

Before the  
U.S. Department of Health and Human Services (HHS)  
Office for Civil Rights (OCR), Office of the Secretary,  
Washington, D.C.

In the Matter of: )  
Public Comment of Notice of Proposed Rule- )  
Making on Prohibiting Financial Recipients of HHS )  
to Discriminate on the Basis of Disability in their )  
Programs and Activities; RIN 0945-AA15 )  
)

**COMMENTS OF ADVOCATES FOR THE EMS DISABLED  
TO NOTICE OF PROPOSED RULE-MAKING**

**NOVEMBER 13, 2023**

**FILING PARTIES**

The parties listed below collectively constitute the “Advocates for the EMS Disabled,” have granted permission to submit these Comments on their behalf under the name of “Advocates for the EMS Disabled,” and join together to submit these Comments:

Wired Broadband, Inc., Odette Wilkens, President & General Counsel, Forest Hills, NY; Children’s Health Defense ([www.childrenshealthdefense.org](http://www.childrenshealthdefense.org)); Susan Molloy, M.A. Disability Policy Rehab Assistance for People with Environmental Illness, Snowflake, AZ; Coloradoans for Safe Technology, Andrea Mercier (Mother of a **severely disabled child** who is adversely impacted by geopathic stress and **various forms of non-ionizing radiation**), Colorado Springs, CO; Coloradans for Safe Technology, Nancy VanDover, DVM, OMD, Dipl Acup, **EMS Disabled**; Deborah Shisler, **EMS Disabled**, CO; La Plata for Safe Technology, Ingrid Iverson, **EMS Disabled**, CO; Virginians for Safe Technology, Jenny DeMarco and Mary Bauer, Fredericksburg, VA; Melinda H. Wilson, Snowflake, AZ; Dorene Dougherty, Tunkhannock, PA; Virginia Farver, Fort Collins, CO; NY4Whales & NY4Wildlife Taffee Williams, President, Tuckahoe, NY; Alliance for Microwave Radiation Accountability, Inc. (AMRA), Michael Muadin, President, EMS Disabled, East Chatham, NY; Pittsfield Injured & Concerned Citizens, Courtney Gilardi, **EMS Disabled**, Pittsfield, MA; Safe Cell 01240, Lenox, MA; Safer Cellphone and WiFi Project, Margaret M. Glaser, Chicago, IL; Pamela Wallace, **EMS Disabled**, Rochester Hills, MI; Idahoans for Safe Technology, David DeHaas, President, Boise, Idaho; Southwest Pennsylvania for Safe Technology, Susan Jennings, MPA BA, Founder; Center for Safer Wireless, Desiree Jaworski, Executive Director, Haymarket, VA; Mr. and Mrs. John Decristofaro, **EMS Disabled wife**, Little Compton, RI; Floris Freshman, EMS Disabled (with constant EMF harm), Scottsdale, AZ; Children’s Health Defense, Pennsylvania Chapter, Vince Feldman, President; Safe Technology Minnesota, Leo Cashman, St. Paul, MN; Moira Hahn, **EMS Disabled**, Long Beach, CA; Mark Hotchkiss, Long Beach, CA; New Yorkers 4 Wired Tech, New York, NY; EMF Safety Network, Sidnee Cox, Director, Windsor, CA; 5G Free California, Julie Levine, **EMS Disabled**, Topanga, CA; Connie Sampognano, **WiFi Sensitive**, Calhoun, LA; Massachusetts for Safe Technology, Cecelia Doucette, Director, Ashland, MA; mocoSafeG.org, Robert Janku, Montgomery County, MD; Alison McDonough,

**EMS Disabled**, Cambridge, MA; Dorothy Baker, Northampton, MA; Napa Neighborhood Association for Safe Technology, Amy Martenson, Napa, CA; EMF Safety Network—Marin County Education/Outreach, Vicki Sievers, San Rafael, CA; Glenna Ploeger, Fletcher, NC; Pennsylvanians for Safe Technology, Donna DeSanto Ott, PT DPT MS FMCHC, Founder & President, Reading, PA; Longmont For Safe Technology, Doe Kelly, **EMS Disabled**, Longmont, CO; SW Ohio for Responsible Technology (SWORT), Monique Maisenhalter, SWORT Board Member; Tais Howard, LAC, MAOM, Malden, MA; Wire Idaho, Anne Wilder, Vice Chair, Priest River, ID; and Amy Shulman, **EMS Disabled**, Amherst, MA.

## Introduction

The U.S. Department of Health and Human Services (HHS) has issued a Notice of Proposed Rulemaking (NPRM) under Section 504 of the Rehabilitation Act of 1973 to update its 2005 rules to prohibit recipients of HHS financial assistance from discriminating on the basis of disability in their programs and activities. While we applaud HHS's efforts in its stated goals of addressing equitable access to historically underserved communities, the proposed rule revisions do not sufficiently address the disabilities of those disabled by wireless radiation – the “EMS Disabled,” as more fully described below. Consistent with the goals set forth in the NPRM,<sup>1</sup> we are proposing changes to the methods of access to the internet, medical programs and services, including medical treatment and medical supplies, so that the EMS Disabled have an equal opportunity as afforded to others to benefit from and participate in the foregoing.

We applaud (1) HHS's goals to ensure that persons with disabilities are not excluded from medical programs or services or denied an equal opportunity to participate in or benefit from them and (2) HHS's acknowledgement that “discrimination contributes to significant health disparities and poorer health outcomes than persons with disabilities would experience absent the discrimination.”<sup>2</sup>

While the use of mobile apps to gain access to web content from public entities for services may be beneficial for some or even many of those who are disabled, there is a growing portion of the population which cannot use or be near mobile devices or any form of wireless radiation, and which can be life threatening.

We are focusing on the following issues to help guide HHS in promulgating rules that ensure equal opportunities for access for the EMS Disabled: (1) Recognizing that the EMS Disabled comfortably fit within the definition of “disability,” (2) EMS disability recognized by federal agencies, (3) What are “Relevant Disabilities?” Issues of Inclusion and the Digital Divide; (4) Accessibility Recommendations; (5) Who are the EMS Disabled? (6) Industry Views of RF Radiation as a Pollutant; (7) FCC's Failure to Comply with Court Order on Its Outdated 1996 Emission Limits; and (8) Conclusion.

### **(1) EMS DISABLED MEET THE DEFINITION OF “DISABILITY”**

The EMS Disabled suffer from disabilities and handicaps that arise from or made worse by recurring exposure and injuries (“sensitivity”) from microwave (MW) radiation, electro-magnetic frequency (EMF) radiation or radio frequency (RF) radiation (collectively, “radiation”). This is also referred to as

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<sup>1</sup> <https://www.federalregister.gov/d/2023-19149/p-3>.

<sup>2</sup> <https://www.federalregister.gov/d/2023-19149/p-82>.

“radiation sickness,” “radiation poisoning” or “electro-magnetic sensitivity” (EMS). Those disabled by this radiation are herein referred to as “EMS Disabled.”

- **Understanding Involuntary Exposure and EMS Symptoms**

Exposure comes from involuntary exposure to cell towers, wireless antennas, “smart” meters, cell phones, Wi-Fi. Radiation can emanate from within the premises of a home, structure or facility, or from outside that, if close enough, will affect the livability and safety of the premises, e.g., an adjacent apartment using Wi-Fi, near an elevator shaft where people are using their cell phones with radiation penetrating through adjacent apartments, facing a cell tower or wireless antenna or a top floor apartment with a rooftop antenna directly overhead.

Common EMS symptoms include sleep disturbances, chronic fatigue, chronic pain, poor short-term memory, difficulty concentrating (e.g., “brain fog”), skin problems, dizziness, loss of appetite, heart palpitations, tremors, vision problems, tinnitus, nose bleeds, asthma, reproductive problems and headaches, to name a few.<sup>3</sup> There are other sources showing the proliferation of EMF sensitivities and disabilities.<sup>4</sup> The symptoms are from the physiological injuries that individuals have sustained.<sup>5</sup>

Exposure is usually 24/7 with no “off” switch, where individuals are uninformed of the exposure or the intensity of exposure. Even when becoming aware and objecting to such exposure, individuals are nonetheless forced to be exposed in what otherwise should be the privacy and safety of their homes or in anchor institutions where they require services. This also extends to medical programs and services, that, if only made available via Wi-Fi devices or in Wi-Fi activated spaces, can be life-threatening to the EMS Disabled. See Section on “Who are the EMS Disabled.”

- **The nature of MW/EMF/RF radiation**

It is the pulsations of RF radiation that cause adverse health outcomes.<sup>6</sup>

Wireless emissions are typically measured by the FCC by averaging the peaks and lowest points of RF radiation emissions and exposure levels over a period of 30 minutes. There are two problems with this methodology. First, it completely obscures the effects of the pulsating nature of RF radiation emissions and does not account for constant 24/7 exposure by the population to RF emissions.

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<sup>3</sup> “Electrohypersensitivity as a Newly Identified and Characterized Neurologic Pathological Disorder” Int’l Journal of Molecular Sciences, <https://www.mdpi.com/1422-0067/21/6/1915>.

<sup>4</sup> Electrohypersensitivity (EHS) Is An Environmentally-Induced Disorder That Requires Immediate Attention, Dr. Magda Havas, J. Sci Discov (2019), <http://www.e-discoverypublication.com/wp-content/uploads/2019/03/JSD18020-final.pdf>; Presentation by Karl Maret, M.D., M.Eng., Presentation, 1-17-20, <https://www.youtube.com/watch?v=Xilsy3mcjcy>; “The Bioinitiative Report,” <https://bioinitiative.org/>.

<sup>5</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

<sup>6</sup> See, Brief of Children’s Health Defense, and Building Biology Institute, et al as Amici Curiae in Support of Appellees/Cross-Appellants “Customers,” Sept 14, 2021, <https://childrenshealthdefense.org/wp-content/uploads/Brief-and-Addendum-Submitted-9-14.pdf>.

Second, the pulsating peaks are higher than the recorded average.<sup>7</sup> Third, the health outcomes occur with the persistent pulsations of RF radiation emissions. It is the pulsed high peak power emissions that, e.g., increase the potential for traumatic brain injury.<sup>8</sup> To obtain a more accurate reading of RF radiation emissions, the maximum power density and peak power density levels per millisecond should be recorded, as adverse health outcomes arise from the peaking and pulsating nature of wireless emissions.<sup>9</sup>

To get an idea of the range of MW/EMF/RF radiation, see the heat map in Appendix C which illustrates the wide arc of radiation.<sup>10</sup> Although the map exemplifies a pole top antenna, there would be a similar arc of radiation (depending on intensity, position and other factors) for rooftop antennas, smart meters, Wi-Fi and other facilities and devices.

Electrosmog refers to the erratic pulsating RF radiation emanating from wireless and the production of dirty electricity. Regarding intensity, and to put this in perspective, Martin L. Pall, PhD, Professor Emeritus of Biochemistry and Basic Medical Sciences, Washington State University, provided evidence in the FCC's docket that the FCC's existing RF exposure limits "are approximately 7.2 million times too high."<sup>11</sup>

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<sup>7</sup> Dr. Magda Havas: WiFi in Schools is Safe. True or False? at 7:15, <https://www.youtube.com/watch?v=6v75sKAUFdc>.

<sup>8</sup> Computational modeling investigation of pulsed high peak power microwaves and the potential for traumatic brain injury. *Sci Adv.* 2021 Oct; 7(44). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8555891/>.

<sup>9</sup> Human-made electromagnetic fields: Ion forced-oscillation and voltage-gated ion channel dysfunction, oxidative stress and DNA damage (Review) (2021) Pangopolous DJ, et al. *International Journal of Oncology.* August 23, 2021. <https://pubmed.ncbi.nlm.nih.gov/34617575/>.

Computational modeling investigation of pulsed high peak power microwaves and the potential for traumatic brain injury. *Sci Adv.* 2021 Oct; 7(44). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8555891/>. ("These studies reveal that the MAE threshold depends on the energy in a single pulse (not the average power density) for sufficiently short pulses [e.g., 32  $\mu$ s in (46)], and peak power densities of 102 to 105 mW/cm<sup>2</sup> have been known to cause auditory effects in human participants (45).")

Diplomats' Mystery Illness and Pulsed Radiofrequency/Microwave Radiation. Dr. Beatrice Golomb. *Neural Comput.* 2018 Nov; 30(11):2882-2985. <https://pubmed.ncbi.nlm.nih.gov/30183509/>; "Reported facts appear consistent with pulsed RF/MW as the source of injury in affected diplomats."

"5G: Great risk for EU, U.S. and International Health! Compelling Evidence for Eight Distinct Types of Great Harm Caused by Electromagnetic Field (EMF) Exposures and the Mechanism that Causes Them," Martin L. Pall, PhD, <https://peaceinspace.blogs.com/files/5g-emf-hazards--dr-martin-l.-pall--eu-emf2018-6-11us3.pdf>.

Belyaev, I., Dean, A., Eger, H. et al. "EUROPAEM EMF Guideline 2016 for the prevention, diagnosis, and treatment of EMF-related health problems and illnesses." *Rev environ Health.* 2016;31(3):363-397. Doi:10.1515/reveh-2016-0011.

B. W. G. (2012). "Bioinitiative Report 2012: A Rationale for Biologically-based Exposure Standards for Low-Intensity Electromagnetic Radiation."

<sup>10</sup> <https://ehtrust.org/wp-content/uploads/5G-Health-and-Policy-New-York-City-March-15-2023-.pdf> at p.6.

<sup>11</sup> Appeals Court Tells FCC to Address Non-Thermal Health Impacts of Radiation from Wireless Technology on Children, the Public, and the Environment, Aug. 25, 2021, <https://ehtrust.org/appeals-court-tells-fcc-to-address-non-thermal-health-impacts-of-radiation-from-wireless-technology-on-children-the-public-and-the-environment/>.

This is noteworthy as this was in connection with a federal case decided in 2021 by the D.C. Circuit, Court of Appeals. The Court rebuked the FCC and remanded the FCC's emission limits for further consideration in light of scientific evidence which the FCC ignored that had been presented into the FCC's docket of health hazards below those limits.<sup>12</sup> To date, the FCC has failed to update its limits dating back to 1996, and **can no longer be viewed as safety limits.**

## (2) EMS DISABILITY RECOGNIZED BY FEDERAL AGENCIES

The **National Council on Disabilities** (NCD) issued a Framework for health equity, recognizing EMS:<sup>13</sup>

Provide mandatory industry guidance, including recommended policies, training and best practices, to address the needs of people disabled by exposure to low level chemical, electromagnetic, and other environmental exposures that preclude access to care and treatment at medical, dental and at other providers' offices, hospitals, surgical centers, and other healthcare and healthcare-related facilities, as a result of their use of chemical, fragranced and other scented products, and also as a result of the usage of wireless communications and electrical technologies and other sources of non-ionizing radiation, which may trigger disabling and life-threatening cardiac, respiratory, neurological, and other adverse physical reactions. (Requires administrative action through HHS Office of Civil Rights, and further research concerning this matter should be conducted by the FDA, NIH, HHS, and HUD.

A presentation on EMS disability was made to NCD on May 12, 2022 which includes information on the need to provide access and accommodation for the EMS Disabled.<sup>14</sup>

**HUD Recognizes Environmental Illness in 1992.** Involuntary exposure to MW/EMF radiation can lead to Environmental Illness. Environmental Illness has long been recognized by HUD. See, e.g., the March 5, 1992 legal memorandum from Carole Wilson, Associate General Counsel for Equal Opportunity and Administrative Law to Frank Keating, General Counsel of HUD on the subject of "Multiple Chemical Sensitivity Disorder [MCS] and Environmental Illness [EI] as Handicaps."<sup>15</sup>

In recognizing EI as a handicap, Wilson states:

[W]e conclude that MCS and EI can constitute handicaps under the Act. Our conclusion is consistent with the weight of both federal and state judicial

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<sup>12</sup> Environmental Health Trust, et al v FCC, Aug 13, 2021; [https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFD7/\\$file/20-1025-1910111.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFD7/$file/20-1025-1910111.pdf); see also, <https://ehtrust.org/in-historic-decision-federal-court-finds-fcc-failed-to-explain-why-it-ignored-scientific-evidence-showing-harm-from-wireless-radiation/>; Factsheet: FCC's Lack of Review for Wireless Radiation Exposure Limits, <https://ehtrust.org/wp-content/uploads/EHT-et-al.-v.-FCC-Factsheet-EHTRUST.org-1-1.pdf>.

<sup>13</sup> <https://ncd.gov/sites/default/files/NCD-Framework-to-End-Health-Disparities-of-People-with-Disabilities.pdf> at Page 10, Sub-Component 6.

<sup>14</sup> <https://www.electrosensitivesociety.com/national-council-on-disability-ncd-ehs-mcs-presentation-may-12-2022/> (includes transcripts, slide deck and historical timeline of MWEMF/RF exposure).

<sup>15</sup> <https://www.hud.gov/sites/documents/GME-0009LOPS.PDF>.

authority construing the [Fair Housing] Act and comparable legislation, the Act's legislative history, as well as the interpretation of other Federal agencies, such as the Social Security Administration and the Department of Education, construing legislation within their respective domains. The Civil Rights Division of the Department of Justice has also informed us that it believes MCS and EI can be handicaps under the Act. In addition, HUD has consistently articulated this position, and FHEO [Fair Housing/Equal Opportunity] agrees with our conclusion.

Borrowing from Section 802(h) of the Fair Housing Act, handicap is defined:

(h) "Handicap" means, with respect to a person--

(1) a physical or mental impairment which substantially limits one or more of such person's major life activities ...<sup>16</sup>

Also borrowing from HUD's implementing regulation in 24 C.F.R 100.201 (1991):<sup>17</sup>

**Physical ... impairment** includes:

(1) Any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: Neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular;

**Major life activities** means functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning and working.

[Emphasis added]

The memo further itemizes the kinds of physical impairments that can be experienced by exposure, e.g. neurological (ear ringing, seizures), musculoskeletal (fatigue), special sense organs (ear ringing), respiratory (shortness of breath).

