



# PITTSFIELD BOARD OF HEALTH

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April 11, 2022

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## EMERGENCY ORDER

**REQUIRING THAT PITTSFIELD CELLULAR TELEPHONE COMPANY, D/B/A VERIZON WIRELESS, AND FARLEY WHITE SOUTH STREET, LLC, SHOW CAUSE WHY THE PITTSFIELD BOARD OF HEALTH SHOULD NOT ISSUE A CEASE AND DESIST ORDER ABATING A NUISANCE AT 877 SOUTH STREET ARISING FROM THE OPERATION OF A VERIZON WIRELESS CELL TOWER THEREON AND CONSTITUTING IMMEDIATE ORDER OF DISCONTINUANCE AND ABATEMENT IF NO HEARING IS REQUESTED**

Pursuant to, *inter alia*, MGL 111 ss 122-125, 127-127I, 130, 143-144, 146-150, and State Sanitary Code 410.750, 410.831-832, 410.850-.960, the Board of Health deems the following actions necessary to protect the public health in the City of Pittsfield, State of Massachusetts.

**Whereas**, Verizon Wireless has constructed and operates a wireless telecommunications facility, a cell tower (the “facility”), located at 877 South Street, Pittsfield, Massachusetts, on property Verizon Wireless leases from owner Farley White South Street LLC. The Verizon Wireless facility was activated in August, 2020, and has been operating continuously since that date.

**Whereas**, soon after the facility was activated and began transmitting, the City started to receive reports of illness and negative health symptoms from residents living nearby the facility, and in particular, from residents living in the so-called “Shacktown” neighborhood. The negative health symptoms the affected residents have reported include complaints of headaches, sleep problems, heart palpitations, tinnitus (ringing in the ears), dizziness, nausea, skin rashes, and memory and cognitive problems, among other medical complaints.

**Whereas**, as further documented below, the neurological and dermatological symptoms experienced by the residents are consistent with those described in the peer-reviewed scientific and medical literature as being associated with exposure to pulsed and modulated Radio Frequency (“RF”) radiation, including RF from cell towers.

**Whereas**, those symptoms are sometimes referenced in the scientific and medical literature as electromagnetic sensitivity, also known as Electro-Hypersensitivity (“EHS”), Microwave Sickness, or Radiation Sickness. All these names describe a syndrome where the afflicted develop one or more

recognized symptoms as a result of pulsed and modulated RF radiation (“RFR”). EHS is a spectrum condition. For some, the symptoms can become debilitating, and severely affect their ability to function.

**Whereas**, the federal government has officially recognized this syndrome in various ways. For example, in 2002, the “Access Board,” an independent federal agency responsible for publishing Accessibility Guidelines used by the U.S. Department of Justice to enforce the Americans with Disabilities Act (“ADA”), recognized that “electromagnetic sensitivities may be considered disabilities under the ADA.”<sup>1</sup> The Access Board contracted for the publication of the National Institute of Building Sciences 2005 report, which concludes that radiofrequency/electromagnetic frequency (RF/EMF) radiation is an “access barrier,” and can render buildings “inaccessible” to those with electromagnetic sensitivity. The report recommends accessibility guidelines.<sup>2</sup> For ADA Title I purposes, the U.S. Department of Labor’s Office of Disability Employment Policy has issued guidelines for accommodations; these guidelines emphasize exposure avoidance and list as a resource, the EMF Medical Conference 2021 which trains medical doctors on the issue of electromagnetic radiation and health.<sup>3 4</sup>

**Whereas**, The Centers for Disease Control’s 2022 Classification of Diseases Codes Clinical Modification and Procedural Classification System implements the International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM). The “diagnosis code” for Radiation Sickness” is “T66.”<sup>5</sup> The “injury” code for “Exposure to Other Nonionizing Radiation” is “W90.”<sup>6</sup> These codes cover electro-sensitivity along with other RF exposure-related injuries and maladies.

**Whereas**, the Health Board does not administer disability laws, but the foregoing authority strongly confirms that RF/EMF – even if emitted at levels within the FCC emissions guidelines – can be injurious to health or cause common injury to that significant portion of the public who are electromagnetic sensitive. Stated differently, pulsed and modulated RF can constitute a “public nuisance” or a “cause of sickness,” and can constitute a trade which may result in a nuisance or be dangerous to the public health for purposes of G.L. ch. 111 ss 122-125, 127B, 127C, 143-150, and 152.

**Whereas**, the federal government’s recognition that pulsed RF can directly cause harm to at least certain individuals or create an access barrier means that for the purposes of Massachusetts law, RF/EMF may effectively render certain dwellings Unfit for Human Habitation or constitute a Condition Which May Endanger or Materially Impair the Health or Safety and Well-Being of an Occupant as defined in State Sanitary Code 410.020 and 410.750(P).

**Whereas**, Verizon Wireless 877 South Street wireless facility is not itself a dwelling unit, but the Sanitary Code and other Massachusetts law allow the Health Board to act as necessary to ensure that

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<sup>1</sup> U.S. Access Board. (n.d.). *Indoor Environmental Quality*. U.S. Access Board - Introduction. Retrieved March 31, 2022, from <https://www.access-board.gov/research/building/indoor-environmental-quality/>.

<sup>2</sup> *IEQ Indoor Environmental Quality Project (IEQ)*. (n.d.). National Institute of Building Sciences (NIBS), The Architectural and Transportation Barriers Compliance Board (Access Board). <https://www.access-board.gov/files/research/IEQ-Report.pdf>.

<sup>3</sup> U.S. Department of Labor Office of Disability Employment Policy [Accommodations Webpage](#); Job Accommodation Network: [Accommodation and Compliance: Electrical Sensitivity](#) and [Accommodation and Compliance Series: Employees with Electrical Sensitivity Publication Downloads](#).

<sup>4</sup> [EMF – Medical Conference 2021](#) Continuing Medical Education for physicians and health professionals. Several experts who presented to the Board and provided information also presented at the EMF Medical conference including Sharon Goldberg MD, Magda Havas PhD, Paul Héroux, PhD, Cindy Russell MD, Sheena Symington, B.Sc., M.A., Cecelia Doucette, and Theodora Scarato, MSW.

<sup>5</sup> *2022 ICD-10-CM Diagnosis Code T66: Radiation sickness, unspecified*. (n.d.). Retrieved March 31, 2022, from <https://www.icd10data.com/ICD10CM/Codes/S00-T88/T66-T78/T66-/T66>.

<sup>6</sup> *W90—ICD-10 Code for Exposure to other nonionizing radiation—Non-billable*. (n.d.). ICD-10 Data and Code Lookup. Retrieved March 31, 2022, from <https://icd10coded.com/cm/W90/>.

activity or operations in a non-dwelling building, structure, or facility do not contribute to conditions that impact occupants of a dwelling to the point they render a dwelling unfit for habitation for purposes of Sanitary Code 410.831.

**Whereas**, the Health Board has been presented with credible, independent, and peer-reviewed scientific and medical studies and reports that provide convincing evidence that pulsed and modulated RFR is bio-active and affects all living things over the long term. RFR can and does also cause more immediate harm and injury to human beings. The Health Board has also received strong evidence that the Verizon Wireless 877 South Street wireless facility is presently causing such harm and injury to numerous residents in the adjacent neighborhood.

**Whereas**, City of Pittsfield residents have submitted to the Health Board over 11,000 pages of evidence of studies, reports, and scientific and medical experts' opinion about the dangers to human health and the environment caused by exposure to wireless radiation.<sup>7</sup> The Health Board also has heard testimony from medical professionals who directly treat patients injured by RF/EMF as well as testimony from scientific experts. The Board has been presented with personal testimony from many of the City of Pittsfield residents who have been personally harmed by pulsed and modulated RF radiation transmitted from the Verizon Wireless 877 South Street wireless facility's operations. *Specifically, but without limitation, the Health Board bases its conclusions, findings, and actions on all the scientific, medical, and personal evidence that has been submitted, but provides this general summary:*

1. The evidence presented to the Board includes well over one thousand peer-reviewed scientific and medical studies which consistently find that pulsed and modulated RFR has bio-effects and can lead to short- and long-term adverse health effects in humans, either directly or by aggravating other existing medical conditions. Credible, independent peer-reviewed scientific and medical studies show profoundly deleterious effects on human health, including but not limited to: neurological and dermatological effects; increased risk of cancer and brain tumors; DNA damage; oxidative stress; immune dysfunction; cognitive processing effects; altered brain development, sleep and memory disturbances, ADHD, abnormal behavior, sperm dysfunction, and damage to the blood-brain barrier.<sup>8</sup>
2. Peer-reviewed studies have demonstrated that pulsed and modulated RFR can cause the symptoms suffered by and personally attested to by City of Pittsfield's residents, including studies showing that these symptoms can develop as a result of exposure to cell towers specifically.
3. The symptoms described by City of Pittsfield's residents are often referred to in the scientific and medical literature as "electrosensitivity." The record evidence shows that exposure to pulsed and modulated RFR within the emission limits authorized by the FCC can cause the

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<sup>7</sup> [Environmental Health Trust et al. v. FCC Key Documents Volume 1, Volume 3, Volume 4, Volume 5, Volume 6, Volume 7, Volume 8, Volume 9, Volume 10, Volume 11, Volume 12, Volume 13, Volume 14, Volume 15, Volume 16, Volume 17, Volume 18, Volume 19, Volume 20, Volume 21, Volume 22, Volume 23, Volume 24, Volume 25, Volume 26, Volume 27](https://ehtrust.org/environmental-health-trust-et-al-v-fcc-key-documents/) <https://ehtrust.org/environmental-health-trust-et-al-v-fcc-key-documents/>.

