consistent reports of adverse health complaints. Symptoms which can be so severe, that the only remedy is to leave the environs of the wind power installation. Protection and prevention of harm to health has been ignored by all levels of responsible governance. Treatment to evoke respite of intolerable symptoms has resulted in the advice given to avoid exposure. Avoidance as a remedy has meant the abandonment of farms and or homes. It is time for action to protect against such a serious harm to health.



johana

December 29, 2014 at 12:25 am

In 1999, Prof. J. McMurtry described "The Cancer Stage of Capitalism" where disease agents in the form of tabloid columnists, corporate think tanks, bankers, financed politicians, corporate media, speculators, stock market apparatchiks, speculators, policy servants, corporate board members, economists: the collaborating humans, who are the mediating agents of invading carcinogens which represent the Global Corporate Market System/Programme.

Comparing the disease state in individuals to that in the civic body, governments were described as not functioning in their mandated role of protectors of human health and the 4th estate [be it journals, radio, newspapers, TV, film...] as no longer true to its original purpose to tell the whole truth and nothing but the truth.

Once people understood that governments were no longer by/of/for the people and that the 4th estate had been overtaken by the Global Corporate Market System/Programme, searching for ways to reverse the process, Eleanor Roosevelt's dictum " The PRICE of FREEDOM is ETERNAL VIGILANCE" CAME TO MIND.

So, our life preserving purpose is to be or [our choice] not to be one of ETERNAL VIGILANCE in sensing, recognizing and RESPONDING to pathogenic intrusion and growth of carcinogens in our civic body.

Our challenge is to EXPOSE further destruction of our democratic governments caused by the Global Corporate Market System/Programme, the Industrial Wind Turbine Corporations and Wind Energy Associations which are enabling serious harm to our health and environment.

Our democratic rights are being abrogated by a part of our judicial system, the Environmental Review Tribunals whose decisions:

- \* don't treat citizens as equals to corporate agents
- \* don't probe for truth and accuracy or possible deletions in presented evidence
- \* don't give those most impacted by judicial decisions equal, fair and just representation
- \* and are not in accord with principles of fundamental justice, moral and ethical values.

Our Legal, Medical and Engineering Professionals are hereby challenged to live up to their responsibilities when they vowed to devote themselves to the cause of preserving human health and the environment.

And the challenge to the 4th estate is that it keeps our civil society up to date and informed of the actions of the above professionals.



**William Denis Guest**

April 2, 2015 at 3:41 pm

Is it possible to direct out of phase matching sound waves back at the turbine to nullify the sounds?



**Johana**

April 4, 2015 at 11:54 am

Denis

Would you please contact the Professional Engineers Association of Canada.

They are better trained to answer your Q than those who are on this blog site.

Do let us know, though, what you learn from acoustic engineering experts.



**Robert Rand, ASA, INCE**

July 12, 2015 at 1:21 pm

In short, no. Active noise cancellation of discrete tones can be effective inside bounded environments such as ducts. There is no bounding in the free atmosphere. Even if it were possible to create a pulse precisely out of phase at some location (a house) with the incoming pulse from just one turbine, cancellation might work only in

a certain location, while addition could occur somewhere else. Cancelling a signal from multiple turbines simply compounds the difficulty into a dense amount of mathematics without supporting acoustic inputs. Any shift in atmospheric conditions (think ray tracing issues out several tens of kilometers) would require an instantaneous change in the control signal to the out-of-phase generator for each location where this kind of cancellation is being attempted. Typical time constants in PID loops (several seconds minimum) don't support instantaneous corrections. Hope this gives a basic idea of the design environment.



**Richard Mann**

April 29, 2015 at 10:38 pm

I am writing to provide an update on my research on Infra sound from Wind Turbines.

Our research paper has just been presented in Glasgow, Scotland. The citation is:

J. Vanderkooy and R. Mann. "Measuring Wind Turbine Coherent Infrasonic Noise". Wind Turbine Noise 2015, INCE/EUROPE, Monday 20th April to Thursday 23rd April 2015. Glasgow, Scotland.

Link: <http://www.cs.uwaterloo.ca/~mannr/WTN2015.pdf>

I recently learned that Health Canada has collected extensive measurements of wind turbine noise, including infra sound, as well as wind turbine operational data,

Link: <https://www.wind-watch.org/documents/analysis-modeling-and-prediction-of-infrasound-and-low-frequency-noise-from-wind-turbine-installations/>

Repeated requests to Health Canada, either to work together, or to study the data independently, have been denied. Accordingly, I have filed the following "access to information" request, listed below.

A-2015-00042: Wind Turbine Noise and Health Study. MG Acoustics was contracted by HC to study infra sound. Request all correspondence between HC and MG. Also request all raw data collected by MG for this contract. This includes all microphone, microbarometer, vibration, weather station, and turbine operational data (turbine orientation, RPM, power output, wind speed at turbine, etc). Note: Informal request made to David Michaud (March 2, 2015), redirected to Stephen Bly (March 9, 2015), and ultimately rejected by Stephen Bly (March 24, 2015)

Richard Mann

Associate Professor (Computer Science)

University of Waterloo



**Pauli Sommer**

November 13, 2015 at 3:57 pm

Where else in Canada do we have a situation where citizens have no say in changes to their environment that potentially can have adverse health effects? What other subgroup of Canadian citizens are being violated the way rural residents are being violated with the placement of industrial wind turbines close to and in some cases surrounding their homes?

