

MOIRA HAHN
4351 Clark Avenue
Long Beach, CA 90808

October 21, 2026

Re: Docket (HHS-OASH-2026-0397): Request for Information on Electromagnetic Fields (EMFs), Radiofrequency (RF) Radiation, and Wireless Radiation Exposure

“Everything that makes man’s life worthwhile – family, work, education, a place to rear one’s children and a place to rest one’s head – all this depends on the decisions of government; all can be swept away by a government which does not heed the demands of its people, and I mean all of its people.”

Robert F. Kennedy, Sr.

University of Cape Town, South Africa, Day of Affirmation, June 6, 1966¹

Dear Secretary Kennedy,

I am grateful for the opportunity provided by Health and Human Services to comment on how our lives were turned upside down when we opened an envelope in February 2021 and were informed that the city of Long Beach had issued a 5G permit for the streetlight 25 feet from our home. What we went through to protect my health because of Electromagnetic Sensitivities² is something no one in this country should have to live through.

My medical back story

I experienced daily migraines for 20 years, and the cause eluded me and my primary care physician. I tried every medication my doctor suggested, I had all kinds of tests, I tried various modalities, but these migraines persisted. My husband Mark is an electronics

¹ Robert F. Kennedy, “Day of Affirmation Address,” speech delivered at the University of Cape Town, South Africa, June 6, 1966, transcript published by the University of Cape Town, Centre for Curating the Archive, <https://humanities.uct.ac.za/cca/projects-archive-and-curatorship-arc-visual-university/robert-f-kennedy-speech-university-capetown-south-africa-day-affirmation-6-june-1966>

² The history of governmental attention to electromagnetic sensitivities spans several decades. In 2002, the U.S. Access Board stated that “multiple chemical sensitivities and electromagnetic sensitivities may be considered disabilities under the ADA” when they substantially limit one or more major life activities; its sponsored *Indoor Environmental Quality* report, prepared by the National Institute of Building Sciences in 2005, addressed access and accommodations for affected individuals. Earlier, the U.S. Naval Medical Research Institute published Zorach R. Glaser’s *Bibliography of Reported Biological Phenomena (“Effects”) and Clinical Manifestations Attributed to Microwave and Radio-Frequency Radiation* (October 4, 1971; revised April 20, 1972), compiling more than 2,000 references. On April 2, 2009, the European Parliament called on member states “to recognise persons that suffer from electrohypersensitivity as being disabled so as to grant them adequate protection as well as equal opportunities.” See U.S. Access Board, *Indoor Environmental Quality*, “Background,” and “Recommendations for Accommodations”; Glaser, Naval Medical Research Institute, Research Report No. 2 (1971/1972); and European Parliament, resolution on health concerns associated with electromagnetic fields, 2008/2211(INI), para. 28.

engineer but we needed my income as a professional painter and an art professor at a local junior college to qualify for a mortgage on our home, and I needed to continue to work to keep this home. The home we currently live in is the first home I have ever owned and it was with great pride that we purchased the house, improved it using my skills as an artist and Mark's as an engineer, and this home is where we had long planned to retire and grow old together. We had carefully saved for retirement and had finally retired around 2011.

It was a struggle to work through the daily migraines that plagued me for two decades. I would come home from work and go to bed. When I look back, I wonder how I was able to teach five days a week, but I love the world of art and I love imparting my craft to others. I think it was that passion that sustained me and helped me through the pain. To be candid, it wore on me, the pain showed on my face when I encountered neighbors or even strangers at a grocery store, it was hard on my husband because he is accustomed to fixing things and finding solutions with that exceptionally bright engineering mind of his. A solution to my mysterious migraines that had started, seemingly out of the blue, eluded everyone who tried to help.

It was early 2021 when a friend I had known for a very long time, David Morrison, called to check on me, and asked if I had ever tried what he had been suggesting for years. Frankly, what he had suggested sounded a little extreme and unreasonable to me. David wanted us to turn off everything wireless in the house and go wireless-free for several weeks.