<sup>8</sup> [The California Medical Association Wireless Resolution](https://ehtrust.org/the-california-medical-association-wireless-resolution/). (2015, March 9). *Environmental Health Trust*. <https://ehtrust.org/the-california-medical-association-wireless-resolution/>; bioadmin. (n.d.). [Conclusions—BIOINITIATIVE 2012—CONCLUSIONS Table 1-1](https://bioinitiative.org/conclusions/). *The BioInitiative Report*. Retrieved March 19, 2022, from <https://bioinitiative.org/conclusions/>; bioadmin. (n.d.). [Table of Contents](https://bioinitiative.org/table-of-contents/). *The BioInitiative Report*. Retrieved March 19, 2022, from <https://bioinitiative.org/table-of-contents/>; [EMFscientist.org—International EMF Scientist Appeal](https://www.emfscientist.org/index.php/emf-scientist-appeal). (n.d.). Retrieved March 19, 2022, from <https://www.emfscientist.org/index.php/emf-scientist-appeal>.

symptoms, injuries, and mechanisms of harm associated with electrosensitivity and exhibited by the residents near the facility.<sup>9</sup>

4. Electrosensitivity describes a constellation of mainly neurological symptoms that occur as a result of exposure to pulsed and modulated RFR. The symptoms described in the scientific and medical literature include headaches, sleep problems, heart palpitations, ringing in the ears, dizziness, nausea, skin rashes, memory, and cognitive problems, among others. According to the evidence, exposure avoidance is the only effective management.

5. There are diagnosis guidelines. The European Academy of Environmental Medicine (EUROPAEM) published the “*EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses.*”<sup>10</sup> These peer-reviewed guidelines cite 235 scientific references for symptoms, physiological damage, and mechanisms of harm. These guidelines have been used by doctors in the U.S. and throughout the world. Dr. Sharon Goldberg, MD, who diagnosed three City of Pittsfield residents with electro-sensitivity following their continuous exposure to the Verizon Wireless 877 South Street wireless facility, uses these guidelines. Dr. Goldberg has provided this Board with documentation and supporting information on the injuries suffered by these three Shacktown residents which Dr. Goldberg has opined to a reasonable degree of medical certainty have been caused by their exposure to the wireless radiation being emitted by this facility.

6. The recent U.S. government reports regarding the “mystery illness” of U.S. diplomats in Cuba, China, Austria, and elsewhere provide further support that pulsed RF can cause injury similar to that suffered by Shacktown residents. In December 2020, the National Academy of Sciences, Engineering, and Medicine (NAS) concluded<sup>11</sup> that the diplomats’ “mystery illness” is likely caused by pulsed RF. Prof. Beatrice Golomb, MD, PhD, 2018, wrote the first paper analyzing the science and showed that pulsed RFR is the likely cause of the symptoms suffered by some US diplomats in Cuba and China.<sup>12</sup> Her analysis relies on government studies as well as studies on commercial wireless devices and technology, and demonstrates how the diplomats’ symptoms can result from pulsed RFR exposure. Dr. Golomb concluded that the diplomats likely suffer from electrosensitivity (which she refers to as “Microwave Illness”). Most recently, on February 1, 2022, the federal government published a report adopting the conclusion of the NAS, finding that pulsed RFR is likely the cause of the diplomats’ sickness.<sup>13</sup>

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<sup>9</sup> Belyaev, I., Dean, A., Eger, H., Hubmann, G., Jandrisovits, R., Kern, M., Kundi, M., Moshhammer, H., Lercher, P., Müller, K., Oberfeld, G., Ohnsorge, P., Pelzmann, P., Scheingraber, C., & Thill, R. (2016). [EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses](https://doi.org/10.1515/reveh-2016-0011). *Reviews on Environmental Health*, 31(3), 363–397. <https://doi.org/10.1515/reveh-2016-0011> ; Bray, R. (n.d.). *Electromagnetic Hypersensitivity*. 81. <https://maisonsaine.ca/uploads/2016/09/ehs-bray-13-08-2016.pdf>.

<sup>10</sup> Belyaev, I., Dean, A., Eger, H., Hubmann, G., Jandrisovits, R., Kern, M., Kundi, M., Moshhammer, H., Lercher, P., Müller, K., Oberfeld, G., Ohnsorge, P., Pelzmann, P., Scheingraber, C., & Thill, R. (2016). [EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses](https://doi.org/10.1515/reveh-2016-0011). *Reviews on Environmental Health*, 31(3), 363–397. <https://doi.org/10.1515/reveh-2016-0011>.

<sup>11</sup> National Academies of Sciences, E., and Medicine. (2020). *An Assessment of Illness in U.S. Government Employees and Their Families at Overseas Embassies*. The National Academies Press. <https://doi.org/10.17226/25889>.

<sup>12</sup> Golomb, B. A. (2018). *Diplomats’ Mystery Illness and Pulsed Radiofrequency/Microwave Radiation*. *Neural Computation*, 30(11), 2882–2985. [https://doi.org/10.1162/neco\\_a\\_01133](https://doi.org/10.1162/neco_a_01133).

<sup>13</sup> *Executive Summary DECLASSIFIED by DNI Haines on 1 February 2022*. (2022). [https://www.dni.gov/files/ODNI/documents/assessments/2022\\_02\\_01\\_AHI\\_Executive\\_Summary\\_FINAL\\_Redacted.pdf](https://www.dni.gov/files/ODNI/documents/assessments/2022_02_01_AHI_Executive_Summary_FINAL_Redacted.pdf).

7. As the record shows, there is evidence of clusters of sickness around cell towers. Evidence filed in the *Environmental Health Trust, et al. v. FCC case*<sup>14</sup> and provided to the Board of Health shows that California firefighters developed electrosensitivity symptoms after a cell tower was installed on their stationhouse, including headaches, memory problems, sleeping problems, depression, and other neurological problems. SPECT brain scans found brain abnormalities. Additionally, TOVA testing found delayed reaction time, lack of impulse control, and difficulty in maintaining mental focus. Following these incidents, the International Association of Fire Fighters Division of Occupational Health Safety and Medicine investigated evidence of pulsed and modulated RF harm, and published a resolution opposing the use of fire stations as base stations for towers and/or antennas for the conduction of cell phone transmissions.<sup>15</sup>

8. In November 2020, New Hampshire's Commission to Study the Environmental and Health Effects of Evolving 5G Technology (the Commission was established by the State Legislature to learn about the health effects of 5G wireless radiation), published a report which concludes that RF emissions at levels below the FCC emissions guidelines can be harmful. The Committee's final report followed a thorough study of the evidence. The Committee's final report recommends adoption of cell tower antenna setbacks and acknowledges electrosensitivity and its association with RFR exposure.<sup>16</sup> Dr. Kent Chamberlin, former Chair, Department of Computer and Electrical Engineering, University of New Hampshire, and Dr. Paul Heroux, PhD, Professor of Toxicology and Health Effects of Electromagnetism, McGill University Faculty of Medicine, two of the expert members of the New Hampshire Committee, have provided testimony to the Pittsfield City Council about the health effects of RFR exposure, and this testimony has been included in the record considered by this Board.

9. Other highly-credentialed, independent academic research experts have also offered testimony, at no cost, in support of residents' contentions that the Verizon Wireless 877 South Street wireless facility is the cause of their electrosensitivity symptoms. Experts include Dr. Martha Herbert, MD PhD, pediatric neurologist and former Assistant Professor at Harvard Medical School, and Dr. Magda Havas PhD., Professor Emeritus, Trent School of the Environment, Trent University.