In Canada, we choose the food we eat.

We choose to exercise adequately each day... or not.

We choose whether or not to get adequate sunlight.

We choose the amount of water we drink on a daily basis.

We can even choose the kind of water we drink.

We choose how we will dress ourselves to protect ourselves from the elements.

We choose whether or not to smoke cigarettes or drink alcohol to excess.

We choose whether or not to partake in potentially harmful recreational activities.

We choose whether or not to get adequate sleep on a daily basis.

And yet, residents of rural communities have not been given a choice as to whether or not they will be exposed to distressing noise from turbines that have been placed too close to their homes. They simply have no protection from having their neighbourhood environment turned into an industrial soundscape whenever the wind blows or atmospheric conditions are such that industrial wind turbines make a variety of unnatural, penetrating, pervasive sounds.

Rural residents have been used as subjects of an experiment, where they are being exposed to audible sound and infrasound radiation from industrial wind turbines in close proximity to their homes. Carmen Krogh deserves a great deal of credit for her dedication to bring this subject to the attention of the medical establishment. Without ever uttering a word of derision she has consistently appealed to people who still possess common sense in this country.

Those who are responsible for our environment and our health in Canada refuse to acknowledge that the noise compliance standards are not adequate when it comes to transforming a quiet countryside soundscape into an industrial power station around homes.

To my knowledge, there is no precedent for this highly unethical, lack of protection for rural residents.

Throughout Canada, employees are protected in the workplace by rigorously upheld safety standards.

Canadian citizens are protected from a myriad of possibly harmful effects as they go about their day to day lives.

Crimes of neglect and abuse are steadily being reported, examined and reduced in Canadian society through legal protection.

And yet we have thousands of rural residents who have pleaded for protection from industrial wind turbines sited too close to their homes...to no avail. These residents have been further violated and distressed by the medical community's insistence that industrial wind turbines' audible noise and infrasound radiation, are not causing the health effects being reported anecdotally?

Prescription drugs to ameliorate adverse health effects are not the solution.

Sleeping pills are not the solution for residents who cannot sleep or are woken suddenly from their sleep with traumatic episodes caused by the turbines.

Recommendations of relocation are absolutely unacceptable and will become a legal nightmare if medical people continue such practices.

The logical solution is simple.

Call a halt to any further industrial wind turbines being sited within unsafe distances to rural peoples' homes. Network with one another and collectively recommend to the government that turbines that have been placed too close to peoples' homes be turned off immediately.

If you really believe that industrial scale wind turbines are the way to 'save the planet' and that this needs to be done at the expense of rural people in Canada, then I highly suggest that you read the engineers reports on efficacy of industrial wind turbines. It's in this document "Engineering Expertise Vital to Success of Ontario's Electricity System: OSPE", Jan 16, 2013.

Also I suggest spending time getting up to date with the serious scientific arguments against the claim that industrial wind turbines can mitigate climate change. Here's a place to start:

<http://wattsupwiththat.com/2015/03/18/anatomy-of-a-collapsing-climate-paradigm/>

Your leadership is desperately needed NOW.



**Richard Mann**

December 6, 2015 at 10:41 pm

I am pleased to announce that I have received funding from University of Waterloo for my research, "Measurement, Analysis and Synthesis of Infra sound". I have enclosed a media/publicity statement below. Further details are available from my web page. (<http://www.cs.uwaterloo.ca/~mannr>).

Richard Mann

Encl:

I first became interested in infrasound in May 2013 after reading a paper by Carmen Krogh dealing with adverse health effects caused by Industrial Wind Turbines. Infrasound refers to sound waves below the range of human hearing. Infra sound comes from a number of man-made sources including HVAC systems, industrial machinery, moving vehicle cabins, and energy generation (wind turbines, gas plants).

I was surprised that very little study had been done on this subject and the effects on humans. What information has been published has largely been ignored by both governments and the wind industry. While low frequency noise and infra sound are believed to impact human health, there are currently no standards for infra sound exposure. In most cases, low frequency sound is simply ignored.

I began researching ways to record infrasound and in joint experiments with a colleague at Waterloo we developed a method of isolating infrasound from a single wind turbine and measuring it free from the of other turbines, wind noise Etc. Our work was presented at the INCE/EUROPE Wind Turbine Noise conference in Glasgow, Scotland, in April, 2015.

I have been fortunate to have recently received approval of seed funding from both the School of Computer Science and Office of Research such that I will be able to purchase the necessary equipment and hire student research assistants allowing this research to go forward.

The focus of my research is as follows.

1. Develop the best possible methods and systems for measurement of infrasound in general and specifically that generated by Industrial Wind Turbines.
2. Develop methods and standards for analysis of information gathered both in our lab and in conjunction with other interested researchers.
3. Create infra sound in a lab setting to a documented duplicate of that generated by wind turbines and other man made devices.
4. Enable future testing on humans, by others with appropriate medical training and ethics approval, with the goal of establishing safe exposure levels.
5. Share the results of this research with others in the scientific community.