The **U.S. Access Board** which advises the Justice Department and other state and federal agencies under the Americans with Disabilities Act<sup>18</sup> recognized EMS disability going back to 2002.<sup>19</sup> It notes that a U.S. National Institute of Building Sciences survey of a representative region found that 2-6% of the population are sensitive to electro-magnetic fields.<sup>20</sup> That would represent about 6.5 million to 20 million of the U.S. population.

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<sup>16</sup> Fair Housing Act (Title VIII of the Civil Rights Act), <https://www.corada.com/documents/fhaa/sec-802-h-42-u-s-c-3602-h-handicap>.

<sup>17</sup> <https://www.law.cornell.edu/cfr/text/24/100.201>.

<sup>18</sup> <https://www.govinfo.gov/content/pkg/USCODE-2021-title42/pdf/USCODE-2021-title42-chap126-sec12101.pdf>.

<sup>19</sup> U.S. Access Board, *Advancing Full Access & Inclusion for All*, "Indoor Environmental Quality Project," <https://www.access-board.gov/research/building/indoor-environmental-quality/>.

<sup>20</sup> U.S. Access Board – *Advancing Full Access & Inclusion for All* - "Indoor Environmental Quality Project," <https://www.access-board.gov/research/building/indoor-environmental-quality/>.

**The Department of Defense has guidelines that recognize injuries that may occur to its personnel from RF radiation.**<sup>21</sup> As early as 2000, the Social Security Administration also made a determination of severe impairment.<sup>22</sup> The National Institute of Building Sciences (NIBS) was contracted by the U.S. Access Board to examine how to accommodate the needs of the electro-sensitive in federally funded buildings; in 2005, they produced a report, the Indoor Environmental Quality (IEQ) Report.<sup>23</sup> The IEQ recommended the following:

- Cell Phones Turned Off: Protect those with electromagnetic sensitivities and others who may be adversely affected by electrical equipment.
- Ability to turn off or unplug computers and other electrical equipment by occupant or staff: Protect those with electromagnetic sensitivities.
- People with electromagnetic sensitivities can experience debilitating reactions... from electromagnetic fields emitted by computers, cell phones, and other electrical equipment. The severity of sensitivities varies among people with electromagnetic sensitivities...According to the Americans with Disabilities Act (ADA) and other disability laws, public and commercial buildings are required to provide reasonable accommodations for those disabled by electromagnetic sensitivities. These accommodations are best achieved on a case-by-case basis.<sup>24</sup>

The **Job Accommodations Network (JAN)** funded by the U.S. Department of Labor's Office of Disability Employment Policy (DOL/DEP) has issued a list of guidelines that recognize EMS and requires accommodation (see listing for "Electrical Sensitivity & Hypersensitivity," and "Electromagnetic Fields and Public Health").<sup>25</sup> In JAN's "Effective Accommodation Practices (EAP) Series," JAN recognizes that:

Individuals with electromagnetic sensitivity may experience various non-specific symptoms including but not limited to fatigue, weakness, neurological issues, immunological issues, gastrointestinal issues, increased irritability, lack of ability to think clearly and quickly, sleep disturbance, overall malaise, and anxiety . . . [T]he nature of electromagnetic sensitivity is such that even levels that are deemed safe for the general public can cause trigger symptoms . . . at far lower levels and therefore may need accommodations in the workplace beyond the safe levels of exposure indicated in the manual. <sup>26</sup>

JAN reports that those suffering from EMS manage their symptoms by minimizing or avoiding their exposure to EMFs that trigger their symptoms.<sup>27</sup> They minimize exposure by reducing their overall long-

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<sup>21</sup> DoD Instruction 6055.11, "Protecting Personnel from Electromagnetic Fields,"

<https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605511p.pdf>.

<sup>22</sup> <https://ehtrust.org/wp-content/uploads/Electromagnetic-Sensitivity-Found-to-be-a-Severe-Impairment-by-the-Social-Security-Administration-2003-and-2020-.pdf>.

<sup>23</sup> <https://www.access-board.gov/research/building/indoor-environmental-quality/>.

<sup>24</sup> Ibid at 51-52.

<sup>25</sup> <https://askjan.org/disabilities/Electrical-Sensitivity.cfm#otherinfo>.

<sup>26</sup> <https://ehtrust.org/wp-content/uploads/JAN-EHS-1.pdf>.

<sup>27</sup> <https://askjan.org/disabilities/Electrical-Sensitivity.cfm#otherinfo>.

term, duration and strength of exposure, and using shielding material to shield themselves from the source of radiation.<sup>28</sup> “[C]ommon workplace issues involve exposure to Wi-Fi, cell phones, and computer equipment such as CPUs and monitors.”<sup>29</sup>

In determining accommodation, it poses several important questions, including:

- “What limitations is the employee experiencing?
- How do these limitations affect the employee and the employee’s job performance?
- What accommodations are available to reduce or eliminate these problems? Are all possible resources being used to determine possible accommodations?”<sup>30</sup>

Some of JAN’s key recommendations for accommodations are:

- “Allow communication via typewriter or handwritten notes rather than via computer or work with the employee to determine what modifications would allow them to use a computer safely and effectively.
- Change the employee's shift to allow for less exposure to others' devices
- Relocate workplace away from areas where symptoms are triggered. This may include limiting certain types of devices in the vicinity of the employee's workstation
- Allow the employee to meet with others in areas where triggers are minimized or allow remote access to meetings or activities that must take place in areas that trigger symptoms.”<sup>31</sup>

The **National Institute for Occupational Safety and Health (NIOSH)** also recognizes EMS. **NIOSH and CDC** have published guidelines for “safe” human exposure levels in their “Manual for Measuring Occupational Electric and Magnetic Field Exposures.”<sup>32</sup> The NIOSH recognizes that “some epidemiological studies in occupational as well as non-occupational settings have found positive associations between EMF exposures and diseases such as cancer, and reproductive and neurobehavioral disorders.”<sup>33</sup> It contains “16 exposure measurement protocols which have been used successfully in EMF epidemiologic studies and NIOSH’s health hazard evaluations.”<sup>34</sup>

The **Center for Disease Control (CDC)**, in its International Classification of Diseases, recognizes a medical diagnosis for MW/EMF/RF injuries:<sup>35</sup>

- ICD-10-CM “diagnosis code” for radiation sickness is “T66.”  
ICD-10-CM “injury” code for “Exposure to radio frequency” and “Exposure to other non-ionizing radiation” is “W90.

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<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid p.3.

<sup>31</sup> Ibid p.3.

<sup>32</sup> <https://www.cdc.gov/niosh/docs/98-154/default.html>.

<sup>33</sup> Ibid. p. I-1.

<sup>34</sup> Ibid.

<sup>35</sup> <https://icd10cmttool.cdc.gov/?fy=FY2023&query=radiation>.



### **(3) What are Relevant Disabilities? Issues of Inclusion and the Digital Divide**

There are references to “relevant disabilities” in this NPRM, which, for instance, the U.S. Dept of Justice identified in its NPRM similarly updating its disability access rules, as vision, hearing, cognitive and manual dexterity.<sup>36</sup> This list is too limiting, and there are other, just as relevant, disabilities.

By virtue of the NPRM focusing only on such “relevant disabilities,” other disabilities are necessarily excluded which are actually relevant for the EMS Disabled. Although the EMS Disabled may also have these “relevant disabilities,” the EMS Disabled have many more disabilities, as described in the section entitled “Who are the EMS Disabled” and in Appendix A, which are not accounted for in the NPRM. For instance, the assumption that pervades the NPRM is that by providing web content through mobile applications, HHS can provide a one-size-fits-all solution to all of the disabled. That is an incorrect assumption as it does not apply to, or benefit, the EMS Disabled, as this class of disabled individuals and children cannot be near any source of RF radiation being emitted from Wi-Fi routers, computers, smartphones, iPads, etc., because the RF radiation may be life-threatening. It is critical that medical programs and services be readily accessible to all people with all disabilities, not only to the four categories that the DOJ designates in the NPRM as “relevant.”

The National Council on Disability (NCD) has recommended regulatory action on the issues being addressed in the NPRM, particularly “that voluntary compliance with . . . accessibility guidelines has not resulted in equal access for people with disabilities.”<sup>37</sup> However, the NCD, as indicated in the previous section, among other federal agencies recognizes EMS disability without placing any limitation on what disabilities are “relevant.” Although HHS may not be intending to do so, the NPRM gives the appearance of bias towards “relevant disabilities,” hence exclusionary and in conflict with HHS’ goal and the ADA to provide persons with disabilities with equal access.

The ADA defines a disability as “a physical or mental impairment which substantially limits one or more of such person's major life activities.”<sup>38</sup>

Based on the disabilities of the EMS Disabled described in the section “Who are the EMS Disabled,” the disabilities of the EMS Disabled certainly qualify and fit comfortably under the ADA, and are very much disabilities that are relevant to the issue of accessibility of web-enabled medical accessibility. There is the need for continued access to traditional technologies (wired connections, e.g., copper, cable or fiber optics), landline phones, human agents and paper communications, by which many of the EMS Disabled are only able to access essential medical programs and services, including emergency care.

It’s HHS’s responsibility to uphold the standard set forth by the ADA, that the term “disabilities” includes all disabilities. If the proposed rule limits the benefits to accrue only to disabled individuals with the four enumerated disabilities: vision, hearing, cognitive, and manual dexterity,<sup>39</sup> this will stratify disabled people between those with “relevant disabilities” and those who do not have them but who have just as

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<sup>36</sup> <https://www.federalregister.gov/d/2023-19149/p-509>.

<sup>37</sup> <https://www.federalregister.gov/d/2023-15823/p-124>

<sup>38</sup> Fair Housing Act (Title VIII of the Civil Rights Act), <https://www.corada.com/documents/fhaa/sec-802-h-42-u-s-c-3602-h-handicap>.

<sup>39</sup> NPRM, Paragraph D. Summary of Costs and Benefits; Executive Summary; Federal Register, page 51940

relevant disabilities. The disparate impact of this stratification will lead to a continuous process of unacknowledged disabilities otherwise deserving of protection under the ADA.

## Inclusion

When an individual is EMS Disabled, it may be exceedingly difficult, and even impossible for them to advocate for themselves because of their impairments, which can include neurological brain injury. In the case of an 82-year-old woman, who has been disabled from intense EMF radiation from a “smart” meter installed on her house, she cannot go to a dentist or in a hospital since they have Wi-Fi and she barely survives the ordeal and comes out sicker. This limits her access to medical care and services.

The many ADA and HHS regulations that apply to the disabled may not be able to be easily accessed by the EMS Disabled if they are online. There needs to be an easy-to-read guide (also on paper), and video, on what regulations apply and how to easily navigate through a request for accommodation that is not online.

## Digital Divide

The digital divide is no less relevant for the EMS Disabled who may not be able to use web-based services and who cannot use mobile devices. **For the EMS Disabled, being required to use mobile services and devices to access necessary medical programs and services would only guarantee the digital divide for the EMS Disabled.** HHS must promulgate rules to ensure that access to such necessary services does not require wireless connectivity on mobile devices.

Mention has been made of the pandemic and the need for more web access. However, the best access is through wired connections. For instance, the National Telecommunications Information Administration (NTIA) has prioritized fiber to the premises for the nation in order to bridge the digital divide, not mobile.<sup>40</sup> Lest HHS believes that mobile access will bridge the digital divide, it will not. So, to digress a moment on the benefits of fiber to the premises ... Underscoring the importance of fiber over wireless, former FCC Chairman, Tom Wheeler, in his March 2021 Congressional testimony, described fiber as “future proof,” and prioritized a “fiber first” policy for the nation.<sup>41</sup> Wheeler’s statements point to the fact that wireless and fiber **are not equivalent broadband media**,<sup>42</sup> and that wireless should be used **only as a last resort**. “Fiber is unmatched in its speed, performance [and] reliability ... “<sup>43</sup> far exceeding the promise of any generation of wireless technology.

Wired connections, such as fiber and cable, to the premises provide the best capacity for remote learning for children and students, particularly those who are already EMS Disabled, and more reliable

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<sup>40</sup> NTIA Official Acknowledges Clear Preference for Fiber in Infrastructure Deployment Program, June 13, 2022, <https://broadbandbreakfast.com/2022/06/ntia-official-acknowledges-clear-preference-for-fiber-in-infrastructure-deployment-program/>.

<sup>41</sup> Tom Wheeler’s Testimony to Congress, [https://energycommerce.house.gov/sites/democrats.energycommerce.house.gov/files/documents/Witness%20Testimony\\_Wheeler\\_FC\\_2021.03.22.pdf](https://energycommerce.house.gov/sites/democrats.energycommerce.house.gov/files/documents/Witness%20Testimony_Wheeler_FC_2021.03.22.pdf).

<sup>42</sup> “Reinventing Wires: The Future of Landlines and Networks,” National Institute for Science, Law and Public Policy, authored by Timothy Schoechle, PhD; <https://electromagnetichealth.org/wp-content/uploads/2018/02/ReInventing-Wires-1-25-18.pdf>.

<sup>43</sup> Ibid.

access to medical and other services for the elderly and disabled during emergencies or severe weather when wireless service is more likely to be interrupted. Wired connections will also prevent the exclusion of the EMS Disabled who cannot be near RF radiation emitted from mobile devices and equipment.

#### (4) ACCESSIBILITY RECOMMENDATIONS

The importance of providing accommodation for the EMS Disabled for medical programs and services is two-fold. First, exposure to RF / EMR / EMF / MW radiation in medical facilities can be life-threatening. Second, a “patient’s vital signs or test results may vary dependent on EMF/EMR exposures at a specific location and at a specific moment (electrosmog can affect the autonomic nervous system, the blood, the heart and even blood sugar levels in some sensitive diabetics) . . . this can lead to misdiagnosis, over-treatment, under-treatment, inappropriate medications or dosages . . .” **Further reasons and a detailed list of recommendations for accommodation are provided by the ElectroSensitive Society as set forth in Appendix A, incorporated herein by reference.**<sup>44</sup> The Society refers to EHS – electrohypersensitivity – another term for EMS.

Here are some examples of accommodations needed for the EMS Disabled. The EMS Disabled need landline corded phones as they cannot use or be dependent on cell phones, human agents and, where necessary, paper rather than electronic communications if it is hazardous for them to touch a computer or any Wi-Fi enabled device. The Building Biology Institute provides additional recommendations.<sup>45</sup>

#### Accessibility

Access to medical programs and services may be accessed wirelessly or by wired connections. The EMS Disabled require access by wired connections or by paper; such programs and services cannot be coupled with wireless-only access, such as by mobile applications and devices. To be clear, access to web content and services is not synonymous with a wireless connection, but would engage any technology which would provide access to a disabled individual so as to receive medical programs and services on an equal basis as others. Requiring access to wired technology, such as copper wires, cable or fiber optics, as well as providing paper alternatives, would help ensure that parity for the EMS Disabled.

The National Institute for Science, Law and Public Policy published a report of hard-wiring broadband connections which would be of tremendous benefit for making accommodation for the EMS Disabled.<sup>46</sup>

The HHS should ensure that providing mobile applications and promoting their use on mobile devices does not impair the EMS Disabled from accessing medical programs and services by more traditional

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<sup>44</sup> Electrosensitive Society

<https://www.electrosensitivesociety.com/how-hospitals-can-accommodate-patients-who-have-ehs/>.

<sup>45</sup> [https://buildingbiologyinstitute.org/wp-content/uploads/2022/04/EMR\\_Factsheet\\_v2.0r.pdf?kx=rTGycWw57cXYTKX7Sp91I6a7XWgrVJvuJ7aQ34KIbyY%3D.UN8SAd](https://buildingbiologyinstitute.org/wp-content/uploads/2022/04/EMR_Factsheet_v2.0r.pdf?kx=rTGycWw57cXYTKX7Sp91I6a7XWgrVJvuJ7aQ34KIbyY%3D.UN8SAd).

<sup>46</sup> “Reinventing Wires: The Future of Landlines and Networks,” at 73, National Institute for Science, Law and Public Policy, authored by Timothy Schoechle, PhD; <https://electromagnetichealth.org/wp-content/uploads/2018/02/ReInventing-Wires-1-25-18.pdf>.

means, i.e., wired connections (copper, cable and fiber), as well as by landline phone, human agents and paper communications via the U.S. Postal Service, by which many of the EMS Disabled are only able to access essential medical programs and services, including emergency care.

For those EMS Disabled who are so disabled that they cannot even touch a computer to retrieve services via the web, it is essential that there be access to a staffed telephone information line. In effect, a website or check-in device or kiosk by which a person would otherwise access medical programs and services becomes inaccessible to the extent that the EMS Disabled cannot even touch a computer or electronic device to access medical programs and services. Web-based services will never replace the need for an EMS Disabled person to speak to a live person. Cutting off access to a live person would cut off the life-line of the EMS Disabled who would be in dire need of medical services.

**Correct Wiring.** Correct wiring, up to code, especially at the junction and breaker boxes in buildings, needs to be enforced. This should be certified by accredited entities. And for the EMS Disabled, the electrical and magnetic fields need to be at the safe levels as per the Building Biology Institute standards.<sup>47</sup> Wiring errors are frequently made in buildings which increases the EMF's (electromagnetic fields) to unsafe levels. These can be prevented and many remedied. If an outlet is incorrectly wired, especially the grounding, the increased electric fields will travel through the air into the room and through the wire to any device plugged into it. Light switches and fixtures will have unsafe levels of electric and magnetic fields if incorrectly wired or grounded.