10. Professor David Carpenter, MD, former Dean, School of Public Health at University of Albany, New York, wrote a letter to the City of Pittsfield in which he discussed studies showing that cell towers increase cancer risk, and cause changes in hormones as well as electrosensitivity symptoms, including headaches, fatigue, "brain fog," and ringing in the ears. Dr. Carpenter has published numerous studies on the negative health effects of electromagnetic radiation which have been submitted to this Board and are part of the record herein.<sup>17</sup> Dr. Carpenter is the co-

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<sup>14</sup> *Envtl. Health Tr., et al. v. FCC*, 9 F.4th 893 (D.C. Cir. 2021).

<sup>15</sup> [Cell Tower Radiation Health Effects](https://www.iaff.org/cell-tower-radiation/). (2004). *IAFF*. Retrieved March 19, 2022, from <https://www.iaff.org/cell-tower-radiation/>; Susan Foster Ambrose, M.S.W., Medical Writer. (2004). *INTERNATIONAL ASSOCIATION OF FIREFIGHTERS (IAFF) VOTES TO STUDY HEALTH EFFECTS OF CELL TOWERS ON FIRE STATIONS Call for Moratorium on New Cell Towers on Fire Stations Until Health Effects Can Be Studied*. Advancing Sound Public Policy on the Use of Electromagnetic Radiation (EMR). [https://ehtrust.org/wp-content/uploads/pr\\_iaff\\_vote-1.pdf](https://ehtrust.org/wp-content/uploads/pr_iaff_vote-1.pdf).

<sup>16</sup> *Final Report of the Commission to Study The Environmental and Health Effects of Evolving 5G Technology* (HB 522, Chapter 260, Laws of 2019, RSA 12-K:12–14). (2020). State of New Hampshire. <http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf>.

<sup>17</sup> Bandara, P., & Carpenter, D. O. (2018). [Planetary electromagnetic pollution: It is time to assess its impact](https://doi.org/10.1016/S2542-5196(18)30221-3). *The Lancet. Planetary Health*, 2(12), e512–e514. [https://doi.org/10.1016/S2542-5196\(18\)30221-3](https://doi.org/10.1016/S2542-5196(18)30221-3).

editor of the BioInitiative Report,<sup>18</sup> a scientific review of the science on RF/EMF by independent expert scientists. The report reviewed approximately 2,000 published studies on RFR health effects. After it was first released, the content of the Bioinitiative Report underwent peer review and was published in condensed form as a special two-volume issue of the Journal Pathophysiology. Additional chapters have been published in various journals.<sup>19</sup> The Report concludes that bio-effects from wireless technology and infrastructure, including from cell towers, occur at radiation levels significantly below the FCC's emissions guidelines as documented in published research. The Report finds that the overwhelming majority of published neurological studies show bio-effects.<sup>20</sup> Over 90 percent of the studies that examine the oxidative stress mechanism (a mechanism of harm associated also with electro-sensitivity) show bio-effects.<sup>21</sup> The Report contains cell tower exposure studies that show harmful effects of radiation emitted by cell towers, and demonstrate that exposure to pulsed RF causes hormonal and cell stress effects at radiation levels far, far lower than the FCC emissions guidelines.<sup>22</sup> According to the 2012 Report's conclusion, public safety standards are 10,000 or more times higher than levels now commonly reported in mobile phone base station studies that reveal bio-effects. Because of the actual evidence of harm to humans from exposure to wireless radiation transmissions from cell towers, the Report uses mobile phone base station-RFR levels studies and other studies with very, very low RF exposures to determine the "lowest observed effect level" for RFR exposure as the basis for its recommendations for biologically-based exposure guidelines.<sup>23</sup>

11. Dr. Cindy Russell, a medical doctor and the executive director of "*Physicians for Safe Technology*,"<sup>24</sup> provided a synopsis of 28 studies showing cell tower harm in her letter to this Board, dated July 6, 2021, which explains how it is "well established" that wireless radiation at non-thermal levels causes oxidative stress, and "oxidative stress plays a major part in the development of chronic, degenerative, and inflammatory illnesses such as cancer, autoimmune

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<sup>18</sup> bioadmin. (n.d.). Table of Contents. *The BioInitiative Report*. Retrieved March 19, 2022, from <https://bioinitiative.org/table-of-contents/>.

<sup>19</sup> Martin Blank (Ed.). (2009). [Electromagnetic Fields \(EMF\) Special Issue](https://doi.org/10.1016/S0928-4680(09)00066-2). *Pathophysiology*, 16(2–3), CO2. [https://doi.org/10.1016/S0928-4680\(09\)00066-2](https://doi.org/10.1016/S0928-4680(09)00066-2); Hardell, L., & Sage, C. (2008). [Biological effects from electromagnetic field exposure and public exposure standards](https://doi.org/10.1016/j.biopha.2007.12.004). *Biomedicine & Pharmacotherapy*, 62(2), 104–109. <https://doi.org/10.1016/j.biopha.2007.12.004>; Herbert, M. R., & Sage, C. (2013). Autism and EMF? Plausibility of a pathophysiological link – Part I. *Pathophysiology*, 20(3), 191–209. <https://doi.org/10.1016/j.pathophys.2013.08.001>; Herbert, M. R., & Sage, C. (2013). Autism and EMF? Plausibility of a pathophysiological link part II. *Pathophysiology*, 20(3), 211–234. <https://doi.org/10.1016/j.pathophys.2013.08.002>.

<sup>20</sup> Neurological Effects Studies Percent Comparison, BioInitiative. (2022). <https://bioinitiative.org/wp-content/uploads/2020/10/13-Neurological-Effects-Studies-Percent-Comparison-2020.pdf>.

<sup>21</sup> Henry Lai. (n.d.). Research Summaries. *The BioInitiative Report*. Retrieved March 19, 2022, from <https://bioinitiative.org/research-summaries/>; Neurological Effects Studies Percent Comparison, BioInitiative. (2022). <https://bioinitiative.org/wp-content/uploads/2020/10/13-Neurological-Effects-Studies-Percent-Comparison-2020.pdf>.

<sup>22</sup> BUCHNER K, EGER H (2011) [A Long-term Study Under Real-life Conditions / Umwelt-Medizin-Gesellschaft](https://www.avaate.org/IMG/pdf/Rimbach-Study-20112.pdf) 24(1): 44-57. <https://www.avaate.org/IMG/pdf/Rimbach-Study-20112.pdf>.

<sup>23</sup> Henry Lai. (n.d.). Research Summaries. *The BioInitiative Report*. Retrieved March 19, 2022, from <https://bioinitiative.org/research-summaries/>; Neurological Effects Studies Percent Comparison, BioInitiative. (2022). <https://bioinitiative.org/wp-content/uploads/2020/10/13-Neurological-Effects-Studies-Percent-Comparison-2020.pdf>.

<sup>24</sup> Physicians for Safe Technology | Cell Tower Radiation Health Effects. (2017, September 11). *Physicians for Safe Technology*. <https://midsafetech.org/cell-tower-health-effects/>.

disorders, aging, cataracts, rheumatoid arthritis, cardiovascular and neurodegenerative diseases, as well as some acute pathologies (trauma, stroke). Effects of oxidative stress are cumulative.”<sup>25</sup>

12. Devra Davis PhD, MPH, the founder of the Environmental Health Trust, sent a scientific letter and briefing materials to this Board, documenting the published science indicating how FCC limits do not ensure safety to human health, and how legal levels of wireless radiation can damage the health of children, pregnant women, and the medically vulnerable. Studies of wireless radiation exposure from cell towers document neuropsychiatric problems, elevated diabetes, headaches, sleep problems, and genetic damage.<sup>26</sup> Attached to the letter were several published articles, including an article published in the journal *Lancet Planetary Health*, which presented an evaluation by the Oceania Radiofrequency Scientific Advisory Association of 2266 studies (including in-vitro and in-vivo studies in human, animal, and plant experimental systems and population studies). The evaluation found that most studies have demonstrated significant biological or health effects associated with exposure to anthropogenic electromagnetic fields.<sup>27</sup> Furthermore, a scientifically referenced Environmental Health Trust White Paper addressed common misconceptions around the health effects of wireless radiation.<sup>28</sup>

13. These and other studies and reports in the record before this Board show that wireless radiation transmitted from cell towers can have adverse effects even when the pulsed and modulated RF emissions are significantly lower than the FCC’s emission guidelines. Compliance with FCC emission limits does not ensure safety nor protection from all harm. Published studies provided to the Board show negative health effects on human beings at legally allowed levels including: neurological effects and adverse effects on well-being, clear, measurable, physiological effects, hormonal changes, oxidative stress damage, negative effects on sperm, increased cancer risk, and DNA damage.<sup>29</sup>

14. Epidemiological studies demonstrate that exposure to wireless radiation emissions from cell towers causes symptoms similar to those suffered by Shacktown residents as a result of the operation of the Verizon Wireless 877 South Street wireless facility. The record includes a 2010 review of wireless radiation exposure from cell towers and numerous other studies which are relevant to chronic long-term exposure similar to that from cell towers. Effects documented in these studies include various neurological symptoms such as fatigue, sleep problems, headaches and other effects on “wellbeing” proportionate to the distance from the cell tower.<sup>30 31 32</sup> A

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<sup>25</sup> Russell, C., (2021, July 6). [Cindy Russell MD to Pittsfield Board of Health. RE: Pittsfield testing of RFR emissions.](#) [Letter].