David knew that Mark had long ago wired the entire house, so this experiment was not going to be difficult. Yet I couldn't imagine that these invisible radio waves could actually cause physiological problems. I suppose when David referred to RF radiation as "microwaves," that characterized this form of radiation in a somewhat less innocuous way. Yet I still couldn't imagine they would trigger something as severe as a migraine.

Because I had tried everything else and because my doctor said he had prescribed virtually every drug that had been manufactured for the purpose of reducing or stopping migraine headaches, I relented. Within several hours my husband Mark had turned off the Wi-Fi access points he had installed 20 years earlier when we moved into the home, the Wi-Fi router purchased at the same time was turned off, our computers were hardwired and as ridiculous as it all seemed to me, I was trying this experiment for no other reason than the fact that I had tried absolutely everything else.

I was convinced this little experiment would fail.

When David Morrison called two weeks later to see how I was doing, he heard a different tone in my voice. I estimated that I was 80% improved. Instead of having migraines every day I had had only two in the week prior.

My friend David then asked if we had a smart meter measuring electricity attached to our home. I said of course. Southern California Edison, our utility, had installed smart meters nearly a decade earlier. He told me to call SCE in the morning and ask to have an analog or digital opt-out meter placed on our home instead. SCE complied and with that further reduction in microwave radiation coming into the home, I was migraine-free with the

exception of migraines that were associated with weather fronts such as the infamous Santa Ana winds that plague California from time to time.

This was one time in my life when I absolutely loved being wrong.

In doing my research I have come across others who found relief either moving away from cell towers or, as Mark and I had done, reducing their use of wireless within the home and where possible in the workplace. I was far from alone. In fact, a study published in 2026 by Julie McCredden, Lyn McLean and Anne Steinemann, “Wireless Sensitivity and Co-morbidities: A Prevalence Study in Australia, Canada, and the United States,” based on a nationally representative online survey conducted in 2022, found that 12.8% of U.S. adults reported sensitivity to wireless radiation.³

I am sharing what happened to me in hopes that HHS will urgently act to change policy. I will describe what my husband Mark and I went through almost concurrent with the realization that I had been suffering, needlessly, with migraine headaches every single day for 20 years simply for the “benefit” of using Wi-Fi.

Not only had this nonstop exposure to Wi-Fi in our home and at the college where I taught triggered daily migraines for me, but even when the migraines stopped due to our diligent efforts to “go wired” in our home, I found out I had become incredibly sensitive to all forms of the technology. Now I must avoid wireless wherever possible because exposure can easily trigger another migraine. It was such a small price to pay to forgo the supposed convenience of wireless technology in favor of getting rid of two decades of intractable migraine headaches.

My Personal Terror Attack

In one of the great ironies of life, just when I thought I was genuinely going to be able to enjoy my retirement years relatively pain-free, my husband Mark received a letter addressed to him only: “Mark Hotchkiss, Trustee.” It easily could have been mistaken for junk mail, yet it struck him as odd because we are both trustees for the house. Why would the letter be addressed to only one of us?

He opened the nondescript envelope and in an instant our lives changed. We were being informed by a company that was an agent for AT&T that the city of Long Beach had given them a permit to place a 5G antenna on the streetlight in our front yard. We had 10 days from the date of the letter to appeal and we were on lockdown for a global pandemic, meaning City Hall was not open for business as usual.

