

**James Feenan - Fwd: Re: Public hearing re Case# U-2019-0011 (Nixon), 4/16/20**

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**From:** James Feenan  
**To:** James Feenan  
**Date:** 4/14/2020 9:47 AM  
**Subject:** Fwd: Re: Public hearing re Case# U-2019-0011 (Nixon), 4/16/20

**Mendocino County**

**APR 14 2020**

**Planning & Building Services**

>>> "hollyb@pacific.net" <hollyb@pacific.net> 4/14/2020 9:29 AM >>>  
April 13, 2020

Mendocino County Planning Commission  
860 N. Bush St.  
Ukiah, CA 95482

Re: Case # U-2019-0011 (Nixon); Applicants AT&T

Dear Commissioners and Staff,

I am writing to request that the public hearing regarding case number U-2019-0011 (Nixon) and its Negative Declaration, scheduled April 16, 2020 before the Mendocino County planning commission be postponed or continued to a later date, when we are able to travel to the hearing without fear of the coronavirus.

The proposed installation of a 4G LTE cell tower on Pine Mountain in Willits is a complex, serious matter which deserves much more time and consideration than it's been given so far.

Fire safety is a major concern with an installation like this in such a high fire hazard zone. A 143ft tall tower with 12 antennas is very likely to attract lightning, especially during summer thunderstorms. Lightning strikes to trees have been a significant cause of wildfires in n. California for many years, and the probability is much higher that a metal tower will be struck and set sparks flying, not only to vegetation but to the generator and diesel fuel on the site. High winds have also been responsible for starting past fires and for the devastating extent of them. On Pine Mt we get strong afternoon winds daily throughout the warmer months.

Another factor in the fire danger is that electromagnetic frequencies (EMFs) that come from a 4G or 5G tower can cause cellular changes in many types of plants that are aromatic, such as pine trees, heightening the action of volatile oils which can lead to spontaneous combustion. A 2017 study investigated this effect on Scots pines and states "Pine trees are sensitive to Low Frequency EMFs, causing oxidative damage in the needles and altering the rate of volatile components in pine." (Jnl of Nutrition, supp. Nutriceutical Plants, Vol 9 2017, Esim N, Tiriyaki D)

I've read the letter from a number of residents who propose that if there's a fire they'll be safer with AT&T's 4G tower because phone service will be better. I don't agree. If there's a fire I think the tower equipment would be a liability for the above reasons. And if AT&T was concerned with the quality of our phone service, our landlines would be more reliable, at least most of the time. Every winter for the past 8 years my phone line has become unusable when it rains due to static, and it takes a tech's visit (and often a week or two) to address the issue. When I've asked, 3 of the employees who have come out over the years told me that the trouble is due to ATT's lack of maintenance on the lines, and that the company is intentionally ignoring aging systems "in areas like this" because their focus is now entirely on wireless technologies. Another concern expressed was unaffordability of current options. If you check the ATT website you'll see that the cost of their wireless phone plans (plus buying a phone,



activation fees, etc) and/or their internet access is comparable to any of the satellite services up here, which I agree is too expensive for many people.

My observation is also that when a fire occurs the deciding factor wouldn't be how quickly I could call out. In 2017 I witnessed from my kitchen window how rapidly the Redwood Complex fire was traveling from Redwood Valley over the hills and canyons up toward my home; I heard about the mandatory evacuation order shortly after when neighbors drove to our houses to let us know. I believe that leaving will be the only sane option if it happens again, but there's still no exit except Ridgewood Road. If there's a fire at the proposed tower site, which is 1/4 to 1/2 mile downhill from us as the crow flies (it's hard to tell with the winding geography), we may have no option but to "shelter in place" as we're doing now, a very grim prospect. Will the Little Lake Fire Department be able to make it up Ridgewood Road to the tower site, if traffic from outlying parcels is pouring onto it to escape the prospect of fire? If the fire is already spreading, will they even try? Last time it didn't make sense for them to.

So why are we living here in the first place? There's an aesthetic value inherent to life here that's becoming rare in the world and includes the irreplaceable beauty and vitality of the natural plant and wildlife habitats. I've lived in Mendocino County for 36 years and raised my daughter here, and over those years it's been clear that the quality of life also involves elements that are much deeper than sheer aesthetics. Our area draws people who instinctively know that the fast pace and multiple kinds of pollution in more urban areas are detrimental to their mental, physical, emotional, and spiritual health. The last 30+ years of stress research confirms that a person's life is bound to be healthier and longer if they have easy access to nature, clean air and water, and a life not constantly driven by the technologies of information overload. Adapting ourselves to some communication and financial inconveniences is part of the trade we've made, and I think it's well worth it. On the economic side, if we can sustain this quality of life I believe it will continue to draw retirees, community-based farmers, and others who are experienced, inspired, and adaptable enough to form and support workable systems here even in tougher times.

The concept of an aesthetically pleasing, rich quality of life can't be separated from the reality of one's state of health. If we're debilitated by poor health, whether immediately life-threatening or not, it can become impossible to appreciate or even notice the beauty of the natural surroundings or the clarity of the air we breathe. This is true regardless of the FCC's disallowing of environmental concerns regarding placements of cell towers in neighborhoods like ours.

I hope that the Commissioners continue to read this letter, if only for a more thorough understanding of why many people are so deeply concerned about EMF proliferation in Mendocino County.