<sup>26</sup> Scarato, T., (2021, May 27). [Theodora Scarato to Gina Armstrong, City of Pittsfield Board of Health](#); Davis, D., et al., (2021, April 21). [Dr. Devra Davis, et al., to the Honorable Joseph R. Biden, President/Science/Briefing.](#) [Letters].

<sup>27</sup> Priyanka Bandara, David O Carpenter, [Planetary electromagnetic pollution: it is time to assess its impact](#), *The Lancet Planetary Health*, Volume 2, Issue 12, 2018, Pages e512-e514, ISSN 2542-5196, [https://doi.org/10.1016/S2542-5196\(18\)30221-3](https://doi.org/10.1016/S2542-5196(18)30221-3).

<sup>28</sup> [Myth Fact Scientific Response EHT 2022.](#)

<sup>29</sup> See Appendices I and II.

<sup>30</sup> Abdel-Rassoul, G., El-Fateh, O. A., Salem, M. A., Michael, A., Farahat, F., El-Batanouny, M., & Salem, E. (2007). [Neurobehavioral effects among inhabitants around mobile phone base stations.](#) *Neurotoxicology*, 28(2), 434–440. <https://doi.org/10.1016/j.neuro.2006.07.012>; Khurana, V., Hardell, L., Everaert, J., Bortkiewicz, A., Carlberg, M., & Ahonen, M. (2010). [Epidemiological Evidence for a Health Risk from Mobile Phone Base Stations.](#) *International Journal of Occupational and Environmental Health*, 16, 263–267. <https://doi.org/10.1179/107735210799160192>.

<sup>31</sup> Levitt, B. B., & Lai, H. (2010). [Biological effects from exposure to electromagnetic radiation emitted by cell tower base stations and other antenna arrays.](#) *Environmental Reviews*, 18(NA), 369–395. <https://doi.org/10.1139/A10-018>.

<sup>32</sup> [78 Studies Showing Health Effects from Cell Tower Radio Frequency](#); Oberfeld, G., & Gustavs, K. (2007). *Environmental Medicine Evaluation* (30). 48.

telecom company study found exposure to cell towers causes a variety of neurological symptoms and a dose response. The study also found a causal relationship with sleep disturbance. When, unknown to the subjects, the company secretly turned off the antennas for three days, the sleep quality improved in all subject groups that were studied.<sup>33</sup>

15. Evidence of electrosensitivity and its association to pulsed and modulated RF exposure, as well as evidence of harm to human health and the environment from exposure to wireless radiation from cell towers was filed in the case of *Environmental Health Trust, et al., v. Federal Communications Commission (FCC)* in the U.S. Court of Appeals for the District of Columbia Circuit. The petitioners challenged the FCC's decision in 2019 not to review and update its 1996 guidelines for wireless radiation emissions, following a multi-year proceeding to examine the developing science on the health and environmental effects of exposure to wireless radiation. The FCC determined in 2019 that its 1996 guidelines did not need to be updated.<sup>34</sup> On appeal, the DC Circuit court reversed the FCC, ruling in August 2021 that the FCC's determination that there is no evidence of non-cancerous and environmental harm from RF emissions below the FCC 1996 emissions guidelines was arbitrary, capricious, and not evidence-based. The DC Circuit court ruled that the FCC failed to explain why, despite the substantial evidence of harm filed in the FCC record, the agency decided to not further review its 1996 guidelines for possible updating. The DC Circuit remanded the case back to the FCC, and ordered the FCC to “*address the impacts of RF radiation on children, the health implications of long-term exposure to RF radiation*” as well as *environmental effects, new technological developments and adequacy of RF test procedures*. However, as of today's date, the FCC has not provided any response to the court order. Thus, while the 1996 FCC wireless emissions guidelines remain in effect, they have not been updated in 26 years, and they have not been substantiated by an up-to-date scientific review by any federal regulatory agency. Evidence provided to this Board confirms that when it comes to cell tower network RF emissions, there is no federal regulatory agency with health expertise monitoring the published science, nor providing surveillance for health effects, nor measuring RF levels in the environment.<sup>35</sup> As is also documented in a letter from the Environmental Protection Agency (the “EPA”) to Theodora Scarato of Environmental Health Trust, the EPA has not reviewed the research on biological effects of exposure to wireless radiation since 1984.<sup>36</sup> The FDA has not reviewed the safety of environmental RF levels. The FDA stated in a letter<sup>37</sup> to a family requesting information on the safety of base station antennas that: “The Food and Drug Administration (FDA) does not regulate cell towers or cell tower radiation. Therefore, the FDA has no studies or information on cell towers to provide in response to your questions.” The lack of oversight for the health effects of cell tower network radiofrequency exposure is a serious gap in

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<sup>33</sup> Cherry, N.J. (2002). [Evidence of neurological effects of electromagnetic radiation: implications for degenerative disease and brain tumour from residential, occupational, cell site and cell phone exposures \(9\)](#).

<sup>34</sup> *Environmental Health Trust, et al v. FCC*, 9 F.4th 893 (D.C. Cir. 2021). [https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFDF7/\\$file/20-1025-1910111.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFDF7/$file/20-1025-1910111.pdf).

<sup>35</sup> [Myth Fact Scientific Response by Environmental Health Trust 2022, Theodora Scarato to Gina Armstrong, City of](#)

<sup>36</sup> [Pittsfield Board of Health](#); Davis, D., et al., (2021,

April 21). EPA letter is page 24 of [Dr. Devra Davis, et al., to the Honorable Joseph R. Biden, President/Science/Briefing \[Letters\]](#).

<sup>37</sup> Theodora Scarato presentation of the FDA letter in a video presentation submitted to Pittsfield Board of Health, [Pittsfield MA Expert Forum on Cell Tower Cease-and-Desist Order](#), at minute 54:24, and also in [Myth Fact Scientific Response EHT 2022](#), under section “Myth: The Food And Drug Administration (FDA) has reviewed the science on 5G and cell towers and determined the radiation is safe and FCC limits protect public health.”

federal accountability, especially when research documenting harmful effects continues to be published in respected journals.

16. In November 2021, scientific and policy experts, including Dr. Linda Birnbaum, former Head of the National Institute of Environmental Health Sciences and National Toxicology Program, Dr. Ronald Melnick, National Institute of Health scientist (now retired), Dr. Anthony Miller, Dr. Jerome A. Paulson, Devra Davis, PhD, and several others, sent new requests to the FCC calling for a full examination of the latest scientific evidence in order for the U.S. to develop regulatory safety limits that protect the public and environment from wireless radiation exposure. Included in their filing are over 1,000 pages of reports and studies on demonstrating harm to humans from exposure to RF radiation, including electrohypersensitivity, and harm to humans from exposure to RF radiation from cell towers specifically. The Environmental Health Trust filing to the FCC docket also includes letters from the BioInitiative Report, Environmental Working Group, Consumers for Safe Cell Phones, Phonegate Alerts, and Dr. Kent Chamberlin.<sup>38</sup>

17. The questions raised by the DC Circuit Court and the compelling scientific evidence submitted to this Board allows only one conclusion: pulsed and modulated RFR can and does cause harm, and at least a certain segment of the population can be severely harmed when exposed to this wireless radiation, especially for continuous periods of time. Exposure to wireless radiation can lead to significant temporary and possibly permanent injury, and according to the evidence, it seems that the most effective method to reduce the symptoms and mitigate the harm is through exposure avoidance.

