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February 9, 2019

Arthur Feinstein  
Executive Committee  
Sierra Club California – San Francisco

Re: 5G/ Requesting Sierra Club California Conservation Committee to Urge the National Conservation Policy Committee to Oppose Removal of Local Control & Environment Review.

Dear Executive Committee of the Sierra Club California:

I would like to share a cautionary tale with you about the firefighters of California and ask you to implore your National Conservation Policy Committee to take a strong stand in Washington to call for a moratorium on the buildout of the 5G infrastructure. Given legislation that passed Congress last fall, critical checks and balances of environmental review and local control are missing.

Fire stations have long been a desired and early target of the telecommunications industry. The industry favors fire stations as locations because they are almost always placed near population centers and heavily traveled roadways. The telecommunications industry wants to reach people in their homes and on the road. Telecom has not had difficulty talking municipalities into granting leases on fire station land because the cities and towns reap the rental revenue from these leases. Thus firefighters, who often work and sleep at these stations, have a substantial 24/7 exposure to cell towers that the industry consistently promises are “low-energy” and “1/1000 of the radiation the FCC allows”. Such reassurances ring false when firefighters experience clusters of neurological and immunological illnesses after years of spending shift after shift in stations that are also home to the telecom industry’s towers.

The stance firefighters have taken in California to keep 5G cell towers off their stations should make every American family have heightened concern about the cell towers that are creeping into their neighborhoods on lampposts and monopoles and signage across America *without local control and any environmental review*. Is the cost of American health worth the added value of faster downloads of videos and driverless cars?

Firefighters of California have spent 15 years and millions of dollars fighting cell towers on their stations. They have done so because they know they are among the strongest of the strong when it comes to professionals among us. Yet they have suffered harm living and working in the presence of cell towers, and they know they cannot carry out their duties to protect the general public as they should if they are indeed impaired. Furthermore, they know that those they protect – the general public – are often more vulnerable than they are. Logic tells the firefighters, as it tells us, that if the strongest of the strong are harmed, the weakest and most vulnerable among us are at even greater risk.

### California Firefighters as Canaries in the Coal Mine

Firefighters go through rigorous physical and cognitive testing before being hired by any California fire department. So when cell towers placed on or adjacent to fire stations cause obvious and even irreparable harm to the minds and bodies of our firefighters, something is obviously wrong. There is a lesson to be heeded. This is happening in California, and anecdotally, it is happening across the country. It is not happening at every station, but it is certainly happening at many stations where the cell tower radiation is beamed across the living quarters of the firefighters.

Therefore, what is the risk going to be for every unborn baby, every child, every woman, every elderly person, everyone with a chronic illness, people with allergies and chemical sensitivities, and even strong men with larger body mass and thus greater resiliency, when 5G towers beam untested millimeter waves 24/7 through the walls of homes into living rooms and second-story bedrooms where children sleep?

We think of the proverbial canary in the coal mine as harbingers of danger. Coal miners took canaries in a cage down to the depths of the earth to sound a silent alarm when they were in danger. When the canary fell off its perch from lack of oxygen, it was a warning sign to the miners that oxygen was running low and they needed to get to the surface before they collapsed.

It is hard to believe that firefighters have become our society's "canaries in a coal mine", but that is exactly what I am about to describe to you. As you read the results of a small pilot study we conducted of California firefighters exposed to cell towers on their stations for five years, understand that this brain damage occurred to the strongest of the strong among us after a five-year exposure to 2G. That was three generations of wireless ago, so the question must be asked: **What is going to happen to this entire country when 5G cell towers are deployed every 2 to 10 homes throughout this country?**

As you consider this critical issue and the position the Sierra Club takes regarding the recent removal by Congress of local control and environmental review with respect to cell tower placement, it is essential to know the following. There is no safe level of 5G millimeter wave radiation that has been established, there have been no tests of 5G exposure 24/7 on animals or humans, and there is no Health & Safety division of the Federal Communications Commission, yet our health and society's safety have been entrusted to the FCC.