**Creating Safe Zones.** A zone should be designed to provide safe web access for the EMS Disabled at the premises of public entities, so that a portion of each such public entity would not expose the EMS Disabled to RF radiation. Wi-Fi/wireless free zones are areas in a building that do not have Wi-Fi or other wireless connectivity and are free of any RF radiation or wireless frequency of any kind, including, but not limited to, that generated by mobile devices such as cell phones, tablets, Wi-Fi routers, or any smart meters on the premises.

Creating a Wi-Fi/[wireless free zone](#) would include a way to terminate all wireless transmitting signals originating from within the zone and attenuate all wireless receiving signals penetrating into the zone. Transmitting signals can be terminated with a combination of a hard wire shut-off, permanent Wi-Fi free software deactivation that does not reset itself or just by using fiber to the premises and cabled modems / routers / computer / telecommunications equipment. Received signals can be lowered with a combination of RF attenuation building materials, equipment and products that reduce the RFR penetrating into the zone. The objective is to create an "as low as reasonably achievable" level of RFR for receiving signals.

All telecommunications access should be provided by telecommunications equipment (e.g., modems or routers) connected only by copper wire, cable or fiber optics. Any connectors for fiber optics and other hard-wired alternatives must be secured and ensure a leak-free connection. The zone would have a means to terminate all wireless transmitting signals originating from within the zone and attenuate all wireless receiving signals penetrating into the zone. Transmitting signals can be terminated with a combination of a hard wire shut-off, permanent Wi-Fi free software deactivation that does not reset itself. Alternatively, telecommunications equipment could simply be permanently connected to fiber optics or cable for an even faster, more secure and healthier experience. Received signals can be

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<sup>47</sup> <https://buildingbiology.com/site/downloads/richtwerte-2015-englisch.pdf>

lowered with a combination of radio frequency attenuation building materials, equipment and products that reduce the radio frequency penetrating into the zone. The objective is to create an “as low as reasonably achievable” level of radio frequency receiving signals.

The zone could also be “flexible,” by equipping it with an easily accessible and visible “off” switch and robust software that does not permit wireless signals and prohibits these software settings from being automatically overridden or reset. Those needing a connection for their cell phones would simply turn off their Wi-Fi and cellular connections and plug into the hardwired connections that would be made available to them at various locations within the zone, without any attenuation in service and with the possible advantage of even faster and more reliable service without expense to their health.

In order for the EMS Disabled to reach a flexible zone, any wireless frequency within these public entities would require some form of wireless frequency attenuation (such as RF blocking, shielding or reduction device) over the wireless telecommunications equipment to significantly reduce the amount of wireless frequency emitting from that equipment without affecting wireless connectivity.

The EMS Disabled must have direct access through human agents, e.g., who are able to answer and respond to telephone calls and written correspondence conducted through the USPS first class mail.

In addition, the EMS Disabled require emergency services in case of any acts of God, access to which, incidentally, may also become interrupted with wireless infrastructure.

### **Accommodation for Emergencies**

The EMS Disabled require hardwired connections in the event of any emergency or natural disaster, such as heavy weather conditions or a tornado. An example of how fiber optics made possible the restoration of service during an emergency is in Chattanooga, TN. In November 2012, a tornado ripped through Chattanooga. Because of the fiber optics installation, the system was able to either prevent or automatically restore service from 23,000 customer outages. “Smart Grid Helps Keep Lights Burning,” May 19, 2017 Editorial, Hamilton County Herald, <https://www.hamiltoncountyherald.com/Story.aspx?id=8646&date=5%2F19%2F2017>.

### **Accommodation in Data Systems**

A web and app-based, mobile-only environment, utilized as a communications and information portal to access services, programs, and activities offered by public entities, is problematic. Sole reliance on technology for access creates additional barriers to access for the EMS Disabled, whose disabilities would worsen from such access.

The EMS Disabled have severe health impairments and multiple disabilities that are cardiac, neurological, and sensory, including those with cognitive and processing disabilities, many of whom are at risk for further health impairments. It is critical for this information to be entered into data systems. Therefore, this information is often overlooked and omitted from government data systems because there is no mechanism for it to be created in the drop-down menus of Title II public entities. These systems just throw these individuals into the “Other Health Impairment” category which is akin to a waste bucket in the IEP categorical data collection system.

Therefore, a category for the EMS Disabled should be created to properly account for their disabilities, so that theirs will also be considered “relevant” within the data systems.

### **List of Accommodations**

The following is a short list of readily achievable, affordable modifications, submitted to the National Council on Disability in 2022.<sup>48</sup>

- Daylight, skylights, or option of incandescent lightbulbs (no fluorescents or LEDs) in designated areas of the facility;
- Remove Fragrance Emission Devices (“FEDS”) in designated restrooms, no fragrance distribution systems in Heating, Ventilation, Air Conditioning (“HVAC”) systems, no scented products;
- Do not use Wi-Fi to monitor indoor air pollutants;
- Use no “smart” meters for electricity, gas, or water in or around public areas of a facility unless they are thoroughly and effectively shielded;
- Separate the electrical wiring and fiber optics for designated parts of the facility and install kill switches for designated areas, so that non-essential computers, printers, fluorescents, equipment can be shut down without impacting all areas of the facility;
- Maintain landline telephones, re-install old-style payphones, in and around the facility;
- Use independent variable fresh air ventilation system (fan and operable window) for designated areas that can be operated by the room occupant without assistance;
- Use signage on and around the facility, in pertinent formats, indicating where to find wheelchair- and otherwise accessible sidewalks, ramps, doors, restrooms, phones, conference rooms, parking, along with a posted schedule of recent maintenance materials;
- Use signage to designate areas where wi-fi, pest control and maintenance chemicals, and recent remodeling are present to avert accidental exposures (to the degree possible);
- Designate areas for re-charging wheelchair batteries, cell phones, computers, vehicles, others, using wired electrical outlets;
- Install hard-wired, wheelchair-accessible, buzzer or intercom outside the facility to summon building occupants such as the receptionist, doctor, your child, police, social service staff, grocer, shopkeeper;

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<sup>48</sup> Submitted to the Board of the National Council on Disability, May 12, 2022 by Susan Molloy, M.A., Snowflake, AZ.

- We request a Memorandum of Understanding (“MOU”) available to us, on good stationery, explaining specifically that we are to be given safe(r) passage and accommodation;
- Study the California Building Standards “Cleaner Air Room” concept and language as per the Indoor Environmental Quality (“IEQ”) Report, pages 47-55, 2005, posted on the U.S. Access Board’s website;
- Request development of shielding or redesign of computers and other technology to block electromagnetic fields and wifi, at the point of manufacture;
- Parking and passenger-loading zones protected from EV battery re-chargers, wireless or 5G equipment, cell towers;
- Other guidelines include those in the Indoor Environmental Air Quality report<sup>49</sup>

In addition, for a facility to be safer for the public, as well as more accessible to the EMS Disabled per Coloradans for Safe Technology:

- Use correct wiring, up to code, especially at the junctions and breaker boxes in buildings.
- Wiring errors are frequently made in buildings, which increase the MW/EMFs to unsafe levels. If an outlet is incorrectly wired, or especially the grounding, the increased electric fields will travel out into the room and to any device plugged in. Light switches and fixtures will emit unsafe levels of electric and magnetic fields if incorrectly wired or incorrectly grounded (there does not appear to be a U.S. bio-safe standards for electrical and magnetic fields, other than those meant to prevent acute electrocution)
- Units in multifamily buildings, for EMS Disabled residents, must be in areas away from large electrical sources like the elevator, mechanical room, laundry room, electric vehicle charging stations, and others. EMS safer units must include safe path of travel.
- MW/EMF shielding of premises, using triple-pane Low-E windows, Faraday curtains and Faraday canopies for example, plus for outdoors: Faraday screens to protect parking, paths of travel, and yard areas.
- When a single person who is EMS Disabled needs to find a place to live, too often HUD restrictions that limit a person to one bedroom do not work. That individual may need a standalone house if there are no other accommodation away from MW/EMFs.
- Public entity facilities need wired internet, phones, security systems in designated areas, if not throughout. They are a must for the EMS Disabled along with non-electric appliances (office equipment, heaters), low EMF refrigerators or an electrical shut off for them so they can be opened without fear of them turning on, which would activate high electrical and magnetic fields.

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<sup>49</sup> <https://smartmeterharm.files.wordpress.com/2017/01/2005-indoor-air-quality-guidelines-nibs.pdf>

- Shielding screen made of protective metals on windows.
- Safer public areas inside or adjacent to facilities are may best be placed at the end of the floor, with access to stairs rather than only to the elevator. Accurate RF-EMR meters for the facilities' managers and maintenance officials will help maintain safe areas and to determine if a part of a public facility might be safer for an EMS Disabled member of the public to enter.

## (5) WHO ARE THE EMS DISABLED?

Those suffering injuries from exposure to radio frequency (RF) radiation are known as having electromagnetic sensitivity (EMS), also referred to as radiation poisoning or microwave sickness.<sup>50</sup> Hence, those with ensuing disabilities are referred to as “EMS Disabled.” Their disabilities give rise to “impairment[s] that substantially limit[] one or more major life activities” under the ADA.<sup>51</sup> The EMS Disabled require equal access to web services in a manner that does not injure them and that does not otherwise put them in harm’s way. They cannot use a technology that is injuring them.

What is emitted from wireless devices and facilities is commonly referred to as radio frequency (RF) radiation, electro-magnetic radiation (EMR), electro-magnetic fields (EMF), microwave radiation or wireless radiation. It is the persistent pulsations of RF radiation that cause adverse health outcomes and ensuing disabilities.<sup>52</sup> It is the pulsed high peak power emissions that, for example, increase the potential for traumatic brain injury and consequent cognitive impairments.<sup>53</sup>

EMS disabilities encompass a constellation of symptoms which can include: sleep disturbances, chronic fatigue, chronic pain, poor short-term memory, difficulty concentrating (e.g., “brain fog”), skin problems, dizziness, loss of appetite, heart palpitations, tremors, vision problems, tinnitus, nose bleeds, asthma, reproductive problems and headaches, to name a few.<sup>54</sup> There are other sources showing the proliferation of such disabilities.<sup>55</sup> The symptoms are from the physiological injuries that individuals have sustained from exposure to wireless devices and facilities.<sup>56</sup> Therefore, exposure to mobile apps used on mobile devices, without an alternative means of accessing the web content, will just make

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<sup>50</sup> Electromagnetic Sensitivity, also known as “microwave sickness,” <https://ehtrust.org/science/electromagnetic-sensitivity/>.

<sup>51</sup> 42 U.S.C. §12102(1)(A).

<sup>52</sup> Dr. Magda Havas: WiFi in Schools is Safe. True or False? at 7:15, <https://www.youtube.com/watch?v=6v75sKAUFdc>; see also, Brief of Children’s Health Defense, and Building Biology Institute, et al as Amici Curiae in Support of Appellees/Cross-Appellants “Customers,” Sept 14, 2021, <https://childrenshealthdefense.org/wp-content/uploads/Brief-and-Addendum-Submitted-9-14.pdf>.

<sup>53</sup> Computational modeling investigation of pulsed high peak power microwaves and the potential for traumatic brain injury. *Sci Adv.* 2021 Oct; 7(44). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8555891/>.

<sup>54</sup> “Electrohypersensitivity as a Newly Identified and Characterized Neurologic Pathological Disorder” *Int’l Journal of Molecular Sciences*, <https://www.mdpi.com/1422-0067/21/6/1915>.

<sup>55</sup> Electrohypersensitivity (EHS) Is An Environmentally-Induced Disorder That Requires Immediate Attention, Dr. Magda Havas, *J. Sci Discov* (2019), <http://www.e-discoverypublication.com/wp-content/uploads/2019/03/JSD18020-final.pdf>; Presentation by Karl Maret, M.D., M.Eng., Presentation, 1-17-20, <https://www.youtube.com/watch?v=Xilsv3mcjcy>; “The Bioinitiative Report,” <https://bioinitiative.org/>.

<sup>56</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.



matters worse for the EMS Disabled, worsening their condition and denying them equal access to web content and services from public entities otherwise made available to the general public and other disabled individuals.

A 2019 Bevington study,<sup>57</sup> analyzed the prevalence of EMS within a given population. Based on a population of 332.4 million people in the U.S., the numbers are staggering:

<b>Prevalence of EMS Percentages</b>	<b>Number of EMS in U.S.</b>
Can't work – 0.65%	2.16 million
Severe symptoms – 1.5%	4.99 million
Moderate symptoms – 5%	16.6 million
Mild symptoms – 30%	99.7 million

That means that based on those who can't work or who have severe symptoms, over 7 million are EMS Disabled in the U.S.

See Appendix B, incorporated herein by reference, for an overview of the well-established science on injuries and bio-effects.

### **Involuntary Exposure**

The EMS Disabled face nearly insurmountable barriers from involuntary exposure to radiation emitted by computers, cell phones and other mobile communications devices, as well as antennas, “smart” meters, cell towers, “small” cells, wireless antennas, internatl security and surveillance systems, all of which use Wi-Fi. Exposure is typically 24/7 with no “off” switch. RF radiation and other electromagnetic fields that emanate within public entities affect the usability of the premises and accessibility of services for the EMS Disabled.

To get an idea of the range of RF radiation, see the heat map in Appendix C, incorporated herein by reference, which illustrates the wide arc of radiation.<sup>58</sup> Although the map exemplifies a pole top antenna, there would be an arc of radiation (depending on intensity, position and other factors) for mobile devices, as well.

### **EMS Disabilities are Agnostic**

Those who are EMS Disabled cut across age and socio-economic strata, ranging from professionals and social workers to children. They include formerly high-functioning engineers, doctors and lawyers, a number of whom have become homeless from their RF radiation injuries and disabilities.<sup>59</sup> A renowned doctor in this field, Dr. Golomb<sup>60</sup> observed that, although prior to their exposure they had no problem

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<sup>57</sup> "The Prevalence of People with Restricted Access to Work in Manmade Electromagnetic Environments," Journal of Environment and Health Science, <https://mdsafetech.files.wordpress.com/2019/10/2018-prevalence-of-electromagnetic-sensitivity.pdf>.

<sup>58</sup> <https://ehtrust.org/wp-content/uploads/5G-Health-and-Policy-New-York-City-March-15-2023-.pdf> at p.6.

<sup>59</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

<sup>60</sup> Dr. Beatrice Golomb's Curriculum Vitae, <https://www.golombresearchgroup.org/pagecv>.

navigating in the world, after exposure their condition cost them up to 2 million dollars, many lost their homes and their access to basic services such as hospital care, post offices and libraries became restricted.<sup>61</sup> She states the common refrain is that people were either not aware of, did not hear about, or gave no credence to any possible health hazards connected to wireless infrastructure, until they themselves were injured.<sup>62</sup> She states that:

***The best and the brightest are among those whose lives – and ability to contribute to society –will be destroyed.*** High profile individuals with acknowledged electrohypersensitivity include, for instance, ***Gro Harlem Brundtland*** – the former 3-time Prime Minister of Norway and former Director General of the World Health Organization; [and] ***Matti Niemela***, former Nokia Technology chief ...<sup>63</sup> [Emphasis added]

Dr. Golomb further explains the plight of those unwittingly injured by RF radiation, that:

[T]heir problems arose ***due to actions of others, against which they were given no control*** – and can be reversed, in most cases, if the assault on them is rolled back.<sup>64</sup>

In the case of a 59 year old social worker in the United Kingdom, she was found by her medical practitioner to be permanently disabled from exposure to RF radiation:

***Mrs. Burns has a medical condition that renders her permanently incapable of undertaking any gainful work.*** There currently are no treatments available for her condition; avoidance of emissions is the only way to significantly reduce her symptoms.<sup>65</sup> [Emphasis added.]

Unfortunately, because this condition is not commonly understood, Mrs. Burns commented on the unrelenting discrimination that she has been exposed to:

I have worked in Health and Social Care for 35 years, supporting some of the most disabled and vulnerable members of our society and advocating to ensure their rights have been upheld. ***To have been on the receiving end of societal prejudice, discrimination, ignorance and misunderstanding, has been devastating.***<sup>66</sup> [Emphasis added.]

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<sup>61</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

<sup>62</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

<sup>63</sup> Ibid.

<sup>64</sup> Ibid.

<sup>65</sup> “59 year old social workers wins ‘early ill health retirement’ for disabling ‘Electromagnetic Hypersensitivity (EHS),” Physicians’ Health Initiative for Radiation and Environment Press release June 15, 2022, <https://phiremedical.org/wp-content/uploads/2022/06/Press-Release-EHS-Social-Worker-granted-long-term-ill-health-pension-UK-Named.pdf>.

<sup>66</sup> Ibid.