My stomach sank as the implications became clear. I knew that if a Wi-Fi access point or Wi-Fi router could trigger a sustained, unrelenting migraine for me, living 25 feet from a 5G

³ Julie E. McCredden, Lyn McLean, and Anne Steinemann, “Wireless Sensitivity and Co-morbidities: A Prevalence Study in Australia, Canada, and the United States,” *Next Research* 8 (2026): 101577, doi:10.1016/j.nexres.2026.101577. The study reported self-identified wireless sensitivity in 12.8% of U.S. adult respondents, based on an online survey of 1,271 U.S. adults conducted in February 2022. The finding measures reported sensitivity, not independently verified causation.

tower was the last thing that my body would be able to tolerate. If I was sensitive 20 years earlier when Mark put in the Wi-Fi access points and bought the Wi-Fi router for our home, I was far more sensitive after the 20 years of exposure to something my body could not tolerate in the first place.

The next 18 months were what I can only describe as a daily personal terror attack. It took three of the top attorneys in the country in telecommunications and environmental law, much of our retirement savings and an agonizing 607 days fighting with absolutely everything we had – and even then, for six months, we didn't know if we would be going to District Court to continue to fight AT&T or whether they would decide to go elsewhere.

The lawyers included Andrew Campanelli in New York, Robert Berg – also of New York, and an old friend who represented us right out of law school nearly 30 years earlier when Mark and I attempted to protect Native American burial grounds from aggressive LA developers. In the meantime, Doug Carstens had become one of the top environmental attorneys in California, and out of that earlier case a friendship continued. Doug's associate attorney at the time, Kathryn Pettit, helped us, as well. Zoe Berg, Robert Berg's daughter, was living in Long Beach. We were referred to Zoe because of her work with a group called 5G Crisis founded by Doug and Patti Wood. Zoe, now a lawyer in practice with her father in New York, gave me my initiation into 5G back in 2021. 5G was a vague concept to me initially. I would soon learn that cell towers that used to be out in farmer's field were being moved to people's front yards, and the frequencies for 5G were higher than they had ever been before. 5G was an entire infrastructure change without any science to pronounce it "safe".

In fact, I would also later learn, that FCC Chair Tom Wheeler – when announcing the sale of spectrum for 5G in 2016 – would tell the world that the FCC was not going to wait for the studies and he suggested the industry should regulate itself. Nowhere in Chair Wheeler's comments was there any mention of the consumer, of the child in the school, of the people living in their homes who would unexpectedly be exposed, people like me with the same sensitivity that I have, people fighting cancer, pregnant women and developing babies, little children whose cells were dividing so rapidly and their brains being shaped for the duration of their lifetimes.

The evisceration of disability rights

We are not all the same. It was with the passage in 1990 of the Americans with Disabilities Act that people with special needs were finally recognized by the U.S. government. I would soon learn that this ADA recognition did *not* extend to people like me who are sensitive to wireless technology – at least with respect to cell towers – thanks to something called preemption in the Telecommunications Act of 1996.

Much to my shock, I learned that getting this tower moved away from my home could not be accomplished by using the Americans with Disabilities Act and a letter from my doctor. The ADA's definition requires an impairment that substantially limits a major life activity, not simply any impairment. And its protections are not limited to people who use

wheelchairs or have visible disabilities. The precise statutory term is “major life activities,” which also includes major bodily functions.⁴

Was I disabled by wireless technology? Yes indeed, I was. Yet the city took the position they had no responsibility for my disability under Title II which is the portion of the ADA which applies to municipalities, meaning city services and activities.

The relevant city activity was Long Beach’s administration of wireless-facility (cell tower) siting and permitting, not merely maintaining wheelchair clearance around a pole which is all the city believed they had to consider. The Department of Justice states that Title II applies to zoning regulation, and the Ninth Circuit which is the court circuit that includes California has held that zoning ordinances are subject to the ADA.⁵

Yet that wasn’t the position that Long Beach, like other cities before it, took. They said they did not have to address health concerns because they *couldn’t* address health concerns. They relied on a protection for the telecommunications industry in Section 704(a) of the Telecommunications Act of 1996, codified at 47 U.S.C. § 332(c)(7)(B)(iv). This section preempts state and local regulation of wireless-facility siting based on the environmental effects of radio-frequency emissions, to the extent that the facilities comply with FCC emissions regulations. The courts have ruled that environmental effects included human health.⁶

The ADA and the Telecommunications Act of 1996 are both federal acts. One act is not stronger than another. Neither act cancels the other one out.