The number of manmade sources of infrasound continues to grow among us and the health and safety of individuals presently appears to be secondary to profit in the proliferation of these products. It will be of great benefit to society if we can establish safe levels of infrasound exposure and evolve associated emissions standards.

Richard Mann  
University of Waterloo  
November 11, 2015



Pauli Sommer

January 26, 2016 at 2:21 pm

Here is a list of 26 statements of adverse health impacts from Huron County.

#### Property 1

Living among the 18 Industrial Wind Turbines that are located within 3 km of our farm house has caused us many sleepless nights that interfere with our physical and mental well being. We suffer from ear aches, headaches, "swimming" in our head, foggy brains and the inability to think clearly. Many days after a sleepless night, we are not "alert" like we used to be. Is it causing our short term memory loss/ confusion? We become very agitated and irritable. We had a picture fall off our wall four times one extremely bad day this past summer. It was on the wall closest to the turbines. That picture or an identical one has hung on that wall for over six years. It has never fallen off before.

We listen to the sounds of tractor trailers sitting in front of our place that never seem to go anywhere, whooping and whining sounds that penetrate through the walls of our home and drive us crazy. There are the whomping and whooshing sounds. We are unable to open our windows at night, sit on our deck or back step due to the noises of these monsters. We have family who do not want to come here because they are getting headaches after being here for a brief time. Headaches that go away shortly after they leave here.

#### Property 2

We are surrounded by multiple wind turbines. We can feel a vibration in the bedrooms of our 2 storey home. We can hear a constant rumble that sounds like a jet idling inside our home as well as out in the yard when the windmills are turning, which is pretty much all the time. We can also hear a whining noise and the sound of metal contracting from time to time. I have experienced pressure and ringing in my ears, migraines, motion sickness and lack of quality sleep since the turbines became operational in April. My husband has ringing in his ears, lack of quality sleep and upset stomach.

#### Property 3

In the nine months since the turbines began, we've contacted the MOE spill hotline over 50 times. We average over six sleepless nights per month due to the noise. Our home has 3 turbines closer than 1 km, 7 turbines closer than 1.5 km and 14 turbines closer than 2 km. When the turbines are at their worst, everyone in our home is extremely agitated and anxious, even our dog. We dislike spending time outside or on the front porch or in the garden. We experience headaches, nausea, chest pressure, pressure and aching and ringing in our ears. This can go on for days during windy conditions. Sleep disruption from the turbines causes irritability and exhaustion. Besides the whooshing, whomping, thumping, humming, screeching and jet plane sound, there is a TONAL sound. This tonal "wooooooo" noise rises and lowers in intensity like an emergency warning siren. Under certain atmospheric conditions, our rural home sounds more like an airport runway or an industrial park. It is physically, psychologically and emotionally sickening. We can rarely sleep with the windows open and we do not have air conditioning. Even with the windows closed, we are repeatedly awakened

throughout the night by the turbines. The whooshing, whomping, thumping, humming, screeching, jet plane, TONAL noise comes right through the walls. There is no where to hide. It is torture.

#### Property 4

Since the turbines were turned on, the following has happened to myself, a female adult, tinnitus, ear aches (from dull aches to intense pain), burning sensation inside the ears, and burning outside of ears, fullness in ears, pressure in ears, exhaustion, feeling of slept, but did not sleep, (unable to wake in mornings), depression, lack of energy/motivation to do daily tasks, lack of libido, irregular menstruation, lasting weeks of bleeding, now, a lymph node below one ear has been swollen/pain, and I have no idea why? Children in the house, nosebleeds, headaches, exhaustion, lack of focus on studies, depression from living under/listening to the noise, and having their lives altered daily by the turbines, example: can or can not play outside, due to the noise levels. No escape from the noise/and shadow flicker, and red blinking lights. Ruined our lives over night. Feeling forced to flee our home.

#### Property 5

My home and neighbourhood are now surrounded by turbines. These turbines started running 8 months ago. I felt a sensation in my upper body the first day the turbines were turned on. It impeded my ability to do the physical work I was trying to do outside and would have otherwise enjoyed. Since then, that same sensation has become a common occurrence. It feels like my body is vibrating inside. At times my ability to focus and concentrate in a relaxed mode is seriously affected. My sense of attunement to the earth itself is broken. Sometimes this distressing sensation causes intense, almost dangerous sleepiness. I've also experienced what I call traumatic episodes, where I am suddenly woken from deep sleep, with my heart pounding... for no reason. This is very frightening. At other times, I'm woken up several times a night. I've had frightening nightmares. One night I had 5 nightmares. In addition to these episodes, I've had times when, I've had unprecedented indigestion and sometimes even nausea and headaches. Under certain atmospheric conditions and wind speeds, the sounds outside are so loud and disorienting that when I'm walking in my yard or in my neighbourhood, I feel unsteady. I avert my eyes from the movement of the blades because the sense of oppression and dystopia is overwhelming to me.

#### Property 6

We are three to five km away from the turbines and if the wind is out of the south or south east, east, or north east my vision is so bad, it is like coming into a fog and I can't even drive. When I go away, it mellows out. I return and it gets worse. I know when I can see and I can't.