That people are not being informed of the health hazards of RF radiation, having it be forced upon them and their children without recourse, intruding into their homes, and then be discriminated against for the injuries they sustain as a result, ***should shock the conscience of any public official who took an oath to protect public health and welfare.***

Ultimately, Mrs. Burns “won her appeal for early ill-health retirement and will now receive full pension due to disabling Electromagnetic Hypersensitivity (EHS),”<sup>67</sup> as it is referred to in the U.K. She recounts the damage that exposure has done to her career:

My career has been important to me and I’m disappointed to be having to retire early instead of working beyond retirement age as I’d planned;<sup>68</sup>

. . . and to her life:

When exposed [to non-ionizing radiation, such as Wi-Fi and mobile phone emissions] she experiences dizziness, headaches, palpitations, sleep disturbance, vibrating sensations and sensitivity to noise and light. She feels pain in body areas which are nearest to the radiation sources, such as heat and pain at the ear from mobile phone use and abdominal pain from computer use.<sup>69</sup>

In another ground-breaking decision in the U.K. (and probably the world), a child was recognized as having EHS (referring to electro-hypersensitivity, as it is known in the U.K.) and was awarded accommodation, meaning that the school was mandated to make accommodation for the child’s condition<sup>70</sup>. This was decided in 2022 by the Upper Tribunal of the Administrative Appeals Chamber, which is to say that the decision is precedent setting in the U.K. In the child’s own words:

I am a 13-year-old girl with EHS. I have headaches, insomnia and other symptoms sometimes when exposed to WiFi or other kinds of EMF . . . These can become very severe . . . I can feel things and sense things most people can’t. This has protected my health . . . I have previously been unable to go to school, as the school I went to put in WiFi . . . If you have EHS and are struggling to stay in good health, or can’t go to school, or work, don’t give up . . . People are becoming more aware of this condition, and even if right now it seems like nothing will ever change, it already is.<sup>71</sup>

However, in 2015, seven years prior to this decision, a 15-year old girl in the U.K. who had developed headaches and bladder problems attributed to her exposure to Wi-Fi routers in her school did not experience a positive outcome.<sup>72</sup> The school not only failed to acknowledge her severe condition but punished the girl for leaving class rooms containing routers that were causing her condition. In an

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<sup>67</sup> <https://ehtrust.org/major-uk-decision-awards-to-social-worker-on-the-basis-of-electromagnetic-hypersensitivity-ehs/>.

<sup>68</sup> Ibid.

<sup>69</sup> Ibid.

<sup>70</sup> <https://ehtrust.org/education-health-care-plan-ehcp-awarded-aug-2022-for-uk-child-on-the-basis-of-electromagnetic-hypersensitivity-ehs/>.

<sup>71</sup> Ibid.

<sup>72</sup> <https://www.pressreader.com/uk/daily-mail/20151201/281904477099139>

apparent cry for help, the girl then either accidentally or intentionally, hanged herself, as her mother describes she was driven to despair.

The Massachusetts Medical Association and California Medical Association have adopted resolutions for further studies on health outcomes from RF radiation, calling for safety limits to protect human health.<sup>73</sup>

When the best and the most fit among us, such as firefighters, become injured from RF radiation, then we know we have a big problem for the rest of the population. Firefighters in California were injured after a cell tower was installed on their station house property. They experienced headaches, and memory, sleeping and neurological disorders. SPECT brain scans found abnormalities associated with wireless radiation. Testing results showed delay in reaction time and difficulty in mental focus.<sup>74</sup> During actual emergency calls, they would sometimes become disoriented and could not respond to emergencies with the speed, cognition and orientation required to perform their duties at optimal capacity.

“Firefighters have reported getting lost on 911 calls in the same community they grew up in, and one veteran medic forgot where he was in the midst of basic CPR on a cardiac victim and couldn’t recall how to start the procedure over again...Prior to the installation of the tower on his station, this medic had not made a single mistake in 20 years.”<sup>75</sup>

Consequently, the International Association of Firefighters passed a resolution opposing, and calling for a moratorium, on the placement of cell towers near fire stations in the U.S. and Canada.

### **Descriptions of Injuries Suffered by Individuals and Children**

Individuals and children who have suffered from exposure to RF radiation describe their stories in Appendix D, incorporated herein by reference. In some instances, pseudonyms or the heading of “Anonymous” have been used to protect the privacy of these individuals. With each new “generation” of wireless technology, including 5G on their mobile devices, people are being further exposed to RF radiation which they cannot avoid.<sup>76</sup> These emerging technologies require new policies to address the increasing number of EMS Disabled, especially among the children.

### **More Adverse Impacts on Children**

Children are particularly vulnerable and are adversely affected by RF radiation in their environment, homes and schools.<sup>77</sup> A special risk factor has been identified for children “due to their smaller body

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<sup>73</sup> *Massachusetts Medical Association Adopts Resolution on Wireless Safety Standards Reevaluation*, <https://ehtrust.org/massachusetts-medical-association-adopts-resolution-on-wireless-safety-standards-reevaluation/>.

<sup>74</sup> <https://www.iaff.org/cell-tower-radiation/>; 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, [https://ehtrust.org/wp-content/uploads/pr\\_iaff\\_vote-1.pdf](https://ehtrust.org/wp-content/uploads/pr_iaff_vote-1.pdf).

<sup>75</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

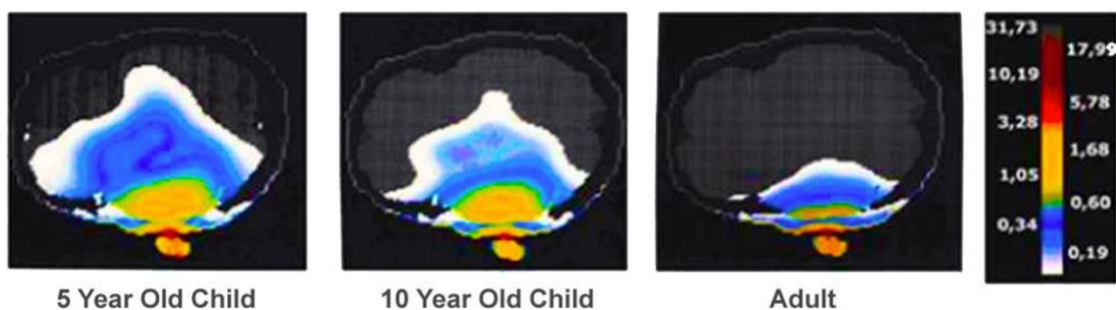
<sup>76</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

<sup>77</sup> *Children and Wireless Radiation*, <https://ehtrust.org/educate-yourself/children-and-wireless-faqs/>.

mass and rapid physical development, both of which magnify their vulnerability to known carcinogens, including radiation.”<sup>78</sup> The American Academy of Pediatrics has pointed out that children are disproportionately affected by cell phone radiation due to their lower bone density and amount of fluid in the brain allowing for absorption of greater quantities of RF radiation than in adults.<sup>79</sup>

Children absorb more RF radiation than adults, and fetuses are at even greater risk.<sup>80</sup> Children’s “brain tissues are more absorbent, their skulls are thinner and their relative size is smaller.”<sup>81</sup> RF radiation penetrates more deeply into the skulls of children compared to adults,<sup>82</sup> as shown below in cell phone usage.<sup>83</sup>

## Children are more vulnerable to RF microwave radiation.



Depth of absorption of cell phone radiation in a 5-year old child, a 10-year old child, and in an adult from GSM cell phone radiation at 900 MHz. Color scale on right shows the SAR in Watts per kilogram. Source: [Exposure limits: the underestimation of absorbed cell phone radiation, especially in children](https://www.ncbi.nlm.nih.gov/pubmed/21999884)

<sup>78</sup> *Key Scientific Evidence and Public Health Policy Recommendations*, Supplement 2012, at 21, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, [https://bioinitiative.org/wp-content/uploads/pdfs/sec24\\_2012\\_Key\\_Scientific\\_Studies.pdf](https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2012_Key_Scientific_Studies.pdf).<https://bioinitiative.org/>.

<sup>79</sup> *Key Scientific Evidence and Public Health Policy Recommendations*, Supplement 2012, at 21, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, [https://bioinitiative.org/wp-content/uploads/pdfs/sec24\\_2012\\_Key\\_Scientific\\_Studies.pdf](https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2012_Key_Scientific_Studies.pdf).<https://bioinitiative.org/>.

<sup>80</sup> *Why children absorb more microwave radiation than adults: The consequences*, Morgan, Kesar and Davis, Journal of Microscopy and Ultrastructure, Vol. 2, Issue 4, December 2014, 197-204, <https://www.sciencedirect.com/science/article/pii/S2213879X14000583>.

<sup>81</sup> Ibid.

<sup>82</sup> See, Dr. Melnick, London 5G Conference at 39:00, [https://www.youtube.com/watch?v=zSx\\_yDzxvM8&t=2295s](https://www.youtube.com/watch?v=zSx_yDzxvM8&t=2295s); <https://ehtrust.org/research-on-childrens-vulnerability-to-cell-phone-radio-frequency-radiation/> and <https://ehtrust.org/science/scientific-imaging-cell-phone-wi-fi-radiation-exposures-human-body/>.

<sup>83</sup> *Exposure limits: the underestimation of absorbed cell phone radiation, especially in children*, Gandhi, Morgan, Augusto de Salles, Han, Heberman, Davis, October 14, 2011, <https://pubmed.ncbi.nlm.nih.gov/21999884/>.

Source: Exposure limits: the underestimation of absorbed cell phone radiation, especially in children, Gandhi, Morgan, Augusto de Salles, Han, Heberman, Davis, October 14, 2011.<sup>84</sup>

Exposure to RF radiation “can result in degeneration of the protective myelin sheath that surrounds brain neurons” and “[d]igital dementia has been reported in school age children.”<sup>85</sup> It also increases the risk of childhood leukemia.<sup>86</sup>

There are also neurological implications to RF radiation exposure for children.<sup>87</sup> Cell towers near schools and Wi-Fi in schools are potentially hazardous to children.<sup>88</sup>

- Elementary school children who were exposed to high levels of RF radiation generated from mobile phone base stations 200 meters from their schools “had a significantly higher risk of type 2 diabetes mellitus” than those exposed to lower RF radiation.<sup>89</sup>
- Adolescent school children who were exposed to high levels of RF radiation generated from mobile phone base stations within 200 meters from their schools had “delayed fine and gross motor skills, spatial working memory and attention” than those exposed to lower RF radiation.<sup>90</sup>
- A ten-year old child testified of his cardiac condition being caused by exposure to RF radiation in a library where he was being tutored.<sup>91</sup>

RF radiation “... has toxic effects in pregnancy, to the fetus and subsequent offspring ... and is tied to developmental problems in later life, including attention deficit and hyperactivity.”<sup>92</sup>

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<sup>84</sup> Ibid.

<sup>85</sup> *Why children absorb more microwave radiation than adults: The consequences*, Morgan, Kesar and Davis, Journal of Microscopy and Ultrastructure, Vol. 2, Issue 4, December 2014, 197-204, <https://www.sciencedirect.com/science/article/pii/S2213879X14000583>.

<sup>86</sup> *Key Scientific Evidence and Public Health Policy Recommendations*, 2007, at 19, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, [https://bioinitiative.org/wp-content/uploads/pdfs/sec24\\_2007\\_Key\\_Scientific\\_Studies.pdf](https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2007_Key_Scientific_Studies.pdf).

<sup>87</sup> See generally, <https://ehtrust.org/research-on-childrens-vulnerability-to-cell-phone-radio-frequency-radiation/>; see also, <https://ehtrust.org/cell-towers-and-cell-antennae/compilation-of-research-studies-on-cell-tower-radiation-and-health/>.

<sup>88</sup> Dr. Magda Havas: WiFi in Schools is Safe. True or False?, <https://www.youtube.com/watch?v=6v75sKAUFdc>.

<sup>89</sup> *Association of Exposure to Radio-Frequency Electromagnetic Field Radiation (RF-EMFR) Generated by Mobile Phone Base Stations (MPBS) with Glycated Hemoglobin (HbA1c) and Risk of Type 2 Diabetes Mellitus*, Sultan Ayoub Meo et al, International Journal of Environmental Research and Public Health, 2015; [https://www.researchgate.net/publication/283726472\\_Association\\_of\\_Exposure\\_to\\_Radio-Frequency\\_Electromagnetic\\_Field\\_Radiation\\_RF-EMFR\\_Generated\\_by\\_Mobile\\_Phone\\_Base\\_Stations\\_with\\_Glycated\\_Hemoglobin\\_HbA1c\\_and\\_Risk\\_of\\_Type\\_2\\_Diabetes\\_Mellitus](https://www.researchgate.net/publication/283726472_Association_of_Exposure_to_Radio-Frequency_Electromagnetic_Field_Radiation_RF-EMFR_Generated_by_Mobile_Phone_Base_Stations_with_Glycated_Hemoglobin_HbA1c_and_Risk_of_Type_2_Diabetes_Mellitus).

<sup>90</sup> Meo, S. A., Almahmoud, M., Alsultan, Q., Alotaibi, N., Alnajashi, I., & Hajjar, W. M. (2018). *Mobile Phone Base Station Tower Settings Adjacent to School Buildings: Impact on Students' Cognitive Health*, American Journal of Men's Health; <https://pubmed.ncbi.nlm.nih.gov/30526242/>.

<sup>91</sup> Child With Heart Problems From Wireless: 5G Health Risks California SB 649 Hearing, [https://www.youtube.com/watch?v=OgNLR9fQOX4&list=PLT6DbkXhTGoDakSqp1i\\_7milpwGx4xMFq](https://www.youtube.com/watch?v=OgNLR9fQOX4&list=PLT6DbkXhTGoDakSqp1i_7milpwGx4xMFq).

<sup>92</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

Children born of mothers who used cell phones during pregnancy developed more behavioral problems by school age than those whose mothers did not use cell phones during pregnancy, with the following results: “25% more emotional problems, 35% more hyperactivity 49% more conduct problems and 34% more peer problems.”<sup>93</sup> A study involving 24,499 children found a 23% increase of emotional and behavioral difficulties.<sup>94</sup>

Therefore, RF radiation can produce adverse health outcomes in vulnerable populations such as children, pregnant women and the elderly, and for the unsuspecting public who have not been informed of potential health hazards of RF radiation.

### (6) Industry Views of RF Radiation as a Pollutant

Interestingly, RF radiation emitted from wireless devices are referred to by industry as pollutants in their published consumer brochures for cell phones, for which they disclaim liability for personal injury.<sup>95</sup> For example, an industry brochure for consumers for cell phone insurance protection states:

***"Pollutants means ... any artificially produced electric fields, magnetic field, electromagnetic field, sound waves, microwaves and all artificially produced ionizing or non-ionizing radiation ..."***<sup>96</sup>

Similar definitions for pollution are in the product protection plans for other telecommunications companies.<sup>97</sup>

Industry's published annual reports and SEC reports<sup>98</sup> also warn of the risk of litigation arising from personal injuries from their wireless devices and facilities.

Two of the largest insurance companies in the world (i.e., Lloyd's of London and Swiss Re) have declined to insure telecom companies for any liability for personal injury that results from these

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<sup>93</sup> *Key Scientific Evidence and Public Health Policy Recommendations*, Supplement 2012, at 8, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, [https://bioinitiative.org/wp-content/uploads/pdfs/sec24\\_2012\\_Key\\_Scientific\\_Studies.pdf](https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2012_Key_Scientific_Studies.pdf).

<sup>94</sup> Miller AB, Sears ME, Morgan LL, Davis DL, Hardell L, Oremus M, Soskolne CL. Risks to Health and Well-Being From Radio-Frequency Radiation Emitted by Cell Phones and Other Wireless Devices. *Front Public Health*. 2019 Aug 13;7:223. doi: 10.3389/fpubh.2019.00223. PMID: 31457001; PMCID: PMC6701402, also available at <https://www.frontiersin.org/articles/10.3389/fpubh.2019.00223/full#B42>.

<sup>95</sup> <https://ehtrust.org/wp-content/uploads/device-protection-brochure-nationwide.pdf>

<sup>96</sup> <https://ehtrust.org/wp-content/uploads/device-protection-brochure-nationwide.pdf>;

<sup>97</sup> <https://ehtrust.org/key-issues/electromagnetic-field-insurance-policy-exclusions/>, <https://ehtrust.org/wp-content/uploads/ATT-Multi-Device-Protection-Pack-Insurance.pdf>, <https://ehtrust.org/wp-content/uploads/Sprint-Insurance-Terms-and-Conditions-Downloaded-2019.pdf>.

<sup>98</sup> See, e.g., Verizon's 2021 U.S. SEC Form 10-K at 17 which states:

<https://www.verizon.com/about/sites/default/files/2020-Annual-Report-on-Form-10-K.PDF>.

exposures.<sup>99,100,101</sup> Insurance companies, reviewing potential claims from a risk analysis perspective, have assessed RF radiation as “high” risk and is, therefore, excluded from coverage.

As early as April 2000, a study commissioned by a major telecom company that sells Wi-Fi service on smartphones and tablets, showed findings of (1) adverse health impacts associated with exposure to RF radiation and (2) strong warnings to significantly lower the power of RF radiation exposure to the public.<sup>102</sup> The findings included risks of cancer (of the central nervous system and testicular cancer), leukemia, damage to the immune system and cognitive impairments (the very disabilities that this NPRM aims to address with mobile apps on mobile devices). The study also recognized electro-sensitivity and the importance of developing a strategy to address the problem, particularly in vulnerable populations in “residential areas, schools, nurseries, playgrounds, hospitals...”<sup>103</sup>

### (7) FCC’s Failure to Comply with Court Order on Its Outdated 1996 Emission Limits

Part of the problem of being exposed to RF radiation is that the FCC’s existing RF exposure limits “are approximately 7.2 million times too high” as observed by Martin L. Pall, PhD, Professor Emeritus of Biochemistry and Basic Medical Sciences, Washington State University, who provided evidence in the FCC’s docket.<sup>104</sup> This is noteworthy as the FCC docket was in connection with a federal case decided in 2021 which the FCC lost concerning its emissions limits. The D.C. Circuit, Court of Appeals rebuked the FCC and remanded the FCC’s emission limits for further consideration in light of scientific evidence which the FCC ignored that had been presented into the FCC’s docket of health hazards below those limits.<sup>105</sup> To date, the FCC has failed to update its limits dating back to 1996, which **can no longer be viewed as safety limits for the public** but simply function as a safe harbor for industry to provide immunity from liability for personal injury, no matter how badly people are injured or disabled.<sup>106</sup>

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<sup>99</sup> <https://5gtechnologynews.com/insurance-companies-can-refuse-claims-related-to-electromagnetic-radiation-illnesses/>

<sup>100</sup> <https://ehtrust.org/wp-content/uploads/Swiss-Re-SONAR-Publication-2019-excerpt-1.pdf>, pg. 29.