In a world that's becoming flooded with digital technology, it's an uncomfortable truth that low-frequency EMFs affect the human body. Small electrical currents are always active in the body due to the chemical reactions that occur in our normal functioning, like nerve transmission, breathing, digestion, and brain and heart activity. Different organs produce different resonance frequencies (called "infrasonic waves") which have recently been measured. For example, the heart's frequency is approximately 1Hz, the brain's is approx. 10Hz, and blood circulation produces .03Hz to 05Hz ([ui.adsabs.harvard.edu/abs/abstract](http://ui.adsabs.harvard.edu/abs/abstract)). External EMFs influence these currents by affecting the distribution of charged particles in the electrical currents, as is true for all living things.

Dr. Henry Lai is a professor emeritus in Bioengineering at the Univ. of Washington who co-wrote the first comprehensive overview of EMFs in 2010. He states that "DNA acts as a fractal antenna in electromagnetic fields," meaning that all DNA has a wide range of interactions with EMFs. He also says "There is a basic interaction mechanism of biological tissues with EMFs that is independent of frequency." (Bioelectromagnetics, 2000; Wang and Lai) And according to Dr Paul Ben-Ishai, a physicist at Hebrew University "The sweat ducts in our skin's upper layer act like helical antennas, which are especially designed to respond to EMFs". He explains that their resonance frequency in the 200 GHz range along with a spiral structure attracts the higher frequencies emitted by 5G radiation and draws them in. (BioMedOptExpress, 2018, Mar 1; Tripathi, Ben Ishai, et al)

By 1995, the EPA had done a study on the effects of RFR (radio frequency radiation) from cell phones and had plans to research the low-frequency EMFs emitted by cell towers. However the EPA was removed from the job of setting safe exposure limits when the FCC (which consists of 5 people appointed by the President) received full regulatory power in 1996, and the research was not pursued.

It was in the 1996 Telecom Act that the FCC prohibited consideration of environmental factors in the placement of cell towers, while adopting RFR exposure limits based largely on research from the 1980's. That research involved behavioral changes in rats exposed to short-term microwave radiation and defined limits based on "SAR" levels

(Specific Absorption Rate per kg of weight) which measures the penetration of the electric field into the body. The study made the hypothesis that the risks found were due solely to the short-term heating of exposed tissue from RFR, which has been proven to be false. An important newer finding about SAR ratings has to do with children, who are affected differently than adults because of their physical composition and still-developing bodies. Using the model of a 5-year-old child, it's been shown that with exposure to EMFs at current compliance levels, "basic restrictions" for levels of absorption are exceeded by 40%. (Electromagnetic Biology and Medicine, 31(1), Mar 2012, Gandhi et al)

Since 1996 there have been over 500 peer-reviewed studies which found harmful biological or health effects from EMF exposures at intensities too low to cause heating of tissues: the "non-ionizing" EMFs, which are produced by 4G and 5G EMFs.

More than 240 scientists from 41 countries who have published peer-reviewed research signed the International EMF Scientist Appeal, which calls for stronger exposure limits. The Appeal states that "EMFs affect 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 in humans. Damage goes well beyond the human race, as there is growing evidence of harmful effects to both plant and animal life." (Scientific American, Joel Moskowitz PhD, Oct 17 2019)

A significant aspect to the proposed 4G LTE tower is that it's the necessary stepping stone to a 5G system, which is not just one "generation" further as far as speed and capacity. 5G uses much shorter waves for its high speeds called "milliwaves" and because they move at a much faster rate they create a very dense wave, allowing the system to operate at many different frequencies at once. On becoming the first 5G provider in Mendocino County, AT&T would then make huge sums from other wireless providers who pay to install their individual 5G antennas on the original tower array; the extra antennas come in the form of canisters or boxes, up to 3 cubic feet in size. There are 3 different bands at which 5G towers can transmit, and with each boost in speed the power is multiplied but the signals cover a smaller overall area. At mid-range there's a several mile radius. If ATT were to provide the highest frequency possible, the range is far less - online articles report 500 feet up to 1/3 mile - so additional antennas would need to be placed at short intervals to transmit the signals. This would require mounting them on existing utility poles or structures in order to reach a large number of customers, and would expose people passing to intensities of EMFs similar to that of a microwave oven, 24 hours a day. It would also have a very negative impact on the beauty and accessibility of our surroundings, as many people walk (with or without their dogs) along Ridgewood Road every day.

The 5G system will not replace the 4G that's already in our environment from towers currently in the area; it will add on over those frequencies, including the microwaves still being emitted. If there are synergistic effects from simultaneous exposures to multiple types of EMFs, our overall risk of harm may increase substantially. (Scientific American, Joel Moskowitz PhD, Oct 17 2019)

In a February 2019 Senate hearing, the wireless industry admitted that they have had NO safety studies on 5G technology, and they don't plan to do any. The current head of the FCC (appointed by President Trump) is a former lawyer for Verizon, who has advocated for further weakening of state and local regulations regarding deployment of 5G. Mendocino County's precautionary principle will only serve us if you bring it to bear.

Again I ask that you adopt a continuance for the public hearing set to occur this Thursday April 16th. If the hearing is to go on, please deny the Major Use Permit, to protect us from the clear threat of EMF-related harms. As humans we are built to eventually adapt to the Covid-19 virus and even its losses. The gradual but devastating effects of EMFs will be with us, our children, and future populations for much longer than this bug.

Thank you.

Sincerely,

Holly Barnard  
6101 Ridgewood Road, Willits