The real legal question comes down to this: does the Telecommunications Act’s restriction on local RF-based siting decisions prevent the city from providing the accommodation required under the ADA?

Right now it feels as if the courts are heavily favoring the telecommunications industry. Telecom has the deepest pockets, cadres of elite attorneys, and it is incredibly rare that people come along like Mark and myself willing to put absolutely everything on the line to protect what we saw as our individual rights and our tiny slice of the American dream we

⁴ Americans with Disabilities Act of 1990, as amended, 42 U.S.C. § 12102(1)–(2), (4), “Definition of Disability,” reproduced by the U.S. Department of Justice, ADA.gov, <https://www.ada.gov/law-and-regs/ada/>. The statute includes impairments that substantially limit major life activities, such as sleeping, concentrating, and thinking, or major bodily functions, including neurological and brain function, and directs that disability coverage be construed broadly.

⁵ U.S. Department of Justice, *ADA Update: A Primer for State and Local Governments*, “Who Is Covered by Title II?,” <https://www.ada.gov/resources/title-ii-primer/> (“It applies to all programs, services, or activities of public entities, from adoption services to zoning regulation”); *Bay Area Addiction Research & Treatment, Inc. v. City of Antioch*, 179 F.3d 725, 730–32 (9th Cir. 1999) (holding that Title II of the ADA and § 504 of the Rehabilitation Act apply to zoning ordinances).ada+1

⁶ Telecommunications Act of 1996, Pub. L. No. 104-104, § 704(a), 110 Stat. 56, 151–52 (1996) (codified at 47 U.S.C. § 332(c)(7)(B)(iv)) (“No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission’s regulations concerning such emissions.”), <https://www.law.cornell.edu/uscode/text/47/332>.

were willing to dive into our retirement fund to protect. Most people move away from their neighborhoods and all that is familiar to them when 5G comes to their yard. They are forced to sell their homes at a discount, or they stay and suffer the physical consequences. My comments to HHS are intended to tell you how fundamentally wrong this is.

It is wrong that the preemption clause in the Telecommunications Act is used as a cudgel over the common man and woman. It should not be incumbent on people like my husband and myself to take on financially backbreaking legal fights against multinational corporations just to protect our home.

How did we even get to this place of profound unfairness?

The back story is the telecommunications industry looked at the tobacco industry and improved upon their playbook. With tobacco, the health studies came rolling in and eventually the U.S. Surgeon General applied a warning label to the side of every package of cigarettes; that warning continues to this day.

Telecom had great lawyers. According to journalist Norm Alster in *Captured Agency: How the Federal Communications Commission Is Dominated by the Industries It Presumably Regulates*⁷, thirteen of fifteen congressional staffers who helped write the Telecommunications Act of 1996 later became lobbyists for the industry. That revolving door described by Alster makes me wonder whose interests the law served.

Whatever the drafters' intentions, the law barred state and local governments from denying cell tower siting applications because of the health effects of radiofrequency emissions, provided the cell towers comply with FCC emissions regulations. It was reported to me that one telecommunications attorney said the emission guidelines set by the FCC were "high enough to ignite the sun."

In other words, telecom could pretty much put their towers wherever they wanted, crank them up and radiate everything in that radiation's path – plant, animal, human – without anyone's consent, and most often without people's knowledge. In my mind it felt as if anything goes for the big carriers, and the citizens of this country were collateral damage for their corporate profits.

Imagine telling cities they could not restrict smoking in public places on health grounds so long as the smoke met a federal exposure limit.

Imagine Congress telling a town it could regulate where DDT was sprayed (before 1972 when it was banned for agricultural use) but could not restrict the spraying because of its health or environmental effects, provided federal exposure limits were met.