<sup>101</sup> <https://ehtrust.org/key-issues/reports-white-papers-insurance-industry>.

<sup>102</sup> [Mobile Telecommunications and Health/Review of the current scientific research](https://docs.google.com/document/d/1Rd2c900GURf9YYQY-L2MHAFDYGIeT2R1tyMZYQhZTEA/edit), ECOLOG Institut, Hannover, April 2000, available at <https://docs.google.com/document/d/1Rd2c900GURf9YYQY-L2MHAFDYGIeT2R1tyMZYQhZTEA/edit>; ECOLOG is a research organization founded in 1991 by scientists from the University of Hannover.

<sup>103</sup> Ibid.

<sup>104</sup> Appeals Court Tells FCC to Address Non-Thermal Health Impacts of Radiation from Wireless Technology on Children, the Public, and the Environment, Aug. 25, 2021, <https://ehtrust.org/appeals-court-tells-fcc-to-address-non-thermal-health-impacts-of-radiation-from-wireless-technology-on-children-the-public-and-the-environment/>.

<sup>105</sup> Environmental Health Trust, et al v FCC, Aug 13, 2021; [https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFD7/\\$file/20-1025-1910111.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFD7/$file/20-1025-1910111.pdf); see also, <https://ehtrust.org/in-historic-decision-federal-court-finds-fcc-failed-to-explain-why-it-ignored-scientific-evidence-showing-harm-from-wireless-radiation/>; Factsheet: FCC’s Lack of Review for Wireless Radiation Exposure Limits, <https://ehtrust.org/wp-content/uploads/EHT-et-al.-v.-FCC-Factsheet-EHTRUST.org-1-1.pdf>.

<sup>106</sup> See also these two comprehensive briefings MW/EMF/RF risk, <https://ehtrust.org/wp-content/uploads/Setbacks-Ordinances-Health-Liability-for-Wireless-Facilitites-.pdf> and <https://ehtrust.org/wp-content/uploads/5G-Health-and-Policy-New-York-City-March-15-2023-.pdf>.



## **(8) CONCLUSION**

For the foregoing reasons, HHS's full weight in promulgating rules under the ADA and other relevant laws and regulations should be brought to bear to ensure equal access to medical programs and services for the EMS Disabled.

Respectfully Submitted  
On behalf of Advocates of the EMS Disabled,

Odette J. Wilkens  
President & General Counsel  
Wired Broadband, Inc.  
P.O. Box 705401  
Forest Hills, NY 11375  
[www.wiredbroadband](http://www.wiredbroadband)  
[owilkens@wiredbroadband.org](mailto:owilkens@wiredbroadband.org)

## APPENDIX A

### Source: Electrosensitive Society

<https://www.electrosensitivesociety.com/how-hospitals-can-accommodate-patients-who-have-ehs/>

#### How Hospitals Can Accommodate Patients Who Have EHS

##### How Hospitals Can Accommodate Patients who have EHS Electrohypersensitivity (EHS)

EHS is an ***environmentally-induced disability*** that has been recognized for more than 100 years. It has been called ***neurasthenia*** (weakening of the nervous system), ***microwave sickness***, ***radio wave illness***, ***screen dermatitis***, ***electromagnetic sensitivity***, and ***idiopathic environmental intolerance attributed to electromagnetic fields***.

##### EHS Symptoms

The symptoms of EHS vary from person to person and may be short-term, chronic or episodic. Symptoms include some combination of the following:

- sleep disturbances
- chronic fatigue
- chronic pain including migraine headaches
- poor short-term memory
- difficulty concentrating (e.g. “brain fog”)
- mood disorders like depression or anxiety
- skin problems
- dizziness
- loss of appetite
- excessive thirst or dehydration
- tremor or movement difficulties
- vision problems
- tinnitus
- frequent night-time urination (any age)
- bedwetting (children)
- heart palpitations
- difficulty regulating blood sugar levels
- nose bleeds
- asthma
- cold extremities
- reproductive problems
- and other symptoms

Individuals become symptomatic at environmental levels far below legally allowed electromagnetic field exposures established by Health Canada in their Safety Code 6 guidelines.

## The World Health Organization (WHO)

The WHO recognizes EHS and recommends that EHS be called “idiopathic environmental intolerance,” with “idiopathic” meaning the cause is unknown.

A phenomenon where individuals experience adverse health effects while using or being in the vicinity of devices emanating electric, magnetic, or electromagnetic fields (EMFs) ... EHS is a real and sometimes a debilitating problem for the affected persons ... Their exposures are generally several orders of magnitude under the limits in internationally accepted standards.

The WHO recommends that people reporting sensitivities receive a comprehensive health evaluation ... Some studies suggest that certain physiological responses of EHS individuals tend to be outside the normal range. In particular, hyperactivity in the central nervous system and imbalance in the autonomic nervous system need to be followed up in clinical investigations and the results for the individuals taken as input for possible treatment.

### EHS Precursors

While exposure to electromagnetic fields/radiation is the trigger for EHS symptoms, the common precursors of EHS include:

- **physical trauma** to the central nervous system, such as concussion or whiplash
- **chemical trauma** in the form of exposure to toxins [including but not limited to drugs, pesticides, metals (especially mercury), and other neurotoxins].
- **biological trauma** in various forms, such as lyme disease, fungal toxins, parasite load, etc.
- **electrical trauma** resulting from acute or chronic electromagnetic field exposures, such as multiple shocks; low, moderate, or high levels of electrosmog (electromagnetic pollution wherever electricity or “wireless” travels or is available); battery- or electricity-powered items; and lightning strikes.
- **impaired immune system** as a result of medical diagnostic/preventative/treatment methods (radiological, chemical, etc.), biological implants, lupus, AIDS; or a **poorly developed immune system** in very young children and in elders

### Recommended Equipment for Detecting and Measuring EMFs

Health and Safety Departments should measure three types of electrosmog within the facility at regular intervals (since exposure can change) and prior to the scheduled admission of a patient who has EHS (or immediately after emergency admission) by using all of these metering devices:

- **Radio Frequency Microwave Radiation** Model: Safe and Sound Pro II. [slt.co/Products/RFMeters/SafeandSoundProIIIRFMeter.aspx](http://slt.co/Products/RFMeters/SafeandSoundProIIIRFMeter.aspx)
- **Extremely Low Frequency Electric and Magnetic fields.** Model: ME 3830B. [slt.co/Products/EMFMeters/ME3830B.aspx](http://slt.co/Products/EMFMeters/ME3830B.aspx)
- **Dirty Electricity.** Model: Graham Stetzer Microsurge Meter. [www.stetzerelectric.com](http://www.stetzerelectric.com)

### Sources of Electrosmog

- **Radio Frequency (RF) Radiation:** Cell network antennas (on towers, buildings, poles, boosters); WiFi routers/hotspots; battery- or electricity-powered wireless devices, sensors, controllers, audio equipment, and vehicles using or enabled for WiFi or Bluetooth; WiFi boosters; cell phones; tablets, laptops, and desktop computers; signal boosters; medical data transmitters; MRI equipment; microwave ovens; pagers; personal wearables (smart watches/necklaces, fitness trackers, etc.); cordless telephones; wireless baby monitors; vehicle radar; airport or

naval radar; security systems; pest-control systems; smart utility meters; digital automatic meter readers (AMR), smart appliances; and nearby broadcast antennas.

- **Extremely Low Frequency (ELF) Electric and Magnetic Fields (EMFs):** Power transmission lines; power distribution lines (above or below ground), substations, transformers, light fixtures, breaker/fuse panel, faulty wiring, knob and tube wiring, power supply cables, electric appliances especially those that generate heat (e.g., electric stove, toaster, hair dryer, convection stovetops), all sizes of computers and electronic devices, air-conditioning and other HVAC equipment, fans, metal pipes (in some circumstances), power outlets.
- **Dirty Electricity:** Computers, televisions, tube fluorescent lights, compact fluorescent light bulbs, energy efficient LED light bulbs, dimmer switches, variable speed motors/tools, treadmills, vacuum/floor cleaners, sewing machines, solar photovoltaic cells (if converted to AC power), wind turbines, smart utility meters, AMR meters, devices that require inverters. Dirty electricity flows along metal — such as in wires, pipes, construction materials and furnishings — and can also enter an area or building from neighbours and neighbourhoods through the electrical panel or water service infrastructure.

>> Reducing the Levels of All Types of Electrosmog << is Critically Essential for Patients who have EHS

#### **Ideal Electrosmog Levels for Patients who have EHS**

- Radio Frequency Radiation – less than 0.1  $\mu\text{W}/\text{m}^2$
- Dirty Electricity – less than 25 GS Units
- Magnetic Field – less than 20 nT (0.2 mG)
- Electric Field – less than 1 V/m

#### Severity of EHS Sensitivity

Some EHS patients may be able to tolerate more EMFs exposure than other patients. Any EHS patient may seem to have a variable tolerance level, dependent on a myriad circumstances. Therefore, it is critical to closely monitor each EHS patient if electrosmog levels are higher than the ideal values listed above.

**“FIND”** (determines the exposure): **F**requency, **I**ntensity, **N**earness, and **D**uration. Exposure is cumulative and the sensitivity reaction can be immediate or delayed, and the reactions and symptoms can worsen and/or be prolonged due to increased duration of exposure. Reducing the intensity and duration while increasing the distance from the radiating source decreases the exposure.

#### Specific Recommendations for reducing EMF/EMR for environmentally sensitive patients in your hospital

This is not an all-inclusive list of recommendations. Please do not hesitate to contact us about other possible or known items and circumstances, whether to collaborate on solutions or to inform future versions of this document.

#### *Radio Frequency Radiation Microwave Radiation*

- When locating patients, avoid cell network antennas both within and outside of building.
- Identify WiFi routers and WiFi boosters. If the hospital does own and have control over these devices, disconnect or reduce power on individual hotspots/routers in order to create areas where RF/MW Radiation is lower. For example, some routers powered down to 16% power will still provide adequate WiFi connectivity for users.
- Cell phone network boosters: Consider shielding boosters (with a double-layered aluminum mesh) where necessary when you do NOT have control over turning off or reducing their

output. Consider inquiring about how to obtain control of their output or at least a reliable emergency contact who has such control.

- Identify and avoid medical device data transmission hotspots – if there are no other options, shield with double-layered aluminum foil where necessary. [Going forward, establish and maintain the option of turning off the power to all wireless devices within the hospital, or if there are no other options then lowering the intensity of wireless emissions and protectively shielding areas occupied by patients, visitors, staff, and volunteers]
- Ensure blood pressure monitors or other hospital equipment do NOT use wireless technology. Use non-wireless or corded diagnostic devices whenever possible. [Going forward, in decisions and policies for planning, renovations, protocols, updates, purchasing, and in employee agreements, clearly specify non-wireless or corded equipment, services, and environments (indoor and outdoor).]
- Eliminate cell phones (absent or powered all the way OFF, and never brought into the same room as the patient even when powered off), pagers, and all personal devices (smart watches/necklaces, fit-bits, etc.).
- Doctors “on call” – should leave their phones at nurses’ station (at least 10 metres distance from the patient) before tending to an EHS patient. [Going forward, ideally, enable “on call” and other communication protocols to be conveyed through wireline communication systems throughout the hospital. Note: Carrying powered on “wireless” devices on the body is against manufacturer’s instructions, and therefore this is an occupational health and safety issue.]
- Consider using RF radiation-blocking fabric (such as bed canopies specialized for this purpose) to create a faraday cage that can be used wherever there is a patient need. Create a RF radiation-blocking hospital gown for EHS use; note: such garments do not necessarily provide relief for all patients or in all circumstances, so abide by a patient’s expressed experience, and if the patient is unconscious or otherwise unable to comprehend or communicate adverse reactions that may happen when such a garment is added to monitor for reactions that may warrant removal of the garment (suppliers in Canada: [slt.co/Products/RFShieldingFabrics/www.emrss.com](http://slt.co/Products/RFShieldingFabrics/www.emrss.com)).

#### *Extremely Low Frequency (ELF) Electric and Magnetic Fields (EMFs)*

- Measure to locate and avoid high electric and magnetic fields.
- Avoid all types of fluorescent lighting, particularly above the hospital beds.
- Unplug hospital beds from power sources whenever the adjustment features are not directly in use.
- Position the hospital bed away from walls as often and as far as possible, to increase distance between patients and wiring.
- Unplug assessment equipment (e.g., blood pressure monitor) from power sources when the equipment is not directly being use, or remove the equipment from the patient’s vicinity.

#### *Dirty Electricity*

- Locate sources of dirty electricity and eliminate these sources where possible. Filter dirty electricity that cannot be eliminated with appropriate filters.

#### **General Recommendations**

Establish an environmentally-friendly (low-EMF/EMR and low-chemical) waiting room, treatment room, and in-patient room. Many patients who have EHS also have Multiple Chemical Sensitivity (MCS), which

means they have adverse reactions to chemicals such as cleaning products, car exhaust, perfumes, laundry detergents, paint, natural flower and food aromas, etc.

- Provide an area that has no cell phone network antenna within, above, below, adjacent, or outside the building (roof, balcony, etc.).
- Turn off (power off) and/or reduce emission intensity of WiFi routers, hotspots, or anything that can emit wireless signals.
- All cell phones powered OFF.
- Prohibit wireless wearable devices.
- Provide MCS-friendly soaps, cleaning products, and laundered linens.
- Avoid newly painted areas.
- Avoid new furniture (due to off-gassing).
- *Post signs* that prominently indicate a “no wireless and no scent” zone within 10 metres (cell phones powered OFF, etc.). Note: signage should serve as a reminder, not as a substitute for instructions (to staff, visitors, and other patients).

***Reduce waiting times:***

- Expedite admission to reduce waiting time (to avoid additional EMF/RF radiation exposure).
- Schedule appointments first or last in the day (to reduce exposures caused by uninformed or non-compliant persons/places).

***Isolate to reduce exposures caused by other persons:***

- For any wait time, agree to find patients wherever they prefer to wait in a safer environment (e.g., inside their car, outside, in another hospital area) when ready to see them.
- Provide a separate and shortest possible entrance route, preferably directly from outside the destination area of the hospital.
- Give attention to ensure paint-free and construction-free zones outside and within the building.
- Provide exclusive use of elevators.

***Assign a helper (volunteer) for the person who has EHS:***

Recommendations for the **Helper**:

- All **cell phones powered OFF** (“silent” modes and “airplane” modes do not adequately halt wireless emissions).
- No fitbit and/or smart watches/necklaces.
- Use a dedicated elevator to avoid electrosmog emissions caused by other people.
- Inform the EHS person that all of your personal wireless devices have been eliminated. Give this information at the beginning of each in-person interaction.
- Prior to and during interactions do not use personal scented products (perfume, laundry soap, fabric softener/dryer sheets, hair products, skin products, deodorant, etc.).
- Ensure cleaning products are scent-free (including soaps).
- Avoid newly painted areas.
- Avoid new furniture due to the off-gassing that occurs.

***Communication with a person who has EHS:***

- Good communication is critical in the accommodation of EHS. This applies in both pre-arrangement of appointments and emergency situations. Communication directly to the patient from the administrative staff, nurses, doctors, and other healthcare professionals and volunteers is important so that EHS/MCS patients know their needs are both recognized and accommodated.
- Communicate with the patient about where to arrive for each visit – even if it will be a location previously attended by the patient, as the patient may experience brain fog due to the electrosmog environment enroute to the destination.

**Further accommodation for a person who is EHS/MCS:**

- Allow the patient to bring their own RF radiation-shielding fabric.
- Allow the patient to bring anything else needed for a comfortable environment (e.g., clothing, bedding due to MSC, personal hygiene products).
- Continue to monitor electrosmog at frequent intervals to ensure low-level exposure – see template below. Also use the template prior to a scheduled arrival and to aid accommodation in an emergency situation.
- Determine, in advance of first electrosmog measurements regarding a patient visit/stay, to report the electrosmog environment, to report electrosmog changes (detrimental or beneficial, as a consequence change in accommodation or protection or medication may be necessary), and to arrange any collaborations necessary to accomplish recommendations. For example, it might be the patient, or the patient’s representative, an off-site healthcare professional, or a knowledgeable third-party expert.
- Assign responsibility for timely action points: review of monitoring details, providing recommendations, and acting on recommendations.

**Template**

Low-EMF/MCS Room Electrosmog Monitoring Details

Room	Date (m/d/yr)	Time	RFR ( $\mu\text{W}/\text{m}^2$ ) <0.1	DE <30	(GSU)	E-Field (V/m) <1	M-Field (mG) <0.2	Recommendations
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**Observations**

- A patient’s vital signs or test results may vary dependent on EMF/EMR exposures at a specific location and at a specific moment (electrosmog can affect the autonomic nervous system, the blood, the heart and even blood sugar levels in some sensitive diabetics). Our understanding is that this can lead to misdiagnosis, over-treatment, under-treatment, inappropriate medications or dosages, etc.
- In different types and intensities of electrosmog (or other contaminating) exposures, patients may experience a different constellation of EHS symptoms.
- When a device or equipment is hybrid (i.e., can connect/communicate via both wireless and a cord), using the cord does not necessarily disable the wireless emissions. Whenever a connection is via cord, manually assure that all wireless capability is set as disabled or turned

off. For each use of hybrid devices/equipment verify those settings, as some devices/equipment do not retain such settings between uses.

- If you will be transporting an EHS patient, be mindful of the need for accommodation.