If you contact the FCC to express concern regarding risk factors of 5G, they will refer you to the FDA. The FDA, which originally had authority over safety with respect to cell phones, gave a “pass” to the telecommunications industry. Thus the premarket testing phase for cell phones was skipped before they were launched onto the market. In a sense, a “pass” has just been given to the industry for 5G cell towers that are rapidly coming into our residential areas – now unfettered by any local control whatsoever.

However, concern is growing within Washington DC and across the country, and perhaps it is time for wise voices to stand up and ask for a return of local control and a return of environmental review. No one at any of our regulatory agencies is promulgating any safety standards. Regulatory standards may have been advanced from time to time, but not safety standards. Those last two sentences should could give everyone pause.

When the first brain tumor cases started coming to the courts, the telecommunications industry funded the science which had predictably favorable outcomes for the telecommunications industry. Independently funded studies have come to different conclusions, and the majority of independently funded studies have suggested there a link between RF radiation and neurological, immunological, and/or endocrine abnormalities and diseases. The US government’s NIEHS recently completed a \$25 million study of rats and mice exposed to 2G technology – and the findings showed cell phone radiation caused health effects in the exposed rats and mice. Malignant schwannoma tumors found in the hearts of male rats suggested “clear evidence of carcinogenicity”. The malignant gliomas found in the brains of male rats were categorized as “some evidence of carcinogenicity.”

The firefighters of California did not need the NTP findings to tell them radiation next to their sleeping/working environment was dangerous. They have known since towers were activated near their stations, and if not in the line of fire, they have known since the findings of our 2004 California firefighter study were made public.

In 2001 I was asked by San Diego firefighters to write an appeal when cell towers were permitted for their station. I began hearing more and more stories of firefighters who literally could not function in the job that clearly establishes firefighters as the guardians of society. Once cell towers were activated on or adjacent to their stations, many of them could no longer function due to severe headache, inability to sleep, and foggy thinking. These are not symptoms we wish to see in our First Responders.

In 2004 I organized a SPECT brain scan pilot study of firefighters who has been exposed to a cell tower on their station for over five years. We found brain abnormalities in all firefighters tested. Attached is my 2013 filing with the FCC detailing this study.

In 2004 I co-authored Resolution 15 which was passed overwhelmingly by the International Association of Firefighters. Res. 15 urged a moratorium on the placement of cell towers on fire stations in the US and Canada. I then helped the Los Angeles IAFF locals as they aligned with law enforcement unions to fight FirstNET towers on their stations. I am currently following a brain tumor cluster in a California fire station with a wireless hub next door to their station.

The symptoms experienced by the firefighters who participated in the SPECT brain scan study were similar to firefighters in other stations who live in the shadow of cell towers. Yet specific to the men we studied, it is important to note all the men had passed rigorous physical and cognitive exams prior to being hired by the fire department. Their symptoms included:

- headaches
- extreme fatigue
- cognitive impairment
- anesthesia-like sleep where the men woke up for 911 calls “as if they were drugged”
- inability to sleep
- depression
- anxiety
- unexplained anger
- immune-suppression manifest in frequent colds and flu-like symptoms

Real life examples of these symptoms are best briefly characterized by:

- 1) Firefighters got lost on 911 calls in the town they grew up on several occasions.
- 2) In one instance, four firefighters sat in the rig in a stupor with the alarm sounding in the background, unable to remember how to start the engine.
- 3) A medic with 20 years of experience who had never made a mistake forgot basic CPR in the midst of resuscitating a coronary victim.

The brain scans of these six men revealed a pervasive, hyper-excitability of the neurons in certain parts of the brain. These findings suggested the exposure to RF (microwave) radiation was causing the neurons to continually fire in these areas without benefit of rest. When neurons (brain cells) cannot rest, they ultimately die. The scans further revealed that other sections of the brain that should have been functional showed hypoperfusion, or decreased blood flow, suggesting impairment in these particular areas.