About three months after the first Project about 5 km north of us came online, I was diagnosed with glaucoma. I had been on a watch for a few years due to a family history so I was getting regular checks. My eyesight continues to deteriorate with my pressures described as 'wildly fluctuating' to the point that I was twice sent for

emergency surgery after being tested in Grand Bend and not requiring it once I got to London because the numbers dropped below what was needed to make it an 'emergency'.

The Ivey Eye Clinic Dr.'s are stymied and cannot say where the inflammation comes from however I have been informed by credible sources that infrasound can create inflammation which I was diagnosed with in October. The maximum medications that can be given has now created a cataract, requiring further surgery. My situation has attracted a renowned specialist and I am currently waiting on a hopefully less invasive 'emergency' surgery, scheduled for mid February.

Added to the stress attached to potentially going blind, I have felt the following:

Vibration and a feeling of unrest

Extreme headaches

Jittery

Chest pains

Vertigo (twice while using a chain saw)

Significant weight loss

I have income property on which my livelihood depends. Currently there are 4 turbines within of the apartments. My tenants have complained about headaches, head pressure, changes in their menstrual cycles and unexplained mental fatigue beginning shortly after the operation of the first Project. I have one tenant who eventually left and advised that they felt an incredible change within a few days of moving.

I also reside on Property 6. Five days after the first project was turned on I began with my first bout of tinnitus. I understood I may have been hyper-vigilant as I had done research and was aware of symptoms some people had but truly didn't expect to feel anything since I lived about 5 km from the closest ones. Since then and more so since the second Project 3 km west of us began, I have experienced tightness in my abdomen, nauseousness, churning sensations I have never felt before in my life, head pressure, headaches, interrupted sleep, lack of concentration, heart palpitations, impaired memory and impaired cognitive ability which has decreased the quality of my life significantly. That combined with needing to drive back and forth to London for medical appointments left me unable to work and what is even more stressful is the eight 3 MW turbines that surround our home and the 14 coming around the income property have yet to start.

Our cat is behaving strangely, now regularly going under the deck, refusing to come out and needing to be physically pulled out. Some nights he refuses to go outside. When indoors, spends 90% of his time in the basement.

Property 7

We live directly west of turbine # 7 in the project. There are at least 40 other turbines within a 10 km radius.

This is my statement concerning health and other effects I have experienced almost immediately from when the Industrial Wind Turbines started up July 26, 2014.

From then on, all these effects have been experienced on an on-going basis.

The turbines are loud especially on a heavy, wet day.

The sound they make as they cross the wind.

There is also SQUEAKING, creaking, gnarling sounds, like metal upon metal Sometimes sounds like cows screaming in the field. Made formal complaints to NextEra and my municipality. NOTHING DONE.

The biggest complaint I have is sleepiness. I have gone almost 16 month with maybe 2 – 3 hours of sleep nightly. I am sick and as I write this I am leaving my home for a month to get away from the turbines and get some rest. I rented a room in Bayfield but it was not far enough away from the turbines as I have become HYPER-SENSITIVE to the Infra-sound radiation.

I have attached an expert from an article I read.

I believe I am experiencing vibroacoustic disease from the constant and relentless vibration and infra-sound radiation I have been exposed to over the last 16 months have caused

From Frey et al., 2007:

"In coursework description of "Whole Body Vibration" Prof Alan Hedge of Cornell University writes: "Vibrations in the frequency range of 0.5 Hz to 80 Hz have significant effects on the human body.

Individual body members and organs have their own resonant frequencies and do not vibrate as a single mass, with its own natural frequency.

This causes amplification or attenuation of input vibrations by certain parts of the body due to their own resonant frequencies.

According to Alves-Pereira and colleagues (2007), The clinical symptoms of vibroacoustic disease (in people) are:

Stage 1- slight mood swings, indigestion and heartburn, mouth or throat infections and bronchitis.

Stage 2- chest pain, definite mood swings, back pain, fatigue, fungal, viral and parasitic infections, inflammation of the stomach lining, pain and blood in urine, conjunctivitis and allergies.

Stage 3- psychiatric disturbances, small nose bleeds, varicose veins and hemorrhoids, duodenal ulcers, spastic colitis, decrease in visual acuity, headaches, severe joint pain, intense muscular pain and neurological disturbances.

I was rushed to the hospital in July due to a perforation in my bowel. I have never had any problems before.

AS is clearly stated in the above study inflammation of the stomach lining is a result of the constant vibration.

Other symptoms I have experienced and continue to experience are as follows:

ringing in my ears

Vertigo

Dizzy

Pressure in my head

Palpitations

Shaking

Nauseous

Bruising behind my knees

Pressure in my chest

Itchy ears (right from the beginning)

Unknown aches and pains

Jittery

Burning, tingling feels like electricity moving through my legs and arms. This happens almost every night it is very painful.

Sleepless

As I stated 16months of theses symptoms have left me very ill. I have lost almost 30 pounds and it is all muscle mass – not healthy weight loss.

My dog started to seizure January 2015. She usually seizures after a 3-4 day period of easterly winds.

Our well has been disturbed as has our neighbours – NextEra has promised to do “something” nothing has yet been done. We no longer drink our water or give it to the dogs.