## APPENDIX B

### Overview of Studies Showing Injury and Bio-Effects from RF Radiation Exposure

There has been overwhelming scientific evidence establishing a causal link to health side effects from MW/EMF/RF radiation and devices emitting such radiation:

- 1 Thousands of scientific and medical studies show neurological disorders; 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>107</sup>
- 2 Three studies since Jan 2023 show adverse health impacts from exposure to 5G towers. **Previously healthy individuals developed typical “microwave syndrome” symptoms shortly after the towers were installed:** headaches, abnormal fatigue, heart arrhythmia, burning skin, trouble concentrating.<sup>108</sup> The significance of these reports is that non-ionizing radiation<sup>109</sup> from 5G — well below levels allowed by authorities — can cause health problems in individuals who had no prior history of electromagnetic sensitivity.<sup>110</sup> Dr. Lennart Hardell, lead author of the reports and a world-renowned scientist on cancer risks from radiation, affirms these reports as “groundbreaking” because they serve as the “first warning of a health hazard.”<sup>111</sup>
- 3 Given the lack of information regarding any safety testing of 5G, US Sen. Blumenthal confirmed during a Feb. 2019 hearing of telecom executives, that there was no pre-market testing of 5G for public health or safety. The telecom executives conceded that they were not aware of any independent scientific studies on the safety of 5G. Sen. Blumenthal also criticized the FCC and

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<sup>107</sup> A Rationale for Biologically-based Exposure Standards for Low-Intensity Electromagnetic Radiation, 2022, <https://bioinitiative.org/conclusions/>; see also, Adverse health effects of 5G mobile networking technology under real-life conditions, May 1, 2020, <https://pubmed.ncbi.nlm.nih.gov/31991167/>; Wireless Radiation (RFR) – Is U.S. Government Ignoring Its Own Evidence for Risk? March, 28, 2019, <https://electromagnetichealth.org/electromagnetic-health-blog/u-s-gov-ignoring-own-evidence/>; Oxidative Mechanisms of Biological Activity of Low-Intensity Radiofrequency Radiation, *Electromagnetic Biology and Medicine*, 35(2), 186-202, Yakymenko, I., Tsybulin, O., Sidorik, E., Henshel, D., Kyrlyenko, O., & Kyrlyenko, S. (2016), <https://pubmed.ncbi.nlm.nih.gov/26151230/>.

<sup>108</sup> Jan 2023 study of 63 year old man and 62 year old woman where 5G antennas were installed on the rooftop of their home, [https://www.gavinpublishers.com/assets/articles\\_pdf/Case-Report-The-Microwave-Syndrome-after-Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf](https://www.gavinpublishers.com/assets/articles_pdf/Case-Report-The-Microwave-Syndrome-after-Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf) and <https://childrenshealthdefense.org/defender/5g-radiation-microwave-syndrome-symptoms/>; Feb 2023 study of two previously healthy men where 5G antennas were installed on the rooftop of their business, <https://www.anncaserep.com/open-access/development-of-the-microwave-syndrome-in-two-men-shortly-after-9589.pdf>; April 2023 study of 52 year old woman whose apartment was 60 meters from a 5G base station, <https://acmcasereport.com/pdf/ACMCR-v10-1926.pdf?fbclid=IwAR2J-mE3XeBxqaXPQdFxsIf9Q23bMCer9vgUBHnCvJXBrgBv-w7YdRUDwF0>; see also, The microwave syndrome or electro-hypersensitivity: historical background <https://pubmed.ncbi.nlm.nih.gov/26556835/>.

<sup>109</sup> <https://childrenshealthdefense.org/emr/emf-key-terms-descriptions/>.

<sup>110</sup> <https://childrenshealthdefense.org/emr/emf-wireless-health-impacts/>.

<sup>111</sup> <https://www.stralskyddsstiftelsen.se/two-studies-show-that-5g-caused-the-microwave-syndrome-in-healthy-persons/>.

the FDA for inadequate answers on the subject. Sen. Blumenthal concluded, “We’re kind of flying blind here as far as health and safety is concerned.”<sup>112</sup>

- 4 A study in 2000, commissioned by one of the major telecom carriers, found links to cancer, leukemia, neurological disorders and cognitive impairment, with special caution for children and an acknowledgement of those already disabled from the radiation.<sup>113</sup>
- 5 The New Hampshire Commission that studied the health impacts of wireless radiation found that levels below the FCC emission limits can be harmful.<sup>114</sup>
- 6 The Board of Health of Pittsfield, MA issued an emergency order to turn off a 4G cell tower that injured 17 residents most of whom evacuated their homes.<sup>115</sup> Although the emissions were within the FCC emission limits, children were found vomiting in their beds, pets were vomiting and residents were becoming ill and evacuating their homes.<sup>116</sup>
- 7 One hundred sixty scientists worldwide submitted in 2015 The International Scientists’ Appeal to the United Nations to Protect Humans and Wildlife from the unconstrained proliferation of wireless radiation.<sup>117</sup>
- 8 The WHO’S International Agency for Research on Cancer classified wireless radiation (2G and 3G) as a possible human carcinogen back in 2011,<sup>118</sup> similar to lead, diesel fuel and gasoline engine exhaust.
- 9 The National Toxicology Program, commissioned by the Food and Drug Administration to conduct a \$30 million study, in 2018 found clear evidence of cancer;<sup>119</sup> NTP is one of the most prestigious institutions in the world in toxicology. Indeed, in 1999 the FDA nominated to the NTP the study of RFR “with a high priority,” to conduct animal studies, stating that it was “not scientifically possible to guarantee that non-thermal levels of microwave radiation . . . will not cause long-term adverse health effects.”<sup>120</sup> the results have been replicated by the Ramazzini Institute in another study using exposures below the FCC thermal thresholds.<sup>121</sup>

## **The Settled Science on Adverse Health Effects of MW/EMF/RF Radiation: From Industry, FCC, FDA, Scientists And Experts**

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<sup>112</sup> <https://ehtrust.org/health-effects-of-5g-wireless-technology-confirmed-at-us-senate-hearing-after-senator-blumenthal-questions-industry/>; see also, <https://mdsafetech.org/2019/02/13/no-research-on-5g-safety-senator-blumenthal-question-answered/>.

<sup>113</sup> T-Mobile Deutsche Telekom commissioned study by the Ecolog-Institute, April 2000, “Mobile Telecommunications and Health Review of the Current Scientific Research in View of Precautionary Health Protection,” <https://ehtrust.org/wp-content/uploads/ecolog2000.pdf>.

<sup>114</sup> <http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf>.

<sup>115</sup> <https://ehtrust.org/cease-and-desist-order-against-verizon-cell-tower-by-board-of-health-pittsfield-ma/>.

<sup>116</sup> <https://ehtrust.org/family-injured-by-cell-tower-radiation-in-pittsfield-massachusetts/>.

<sup>117</sup> Dr. Martin Blank, PhD, Dept of Physiology and Cellular Biophysics, Columbia University, announcing the appeal and warning on wireless radiation, <https://www.youtube.com/watch?v=HgECRrabuZQ>.

<sup>118</sup> [https://www.iarc.who.int/wp-content/uploads/2018/07/pr208\\_E.pdf](https://www.iarc.who.int/wp-content/uploads/2018/07/pr208_E.pdf).

<sup>119</sup> *Environmental Health Trust, et al v. FCC*, Motion for Leave to File Brief of Amicus Curiae Joseph Sandri in Support of Petitioners Urging Reversal, Aug. 5, 2020, <https://ehtrust.org/wp-content/uploads/20-1025-Amicus-Brief-Joe-Sandri.pdf>.

<sup>120</sup> Letter from the Dept of Health and Human Services to the National Toxicology Program at the National Institute for Environmental Health Studies, May 19, 1999, [https://ntp.niehs.nih.gov/sites/default/files/ntp/htdocs/chem\\_background/exsumpdf/wireless051999\\_508.pdf](https://ntp.niehs.nih.gov/sites/default/files/ntp/htdocs/chem_background/exsumpdf/wireless051999_508.pdf).

<sup>121</sup> <https://www.saferemr.com/2018/03/RI-study-on-cell-phone.html>.

- **Industry's Settled Science:**

As early as April 2000, the ECOLOG Institute, which was commissioned by T-Mobile in Germany (parent company to T-Mobile in the U.S.), issued a report on its study of the risks of electromagnetic fields (EMFs) because of the rapidly expanding mobile telecommunications industry. The results were twofold: (1) findings of adverse health impacts associated with exposure to EMFs and (2) strong precautions and warnings to significantly lower the power of the EMFs to which the public would be exposed.<sup>122</sup> The findings included risks of cancer (of the central nervous system and testicular cancer), leukemia, damage to the immune system and cognitive impairments. It found that for all stages of cancer development, power flux densities of less than 1 W/m<sup>2</sup> were sufficient. "For some stages of cancer development, intensities of 0.1 W/m<sup>2</sup> or even less may suffice to trigger effects."<sup>123</sup>

The ECOLOG Institute also addressed the issue of electrosensitivity. It emphasized the importance of developing *"a strategy for the research of the electrosensitivity phenomenon and its incidence, which would acknowledge the failure of traditional scientific methods to address the problem and allow the inclusion of the data available from the self-help groups and associations of the affected."* [Emphasis added]

The Institute also provided precautions for vulnerable populations in "residential areas, schools, nurseries, playgrounds, hospitals and all other places at which humans are present for longer than 4 hours."<sup>124</sup>

In an article, "Why Tech Leaders Don't Let Their Kids Use Tech,"<sup>125</sup> it's reported that technology executives restrict or forbid their children's use of the very technology that they are providing to the public, including "the makers of smartphones and tablets, of social media channels and game boxes." Technology "titans" such as former Apple's Steve Jobs and Bill and Melinda Gates have admitted to placing restrictions on their children's use of technology. Chris Anderson, former Wired magazine editor and CEO of 3D Robotics, said that his kids "accuse me and my wife of being fascists and overly concerned about tech, and they say that none of their friends have the same rules. That's because we have seen the dangers of technology firsthand. I've seen it in myself, I don't want to see that happen to my kids."<sup>126</sup>

**Federal Communications Commission (FCC):** The FCC admitted in 2019 that at least some types of RF radiation can cause instantaneous non-thermal adverse effects with RF radiation frequencies ranging

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<sup>122</sup> Mobile Telecommunications and Health/Review of the current scientific research, ECOLOG Institut, Hannover, April 2000, available at <https://docs.google.com/document/d/1Rd2c900GURf9YYQY-L2MHAFDYGIeT2R1tyMZYQhZTEA/edit>; ECOLOG is a research organization founded in 1991 by scientists from the [University of Hannover](#).

<sup>123</sup> Ibid.

<sup>124</sup> Ibid.

<sup>125</sup> "Why Tech Leaders Don't Let Their Kids Use Tech," <https://kidzu.co/health-wellbeing/why-tech-leaders-dont-let-their-kids-use-tech/>.

<sup>126</sup> Ibid.

between 3 KHz and 10 MHz.<sup>127</sup> Typically, the FCC averages exposure levels over 30 minutes, which completely obscures the effects of the pulsating nature of RF radiation and does not account for 24/7 exposure by the population or the constant pulsations of RF radiation. To obtain a more accurate reading of RF emissions, the maximum power density and peak power density levels per millisecond should be recorded, because adverse health effects arise from the peaking and pulsating nature of RF emissions.<sup>128</sup>

#### **Food and Drug Administration:**

Linda Birnbaum, Ph.D., former Director of the U.S. NIEHS and former Director of the National Toxicology Program (NTP) spanning across the Department of Health and Human Services organizations which involves NIH, FDA and CDC, has stated:

- ***“Effects from [wireless] radiofrequency radiation (RFR) such as genetic toxicity, immunotoxicity, oxidative stress, changes in gene and protein expression, changes in cell differentiation and proliferation, and increased permeability of the blood brain barrier were reported in these [scientific] publications.” (pg. 8).***
- ***“The phase I [NTP] studies established that non-thermal levels (<10C or no detectible change in temperature) of RFR exposure had toxicological implications in biological systems.” (pg. 9).***
- ***“The NTP found and published evidence of DNA damage after only 90 days of exposure.” (pg. 9).***

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<sup>127</sup> Proposed Changes in the Commission’s Rule Regarding Human Exposure to Radiofrequency Electromagnetic Fields, 34 FCC Rcd 11687, 11743-11745, ¶¶122- 124 & nn. 322-335 (2019).

<sup>128</sup> Human-made electromagnetic fields: Ion forced-oscillation and voltage-gated ion channel dysfunction, oxidative stress and DNA damage (Review) (2021) Pangopolous DJ, et al. International Journal of Oncology. August 23, 2021. <https://pubmed.ncbi.nlm.nih.gov/34617575/>.

Computational modeling investigation of pulsed high peak power microwaves and the potential for traumatic brain injury. Sci Adv. 2021 Oct; 7(44). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8555891/>. "These studies reveal that the MAE threshold depends on the energy in a single pulse (not the average power density) for sufficiently short pulses [e.g., 32 µs in (46)], and peak power densities of 102 to 105 mW/cm<sup>2</sup> have been known to cause auditory effects in human participants (45)."

“Diplomats' Mystery Illness and Pulsed Radiofrequency/Microwave Radiation,” Dr. Beatrice Golomb. Neural Comput. 2018 Nov; 30(11):2882-2985. <https://pubmed.ncbi.nlm.nih.gov/30183509/>; “Reported facts appear consistent with pulsed RF/MW as the source of injury in affected diplomats.”

“5G: Great risk for EU, U.S. and International Health! Compelling Evidence for Eight Distinct Types of Great Harm Caused by Electromagnetic Field (EMF) Exposures and the Mechanism that Causes Them,” Martin L. Pall, PhD, <https://peaceinspace.blogs.com/files/5g-emf-hazards--dr-martin-l.-pall--eu-emf2018-6-11us3.pdf>.

Belyaev, I., Dean, A., Eger, H. et al. "EUROPAEM EMF Guideline 2016 for the prevention, diagnosis, and treatment of EMF-related health problems and illnesses." Rev environ Health. 2016;31(3):363-397. Doi:10.1515/reveh-2016-0011.

B. W. G. (2012). "Bioinitiative Report 2012: A Rationale for Biologically-based Exposure Standards for Low-Intensity Electromagnetic Radiation."

- ***“Overall, the NTP findings demonstrate the potential for RFR to cause cancer in humans. The independent peer review of the entire proceedings carried out by toxicologists, pathologists and statisticians independent of the NTP staff conducted March 26-28, 2018, concluded that there was ‘clear evidence of cancer,’...exposure to RFR is associated with an increase in DNA damage.” (pg. 11).***

IMPORTANT NOTE: NTP refers to the National Toxicology Program. Since completion of the \$30 million NTP study (originally sponsored by the FDA to research possible biological effects of RFR), the results have been replicated by the Ramazzini Institute in another study using exposures below the FCC thermal thresholds (simulating emissions from cellular base stations and wireless transmitters).<sup>129</sup>

### **Facts and Statements by U.S. Preeminent Scientists and Experts In the Area of MW/EMF/RF Radiation Research**

As shown by the following facts and statements by the United States’ preeminent scientists and experts in the area of wireless RFR research, it has become well established that wireless radiation exposure produces or has the recognized potential of producing biological effects.

- 1 In 2011, the World Health Organization’s (WHO) International Agency for Research on Cancer (IARC) classified wireless radiation as a Group 2B possible carcinogen.<sup>130</sup> This conclusion was based upon an increased risk of malignant brain cancer (glioma) identified in those who used cell phones for over 10 years for an average of 30 minutes per day.

Anthony B. Miller, M.D., Senior Epidemiologist, IARC, states in a 2018 updated assessment to the 2011 IARC classification of wireless radiofrequency radiation (RFR), ***“When considered with recent animal experimental evidence, the recent epidemiological studies strengthen and support the conclusion that RFR should be categorized as carcinogenic to humans (IARC Group 1).***<sup>131</sup>

- 2 “Since 2011, the scientific evidence linking wireless to cancer has significantly increased and today several published reviews conclude that the current body of evidence indicates cell phone radiation is proven Group 1 human carcinogen (Miller et al 2018, Peleg et al 2018 Carlberg and Hardell 2017, Belpomme et al 2018).”<sup>132</sup>
- 3 Christopher J. Portier, Ph.D., former director of the National Center for Environmental Health at the Centers for Disease Control and Prevention (CDC) and a scientific advisor for the WHO, reviewed the most recent body of scientific research and literature to look at the feasibility of RFR causing specific brain tumors in humans and concluded in March, 2021:

<sup>129</sup> <https://www.saferemr.com/2018/03/RI-study-on-cell-phone.html>

<sup>130</sup> [https://www.iarc.who.int/wp-content/uploads/2018/07/pr208\\_E.pdf](https://www.iarc.who.int/wp-content/uploads/2018/07/pr208_E.pdf).

<sup>131</sup> <https://www.sciencedirect.com/science/article/abs/pii/S0013935118303475>.

<sup>132</sup> <https://ehtrust.org/science/who-iarc-position-on-wireless-and-health/>.

