March 20, 2023

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Dear Supervisor Tistrya Houghtling and Town of New Lebanon decisionmakers,

We write to you regarding the placement of cell towers, "small cell" and wireless facilities. Cell antennas and cell towers should not be placed near schools and homes. Safety is not assured even if the cell tower is compliant with FCC limits.

On August 13, 2021, the United States Court of Appeals for the District of Columbia Circuit ruled in our case against the FCC that the decision by the Federal Communications Commission (FCC) not to update it's 1996 safety limits for human exposure to wireless radiation (which includes cell tower emissions) was "arbitrary and capricious." One of the most important aspects of the court decision was that the court found the FCC did not adequately explain why it ignored scientific evidence on impacts from long term wireless radiation exposure, especially in regards to children, who the American Academy of Pediatrics states are more vulnerable to wireless radiation. The court ordered the FCC to examine the record evidence regarding long term exposure to children. So far, the FCC has not responded. Thus, this landmark ruling highlights how no federal health agency has reviewed the full body of current research to ensure the current human exposure limits of the FCC are adequately protective.

Extensive published scientific evidence indicates that radiofrequency radiation *at levels far below FCC limits* can cause cancer, increased oxidative stress, genetic damage, structural and functional changes of the reproductive system, memory deficits, behavioral problems, and neurological impacts. We consider radiofrequency radiation (RFR) to be a human carcinogen based on the current body of evidence.

The exposure limits of the US Federal Communications Commission are totally outdated and do not protect the health of the public, especially not the health of children. The Los Angeles School District has banned cell towers on their District's school grounds and also set an RF limit at 10,000 less than FCC limits stating that, "It is believed that a more conservative level is necessary to protect children, who represent a potentially vulnerable and sensitive population."

Children are more vulnerable to RF radiation, just as they are to other environmental exposures. Even very low exposures to children can have serious impacts later in life because their nervous and immune

systems are rapidly developing. Children absorb higher levels of RF radiation deeper into their brains and bodies because they have thinner skulls, a higher water content in their tissues. Children will have a longer lifetime of higher exposures, compared to adults today.

The American Academy of Pediatrics states;

> "In recent years, concern has increased about exposure to radio frequency (RF) electromagnetic radiation emitted from cell phones and phone station antennas. An Egyptian study confirmed concerns that living nearby mobile phone base stations increased the risk for developing:
>
> - Headaches
> - Memory problems
> - Dizziness
> - Depression
> - Sleep problems
>
> Short-term exposure to these fields in experimental studies have not always shown negative effects, but this does not rule out cumulative damage from these fields, so larger studies over longer periods are needed to help understand who is at risk. In large studies, an association has been observed between symptoms and exposure to these fields in the everyday environment."

At this time we have not identified a safe level of exposure. Although radiation levels decrease as you increase your distance from a particular antenna/tower, the reality is that adding a tower or base station to a community will definitely *increase* the radiation exposure in that area near the antennas and within the surrounding coverage area.

We recommend policies to reduce human exposure to RFR, especially for children. Schools are where children spend the majority of their daytime hours. Therefore we strongly recommend against installing cell towers near schools, daycares, parks, homes, or hospitals.

Recent research on people living near cell antennas has found increases in molecular markers in the blood that predict cancer. This study evaluated effects in the human blood of individuals living near mobile phone base stations (for study purposes, they chose a distance of 80 meters) compared with healthy controls living more than 300 meters from a base station. The study measured higher RFR levels in the homes of people living in homes within 80 meters from the cell antennas (documenting the impact of increased RFR radiation from the antenna installations) and found statistically significant differences in their blood. The group living closer to the antennas had statistically significant higher frequency of micronuclei and a rise in lipid peroxidation in their blood; these changes are considered biomarkers predictive of cancer (Zothansiama et al, 2017).

A review paper entitled "Limiting liability with positioning to minimize negative health effects of cellular phone towers" reviewed the "large and growing body of evidence that human exposure to RFR from cellular phone base stations causes negative health effects." The authors recommend restricting antennas near home and within 500 meters of schools and hospitals to protect companies from future liability (Pearce 2020).

Please note the following scientific publications regarding cell towers and cell phone radiation:

- European Parliament requested a research report "Health Impact of 5G" which was released in July 2021 and concluded that commonly used RFR frequencies (450 to 6000 MHz) are probably carcinogenic for humans and clearly affect male fertility with possible adverse effects on the development of embryos, fetuses and newborns.

- A review entitled "Evidence for a health risk by RF on humans living around mobile phone base stations: From radiofrequency sickness to cancer reviewed the existing scientific literature and found radiofrequency sickness, cancer and changes in biochemical parameters (Balmori 2022).

- The US National Toxicology Program $25 million animal study on long-term exposure to radiofrequency radiation found DNA Damage, heart damage, increased brain tumors, and increased heart tumors deemed "clear evidence of cancer." Importantly, this study was launched almost two decades ago by the FDA because the US government had not performed research on the long-term effects of RFR exposure and the FDA wanted data on long-term safety. In 1996, the EPA was defunded from developing proper safety standards, and since then there has been no systematic review of the science by any US agency.