The firefighters most important lesson to us as a state, and as a nation, may be that if we allow a buildout of cell towers such that they are as commonplace in front of homes and schools as they are now on fire stations, we may be facing a tsunami of Alzheimer’s and dementia.

The rate of people dying from Alzheimer's disease in the United States rose by 55% over a 15-year period according to new data from the Centers for Disease Control. The direct and indirect costs to the state for Alzheimer’s and a host of related neurological and immunological diseases could be catastrophic for not just California, but for the nation.

Clearly the state honored the sacrifice of California’s firefighters and is concerned about the health risks they face from cell towers, having granted an exemption to them in AB 57 and SB 649. Yet firefighters are the strongest of the strong. What does that imply for the rest of us?

The position taken by the Sierra Club is going to be an important commentary on environmental review and local control as we go forward in the 21<sup>st</sup> century. As strongly as the Telecommunications Act of 1996 fosters expansion for the wireless industry, Section 704 of the

TCA does guarantee local control within certain parameters. To suddenly, after more than two decades of allowing a certain amount of local control, completely eliminate the right of local governments to decide their own environmental fate flies in the face of some fundamental American rights. We can, and we must, do better.

In 2002, I was invited by the County of San Diego to become a member of the newly formed Cell Tower Ordinance Siting Committee. We came up with a four tiered ordinance that imposed restrictions and permit requirements on the construction and location of cell towers. We had preferred locations such as industrial zones where low-visibility structures were preferred as opposed to larger towers in residential zones. We were trying to give the telecommunications industry the right to have coverage without encroaching in residential neighborhoods. Schools and residences were to be placements of last resort.

Sprint sued the County of San Diego. There were multiple appeals and ultimately a three-judge panel hearing was granted by the Ninth Circuit Court of Appeals. In *Sprint vs San Diego* the judges concluded that the Ordinance did not effectively prohibit Sprint from providing wireless service. Therefore the [Telecommunications] Act did not preempt the County's wireless telecommunications ordinance with its four tiered order of preferred priority.

From the perspective of having been on the planning committee, and having read the opinion of the Ninth Circuit, the merits of local control made abundant sense. The San Diego Ordinance did not make either side extraordinarily happy, but that often means the judges have done a good job. Those who wanted to limit cell towers were frustrated because their hands were tied by the TCA. The telecom industry was frustrated because they had to deal with local control issues, and as long as they could cover neighborhoods without actually entering into those neighborhoods, our San Diego Ordinance forced them to do exactly that. We forced the industry to look for alternatives.

To do away with local control and environmental review strikes me as not just un-American but unwise, given the thousands of studies showing biological effects from radiofrequency (wireless) radiation, given the abnormal SPECT brain scans from the firefighters who had only a five-year exposure that was not 24/7, but rather three days/nights a week, and given the untested nature of this newest generation of wireless, 5G, which is simply another wireless application but not a necessity for life.

The millimeter wave that will be carrying 5G data was once thought to be too weak to enter people's homes. Then the telecom industry came up with a way to boost it, and they created software that would allow 5G millimeter waves to penetrate through almost any barrier. These waves will come through brick and mortar into your living rooms and bedrooms and that is where they will be 24/7 – untested, virtually unregulated, with no limit as to how many 5G towers end up on the lamppost outside your home.

The firefighters of California have carried that message to Sacramento, and I am respectfully asking the Sierra Club to carry this message to Washington DC and suggest a moratorium on the legislative removal of the usurpation of local control and environmental review for siting cell towers. Too many rights have been taken away with recent bills that passed Congress, ushering

in the deployment of millions of cell towers across the nation. The firefighters asked the state of California to exempt their stations from 5G so that they could better protect the people they serve, and so they could protect their own lives and well-being.

It would be prudent and noble and for the Sierra Club to ask for a rollback of recent legislation that may have been ushered through with too little thought to the legacy we leave.

Respectfully,

*/s/ Susan Foster*

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Attachment: FCC Comments SDF 9-2-13