- **"Given the human, animal and experimental evidence, I assert that, to a reasonable degree of scientific certainty, the probability that RF exposure causes gliomas and neuromas is high."** <sup>133</sup>

- 4 Ronald Melnick, Ph.D., retired NIEHS senior toxicologist who won the American Public Health Association's 2007 David P. Rall Award for public health advocacy states:

***"I strongly feel health and regulatory agencies should promote policies that reduce cell phone radiation exposure, especially for children and pregnant women. The agencies in the U.S. say, "if you are concerned" rather than "we are concerned." Agencies should be clear and straightforward educating the public on "here is what you should do."***

***"The risk can be greater for children than adults due to the increased penetration of the radiation within brains of children and the fact that the developing nervous system is more susceptible to tissue damaging agents."*** <sup>134</sup>

- 5 The American Academy of Pediatrics, a non-profit professional organization of 60,000 primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists, stated in a letter to the FCC on July 12, 2012:

***"Children ... are not little adults and are disproportionately impacted by all environmental exposures, including cell phone radiation. In fact, according to IARC, when used by children, the average RF energy deposition is two times higher in the brain and 10 times higher in the bone marrow of the skull, compared with mobile phone use by adults."*** <sup>135</sup>

- 6 New Hampshire formed a State Commission to examine whether wireless radiation is harmful to human health. The majority of that New Hampshire State Commission came to the conclusion that exposure to wireless radiation is harmful to human health and the environment. The commission was convened through bipartisan legislation<sup>136</sup> that was signed by the governor. Commission membership included unbiased experts in fields relating to health and radiation exposure, and they issued their Final Report in November 2020.<sup>137</sup>

- 7 In 2021, the U.S. D.C. Circuit Court of Appeals in *EHT et al v. FCC* ruled that the FCC's 2019 decision to maintain their 26 year old thermal-based exposure "safety" guidelines demonstrated that the FCC was acting in an **"arbitrary and capricious"** manner **"in its complete failure to respond to**

<sup>133</sup> <https://www.saferemr.com/2021/03/expert-report-by-former-us-government.html?m=1>.

<sup>134</sup> [https://www.youtube.com/watch?v=zSx\\_yDzxvM8&t=2295s](https://www.youtube.com/watch?v=zSx_yDzxvM8&t=2295s)

<sup>135</sup> <https://ehtrust.org/wp-content/uploads/American-Academy-of-Pediatrics-letter-to-the-FCC-July-12-2012.pdf>

<sup>136</sup> <https://legiscan.com/NH/text/HB522/2019>.

<sup>137</sup> <http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf>.

*comments concerning environmental harm caused by RF radiation*” below the current FCC limits.<sup>138</sup>

The Court further ruled that, “***The factual premise—the non-existence of non-thermal biological effects—underlying the current RF guidelines may no longer be accurate.***” The Court pointed out that the FCC had ignored the scientific evidence documenting biological harm at non-thermal levels (i.e., at levels hundreds and even thousands of times below the current FCC wireless exposure “safety” guidelines). Indeed, thousands of scientific studies of biological hazards from RFR and hundreds of personal accounts of injuries from RFR were in the FCC docket which the FCC ignored, and which the D.C. Circuit Court of Appeals admonished the FCC that it cannot ignore.

The ruling called into question the underlying basis for the FCC’s extremely high thermal-only “safety” threshold and ruled in favor of health and safety advocates who sued the FCC.

## 8 ***Scientific Evidence Invalidates Health Assumptions Underlying the FCC Exposure Limit Determinations for Radiofrequency Radiation***<sup>139</sup>

The International Commission on the Biological Effects of Electromagnetic Fields (ICBE-EMF) published a paper which reviewed the studies and assumptions made in determining the current FCC limits, established 27 years ago in 1996, and found that those assumptions were incorrect and cannot form the basis currently to protect the public.

In the late 1990s, the FCC adopted RF radiation exposure limits to protect the public and workers from adverse effects. However, they:

. . . were based on results from behavioral studies conducted **in the 1980s involving 40–60-minute exposures in 5 monkeys and 8 rats**, and then applying arbitrary safety factors to an apparent threshold specific absorption rate (SAR) of 4 W/kg. The limits were also based on two major assumptions: any biological effects were due to excessive tissue heating and no effects would occur below the putative threshold SAR . . .

The paper concludes that extensive research on RF radiation during the intervening 25 years shows that the assumptions are invalid and “continue to present a public health harm” with no adequate protections for the general population for short -term and long-term exposures, including children and those acutely affected by exposure.<sup>140</sup>

Adverse effects observed at exposures **below** the assumed threshold SAR include non-thermal induction of **reactive oxygen species, DNA damage,**

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<sup>138</sup> [https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFD7/\\$file/20-1025-1910111.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFD7/$file/20-1025-1910111.pdf).

<sup>139</sup> [https://icbe-emf.org/wp-content/uploads/2022/10/ICBE-EMF-paper-12940\\_2022\\_900\\_OnlinePDF\\_Patched-1.pdf](https://icbe-emf.org/wp-content/uploads/2022/10/ICBE-EMF-paper-12940_2022_900_OnlinePDF_Patched-1.pdf).

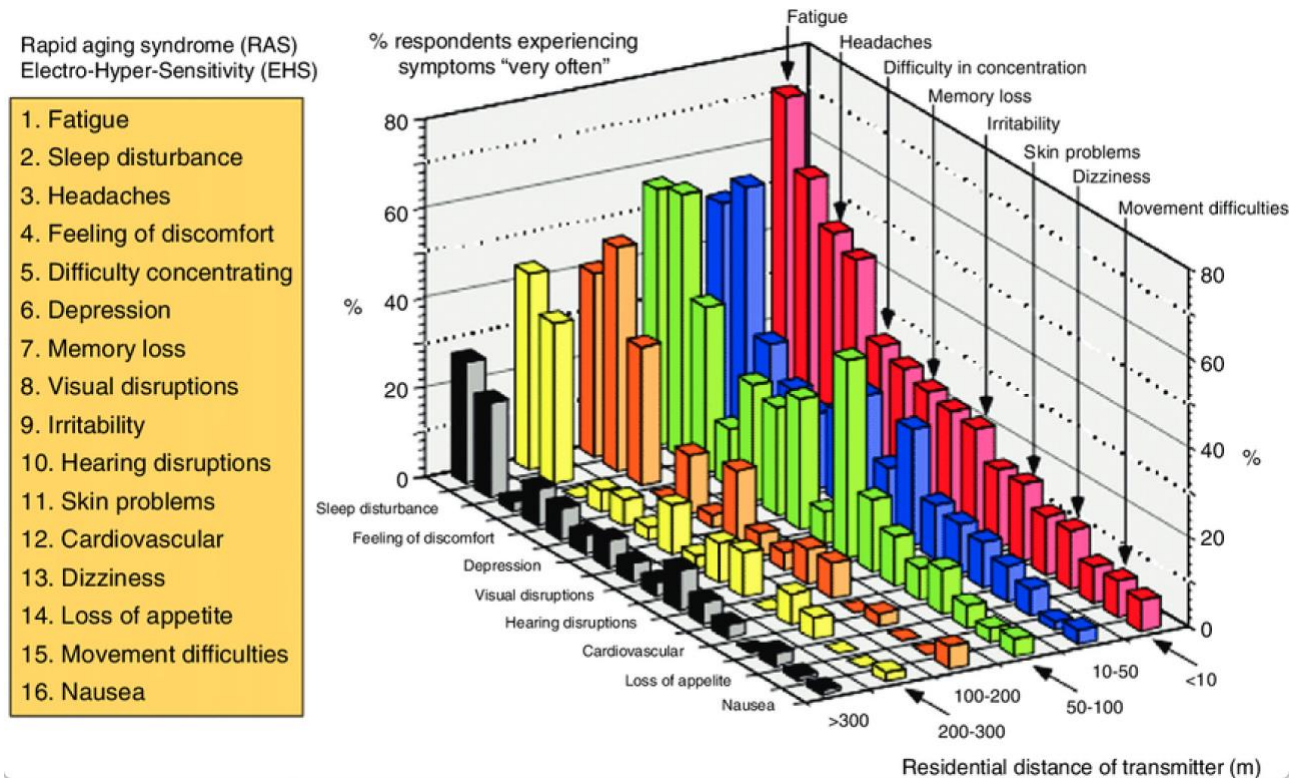
<sup>140</sup> Ibid.

**cardiomyopathy, carcinogenicity, sperm damage, and neurological effects, including electromagnetic hypersensitivity . . .**

The paper makes an urgent appeal for much needed “health protective exposure limits for humans and the environment.”<sup>141</sup>

**Neurobehavioral Symptoms Near Cell Towers<sup>142</sup>**

The following chart shows a worsening of symptoms when closer to a cell tower but a lessening of symptoms when farther away from a cell tower.



Symptoms experienced by people near cellular phone base stations; RF radiation affects the blood, heart and autonomic nervous system.<sup>143</sup> Source: Santini, et al (France): *Pathol Biol.* 2002;50:S369-73; Dr. Magda Havas, PhD.

There have been numerous reports of adverse health effects from RF radiation and cell towers that have been placed in close proximity to people, either at their residences, businesses or other areas which they frequent.<sup>144</sup> The relevance of this for the UDC is that cell towers placed in the UDC can have similar

<sup>141</sup> Ibid.

<sup>142</sup> *Cell Tower Health Effects*, Physicians for Safe Technology, <https://mdsafetech.org/cell-tower-health-effects/>.

<sup>143</sup> Dr. Magda Havas, [https://www.researchgate.net/figure/Symptoms-experienced-by-people-near-cellular-phone-base-stations-based-on-the-work-of\\_fig2\\_258313941](https://www.researchgate.net/figure/Symptoms-experienced-by-people-near-cellular-phone-base-stations-based-on-the-work-of_fig2_258313941).

<sup>144</sup> *Cell Tower Health Effects* <https://www.saferemr.com/2015/04/cell-tower-health-effects.html>, Center for Family and Community Health, School of Public Health, University of California, Berkeley.



effects for any residents or visitors seeking to continue to partake in the recreational activities that the UDC offers.

Public exposure to RF radiation is chronic – 24/7, 365 days a year. Therefore, there is an entire spectrum of conditions produced ranging from neurological and immunological disorders to DNA damage (a precursor to cancer).

## APPENDIX C

# INCREASED EXPOSURE FROM 5G/4G "SMALL" CELL ANTENNAS LOCATED CLOSE TO PEOPLE

A study entitled "[Very high radiofrequency radiation at Skeppsbron in Stockholm, Sweden from mobile phone base station antennas positioned close to pedestrians' heads](#)" published in *Environmental Research* by Koppel et al. (2022) created an RF heat map of RF measurements, finding that the highest RF measurements were in areas of close proximity to the base station antennas. The researchers concluded with recommendations to reduce close proximity placements such as positioning antennas "as far as possible from the general public" like in high-elevation locations or more remote areas.

A study entitled "[Measurements of radiofrequency electromagnetic fields, including 5G, in the city of Columbia, South Carolina, USA](#)" published in the *World Academy of Sciences Journal* found the highest RF levels in areas where the cell phone base station antennas were placed on top of utility poles, street lamps, traffic lights or other posts near to the street. The scientists compared their [2022 findings](#) to an earlier [2019 published review](#) on the mean outdoor exposure level of European cities and they found the South Carolina measurements to be higher.

The researchers concluded that the highest exposure areas were due to two reasons: cell phone base antennas on top of high-rise buildings provide "good cell coverage reaching far away, but creating elevated exposure to the radiofrequency electromagnetic fields at the immediate vicinity; and cell phone base station antennas installed on top of utility poles have placed the radiation source closer to humans walking on street level."



Figure 7. Gervais Street: Cell phone base station antenna placed close to street level and causing high exposure to pedestrians and nearby café visitors (exposure scenario illustration). The antenna appears camouflaged and seemingly part of a utility pole. The measurer only discovered the antenna due to the high radiofrequency levels in the vicinity.

**Appendix D**  
**THE EMS DISABLED – IN THEIR OWN WORDS**

Note: Some names have been truncated, changed or anonymized to protect individuals' privacy.

October 3, 2023

To Whom It May Concern,

In 2009 my husband bought me an iPad for Christmas. I loved it and was on it a few hours every day. Within a few weeks, however, I noticed that I would be nauseous after using it. I set it aside and have not picked it up since.

Soon afterward, I became aware that I was sensitive when texting on my Blackberry which gave me the feeling of sharp metal shards in my fingertips. It was affecting my manual dexterity. I now use a corded landline phone and mail for most all my communication. I cannot use wireless devices without adverse health effects. Myself, and others like me, need to have alternate ways to communicate (landlines, hardwired devices, mail) because wireless negatively impacts our health.

D.S.  
EMS Disabled, Colorado

~\*~

Department of Justice, Civil Rights Division  
28 CFR Part 35, CRT Docket No. 144, AG Order No. 5729-2023, RIN 1190-AA79  
Nondiscrimination on the Basis of Disability; Accessibility of Web Information and Services of State and Local Government Entities  
Notice of Proposed Rulemaking

October 1, 2023

Department of Justice:

Thank you for this opportunity to share my response to the NPRM with you.

I have been disabled by environmental exposures since 1981. For the first years the electromagnetic hypersensitivities were especially painful and disorienting, but I learned to adapt to the dystonic symptoms (falling, clenched muscles, losing my ability to speak) by taking certain measures. For example:

- a.) I avoided sidewalks with overhead power distribution lines;
- b.) never crossed Market or Mission Streets over the Bay Area Rapid Transit train lines;
- c.) never approached S.F. General Hospital from the front, to avoid power generators under the street;
- d.) I avoided being anywhere that was line-of-sight from Sutro tower;
- e.) walked/rolled along the outer edge of the sidewalk, as far as possible from neon signs in shop windows;
- f.) other measures, many others.

It took several years but I learned to use my wheelchair, attendant, driver, and oxygen to go out. My neurology was severely damaged but sometimes I just risked the hit.

These and numerous other adaptations I learned by experiment. I'd never heard of anyone whose disability was "triggered" like mine was. For years, in no way could I explain the invisible barriers and constraints that held me back, except that they coincided with electromagnetic and radiofrequency exposures.

Eventually I found a support group for people with environmental illnesses, and began answering the "warm line" I&R calls from dozens of other people who'd been traumatized and isolated by environmental factors. I was learning some valuable principles from the S.F. Bay Area disabled community, too.

In more recent years, friends helped me move to the remote high desert in Arizona. I have a small, safe enough house, with a landline-wired phone and computer, and a long driveway where numerous electrically and chemically sensitive guests have camped or parked after they've become hypersensitive, unhoused, and without work or family for the first time.

There's a lot to get used to, primarily the estrangement from everything we loved and thought we knew. Despite the numerous promises of the A.D.A., people with environmental illnesses have no access to "public" programs and facilities like hotels, housing, homeless shelters, vocational and occupational rehab, hospital and medical care, the bank, taking classes, most shopping or chores, the sidewalks.

I can get around a lot of the time now, and think relatively well enough to take care of the daily needs. I have a hard-wired lap-top computer, shielded in metals, and can now do Word, e-mail, and print.

The old-fashioned electronics that first disabled me posed terrifying barriers but in retrospect they seem simpler, once I learned that they were "only" extremely painful, debilitating, and alienating. I could lessen their damage, to some degree, by isolating myself.

But now?

Now there doesn't seem to be a way to defend myself from the new communications technologies like cell phones, and I expect this will be made worse by 5-G. It took hard work to opt out of having a "smart" meter installed on my own house. There is hardly a single place to go, certainly none in public, to get far enough away to avoid aggravating the neurological problems. I don't know where else to live.

People who are ignorant about our situation invariably suggest that we "just" (like it is simple) get cell phones, use computers to work from home, for medical or legal appointments, and to order our food and other necessities. It is suggested that we could expand our social interaction through Facebook or similar.

This assumption that we can "hop on" computers or cell phones for daily tasks is dead wrong. It reflects extreme naivete to assume that we can be in a room with a computer for more than a few minutes if at all, or use cell phones, for example, to call for help when there is a fire, injury, assault, or a vehicle wreck. Only phones with real wiring are safe and don't hurt to use, same with computers.

Activities that are inaccessible now, due to wifi, include going to parks, campgrounds, and the library. I can't enter Lowe's, Home Depot, Ace, or most other stores without being overcome by their wifi.

I used to use an outdoor ATM machine, but now it hurts, and the flashing pictures and movement on the screen make it all but unusable. Managing inside the bank, by myself, is out of the question.

There is one public pay phone where a person can call out with coins in my town. It is in front of Circle K, surrounded by fluorescent lights and gas fumes, and a person should never go there after dark.

I get terribly disoriented using the computer to send for things, so my landline phone is the only option. I'm very concerned that the phone company where I live might switch to cellular only. That would mean no phone, no computer. Some of us are increasingly isolated by this true and actual "digital divide".

A lot of the roads out where I live are slick mud when the washes run, during monsoon. Last time I called Triple AAA Premier, they wouldn't help me because there was no cell phone I could use.

Same when I needed to reset my computer after it got hacked. The Communications Company wouldn't help because I didn't have a cell phone they could call.

The NPRM says it aims to improve the lives of people with the four relevant disabilities, but thousands of the rest of us have disabilities that we actually do find extremely relevant. It is wrong to allow the technology that means life or death to us (wired phones for example) to be made even less available than it already is.

Susan Molloy  
Snowflake, Arizona 85937

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Department of Justice, Civil Rights Division  
28 CFR Part 35  
CRT Docket No. 144, AG Order No. 5729-2023  
RIN 1190-AA79  
Nondiscrimination on the Basis of Disability; Accessibility of Web Information and Services of State and Local Government Entities  
Notice of Proposed Rulemaking

September 29, 2023

Dear Department of Justice,

I am a disabled individual writing to express the devastation that I currently suffer due to wireless technology and electronics. It will become even more life-threatening, just impossible to endure, with any and all expansion of wireless technology.

I am elderly and frail, and have severe mobility impairments which are made much worse with exposure to electronics, any electrical devices that are "smart" – those marketed (falsely) as "saving energy".

The energy-saving features are advertised to promote sales but the reality is that they create electromagnetic fields and radio frequencies that travel on every wire inside a dwelling.

There is a growing body of evidence showing harm to humans. The sources of harm, among many others, include appliances, new "energy saving" light bulbs, heart monitors and certain other medical devices, and the so-called "information technologies" like routers and modems

I fall easily. I have severe osteoporosis. A conventional "Life Alert"-type personal wireless necklace would pose an enormous medical threat to me.

I am concerned about losing my copper landline phone. It is the only form of communications that I can tolerate in my house due to my disability.