⁷ Norm Alster, *Captured Agency: How the Federal Communications Commission Is Dominated by the Industries It Presumably Regulates* (Cambridge, MA: Edmond J. Safra Center for Ethics, Harvard University, 2015), chap. 2, "Just Don't Bring Up Health," text accompanying endnote 9, https://www.ethics.harvard.edu/sites/g/files/omnuum9911/files/capturedagency_alster.pdf.

Imagine allowing a town to object to a factory's appearance while forbidding it to deny the factory's placement because of the health effects of its emissions, just as long as federal emissions standards were met.

Those are the kind of constraints Section 704 places on local wireless-facility siting decisions.

As a member of the Long Beach community I had, perhaps naïvely, expected my city to try to protect me from the encroachment of 5G into my neighborhood. I was wrong. I found out my city benefits financially from leasing out the streetlight they own in front of my home. They use the Telecom Act as a shield against people like me.

I learned from the Long Beach Public Works Department that was overseeing the installation of 5G on streetlights that any amount of RF radiation under the federal RF limit was allowed. My health concerns were not going to be taken into consideration. My doctor's letter was not going to be honored. I later learned from people like Zoe Berg and her father Robert Berg as well as telecommunications attorney Andrew Campanelli that the existing RF standards did not in any way guarantee our safety.

Days after receiving the letter saying that AT&T was going to put a 5G tower on the streetlight in front of our home, Mark and I met over the phone with Daniel Ramirez of the Long Beach Public Works Department. On March 1, 2021 Mr. Ramirez told us that 'health and safety cannot be considered.' When I asked whether any resident had won a small cell appeal, he answered, 'No,' explaining that all appeals, involving 10 separate sites, had been denied. What we received was not an assurance that the installation would be safe for me, but an explanation that my health concerns could not change the city's decision.

In what felt like a betrayal by my own city, Daniel Ramirez referred to me as a "quote unquote disabled person under ADA because of your migraines and headaches." He then said this was an argument I would have to defend and "the city is going to have to argue against." I felt belittled rather than heard, as though my disability were something to discredit rather than a need to address.

This is what people like me with adverse reactions to wireless technology face all the time.

I was fighting for the right to live in my home free of wireless infiltration of the highest magnitude, I was fighting for my health, I was fighting for my Americans with Disabilities Act (ADA) rights, and I was stunned to find out from the public works department in Long Beach that my city would be working against me and against my appeal.

We hear from cities that "their hands are tied" and yes, according to the FCC's *Declaratory Ruling and Third Report and Order* published in 2018, the FCC substantially restricted cities' authority to control wireless infrastructure deployment in public rights-of-way, including their ability to set fees and negotiate access to city-owned poles and other structures within those rights-of-way.⁸ But the FCC and carriers have worked together to

⁸ Federal Communications Commission, *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*; *Accelerating Wireline Broadband Deployment by Removing Barriers to*

make it financially worthwhile for cities to claim their hands are tied, and at the same time use the Telecom Act as a shield, as I mentioned before, against people like me with genuine and often profound disabilities to wireless technology.

We lost our appeal as expected but Doug Carstens, our California attorney with a specialty in the California Environmental Quality Act (CEQA), informed Mark and me that under CEQA law we were entitled to have a hearing before an elected body which meant the Long Beach City Council.

On October 18, 2022 we had that appeal hearing. Doug and his associate attorney Kathryn Pettit spoke on our behalf, both Mark and I spoke, and countless neighbors came to support us and plea before City Council for some relief in our case.

The city attorney and outside telecommunications counsel for the city told the councilmembers they could not vote based on my ADA claim.