18. This Board also finds that the information and testimony provided by Verizon Wireless do not convince this Board otherwise. In particular, this Board invited Verizon Wireless to meet by Zoom in September 2021 with Board Member Brad Gordon, then-Director of Public Health Gina Armstrong, and then-Senior Sanitarian (now current Director of Public Health) Andy Cambi to discuss the concerns of the City of Pittsfield Health Department, this Board, and residents of the City of Pittsfield about the wireless radiation emissions from the Verizon Wireless 877 South Street wireless facility ever since that facility was activated in August 2020. These concerns arose from the complaints reported by numerous residents of the adjacent residential neighborhood of negative health symptoms these residents and their relatives had been and were continuing to suffer from what they believed to be exposure to the continuous wireless radiation being transmitted from that Verizon Wireless facility. On September 9, 2021, Verizon Wireless appeared at the Board of Health Zoom session, represented by Verizon General Counsel New England Market, attorney Joshua E. Swift, Verizon Wireless Network Engineer, Jay Latorre, Verizon Wireless State and Government Affairs Director, Ellen Cummings, and Dr. Eric S. Swanson, Professor, Department of Physics and Astronomy, University of Pittsburgh. Professor Swanson was the primary spokesperson for Verizon Wireless at this meeting.

19. Professor Swanson presented prepared remarks, accompanied by a Powerpoint slide presentation. The Board did not place any time limits on Professor Swanson's presentation, and Ms. Armstrong and Mr. Gordon asked Professor Swanson many questions following his remarks. Professor Swanson's main points included: (a) electromagnetic radiation is the best understood phenomenon in the universe; it is not nuclear radiation; (b) electromagnetic waves form the

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<sup>38</sup> <https://ecfsapi.fcc.gov/file/11302824721650/Remand%20Filing%20-%20Nov%2030th.pdf>; Linda S. Birnbaum, PhD, et al. (2021, November 24). *FCC Record Refresh Letter from Scientists to The Honorable Jessica Rosenworcel, Commissioner, Acting Chairwoman, Federal Communications Commission*. <https://ehtrust.org/wp-content/uploads/FCC-Record-Refresh-Letter-from-ScientistsWireless-Radiation.pdf>; [Scientific and Policy Developments in Radiofrequency Radiation](https://ehtrust.org/wp-content/uploads/New-Scientific-Developments-in-RFR-FCC-EHT-Remand-with-Studies-2.pdf) (2019 - 2021), <https://ehtrust.org/wp-content/uploads/New-Scientific-Developments-in-RFR-FCC-EHT-Remand-with-Studies-2.pdf>; Environmental Working Group, [The Bioinitiative Report](https://ehtrust.org/wp-content/uploads/The-Bioinitiative-Report), Consumers for Safe Cell Phones, [New Hampshire State Commission on 5G](https://ehtrust.org/wp-content/uploads/New-Hampshire-State-Commission-on-5G.pdf).

spectrum; (c) some radiation is ionizing which can sometimes cause cancer; (d) electromagnetic waves below the ionization threshold cannot cause cancer; (e) only wavelengths above visible light on the spectrum are ionizing; (f) wavelengths in the visible light portion of the spectrum are non-ionizing, and cannot cause cancer; (g) wavelengths below visible light on the spectrum, including thermal, microwave, 5G, 4G, and radio, are non-ionizing, and cannot cause cancer; (h) the only verified biological effect on tissue of non-ionizing radiation is heating; (i) the FCC regulates RFR to limit thermal effects, and FCC limits are very strict, set at 1/50 of the level of what is detectable in animal experiments; (j) the FCC limits are based on the evaluation of thousands of studies and the recommendations of expert organizations and agencies; (k) various international regulatory agencies and health organizations have concluded that there is no established evidence for health effects from radio waves used in mobile communications; (l) the FCC regularly updates its rules; (m) the consensus view of all scientists is that wireless radiation does not and cannot cause cancer; all studies to the contrary are from fringe scientists and those studies all show confirmation bias.

20. Following Professor Swanson's remarks, Ms. Armstrong acknowledged, without accepting, his contention that exposure to wireless radiation cannot cause cancer. But she pointed out that the immediate medical symptom residents of the Shacktown neighborhood adjacent to the Verizon Wireless 877 South Street wireless facility were complaining about were not cancer or thermal effects, but rather, headaches, tinnitus, and other conditions typical of electrohypersensitivity. Ms. Armstrong asked Professor Swanson to explain how to deal with those symptoms. Professor Swanson responded by insisting that the only verifiable biological effect of non-ionizing wireless radiation is heat, and the FCC so strictly regulates those emissions levels that heat cannot pose a problem from that Verizon Wireless cell tower. Professor Swanson acknowledged that certain people truly believe that they are hypersensitive to wireless radiation. But Professor Swanson suggested that those persons have psychological issues, and they should be dealt with sympathetically. Professor Swanson maintains that transmission of wireless radiation from Verizon's cell tower cannot actually cause those persons any injury because the immutable laws of physics make that impossible.

21. This Board has reviewed Professor Swanson's presentation and discussion and finds Professor Swanson's conclusions, several of which are strident and absolute, to lack credibility. A major problem with Professor Swanson is that he speaks as a purported expert about matters of human health and disease and medical and scientific studies about the health effects of exposure to wireless radiation, but he lacks any academic or professional qualifications in those fields. Professor Swanson is a professor of theoretical physics.<sup>39</sup> Professor Swanson's research interests focus on esoteric topics in nuclear physics, cosmology, and hadronic physics, especially in learning how "quarks" and "gluons" build the universe. All 124 of Professor Swanson's published scientific studies are limited to these subject areas.<sup>40</sup> Professor Swanson is not a medical doctor. Professor Swanson has no professional training or qualifications in medicine, medical research, biology, environmental studies, public health, epidemiology, or toxicology, and his professional credentials show no such expertise. *See* fn. 39. Yet Professor Swanson rejects the more than 2,000 peer-reviewed scientific studies showing that wireless radiation may or does negatively impact human health as outliers by "fringe" scientists who may be "conspiracy theorists" with an axe to grind, and asserts that their studies all show "confirmation bias." Professor Swanson asserts unequivocally that "the scientific consensus" is that wireless radiation cannot cause human harm. This Board finds that Professor Swanson lacks the qualifications and

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<sup>39</sup> <https://www.physicsandastronomy.pitt.edu/people/eric-s-swanson>.

<sup>40</sup> <https://inspirehep.net/literature?sort=mostrecent&size=100&page=2&q=fin%20a%20swanson%2C%20e%20s>.

the expertise to make such sweeping statements, and his credibility as a witness is severely undermined thereby.

22. Further undermining Professor Swanson’s credibility is his appearance before this Board as a paid expert on behalf of Verizon Wireless, retained through his consulting business, Swanson Scientific Consulting.<sup>41</sup> On Professor Swanson’s private consulting business website, he lists on the “Past Clients” tab, “Pittsfield, MA,” one of his 20 listed “Scientific Presentations and Depositions to Cities.” Professor Swanson also lists presentations to 5 State Senate Committees, the New York State Senators, the New Jersey Urban Mayors Association, and the Center for Growth and Opportunity. He names Verizon and Crown Castle Development (a major cell tower operator) as clients, as well as CTIA, the U.S. wireless industry’s trade and lobbying association. *See fn. 41.* This Board, in assessing Professor Swanson’s credibility, takes notice that he works as a paid industry consultant when making presentations such as the one he made to this Board regarding matters outside of his academic research and professional qualifications. In contrast, the experts who presented to this Board and spoke about the hazards to human health posed by wireless radiation from cell towers all had particular professional qualifications in the subject matter; none of these experts has received any compensation for their appearances before this Board, and all are independent academic researchers, with no affiliation to Verizon Wireless and the telecommunications industry. These facts enhance the credibility of these experts, especially vis-a-vis Professor Swanson.

23. Verizon Wireless also submitted to this Board documents which consist primarily of self-promotional brochures or industry-funded advocacy pieces rather than peer-reviewed scientific studies. These materials generally deny *any* prospect of harm, but do not meaningfully address the scientific evidence in the record or counteract the fact that the majority of independent (not industry-funded) studies, especially studies that use pulsed and/or modulated signals, do show harm.<sup>42</sup> Verizon Wireless did not present government regulatory agency reports or systematic scientific or medical reviews of cell tower wireless radiation exposure studies (or studies of comparable levels of chronic environmental exposures) which conclude that safety to human health is assured. Furthermore, Verizon Wireless cannot and does not adequately rebut the personal testimonies provided by the residents of the neighborhood (“Shacktown”) in the City of Pittsfield adjacent to the Verizon Wireless 877 South Street wireless facility at the several public hearings before the Health Board of the actual harms they have suffered and are suffering from the operation of this wireless facility. Simply stated, the position of Verizon Wireless is that what is plainly happening in Pittsfield cannot occur. That position has been stated most clearly by Professor Swanson during his September 9, 2021 presentation to this Board. But this Board finds that, in fact, Shacktown residents have suffered, and are continuing to suffer, negative health effects from the continuous operation of the Verizon Wireless 877 South Street wireless facility since it was activated in August 2020.