I have documented everything right from the beginning. I am more than welcome to allow you to look at my daily entries.

Property # 8

The K2 project has negatively affected our quiet life. Our property and home now resonates with the beating , thumping and whining of these giant turbines.

Sleeping is now an issue, with very few nights where we get a full and restful sleep. Morning comes and we are exhausted. Needing sleep and never ever attaining it, feeling like one has run a full marathon and been up for 24 hours straight. Certain wind directions seem to have more of an effect on our ability to get a restful sleep. There have been very few days since these turbines started that we have gotten any kind of quality sleep.

We have been experiencing massive mood swings from happy to depressed, to extremely mad all in very short time periods and no real reason for any of the changes.

There are days when we both know that we need to get away from our property, if only for a few hours.

I have under gone a lot of testing lately for a racing heart, the beat was so strong one can see my jugular vein pulse and I could hear my heart beat in my right ear. This started about two months after the wind project became operational. Still no clear diagnosis as to why my heart will unexpectedly start to race. Our doctor has put me on medications to try to control the racing.

Please!! help all those who are suffering.

Property #9

“I would like to know why my bed trembles or lightly vibrates? The nights of the storm were particularly noticeable. I always sleep with my bedroom window open but can't anymore. On the windy nights I hear them even with it closed. It is a whoosh. It sounds like the washing machine is going all the time with a whoosh in

between. Once I am awake it then takes quite a while to get back to sleep. I can't hear it in the rest of the house. On windy days it is noticeable outside.

I have been in touch with someone who suggested adding anti-vibration blocks. They seem to help some but still it is noticeable."

#### Property #10

"Noise from turbines were very loud last night (Oct.31st) but have got to the point that no one will follow up. We run a fan all night to drown out the noise. As soon as my head touches the pillow I can hear the noise and feel the vibration."

#### Property #11

"Our concerns are noise-night time mainly. Going to sleep we hear a constant swoosh. The instances where the weather, temperature, & wind are in a perfect combo causes them to be very loud-enough to wake you from a sleep."

#### Property #12

June 24- 10pm swishing sound noise July 14- Airplane noise (night) July 20- ear ringing July 23- buzzing sound 10:45

Aug 14- night noise Aug 14- day noise Aug 16- swoosh Aug 23-27 night noise Sept 7 -night noise (3am, 4am) Sept 13- night noise, ear ringing (4:30 am) Sept 14- dizzy 10pm

Sept 23 -ear ringing (6pm, 10pm,12am) Sept 25 - ear ringing (8:15pm, 9pm), dizzy, nauseous (11:15pm) Sept 26 -night noise (3am) Oct 11- night noise (10pm, 3:45am, 6 am) Oct 16- night noise (11pm) dizzy nauseous Oct 19- night noise Oct 20- night noise (9pm, 11pm) Nov 5- night noise (9pm) Nov 12- night noise - very windy July 9-11, July 17-22, Aug 10-12,15,17 Aug 23-31, Sept 2, 5,21 (ear tugging)

#### Property #13

"When the wind is South-South West between 6-16 km/h I hear it the worst. So much so, that before I walk out the door, I can tell which turbine the noise is coming from based on the direction I hear the noise.

I have called the proponent 3 times now regarding turbine noise and have not been called back once. I have also called the MOECC at least 3 times and nothing has changed with regard to noise, nor has anyone come out to my home.

Question(s): Will you shut them down at night if it's consistently affecting certain families? What can you do to regulate the infrasound because many of my neighbours say they are feeling the turbines even if they can't hear them?"

#### Property #14

"1 consistent case of adult nausea when returning home after being out of town for work (twice a week on a regular basis). Sept 25, 26, & 27th the swoosh from the turbines heard very loud (with sleeplessness experienced for 1 adult & 2 kids). On the morning of Sept 25th 2 kids affected (1 could not think properly and follow basic duties without constant confusion & the other woke up with a very bad headache - the turbine is the closest to the room these two children sleep in). On Oct 2nd 1 child had pain behind their eyes (bedroom closest to the turbine out of all the residence)."

Property #15

"I suffer from sleeplessness from the turbines and find them very loud. It was particularly bad Sept 25th to 27th. If the turbines are loud and I can hear them from inside the house, my cat now will refuse to go outside the door. That was never a problem before."

Property #16

"We live right in St. Columban and have been affected on-going since the turbines started spinning. We hear them everyday. We have 2 adults and 2 children living in our home. Noise affects us both during the day and at night. Shadow flicker from the blades as well as the blinking red lights at night are a problem for us. We can always hear them whether it is windy or calm."

Property #17

"We definitely hear the turbines and they have interrupted our sleep especially during the summer months as we do not have air conditioning and could not sleep with the windows open. Both occupants of the house are experiencing sleeplessness."

Property # 18

"It sounds like there's a train behind our barn. We're not able to sleep when the window is open (especially during the summer months) as we do not have air conditioning. It is always worse before a storm. Sleeplessness is experienced on a regular basis by both occupants of the house."

Property #19

"We are experiencing noise both day and night from the turbines, literally seven days a week. Shadow flicker; nausea; headaches; & ringing of the ears are problems we have experienced. The lights are a distraction at night and make us nauseous. Obviously the noise is worse if it is windy."