By the time we appeared before the Long Beach City Council that October evening in 2022, I had spent every single day the last 18 months contacting the press, doing research, imposing upon others to help, we had severely dipped into our retirement savings, I had sold as much of my artwork portfolio as I could, we put money and “elbow grease” into fixing up our home because we knew we were going to be forced to sell, we had rented a home in the desert and moved everything out of the home we were still desperately trying to save. Our attorneys had prepared us for a loss and we knew that a loss before the Long Beach City Council could trigger the immediate installation of a 5G tower in our front yard, something that I was afraid could potentially cost me my life.

When the final vote was cast, it was – rather astonishingly – a tie. One city councilmember, an attorney, said she always voted with the city attorney because their job was to protect the city councilmembers and stay within the confines of the law. Yet she could not, in good conscience, vote to deny the appeal of a woman who had a medical disability. As she said from the dais, “If this woman with a letter from her doctor can’t win an appeal, who can?”

That’s the point. The FCC attorneys have, through their *Declaratory Ruling and Third Report and Order*, constructively neutered the ADA. It is legally meaningless in the face of the FCC’s authoritarian takeover of the public rights-of-way, some of which run right through people’s front yards as they did in our case. The cities have been incentivized with the lease monies they get from the monetization of streetlights for 5G. The common man and the common woman are left behind.

Infrastructure Investment, Declaratory Ruling and Third Report and Order, FCC 18-133, WT Docket No. 17-79 and WC Docket No. 17-84 (adopted September 26, 2018; released September 27, 2018), paras. 43–50, 92–97, <https://docs.fcc.gov/public/attachments/fcc-18-133a1.pdf>. The FCC interpreted 47 U.S.C. §§ 253 and 332(c)(7) to restrict state and local governments’ ability to impose fees and access conditions that prohibit or effectively prohibit covered services. It expressly applied this interpretation to public rights-of-way that governments own or control and to government-owned structures within those rights-of-way, including light poles and traffic signals, whether access is governed by permits, leases, or contracts.

Sec. Kennedy, this is fundamentally wrong. Your family's legacy includes opening doors for Americans with disabilities. Your aunt Eunice Kennedy Shriver founded Special Olympics. Your uncle, Senator Edward Kennedy, helped shape and secure passage of the Americans with Disabilities Act culminating in ADA's passage.

I appeal to you to carry that legacy forward for people living with Electromagnetic Sensitivities. Please use your office to champion serious research, meaningful accommodations, and a federal response that puts our health and dignity first.

The Telecommunications Act of 1996 should not be treated as a reason to turn away from Americans asking for help, protection, and the opportunity to participate in everyday life.

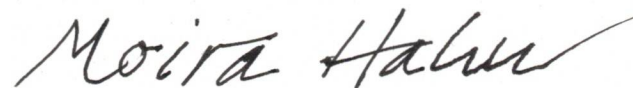
Your father's words; my mother's service

My mother, Margaret Ronayne Hahn, worked on your father's presidential campaign and your uncle's before that, and was with your father on the night he was assassinated. I appeal to you in the spirit of the principles that inspired her 15 years of service to the Kennedy ideals, one of a handful of women entrusted with setting up campaign events in all 50 states.

I offered a quote from your father at the beginning of my comments. Your father said that government must answer "not just to the wealthy" but "to all of the people." Those of us living with Electromagnetic Sensitivities ask to be included in that promise. We need to have our experiences taken seriously, our need for accommodations addressed, and our dignity protected. Please carry forward Sen. Robert Kennedy, Sr.'s commitment to people whose voices too often go unheard.

We should not have to hire three of the top attorneys in the country, take from hard-earned retirement savings, experience the terror of fighting one of the largest corporations in the world, and suffer 18 months of sleepless nights filled with worry simply to protect our slice of the American dream which is, in the final analysis and in the words of your father from Cape Town in 1966, "a place to rest one's head."

Respectfully submitted,

A handwritten signature in black ink that reads "Moira Hahn". The signature is written in a cursive, flowing style with a long, sweeping underline.

MOIRA HAHN