24. The evidence shows that involuntary wireless radiation exposure directed upon Shacktown residents in their homes has effectively evicted several residents injured by pulsed and modulated RFR; they have no choice but to leave. Pulsed and modulated RFR from the Verizon Wireless 877 South Street wireless facility has rendered their homes uninhabitable – unfit for human habitation – because the continued exposure causes them severe pain, unable to function, and endangers and materially impairs their health and safety.

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<sup>41</sup> <https://swansonscientific.com/>.

<sup>42</sup> Panagopoulos, D. J., Johansson, O., & Carlo, G. L. (2015). *Real versus Simulated Mobile Phone Exposures in Experimental Studies*. *BioMed Research International*, 2015, 607053. <https://doi.org/10.1155/2015/607053>.

**Whereas**, this Board has received direct testimony and written submissions from specific individuals that reside, or previously resided, within the reach of the wireless facility in issue. These residents state that they and/or other family members (including their children) have developed symptoms shortly after the facility was activated.<sup>43</sup> Many of the residents have testified on multiple occasions, which indicates the symptoms are persisting. It appears, based on the evidence, that there is a cluster of illness around the Verizon Wireless 877 South Street wireless facility that is caused by the facility's operation. Since no comprehensive survey has been conducted of all neighborhood residents, there may be additional affected residents.

**Whereas**, the symptoms reported by affected neighborhood residents are mainly neurological; they include headaches, ringing in the ears, dizziness, heart palpitations, nausea, and skin rashes. As the evidence that was provided to this Board shows, these symptoms are consistent with the scientific literature regarding adverse health effects from exposure to pulsed and modulated RF, including evidence specific to cellular antennas.

**Whereas**, this Board has received evidence from at least seventeen residents who have suffered on-going medical symptoms that arose for the first time after the Verizon Wireless 877 South Street wireless facility was activated in August 2020 and who believe their symptoms are caused by their continuous exposure to the wireless radiation being transmitted from that wireless facility. This Board finds their letters and oral testimonies to be authentic, compelling, and credible. As a result of their now-impaired health, some of these residents have decided to leave their homes, while others split their time between their homes in Shacktown and other temporary locations. This indicates that some affected Shacktown residents have been constructively evicted from their homes because of the operation of the wireless facility, and have been effectively rendered homeless. According to the evidence in the record, these symptoms are consistent with a diagnosis of electromagnetic sensitivity.

**Whereas**, this Board has received and reviewed, *inter alia*, the following evidence from specific Shacktown residents who have been and are being injured by the continued operation of the Verizon Wireless 877 South Street wireless facility:

1. REDACTED a pre-school teacher, has testified that she and both of her daughters developed various symptoms immediately after the facility went into operation. Ms. REDACTED has provided a physician's medical diagnosis by Dr. Sharon Goldberg, MD, an internal and environmental medicine physician. This diagnosis has linked REDACTED symptoms directly to the RF/EMF emitted by the facility by way of causation. REDACTED diagnosis letter indicates her symptoms improve when she is away from home, but resume when she returns and is again exposed again to the facility's radiation.
2. REDACTED s minor daughter, testified that after the facility went into operation, she and her sister both started getting headaches. They feel dizzy and develop sleeping problems. Her sister also suffered itchiness and developed skin rashes, frequent nausea, and often has to sleep with a bucket next to her bed in case she needs to throw up. Both girls have missed school because of sickness caused by wireless radiation exposure from the cell tower. REDACTED explained that when she is away from home (and out of range of the facility) she feels better.
3. REDACTED reported that following the facility's activation they began to suffer nausea, headaches, and dizziness. They are especially concerned for their five year old son who has Sensory Processing Disorder, a neurological disease. Since he has limited verbal skills, they do not know whether he too suffers from exposure to the wireless radiation transmitted from the cell tower. They are concerned that the exposure to the cell tower's emissions will aggravate

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<sup>43</sup> See Appendix V: Public Comment Testimony to Board of Health.

his condition. The literature indicates that it is not unusual for individuals to have or develop sensitivity to multiple toxins, and this can become an escalating feedback loop.

4. REDACTED and their two children all developed headaches and insomnia after the facility became operational. They left their home because it is essentially uninhabitable and inaccessible to them.

5. REDACTED, an elderly resident, testified that both he and his wife have been unable to sleep since the tower was activated and that his wife has been especially affected.

6. REDACTED reported that they have been severely affected. He is nauseous and has headaches in the morning and again as soon as he returns from work.

7. REDACTED testified that she and her husband developed tinnitus and other serious health issues following the facility's activation. They are suffering from headaches and sleeplessness. They are deciding whether they must abandon their home because it is inaccessible and uninhabitable.

8. REDACTED testified that he developed ringing in the ears and that his wife Luci has developed horrible headaches and migraines. He stated that he sent his wife and their three year old daughter REDACTED away from the house because they believe it is unsafe and therefore uninhabitable. They are concerned for their daughter as she also has limited verbal skills and therefore they don't know if she suffers.

**Whereas**, this evidence clearly demonstrates to this Board that specific Shacktown residents in the vicinity of the facility have suffered and are suffering injuries and illnesses directly caused by the pulsed and modulated RFR emitted by the facility in issue, and for so long as the facility is in operation it will continue to be injurious to the public health and continue to drive residents from their homes.

**Whereas**, the FCC's emissions guidelines provide limits for general population purposes. These guidelines were designed to measure and address primarily only "thermal" or heating related effects. The guidelines for whole body exposure (such as for exposure from cell towers) are for 30 minutes exposure, and protect only from thermal injury. They were not developed to protect sensitive populations against all harms. They ignore the effects of pulsation and modulation and non-thermal effects from long-term chronic exposure, cumulative effects, and effects of exposure to numerous sources of RF exposure.

**Whereas**, the FCC emissions guidelines do not address the demonstrated scientific, medical, and even legally-established fact that these general population limits do not adequately recognize that pulsed and modulated RF radiation emissions are "bioactive" – living things biologically respond to pulsed and modulated RF radiation, and this response can lead to harmful effects. More importantly, these guidelines entirely fail to address or provide for the situation where, at least, certain individuals develop adverse reactions such as those who experience electromagnetic sensitivity.

**Whereas**, this Board concludes that the FCC emissions guidelines do not prevent this Board, operating under State authority, from taking action to protect the health and safety of those specific individuals who have demonstrated that a continuously operating cell tower built adjacent to a densely populated residential neighborhood is injuring their health on a continuing basis, as well as the health of other neighborhood residents. The FCC has ruled that state and local zoning authorities can condition a land use permit on compliance with generally applicable state or local health and safety codes.<sup>44</sup> Verizon

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<sup>44</sup> *Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting; 2012 Biennial Review of Telecommunications Regulations*, 29 FCC Rcd 12865, 122951, ¶202 (Oct. 17, 2014): ("We therefore conclude that States and localities may require a covered request to comply with generally applicable building, structural, electrical, and safety codes or with other laws codifying objective standards reasonably related to health and safety, and that they may condition approval on such compliance.").

Wireless' permit for this facility does precisely that. Verizon Wireless' permit expressly requires compliance with the Massachusetts Sanitary Code and Pittsfield's health-related rules, regulations and requirements. By this Order, this Board finds the Verizon Wireless 877 South Street wireless facility to be in violation, and this Board requires Verizon Wireless and the property owner to bring their facility and the premises into compliance with Massachusetts' and Pittsfield's generally applicable health and safety codes, just as FCC precedent and the permit expressly allow.