Property #20

"I complain everyday it spins, even last night-Nov15th I was awake till 3:00-4:00 am to get to sleep due to the sound. Last week (8th-15th of Nov) day and evening noise. I put an official complaint in at 12:30 or 1:00, and I have recorded the sound on my phone. Migraines during the night, since the turbine started turning. At times I sit straight up in bed due to the swoosh and then can't get back to

sleep because of the sound- it's that loud. We have 2 adults and 3 children living in our house. Warm, windy nights seem to be the worst.

We experience: sleep disturbance, high blood pressure, nosebleeds, vibration on chest during the night, shadow flicker, headaches & nausea."

#### Property #21

"Depending on wind direction, we are affected most early morning (around 3 am). It is loud enough to wake us up, making it very difficult to get a good night's rest. We hear them both at night and during the day. We are also affected by shadow flicker and headaches. The weather does not seem to affect the noise. It is the same regardless. If the wind is blowing, we hear them."

#### Property #22

"Noise is particularly bad depending on wind direction. Sounds like it comes right into the house. 4-5 nights a week our sleep is interrupted. We experience nausea and headaches as well. That was never a problem before  
Property #23

"Noise during the night and early morning. Since they began spinning we have had problems ongoing. There are a total of 6 people living in our home - 2 adults and 4 children."

#### Property #24

My problem with the wind turbines started with the construction of them around my home. The noise of machinery, cement trucks, graders, etc. They tried to work 24/7 but we (neighbours) managed to stop them from 11 pm to 6 am. Not much relief because the letdown site was near us. I thought that was the worst! But I soon discovered it was not after a winter and spring of no sleep. The turbines started up and I had almost no sleep, a few hours in a couch in the middle of my large living room. We have 5 turbines with 1 km of home. The headaches, the nausea, I could not even think. I was miserable. I spent most of my days at the Bayfield Harbour, the Library, homes of friends, anywhere to get relief. We went on a holiday August 2014 and no problems, came home to sleep, headaches, throwing up, etc. again. We went on two more in September 2014, same thing, no issues again, away. Sleep is underrated. When we came home the second time I told my husband I was leaving even if it meant sleeping in the car forever. He was feeling some effects by this time. We drove our fifth wheel trailer to friends and parked there for ten days or so until we bought a new home (trailer) in a park. I could only go home to the big house for maybe two hours at a time. Try packing a 3,300 square foot home in two hours a day. A nightmare. To leave a home we didn't ever want to leave. I still can't go to this property willingly. Who wants to feel sick? Not I. I want my life back. No one cares about us, only money and greed.

#### Property #25

Elderly man notices increased background sound like a machine left running in his machine shop since BlueWater project was activated.

He developed facial paralysis. This Bell's Palsy has not improved in the 17 months since its onset three weeks after BW Project started up. His dominant eye is affected: aching, watering and with reduced ability to focus. Also extremely sensitive to cold. Mouth and cheek have a leathery quality. Also experiences poor sleep, dizziness, reduced balance, poor short term memory, loss of words, and reports 'inability to think'.

Wife has experienced intrusive tinnitus for the same period of time.

#### Property 26

Just over a year ago, the 36 turbine wind farm to my north went into operation. Shortly after I experienced neck tightness and a feeling of pressure in my head. I wasn't really concerned because I thought this was just some work related issue (muscle tension) which would go away soon.

A few months later the 68 turbine wind farm to my east and south-east went into operation with one turbine just 650m from my house. And currently another 40 turbines are under construction to the west.

On top of the now constant pressure in my head I experience ringing in the ears, loss of appetite, dizziness, the feeling of having to throw up in the morning (I'm male and can't be pregnant), a sudden increase in heart rate, muscle cramps and occasionally a blurred vision to the point where, when I was driving, I had to pull over for 10 to 15 minutes until my vision came back to normal. Many nights I'm lying awake for several hours which makes me very tired throughout the day.

I eventually went to see my family doctor which sent me for further examination to check if I was having a brain tumour, nothing was found. For the past 10 months, I have had numerous treatments by massage therapists, chiropractors and acupuncture, nothing helped.

My son started sleeping with a fan running all night and several times he woke up with a nose-bleed.

Our dog will whine all night if it is windy and the turbines are turning.



**Pauli Sommer**

December 14, 2016 at 8:56 am

This letter was sent today to 46 people in Ontario who are collectively responsible for the harm being experienced by residents in Huron County. This person has sent many, many such letters since the turbines were turned on in March of 2015. The name of the sender and of the wind company responsible has been deleted.

Why on earth is this not considered enough evidence that people are being harmed and that these turbines are a community health hazard?

We have an ethical crisis in Ontario over the siting of these turbines and the wilful blindness of all who are responsible for this and take no action to protect people immediately.

"The Industrial Wind Turbines (IWT) continue to cause much distress to many of us in this area. Some complain and some don't. The ones who don't wonder what is the use? Who is going to do anything about them anyway?

From personal experience, I can tell you that we are very distraught about the turbines. They have been an increasing problem in our household most of November and into December. We have often been away for a few days at a time. When we come home - we are quickly reminded of what is happening here. During this time one or both of us have been experiencing headaches, ear pain, body quivering, body vibrations that extend from head to toe (a very eerie feeling), shakiness, heart palpitations, "foggy" head and the feeling that the head is "swimming". I have made calls to the SPILL Line.

