



561 Shunpike Rd., Sheffield MA 0257

To: Sheffield MA Select board

December 12, 2022

Request: To implement a moratorium as stated in the enclosed petition, and to add the below proposal to the agenda for the 2023 May Annual town meeting. In 2021 the Planning Board approved by-laws to regulate small cell 5G.; As an addition to the appropriate section of the Sheffield by-laws, we submit the attached petition for a moratorium on 5G small cell technology. Please advise as to which section of the by-laws the additional paragraph, is best included. We understand we shall be notified well in advance of the date and time of the public hearing.

Looking forward to your reply,

Thank you,

Nina Anderson, President
Patricia Burke, Board Member
Cecelia Doucette, Board Member

Kathryn Levin, Vice President
Leila Baroody, Board Member
Philip Adriance, Treasurer

We the undersigned residents of Sheffield and Ashley Falls do hereby request a warrant to be on the agenda for the 2023 Annual May town meeting agenda to present the following motion for the Zoning by-laws Section 7 Special Regulations 7.1 Personal Wireless Service Facilities, Repeaters and Towers:

8. For the reasons set forth above and notwithstanding any other provision of the Town of Sheffield Zoning By-Laws to the contrary, the Town hereby adopts a temporary moratorium on 5G small cell technology until such time as studies from scientists independent from industry, have fully investigated millimeter wave 5G small cell technology and proved its biological and environmental safety; and that the FCC regulations have been updated to include measures that comply with the results of these studies.

Or if not applicable to zoning in your opinion, to this section instead:

We the undersigned residents of Sheffield and Ashley Falls do hereby request a warrant to be on the agenda for the 2023 Annual May town meeting agenda to present the following motion for General bylaws Chapter 216:

Chapter 216 or the general bylaws WIRELESS REGULATIONS Article I General Regulations

216-1 For the reasons set forth above and notwithstanding any other provision of the Town of Sheffield General By-Laws to the contrary, the Town hereby adopts a temporary moratorium on 5G small cell technology until such time as studies from scientists independent from industry, have fully investigated millimeter wave 5G small cell technology and proved its biological and environmental safety; and that the FCC regulations have been updated to include measures that comply with the results of these studies.

Supplemental Documentation

Definition: 5G is not a replacement of 4G and 3G. Instead it adds new intensified layers of radiation in addition to what we currently have. Due to the weakness of the signals, it requires placing small cell antennae every 200 to 500 feet apart. It will be beamed continuously, 24/7, with no option to avoid or turn it off. Small cell antenna is technology utilized for broadband. In 2019 the FCC reclassified broadband as an information service, and thus placed broadband outside of its Title II jurisdiction. Furthermore broadband is not a “radio transmission” under Title III or a “cable service” under Title VI. So the commission’s express authority under Titles III or VI does not come into play either. Nor did Congress statutorily grant the Commission freestanding preemption authority to displace state laws even in areas in which it does not otherwise have regulatory power.” - Mozilla Corp. v. FCC, 940 F.3d 1 (D.C. Cir. 2019). Federal law allows visual impact and conformance to local zoning as consideration in the decision-making process.

Concerns:

1. **No control over customer charges:** Anyone who is hard-wired is under the regulation of the Public Utilities Commission of each state, but provider (like Verizon or T-Mobile) **transmitting that last-mile-to-the-premise wirelessly** has "no cap" for how much they can charge, unlike for wired communications. So in other words, there's regulation for how much standard cable and telephone companies can charge consumers, but when wireless, they don't fall under that jurisdiction.
2. **No updates on frequency human exposure limits since 1996.** In an historic decision, the U.S. Court of Appeals for the District of Columbia Circuit judged in favor of environmental health groups and petitioners on Aug. 13, 2021, finding the Federal Communications Commission (FCC) violated the Administrative Procedure Act and failed to respond to comments on environmental harm. The court ruled that the decision by the FCC to retain its 1996 safety limits for human exposure to wireless radiation was “arbitrary and capricious.” and held that the FCC failed to respond to “record evidence that exposure to RF radiation at levels below the Commission’s current limits may cause negative health effects unrelated to cancer.” Further, the agency demonstrated “a complete failure to respond to comments concerning environmental harm caused by RF radiation.” The court found the FCC ignored numerous organizations, scientists and medical doctors, who called on them to update limits and the court found the FCC failed to address these issues.ⁱ
3. **Unknown safety limits for biological safety.** Contrary to the assertion that 5G will be harmless because the skin provides a protective barrier, the fact is that 5G uses higher frequency millimeter waves which are absorbed in the skin that can also penetrate deeply into the brain. Some of the 5G frequencies are used by the US and Israeli military for crowd control, its their active denial systems. No US agency nor international authority with expertise in science, biology or safety has ever acted to review research and set safety limits for birds, bees, trees and wildlife.
4. **Unsustainable technology.** 5G will use new “beamforming” antenna designs that create multiple streams of signal from each fixture. Each installation can have over a thousand antennas that are transmitting simultaneously. Engineers say 5G is “an energy hog” ever increasing our carbon footprint. Environmental experts warn that the Internet of Things is an unsustainable technology and will contribute to climate change.
5. **Pollinators negatively affected.** Researchⁱⁱ finds bees and pollinators absorb the higher frequencies of 5G between 3% to 370% higher leading the scientists to warn, “This could lead to changes in insect behavior, physiology, and morphology over time.” Cryptochromes are very badly affected by weak oscillating electromagnetic fields that are orders of magnitude weaker than the Earth’s steady magnetic field. This can disrupt both solar and magnetic navigation, which can account for colony collapse disorder in bees.” -Dr. Andrew Goldsworthyⁱⁱⁱ This is not beneficial for our agricultural community.^{iv}