**Now, therefore, the Pittsfield Board of Health hereby FINDS AND ORDERS as follows:**

1. The Verizon Wireless 877 South Street wireless facility operated by Verizon Wireless is a public nuisance, a cause of sickness, and a trade which may result in a nuisance or be dangerous to the public health for purposes of G.L. ch. 111 ss 122-125, 127B, 127C, 143-150 and 152.
2. The premises owner, Farley White South Street LLC, is also responsible for all activities on its premises and within its direction and control.
3. The Verizon Wireless 877 South Street wireless facility operated on the premises creates an access barrier that directly causes harm to certain individuals, and renders dwellings Unfit for Human Habitation or constitutes a Condition Which May Endanger or Materially Impair the Health or Safety and Well-Being of an Occupant as defined in State Sanitary Code 410.020 and 410.750(P).
4. The Verizon Wireless 877 South Street wireless facility operated on the premises creates conditions that impact occupants of a dwelling to the point that it renders a dwelling unfit for habitation for purposes of Sanitary Code 410.831.
5. Verizon Wireless and Farley White South Street LLC are jointly and severally responsible for these unsafe conditions.
6. This Order shall be served on Verizon Wireless, through its authorized agents, and on Farley White South Street LLC, through its authorized agents, the persons responsible for the violations as provided by *inter alia*, G.L. ch. 111 ss 124, 127B, 127D, 144, and State Sanitary Code for 410.833, 410.850, and 410.851.
7. Verizon Wireless and Farley White South Street LLC are hereby ORDERED to show cause why the Board of Health should not issue an order requiring cessation of operations at the facility pursuant to the Board of Health's statutory and historical police power to protect its citizens from injury and harm.
8. Verizon Wireless and Farley White South Street LLC shall have SEVEN (7) DAYS from the date of this order to request a hearing on this Order to Show Cause. The Board of Health will promptly schedule such hearing in accordance with the provisions of G.L. ch. 111 and the State Sanitary Code, and provide public notice thereof.
9. In the event Verizon Wireless and Farley White South Street LLC do not timely request a hearing, this Order shall become and constitute a notice of discontinuance requiring that Verizon Wireless and Farley White South Street LLC abate and eliminate all activities and operations leading to the present and ongoing nuisance and violations of the State Sanitary Code at their own expense within SEVEN (7) DAYS of the expiration of the deadline to request a hearing.
10. Verizon Wireless and Farley White South Street LLC shall have the right to inspect and obtain copies of all relevant inspection or investigation reports, orders, notices, and other documentary information in the possession of the Board of Health; the right to be represented at the hearing.
11. Any affected party has a right to appear at said hearing and present evidence and argument in favor of or against discontinuance.

12. This is an important legal document. It may affect your rights.

The Health Board reserves the right to take such other and further action as it deems necessary to ensure that all injurious activities and conditions end, including directly acting to remove the offending facilities at the expense of Verizon Wireless and Farley White South Street LLC and or appointment of a receiver responsible for accomplishing the same.

This Order shall take effect upon issuance.

## **Appendix I: Letters and Testimony from Experts**

*All links provided by reference*

Russell, C., (2021, April 6). [Cindy Russell MD to Council Members in the City of Pittsfield. Re: 3/21/21 Agenda Item #15 to encourage the Pittsfield, Massachusetts Health Department to investigate the health effects reported in the vicinity of the Verizon 877 South Street Cell tower.](#) [Letter].

Russell, C., (2021, July 6). [Cindy Russell MD to Pittsfield Board of Health. RE: Pittsfield testing of RFR emissions.](#) [Letter].

Carpenter, D.O., (2020, October 8). [Dr. David Carpenter to Mayor of the City of Pittsfield MA and Board of Health on Cell Tower Radiation](#) [Letter].

Kulberg, A.G., (2021, August 31). [Dr. Kulberg Chair of Pittsfield Board of Health to the Joint Committee on Consumer Protection RE: Senate Bill S.186 and in Support of MA Commission on Wireless Radiation.](#) [Letter].

Havas, M., (2021, July 6). [Dr. Magda Havas to Gina Armstrong, Director of Public Health, Pittsfield Health Department, City of Pittsfield MA on Cell Tower Radiation Measurements and the Lack of Protections by the FCC.](#) [Letter]. [Slide Presentation for BOH Forum.](#)

Heroux, Paul., (2021, July 7) [Paul Héroux, PhD, McGill University Medicine Comments on RF EMISSION STUDY of South St cell tower \(SSct\) on June 10th by VComm Telecommunications Engineering.](#) [Letter].

White, P., (2021, October 4). [Peter White, Councilor City of Pittsfield to Massachusetts State Legislature in Favor of Wireless Right to Know Legislation.](#) [Letter].

Scarato, T., (2021, May 27). [Theodora Scarato to Gina Armstrong, City of Pittsfield Board of Health](#); Davis, D., et al., (2021, April 21). [Dr. Devra Davis, et al., to the Honorable Joseph R. Biden, President/Science/Briefing on Wireless.](#)[Letters]. [Myth Fact Scientific Response EHT 2022.](#)

Boston Petitioners, (1997). [Boston Physicians' and Scientists' Petition To Avert Public Exposures to Microwaves.](#) [Petition Signatures].

Symington, S., (2021) [Letter to Pittsfield Board of Health July 7 2021](#) [Letter].

Chamberlain, K., (2022, February 20). [Kent Chamberlin PhD to Editor of the Berkshire Eagle Re: Response to Feb 19th Opinion on Verizon Cell Tower.](#) [Letter].

Goldberg, S. (2022, February 28). *Wireless Health Effects* [Slides from presentation]. <https://ehtrust.org/wp-content/uploads/Sharon-Goldberg-MD-Pittsfield-MA-2.28.22.pdf>.

## **Appendix II Testimony and Research on Cell Towers and Radiofrequency**

*Note: This is not an exhaustive list, but rather a short list of studies included in evidence sent to the Board.*

### **Compilation Documents**

REDACTED testified repeatedly to the Board, communicated by email and submitted extensive scientific research, video lectures, documentation of health effects and reports.

Michael Maudin, (Numerous letters 2021 and 2022) The Alliance for Microwave Radiation Accountability, Inc. Sent the Board numerous resources, scientific papers, and documents demonstrating evidence of adverse effects, research dating back decades on electromagnetic radiation and more including links [Primary Source Documents - Microwave Radiation Syndrome in April 2021](#), [Michael Maudin's testimony of injury from base station antennas](#) and primary source documents. [Microwave-Radiation-Syndrome-Primary-Source-Documents-BoH-April-2021.pdf](#). Maudin also sent 35 peer-reviewed studies and charts on microwave sickness caused by the radiation from cell

towers to the Pittsfield Board of Health on January 5, 2021 and these are included in the reference list.

[Compilation of Research Studies on Cell Tower Radiation and Health](#). (n.d.). *Environmental Health Trust*. Retrieved March 20, 2022, from <https://ehtrust.org/cell-towers-and-cell-antennae/compilation-of-research-studies-on-cell-tower-radiation-and-health/>

Maryland Children's Environmental Health and Protection Advisory Council (2016) [78 Studies Showing Health Effects from Cell Tower Radio Frequency](#).

### **Research Studies**

Gandhi, G., Kaur, G., & Nisar, U. (2015). A cross-sectional case control study on genetic damage in individuals residing in the vicinity of a mobile phone base station. *Electromagnetic Biology and Medicine*, 34(4), 344–354. <https://doi.org/10.3109/15368378.2014.933349>.

Yakymenko, I., Sidorik, E., Kyrylenko, S., & Chekhun, V. (2011). Long-term exposure to microwave radiation provokes cancer growth: Evidences from radars and mobile communication systems. *Experimental Oncology*, 33(2), 62–70. <https://pubmed.ncbi.nlm.nih.gov/21716201/>.

Santini, R., Santini, P., Le Ruz, P., Danze, J. M., & Seigne, M. (2003). Survey Study of People Living in the Vicinity of Cellular Phone Base Stations. *Electromagnetic Biology and Medicine*, 22(1), 41–49. <https://doi.org/10.1081/JBC-120020353>.

Santini, R., Santini, P., Danze, J. M., Le Ruz, P., & Seigne, M. (2002). Investigation on the health of people living near mobile telephone relay stations: I/Incidence according to distance and sex. *Pathologie-Biologie*, 50(6), 369–373. [https://doi.org/10.1016/s0369-8114\(02\)00311-5](https://doi.org/10.1016/s0369-8114(02)00311-5). [Article in French].

Shahbazi-Gahrouei, D., Karbalae, M., Moradi, H. A., & Baradaran-Ghahfarokhi, M. (2014). Health effects of living near mobile phone base transceiver station (BTS) antennae: A report from Isfahan, Iran. *Electromagnetic Biology and Medicine*, 33(3), 206–210. <https://doi.org/10.3109/15368378.2013.801352>.

Parsaei, H., Faraz, M., & Mortazavi, S. M. J. (2017). A Multilayer Perceptron Neural Network–Based Model for Predicting Subjective Health Symptoms in People Living in the Vicinity of Mobile Phone Base Stations. *Ecopsychology*, 9(2), 99–105. <https://doi.org/10.1089/eco.2017.0011>.

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### **Appendix III: Videos Resources Sent to Board of Health**

[Pittsfield MA Expert Forum on Cell Tower Cease-and-Desist Order](#): With Senator Denise Ricciardi, NH; Dr. Paul Héroux; Dr. Magda Havas; Dr. Kent Chamberlin; Dr. Sharon Goldberg, Environmental Health Trust Director Theodora Scarato; Attorney Robert Berg; Attorney Scott McCollough.