There has been a continuous whine that penetrates into our home. We don't know how it gets in - through the walls??? It is unbearable to listen to that. We have to move from room to room and that does not always help. There are rooms in our home we can not use. It wakes us in the middle of the night. This is to be our personal space and we can not find peace here. One steps outside and hears the tonal sounds whining and whooping and then there is the whooshing and whomping.

The flashing lights are another concern. Why should we have to keep our curtains closed so we do not have to see that?

When will anyone realize what is happening to the residents that live among these monsters? This is our property and our peaceful living here has been destroyed by these monsters. Our quality of life has been destroyed. Our children have now made it quite clear they do not want to ever come home to the family farm and live here. Guests and visitors complain of the noise, headaches, etc.

Please lodge this as a noise complaint that has been ongoing intermittently most of November and now into December.

I have not been complaining on a regular basis because I get the feeling writing these letters is a waste of time. However, I realize some days that the letter writing should continue. How else does anyone know how the rate payers of this township and this province and this country are feeling as a result of these Industrial Wind Turbines that have been placed in rural Ontario against our wishes. Is this a democracy?

The closest turbine to our residence is just over 700 M. Within 10 KM of our residence, from our count, there are 50 IWT and 23 belonging to another development..

Please lodge and investigate it as a complaint under the Radiation Emitting Devices Act (REDA).

I am sending this email for you to archive. Please confirm receipt within seven days. "



**Richard Mann**

May 3, 2017 at 2:57 am

Please see the latest research on infra sound perception:

This work is novel both in the experiments/stimulus used and the brain activations reported.

“Altered cortical and subcortical connectivity due to infrasound administered near the hearing threshold – Evidence from fMRI”

Markus Weichenberger, Martin Bauer, Robert Kühler, Johannes Hensel, Caroline Garcia Forlim, Albrecht Ihlenfeld, Bernd Ittermann, Jürgen Gallinat, Christian Koch, Simone Kühn

PLOS

Published: April 12, 2017

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#### Abstract

In the present study, the brain's response towards near- and supra-threshold infrasound (IS) stimulation (sound frequency near-threshold) as well as the right superior frontal gyrus (rSFG) during the near-threshold condition. In summary, this study is the first to demonstrate that infrasound near the hearing threshold may induce changes of neural activity across several brain regions, some of which are known to be involved in auditory processing, while others are regarded as keyplayers in emotional and autonomic control. These findings thus allow us to speculate on how continuous exposure to (sub-)liminal IS could exert a pathogenic influence on the organism, yet further (especially longitudinal) studies are required in order to substantiate these findings.



**Richard Mann**

May 9, 2017 at 5:57 pm

PS: I've updated my web page, <http://www.cs.uwaterloo.ca/~mannr>

There you will find my correspondence with Huron County Health Board on this topic, and transcripts to meetings held on Wind Turbines.



**Richard Mann**

June 13, 2017 at 1:21 pm

Update:

As of today (Jun 13, 2017) Huron County Health Board is waiting on University of Waterloo ethics. This is their second application, which was submitted on May 18, 2017.

Below is a timeline of correspondence. Documents are on my web page.

Richard

<https://cs.uwaterloo.ca/~mannr/>

Correspondence from Erica Clark, Huron County Health Unit. June 6, 2017. Email (text).

Correspondence from Erica Clark, Huron County Health Unit. May 23, 2017. Email (text).

Meeting with Professors George Dixon (VP, University Research), John Thompson (Associate VP, University Research) and others. May 17, 2017.

Correspondence from Erica Clark, Huron County Health Unit. May 12, 2017. Email (text).

Correspondence from Erica Clark, Huron County Health Unit. May 2, 2017. Email (text).

Tri-Council Policy Statement. Ethical Conduct for Research Involving Humans. Link. Submission, University of Waterloo (PDF). Submission, Carmen Krogh (PDF).

Meeting with Professors George Dixon (VP, University Research) and John Thompson (Associate VP, University Research) Jan 9, 2017.

Letter to Erica Clark, Epidemiologist, Huron County Health Board. 5 December 2016 (PDF).

Huron County (Ontario). Health Board Investigation on Wind Turbine Noise. Initiated 7 March 2016. Stalled June 1 2016. HCHU meeting (4 Aug 2016, Transcript (PDF)). HCHU Public meeting (6 December 2016 (Link, Another Link (facebook), Transcript (PDF) ).



Richard Mann

June 18, 2017 at 3:19 am

One more update (as of June 15, 2017).

University of Waterloo Human Research Ethics Committee. The application was submitted by Phil Bigelow (faculty Waterloo) and Erica Clark (adjunct appointee Waterloo and Huron County Health Unit).



Richard Mann

March 10, 2018 at 4:59 pm

I have just published my results on generation on infra sound. The results are available below or from my web page.

<https://cs.uwaterloo.ca/research/technical-reports/2018-technical-reports>

CS-2018-01

Title Research Report on Infra Sound

Author Richard Mann

Abstract

We have successfully produced infrasound, as a mirror of that produced by Industrial Wind Turbines, in a chamber capable of accommodating a human test subject. This will permit others, with appropriate medical training and ethical oversight, to research the effects of infrasound on humans.