6. **5G speed advantage a lie?** Despite the industry message that 5G will be faster, in reality 5G is turning out to be slower. Testing finds 5G in the field is actually nearly the same speed or slower than 4G. It is not working out so well. Read “At this point, 5G is a bad joke” published in Computerworld. “Unless you live or work right next to an mmWave transceiver, you’re simply not going to see those promised speeds or anything close to them.”^v It has a range, at best, of 150 meters. If you’re driving, that means, until 5G base stations are everywhere, you’re going to be losing your high-speed signal a lot. You can imagine small cells on every tenth utility pole in a neighborhood. And, even if you *are* in range of a 5G base station, anything including window glass, foliage and rain can restrict its high-frequency signal. Japan’s top mobile phone service provider, is working on a new kind of window glass, just so their mmWave 5G will work.”^{vi}
7. **Excessive power not needed.** The 5G small cell antennae that go in front of people’s homes or on top of buildings can carry over 50,000 Watts, when all we need is .02 Watts to make a phone call. These excessive amounts are dangerous and not required.
8. **Clearcutting trees to accommodate 5G signals.** Several studies exist proving the biological harm caused by wireless radiofrequency radiation to trees, plants, wildlife and human health. Another issue with 5G and trees is that leaves weaken the signals. Millions of trees are felled or butchered every year to pave the way for 5G phones.^{vii}
9. **We can regulate 5G:** The 1996 Telecom Act §107 does not preclude Sheffield from regulating the ordinance relating to telecom, be they health, environment or otherwise. The operations of Wireless Telecom facilities was never preempted from local zoning authority - by virtue of the fact that final version of Telecommunications Act of 1996 § 107, the words ‘operate’ and ‘operations’ were removed...meaning local municipalities DO have a say on issues such operations in general and those that affect health!
10. **Insurance risk:** The Insurance authority Swiss Re released a white paper^{viii} classifying 5G as a “high” emerging risk cautioning that “potential claims for health impairments may come with a long latency.” If insurance companies won’t take the risk why should we?

ⁱ The FCC order fails to acknowledge evidence of negative health effects caused by exposure to RF radiation at levels below the limits set by the Commission’s 1996 guidelines, including evidence of cancer, radiation sickness, an adverse effects on sleep, memory, learning, perception, motor abilities, prenatal and reproductive health and children’s health

ⁱⁱ [Exposure of Insects to Radio-Frequency Electromagnetic Fields from 2 to 120 GHz | Scientific Reports \(nature.com\)](#)

ⁱⁱⁱ [Bees, Butterflies and Wildlife: Research on Electromagnetic Fields and the Environment - Environmental Health Trust \(ehtrust.org\)](#)

^{iv} [Climate Change and 5G - Environmental Health Trust \(ehtrust.org\)](#)

^v [At this point, 5G is a bad joke | Computerworld](#)

^{vi} [DoCoMo Claims It Can Smash the 5G Glass Barrier | Light Reading](#)

^{vii} [5G & RF Radiation Damage To Trees – Tree Preservation Ireland \(wordpress.com\)](#)

^{viii} [Swiss-Re-SONAR-Publication-2019-excerpt-1.pdf \(ehtrust.org\)](#)