[Pittsfield MA Cell Tower Discussion 5 July 2021](#): Dr. Kent Chamberlin, EHTrust Policy Director Theodora Scarato & MA for Safe Technology Director Cecelia Doucette.

[Town of Lenox Board of Health Remote Meeting, August 19, 2021, with presentation by Kent Chamberlin, Ph.D., on Cell Tower Research.](#)

[Sacramento City Council Meeting: Includes testimony of two young girls who became sick after Verizon cell installation was powered up.](#)

[Wireless Radiation- What Environmental Health Leaders Need to Know](#): Featuring Linda Birnbaum, former Director of the National Institute for Environmental Health Sciences and the National Toxicology Program • Michael Lerner, Co-Founder and President of Commonweal and Co-Founder of Collaborative on Health and the Environment • Joel M. Moskowitz, PhD, Director Center for Family and Community Health, School of Public Health, University of California- Berkeley and Founder of Electromagnetic Radiation Safety • Uloma Uche, PhD, Environmental Working Group, author of new study on hazards of wireless radiation on children. • Sharon Buccino, Legal Expert, NRDC • Cindy Russell, MD Founder of Physicians for Safe Technology • Larry Ortega, Founder of Community Union • Theodora Scarato, Executive Director of the Environmental Health Trust.

### **Appendix V: Public Testimony to the Board of Health**

*All links provided by reference.*

*In addition to public testimony referenced below, Pittsfield residents submitted numerous emails, documents and letters to the Board.*

#### **Board of Health Meetings**

##### **April 12, 2021**

Agenda:[https://cms2files.revize.com/pittsfieldma/calendar\\_app/docs/Boards Commissions Calendar/Board of Health/BOH\\_04\\_12.pdf](https://cms2files.revize.com/pittsfieldma/calendar_app/docs/Boards_Commissions_Calendar/Board_of_Health/BOH_04_12.pdf)

Meeting link: <https://watch.pittsfieldtv.net/CablecastPublicSite/show/38962?channel=9>

##### **May 5, 2021**

Agenda:[https://cms2files.revize.com/pittsfieldma/calendar\\_app/docs/Boards Commissions Calendar/Board of Health/BOH\\_05\\_05.pdf](https://cms2files.revize.com/pittsfieldma/calendar_app/docs/Boards_Commissions_Calendar/Board_of_Health/BOH_05_05.pdf)

Meeting link: <https://watch.pittsfieldtv.net/CablecastPublicSite/show/40347?channel=9>.

##### **June 2, 2021**

**Pittsfield Board of Health Wireless Harm Expert Forum:**

Agenda;[https://cms2files.revize.com/pittsfieldma/calendar\\_app/docs/Boards\\_Commissions\\_Calendar/Board of Health/BOHAgenda\\_06\\_02.pdf](https://cms2files.revize.com/pittsfieldma/calendar_app/docs/Boards_Commissions_Calendar/Board_of_Health/BOHAgenda_06_02.pdf).  
Meeting Link; <https://watch.pittsfieldtv.net/CablecastPublicSite/show/40684?channel=9>.

**July 7, 2021**

**VComm presents readings from the cell tower (first in person meeting)**

Agenda;[https://cms2files.revize.com/pittsfieldma/calendar\\_app/docs/Boards\\_Commissions\\_Calendar/Board of Health/BOH\\_07\\_07.pdf](https://cms2files.revize.com/pittsfieldma/calendar_app/docs/Boards_Commissions_Calendar/Board_of_Health/BOH_07_07.pdf).  
Meeting link; <https://watch.pittsfieldtv.net/CablecastPublicSite/show/40992?channel=9>.

**September 1, 2021**

Agenda;[https://cms2files.revize.com/pittsfieldma/calendar\\_app/docs/Boards\\_Commissions\\_Calendar/Board of Health/BoardofHealth\\_09\\_01.pdf](https://cms2files.revize.com/pittsfieldma/calendar_app/docs/Boards_Commissions_Calendar/Board_of_Health/BoardofHealth_09_01.pdf).  
Meeting link; <https://watch.pittsfieldtv.net/CablecastPublicSite/show/41536?channel=9>

**October 6, 2021**

Agenda;[https://cms2files.revize.com/pittsfieldma/calendar\\_app/docs/Boards\\_Commissions\\_Calendar/Board of Health/BoardofHealth\\_10\\_06.pdf](https://cms2files.revize.com/pittsfieldma/calendar_app/docs/Boards_Commissions_Calendar/Board_of_Health/BoardofHealth_10_06.pdf).  
Meeting link; <https://watch.pittsfieldtv.net/CablecastPublicSite/show/41802?channel=9>.

**November 3, 2021**

Agenda;[https://cms2files.revize.com/pittsfieldma/calendar\\_app/docs/Boards\\_Commissions\\_Calendar/Board of Health/BoardofHealth\\_11\\_03.pdf](https://cms2files.revize.com/pittsfieldma/calendar_app/docs/Boards_Commissions_Calendar/Board_of_Health/BoardofHealth_11_03.pdf).  
Meeting link; <https://watch.pittsfieldtv.net/CablecastPublicSite/show/43053?channel=9>.

**December 1, 2021**

Agenda;[https://cms2files.revize.com/pittsfieldma/calendar\\_app/docs/Boards\\_Commissions\\_Calendar/Board of Health/BoardofHealth\\_12\\_01.pdf](https://cms2files.revize.com/pittsfieldma/calendar_app/docs/Boards_Commissions_Calendar/Board_of_Health/BoardofHealth_12_01.pdf).  
Meeting link; <https://watch.pittsfieldtv.net/CablecastPublicSite/show/43228?channel=9>.

**February 2, 2022- Cease and desist unanimously voted on**

Agenda;[https://cms2files.revize.com/pittsfieldma/calendar\\_app/docs/Boards\\_Commissions\\_Calendar/Board of Health/BoardofHealth\\_02\\_02.pdf](https://cms2files.revize.com/pittsfieldma/calendar_app/docs/Boards_Commissions_Calendar/Board_of_Health/BoardofHealth_02_02.pdf).  
Meeting link; <https://watch.pittsfieldtv.net/CablecastPublicSite/show/43842?channel=9>.

**February 23, 2022-Executive session for cease and desist order- order upheld**

Agenda;[https://cms2files.revize.com/pittsfieldma/calendar\\_app/docs/Boards\\_Commissions\\_Calendar/Board of Health/BoardofHealth\\_02\\_02.pdf](https://cms2files.revize.com/pittsfieldma/calendar_app/docs/Boards_Commissions_Calendar/Board_of_Health/BoardofHealth_02_02.pdf).  
Meeting link; <https://watch.pittsfieldtv.net/CablecastPublicSite/show/44040?channel=9>.

**March 16, 2022-Second executive session for the cease and desist order**

Agenda:[https://cms2files.revize.com/pittsfieldma/calendar\\_app/docs/Boards\\_Commissions\\_Calendar/Board of Health/BOH\\_03\\_16.pdf](https://cms2files.revize.com/pittsfieldma/calendar_app/docs/Boards_Commissions_Calendar/Board_of_Health/BOH_03_16.pdf)

Meeting link; <https://watch.pittsfieldtv.net/CablecastPublicSite/show/44241?channel=901:45>

**Additional Testimony at City Board Meetings**

*Pittsfield residents and scientific experts testified at numerous City Council meetings as well as other City Board Meetings providing testimony on harm.*

**November 5, 2020 Community Development Board Meeting**

[Pittsfield Community Development Board - November 5, 2020](#)

Topic: Cell towers setbacks

**Community Development Board December 1, 2020**

<https://watch.pittsfieldtv.net/CablecastPublicSite/show/37825?channel=9>

Certified and Regular Mail: [7021-0350-0000-4282-0554](tel:7021-0350-0000-4282-0554) (Pittsfield Cellular Telephone Company, Atty. Ellen W. Freyman)

Certified and Regular Mail: [7021-0350-0000-4282-0547](tel:7021-0350-0000-4282-0547) (Pittsfield Cellular Telephone Company, Mark J. Esposito, Esq.)

Certified and Regular Mail: [7021-0350-0000-4282-0530](tel:7021-0350-0000-4282-0530) (Farley White South Street, LLC, Roger W. Altreuter, Manager)

ORDERED by unanimous vote of the Pittsfield Board of Health on April 7, 2022

Roberta Orsi, MS, RN, CCP, Chairperson

Kimberly Loring, PMHNP-BC

Steve Smith, MA

Brad Gordon, JD

Jeffery A. Leppo, MD – Not Present-Did Not Participate