Date February 25, 2018; public release: March 2, 2018

Report CS-2018-01 (PDF)



Richard Mann

October 19, 2018 at 8:58 pm

Update, October 19, 2018.

On October 7, 2018 I received an alarming letter from a citizen in rural Ontario.

The title was: "Cardiac instability caused by infrasound radiation from industrial wind turbines"

I am including text from the letter below, with permission.

The authour wishes to remain anonymous going forward.

They have informed the Ontario government at the addresses listed below.

Richard Mann

University of Waterloo

Encl: Excerpt from letter of October 7, 2018

From:

Subject: cardiac instability caused by infrasound radiation from industrial wind turbines...

Date: October 7, 2018 at 1:38:43 PM EDT

To: [doug.ford@pc.ola.org](mailto:doug.ford@pc.ola.org), [rickford.Greg@pc.ola.org](mailto:rickford.Greg@pc.ola.org), [colt.manson@ontario.ca](mailto:colt.manson@ontario.ca), [Nina.Chiarelli@ontario.ca](mailto:Nina.Chiarelli@ontario.ca),  
[rod.phillips@pc.ola.org](mailto:rod.phillips@pc.ola.org), [christine.elliott@pc.ola.org](mailto:christine.elliott@pc.ola.org)

Cc: [monte.mcnaughtonco@pc.ola.org](mailto:monte.mcnaughtonco@pc.ola.org), [lisa.thompsonco@pc.ola.org](mailto:lisa.thompsonco@pc.ola.org), [bill.walker@pc.ola.org](mailto:bill.walker@pc.ola.org)

**BEGIN QUOTE:**

In the past two weeks, four people in Ontario have offered to provide their medical investigation records which rule out typical causative factors for traumatic cardiac instability episodes which they have been experiencing in their homes.

All four of these peoples' homes have been surrounded by industrial wind turbines and in two of these cases, substations have been sited too close to their homes.

This situation is an emergency as well as a provable human rights violation.

It confirms the cumulative harm that Dr. Mariana Alves -Pereira has been studying for decades. She has recently presented her work in Slovenia to a group of professionals.

<http://en.friends-against-wind.org/health/infrasound-and-lfn>

In this presentation and also in her most recent interview in Finland, she speaks about LFN and infrasound radiation and the damage to the nervous system as well as the heart. In the interview in Finland she states that, knowing what she knows, she would not live within 20 km of a wind turbine.

Can you imagine how rural residents in Ontario who did not consent to having their homes surrounded by wind turbines feel as their pleas for protection have not resulted in effective measures being taken by their government?

The four people who are willing to have their relevant health investigations used, to show that they are now experiencing the cumulative harm from infrasound radiation, are all people who experienced harm and tried to report it to the Liberal government agents within the MOECC and the MOH. No timely or effective protection was achieved under their leadership and now these peoples' lives are in peril because the turbines that are too close to their homes are still running as I type this letter.

These are four people who have confided in me and are now willing to let you see their medical evidence. How many others are there in rural Ontario who are experiencing harm at various stages of the neurological and cardiac damage that Dr. Mariana Alves-Pereira says is irreversible. How many people, because of the lack of properly delivered information, still have not connected the dots between their symptoms and the turbines near their homes?

With lives of innocent people being threatened in this way and cumulative harm occurring for all who live within 20 km of turbines- harm which cannot be reversed- your government must make this horrible reality a very high priority.

The turbines that are close to or surrounding peoples' homes need to be turned off now.

With respect and gratitude for your willingness to make tough ethical decisions on behalf of the people of Ontario....

END QUOTE



alternative energy supply

December 15, 2018 at 6:31 pm

With the increase in competition and product supply within these industries, in addition to tax incentives and possible government subsidies of these clean energy resources, cleaner smarter energy have been around in reach of many quickly the following several years. More exotic systems use solar heating to run the end of an heat pump chiller; this uses a solar collector being a heat box to heat up a practical fluid to operate exactly like an air conditioner.

Again, just those places of the world with volatile volcanic activity and underground systems could be relied to produce this kind of their time.



Richard Mann

April 24, 2019 at 5:26 pm

On April 9, 2019 I received a legal document (PDF link below).

The document mentions infra sound.

I don't understand the legal implications, if/when there will be a response, or if so, if there will be any remedy.

At this point all I know is the document was filed on Feb 15. 2019.

Please follow up here if anyone has further information.

<https://ccsage.files.wordpress.com/2019/04/notice-of-application.pdf>

Sincerely,

Richard Mann

University of Waterloo



Patti Kellar

September 20, 2019 at 4:11 pm

Having lived around IWT's since 2014 and having both myself and partner become increasingly ill, we have followed the research to try to understand what is happening to us. The following link to Mariana Alves-Pereira's talk on Infrasound and Low Frequency Noise at the University of Waterloo on September 12, 2019 provided us with valuable insight. She has been studying this phenomena for over thirty years and explains scientifically what we have been experiencing in our bodies. It is a must view if you want to understand ILFN. <https://livestream.com/itmsstudio/events/8781285/videos/196181579>

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