- Researchers with the renowned Ramazzini Institute in Italy published findings that lab animals exposed to levels of RFR (below FCC limits) set to mimic cell tower exposures developed the same types of cancerous cancers as the US National Toxicology Program found in their large-scale animal study.

- In 2011, radiofrequency radiation was classified as a Class 2B possible carcinogen by the World Health Organization's International Agency for Research on Cancer. This classification applies to RF regardless of the source. Between 2011 and today, the published peer-reviewed scientific evidence has significantly increased. Now, many scientists are of the opinion that the weight of current peer-reviewed evidence supports the conclusion that radiofrequency radiation should be regarded as a human carcinogen (Hardell and Carlberg 2017, Peleg et al, 2018, Miller et al 2018).

- An Australian study looked at RFR levels to which kindergarten children were exposed, depending on how close their school was to base stations/cell towers. Researchers equipped the children with RFR measuring devices. Researchers found that kindergartens located nearby base stations/cell towers (closer than 300 meters or approximately 330 yards) had total exposure to radiofrequency radiation (RFR or RF-EMF) more than 3 times higher than children at schools where base stations were further away than 300 meters.

- A 2018 study measured radiofrequency radiation exposures in the environment including emissions from cell phone towers, TV and FM radio broadcast antennas, cell phone handsets, and Wi-Fi—in several countries including the United States. The researchers concluded that cell phone tower (base station) radiation emissions are the dominant contributor to RFR exposure in most outdoor areas.

- A 2015 review found that in 93 out of 100 studies, RFR exposure caused oxidative stress (Yakymenko 2015). A 2021 review again confirmed non ionizing radiation has oxidative effects (Schuermann 2021). Many well-known causes of cancer in humans (such as asbestos and arsenic) are understood to induce oxidative stress.

- Studies also show that when combined with lead or a known carcinogen, RFR has magnified the carcinogen's effects. For example, RFR at levels far below FCC limits more than doubled the numbers of liver and lung tumors in carcinogen-exposed mice (Lerchl 2015).

- The International Association of Firefighters has officially opposed cell towers on their stations since 2004 after a study found neurological damage in firefighters with antennas on their fire station. In 2017, when 5G "small cells" were coming to California via a 5G streamlining bill (SB 649), firefighter organizations came out in strong opposition to the bill and requested that towers not be installed on firehouses. They were successful and SB649 was amended to exempt their stations from the deployment due to their health concerns.

- Published research finds the frequencies impact wildlife. For example, studies have found that the radiation alters bird navigation and disturbs honeybee colonies. Research also shows adverse impacts on trees and plants. (Research on EMF and Bees, Research on Wildlife Research on Trees)

- A 2019 study of students in schools near cell towers found their higher RF exposure was associated with impacts on motor skills, memory, and attention (Meo 2019). Examples of other effects linked to cell towers in research studies include neuropsychiatric problems, elevated diabetes, headaches, sleep problems, and genetic damage. Such research continues to accumulate after the 2010 landmark review study on 56 studies that reported biological effects found at very low intensities of wireless radiation, including impacts on reproduction, permeability of the blood-brain barrier, behavior, cellular changes, and metabolic changes, and increases in cancer risk (Lai and Levitt 2010).

- The International EMF Scientist Appeal was submitted to the United Nations urging immediate protective policy action in light of the scientific evidence that has found adverse biological effects from electromagnetic radiation, including radiofrequency radiation, and, as of January 2019, this Appeal is signed by 247 scientists from 42 nations; these are scientists who have published peer-reviewed articles about electromagnetic fields. They state, "numerous recent scientific publications have shown that EMF affects living organisms at levels well below most international and national guidelines. Effects include increased cancer risk, cellular stress, increase in harmful free radicals, genetic damages, structural and functional changes of the reproductive system, learning and memory deficits, neurological disorders, and negative impacts on general well-being."

Please note that in several countries, governments have set policies to protect children, pregnant women, and medically fragile persons by classifying areas with homes, hospitals, and schools as "sensitive areas." Some examples include:

- India lowered their RF limits to 1/10th of US FCC ICNIRP limits.*The Brihanmumbai Municipal Corporation, Zilla Parishad, Rajasthan, and Mumbai have banned cell antenna/tower installations on schools.*
- Greece has banned the installation of mobile phone base stations at the premises of schools, kindergartens, hospitals, or eldercare facilities.
- Chile's "Antenna Law" prohibits cell antennas/towers in "sensitive areas" (educational institutions, nurseries, kindergartens, hospitals, clinics, nursing homes).
- Several countries have lower allowable RFR limits for "sensitive" areas which is generally defined as areas where children play and school.

EHT's position is that children require special protections from radiofrequency radiation and their exposures should be reduced to as low as possible. We strongly recommend against cell tower/antenna placements at or near schools and homes as this would increase daily RFR exposure.

Please feel free to contact us with more questions.

Sincerely,

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