Without my copper landline phone connection, which is known as "POTS" (short for "plain old telephone service"), ***I will have no way to access emergency services such as the ambulance, my doctor, EMTs, or personal care workers.***

***My landline is my lifeline.***

***It is my only connection to the outside world. It is medically necessary that I am able to keep it.***

I reside in an older home that my parents built. My inheritance is a life estate here. I have been fighting for nine years to keep my old analog electric meter. I am not able to tolerate “smart” meters. This home is my one and only refuge.

No elder-care facility or nursing home is safely accessible to me.

Accessibility for people with disabilities does not include only mobility, sight, hearing, cognitive, and manual dexterity impairments. It includes access for all disabled individuals.

We need accessibility not just publicly but within our own private residences. We should not have our lives snuffed out by 5-G antennas beaming into our private residences.

We need electricity and appliances that are safe, not monitored with “smart” meters. We desperately need our copper landlines so we have communications without RF Radio Frequency and harmful harmonics injuring our brains.

My physician has written over and over that if my sensitivities/disabilities are not accommodated, I cannot survive.

Please step out and help me have accessibility accommodations so I can have a chance to survive.

***I urge you to consider this letter a plea for my very life.***

Thank you for your assistance in this life and death situation.

Sincerely,  
D.D. - Pennsylvania

~\*~

## Personal Statement

Oct 3, 2023

**Nancy Van Dover, DVM, OMD, Dipl Acup**

As a person with EMS (electromagnetically sensitive) disability, I would like you to understand how critically important safe communications are for our large, and very “relevant”, disabled class. We need to be able to communicate through the mail, corded landline phones and for those who physically can – internet on wired computers. Public access has not been possible for me for four years due to ubiquitous wireless radiation. For me, this RF radiation exposure is life threatening. So, I cannot go to offices to do business or get information. I do not even have safe in-person medical care although I pay for Medicare.

Telemedicine on my wired computer, and Home Health--- with accommodations to have no wireless brought into my EMS-safe home---are my only options.

*QUESTION: I need to know if your proposed rule will reduce or eliminate my ability to receive safe Home Health or Paramedic accommodations where paper records are used instead of a laptop, tablet or cell phone by the third party coming to my house?*

My life was threatened, when my previously safe home was put in the path of new cellular emissions. It is in direct line of sight to my home. On January 23, 2020, presumably the date on which cellular antennas were altered or activated, I started to feel many of the symptoms I would get when I had tried to go into areas with wireless technologies. I was experiencing brain (cognitive) and heart symptoms, in particular. Although already suffering from EMS disability to a degree, I had never experienced symptoms of the magnitude I experienced beginning on January 23, 2020.

I got my radiofrequency (RF) meter out to check the levels in my house. It was too high for me and steadily increased over a two-week period forcing me to purchase RF shielding for my house. That two-week overexposure made me sicker than I had ever been with EMS, so I tried to reach out for some type of medical assistance. None could be found to come to my house, there was no safe place for me to be taken so Paramedics were called to check on me. I told them by phone, I would only permit them if they followed my EMS-safe protocol; as few people and vehicles as possible, no wireless devices allowed.

Three Paramedics and five deputies (including the one I had given detailed instructions to) came but did not follow my protocol, were totally ignorant of this condition and injured me even more with radiation they had on their belts. I had a hard time even getting them to back away. When the Paramedics tried “airplane mode” for their phones, they still emitted 200x’s more radiation than what was safe for me. After their “visit” the EMS heart arrhythmia worsened and



my BP remained very high for weeks, insomnia became severe, chronic migraine developed again, my immune system was depressed. I did not think I would make it through the night.

It is apparent that First Responders, medical practitioners, and others, need to become aware of this disability and taught about EMS-safe protocol---to understand what a medical alert bracelet related to this disability means. My own medical instructions include not to put me in an ambulance or to take me to a medical facility that is not EMS-safe.

*QUESTION: Will this proposed Rulemaking make it even more difficult for people with EMS disability to get EMS-safe medical care? Will this force medical professionals to only use wireless in record keeping and communications, for instance? Will it make it impossible for law enforcement to remove their wireless devices when coming onto the property of an EMS disabled person?*

The medical “Standard of Care” cannot be based on wireless equipment and record keeping. Law enforcement and First Responders also need to be free to make accommodations by removing wireless devices.

Accommodations for people with EMS disability must be encouraged and enabled by the DOJ. Title I, II and III entities need to be instructed to do this with EMS-safe protocol and adequate Building Guidelines to wire record keeping, as well as security and internet systems so at least part of the building can be safe for this portion of the population.

Just as you are trying to assist four disabled classes in this rulemaking, the EMS disabled class must be considered “relevant” for communications that are safe and efficient, especially considering there is usually no option to go in person. Many people, including myself, when exposed to EMF’s (electromagnetic fields) develop blurry vision, severe tinnitus, cognitive impairment, and some complain of manual dexterity problems, like numbness and prickling sensations in their fingers.

More access barriers to services need to be removed, not erected, so an EMS disabled person can have their legally protected access. Improving, not reducing, phone and mail communications is needed by more and more people disabled by EMS.

Thank you for reconsidering during your rulemaking, making this disabled class relevant and our communication requirements as important as all other citizens.

~\*~

### **Anonymous**

I have cognitive and manual dexterity disabilities. I have a brain injury that causes cognitive and neurological problems. When I’m close to wireless devices, or near wireless devices for a length of time, I have intolerable pain in my head, I become incoherent in my conversation, my voice becomes slurred, I cannot walk straight, my limbs curl inward, it becomes difficult to use my arms and legs, and I experience excruciating pain. These symptoms occur, or get worse, when I’m near wireless internet and apps, and when I move away from these the symptoms either go away or significantly diminish.

I had a mental health crisis and called my county's crisis management line. I told them I could not be near wireless devices, and I needed ADA accommodation. Though they concluded that I needed crisis help, they said they would not meet me without their staff using their wireless internet and apps. I was prevented from getting services in a crisis because of wireless apps and internet.

A couple years previous to this, I asked to meet with my county representative, and as a reasonable accommodation, I asked to meet in a room where there wasn't wireless technology because of my symptoms in which I can't function. They said they could put me in a room without wireless technology; however they couldn't control the rooms adjacent, which had wireless internet. When I met with him, my symptoms that flared, as mentioned previously, were on the edge of getting intolerable, and I mustered through the meeting. At the meeting, the representative said a few times that he could not get me information as he would need to get on wireless communications in order to get me the information. After the meeting, I was so ill that I was incapacitated for a few weeks with symptoms including: pain in my head that so severe that I couldn't function, my head swelled, I couldn't communicate my thoughts, I was dizzy and couldn't take showers, I stumbled when I walked, my memory and concentration were diminished. Though I wanted to follow up with my representative, I couldn't follow up, as it required me to get on emf emitting technologies to get back in touch with the representative. My representative asked that I follow up with him with information; however I was unable to even call him because I could no longer get near any emf emitting device.

For a couple years when I could not use touch pads at grocery stores, as getting near them would create severe pain, and the debilitating symptoms I mentioned above. They would make me feel dizzy, nauseous, my thoughts began to feel extremely confused, and I had to get away from them as fast as I could, as these symptoms were debilitating. I also couldn't go in and out of many grocery stores,(as well as other stores,) as being near the wireless internet and apps that the grocery store uses made my disability worse with the symptoms I've described. The excruciating pain, the dizziness, and cognitive and dexterity impairments became severe. Many times, I stopped going to many grocery stores altogether as the symptoms were too severe to tolerate. I had to get someone else to get me groceries. I have a friend who had the same problem, however she would faint, and also had to stop going into the grocery store, as well as other stores.

I made an appointment with an orthopedist's office as I fractured my foot. The doctor's office, though a very large business, would not accommodate me because they said they would not use any protections for me on any of their wired apps and web-based services. I was prevented from having medical help to get my foot properly x-rayed and treated, and never saw an orthopedist. Instead I had to heal my foot at home without any foot doctor.

I have this same issue with a dentists' using wireless apps and internet, and would not offer me any ADA accommodation, and I have not been able to see a dentist in 3 years.

S.B. – North Carolina

~\*~

Below is a letter from “Helen” sent to several City and County officials in Colorado, seeking help with housing. She did not receive any help even though they are building new senior, low-income housing using federal money. This disabled class cannot be ignored any longer. Lives are at stake and our federal government has a duty to protect their citizen’s rights, to make sure that at least a safe home can be found.

~\*~

**Anonymous**

February 2, 2021

To Whom It May Concern,

I’m a 66 year old single woman who became EMS (electromagnetically sensitive) from exposure to EMF’s at several of my jobs.

The job where I had the most long-term exposure was when I was a professional Optician in a medical center in Boulder, CO. I operated a large machine that cut eyeglass lenses. Over time I got too ill to work. I lost my livelihood, my condo, my retirement savings, my partner, my well-being.....

I don’t have much of a life because avoiding EMF’s is very time consuming and limiting. The EMF’s adversely affect my brain and my sleep making me EMS Disabled.

I got ill 18 years ago and it has left me in poverty, isolation, and I have a big loss of freedom, feeling safe, and feeling well. I have no family that can help me. I need help and protection from EMF’s as I find it impossible to feel better living in housing that isn’t EMF safe.

In my subsidized apartment I get bombarded from high levels of RF’s coming from my neighbor’s wireless devices; It’s like being forced to breathe second-hand smoke. And, I also have high levels of magnetic EMF’s surging randomly from my circuit breaker in a 14 foot radius. Then much of my apartment is not usable, the kitchen, living room, and bathroom. I need to live in a low-income house where I can avoid neighbor’s EMF’s and where I can have more control over reducing EMF’s.

I want to move back to Colorado, and desperately need an EMF safe place to live, walk, and hopefully a road that doesn’t have strong cell tower signals on my way to the grocery store.

Thank you.

~\*~

**Lauren, Upper West Side, Manhattan**

My name is Lauren and I live on the West side of midtown Manhattan where I have lived for many years.

On Feb. 21, 2020, nine “5G” cell towers began operating across the street from my apartment on the roof of 325 W. 37<sup>th</sup> St., approximately 40-90 feet from my apartment windows. I had a safe place to live before cell towers were installed, changing my life overnight.

During the two weeks following the start of their operation, I experienced severe symptoms, which my doctor confirmed:

- Constant tinnitus
- Shortness of breath
- Increased pain in eyes, limiting visual function
- Insomnia
- Severe migraines
- Burning skin
- Palpitations
- Vertical disturbances through cranium and occipital region simultaneous with horizontal intercranial disturbances extending through the ear canal and sharp stabbing pains extending into all 4 extremities

When I entered my apartment, within minutes my symptoms would increase, with severe damage and pain to my central nervous system. My apartment was no longer safe. I would awaken in the night, gasping for breath.

On March 11, 2020, within a month of the initial occurrence, I secured temporary housing.

Since I've left that apartment, my sleep has been restored. Unfortunately, the injuries I sustained have remained. I'm physically weaker, collapsing every day, a sensation of being neurologically sliced and burned. Migraines are more easily triggered, with nausea and heightened sensitivity to light.

Passing by a set of rooftop cell towers is painful. My ear canal intensifies with the sharp energy moving through my head. My heart races, and feels pushed in, creating a sense of suffocation. It feels like a brush of thin metal bristles pressing into my skin.

I am not alone in being injured.

~ ~ ~

### **Jack, Bensonhurst, New York**

There are times when the nerve ending pain I feel, caused by the microwave radiation coming out of the smart meters that have been placed in my building where I live, can be excruciating. Like if someone stuck an ice pick in my ear. Or someone took a whip across the cheek of my face. Or an electric shock deep within my spine. Other times, I can feel my nerve endings burning. A burning, pinching, sensation that I have felt in just about every part of my body at one time or another. From my back and along my arms to my eyes and even my genitals and rectum. The residue from these burning, pinching, sensations would linger throughout the day long after I left my apartment.

Then there were times that I would get cramps in my calves or my chest, making me feel as if I was getting a heart attack. Sometimes my hands and fingers would cramp up, literally becoming disfigured with a muscular distorted look - like I was in a science fiction horror movie. My doctor told me, it's because radiation can change the structure of DNA.

I have felt similar electric currents in many places other than my apartment. Like the laundromats, drugstores, and restaurants in my neighborhood. The painful results have been the same as in my apartment, and sometimes with headaches and dizziness boarding on nausea.

People have asked me, "How do you know it's the meters doing this to you?" Because the first day I experienced these painful sensations, not knowing what was going on with me, I wanted to make an appointment to see my doctor. I looked at my calendar to check the date when she would be in – the day was June 11<sup>th</sup>, 2018. A few days later, I got an e-mail from Con Edison, congratulating me for updating my electrical meter on June 11th to a smart meter. That's how I know for sure it was the smart meter.

The worst part about all of this, regardless of how many family and friends you might have, there is absolutely no one who can help you. The experience of isolation is like being a character in a Kafka novel.

~\*~

#### **THE GILARDI FAMILY, PITTSFIELD MASSACHUSETTS**

The children of the Gilardi family experienced severe symptoms when exposed to RF radiation from a cell tower that had been installed in their neighborhood, Amelia then 13 years old and her younger sister. This story shows just how vulnerable children are to radiation. Courtney Gilardi, the mother, describes the situation:

“My little one had headaches, dizziness, and felt like her head was ‘buzzy.’ She also suffered from the sensation that her skin was crawling and was itchy when she was in her room, which was on the side of the house closest to the cell tower. She complained of stomach aches and a once voracious eater and a like-clockwork sleeper could do neither. Since the tower was activated, she has lost her appetite for food and complained she couldn't fall asleep. Those were never issues in the past. She also suffered with horrible nightmares. She would toss and turn and scream out. I only realized how often she did this after we moved to the cottage [in a different town away from the cottage] and she slept peacefully through the night.”

The cottage Courtney is referring to is the unheated cottage they have rented so they can escape their home which they hope and pray they can return to, but much of that depends on a federal judge's decision. The cottage does not have hot water so Courtney and her family return to their “tower home” for a hot shower, but it is a place they can sleep through the night.

“When we would spend too much time at home, my little one would ask to leave and go to the cottage,” explains Courtney, describing how they would return to the house to get clothes, take a hot shower, and be with their toys and amenities they enjoyed and never contemplated leaving until Verizon became their unwelcome neighbor. “She would say, ‘I'm ready now’ and we knew despite mentally wanting to stay in her own room with her toys, ‘lovies’, fort, books and the only home she had ever known, that physically she knew her body felt better spending time in a rundown cottage where the only thing she had was a mattress on the floor and many mice for company.”

“At our home by the tower, she would lay down on the kitchen bench with her legs curled up to her stomach with red, puffy eyes, looking miserable, sleep deprived and not feeling herself. She would be so

nauseous that she missed school, which led to her losing confidence as she felt she was falling behind in her studies,” describes the mom of two. “Despite being one of the top students in the class, she felt like she had missed so much and felt ill so often and felt that reflected in her work, that she chose to not take the 5th grade MCAS testing.”

“One day, within 10 minutes of going to school, she vomited into her face mask. It wasn't the first time it would happen. She would sleep with a bucket besides her bed and both her dad and I would take turns holding her hair back.”

Amelia testified at a town meeting with her mother showing the various medications Amelia now takes, and the pan she would keep at the side of her bed when the waves of nausea were intense and sudden.

“Amelia would get dizzy. She is my ice skater and gymnast with great balance, and I would watch her walk into walls,” describes Courtney. “Sometimes she would vomit in the middle of the night and I'd hear her little voice besides me in the dark by my bedside saying, ‘Mama, I'm sick. I just threw up in the sink.’ “Sometimes she would get headaches. She would be dizzy.”

It was Earth Day, 2021. Based on the children's classic *Alexander and the Terrible, Horrible, No Good, Very Bad Day*, Amelia Gilardi rewrote and retitled, for purposes of Earth Day, the story based on a challenge faced by her family and her community in which the environment plays a central role. “5G Earth Day Countdown: Children — Amelia's Terrible, Horrible, No Good, Very Bad Cell Tower Days” was an ode to her community and in so many ways, it spoke to a much broader audience.

*My name is Amelia and I am 13 years old.*

*A Verizon cell tower blindsided my Pittsfield, Massachusetts neighborhood and made us sick. This is my story ...*

***The really bad, worst, no good bad part –***

*We learned that we were not the only ones harmed by cell towers. We were put in touch with Noah Davidson's family in Sacramento California. Both their girls, like us, got sick when a 5G tower was placed outside their bedroom window. No one listened to them either.*

*Mom learned about a boy, my age in Canada, also harmed by wireless radiation since he was 5 years old. They made a movie about him and others who were harmed, called Prisoners without Walls. We talked and I learned he liked the same book series. He loved playing video games. He spoke French and liked making videos.*

*We started meeting families from all over with everyday kids, like us, who had been harmed from wireless radiation either from cell towers or mobile devices. Why, if so many people were being hurt from this, was no one helping them?*

*So the truly bad, no good part is that the science is here but our legislators simply are not responding fast enough. Dr. Paul Heroux, Dr. Martha Herbert, Dr. Magda Havas, Dr. Cindy Russell, Dr. Sharon Goldberg, Theodora Scarato, Cecelia Doucette and many others have tried to educate Pittsfield about these issues. They have been silenced at meetings, and any letters from them or offers to present information or assist with an investigation have fallen on deaf ears.*

*My mom would ground me if I was told not to do something and I kept doing it over and over. I've heard my grandma say, "When we know better, we do better."*

*Big people, we know better. Please, do something. We never thought this could happen to us so please, don't wait until it happens to you.*

*I'm asking everyone who is reading this to **advocate for cell tower setbacks away from schools and homes**. I'm asking everyone to require the FCC standards that fail to protect us from biological harm to be updated. I'm asking you restore my neighborhood to the safe, residential place it was before the tower, and I am asking for each and every person to care about the wireless safety issue.*

*Our people, our pollinators and our planet depend on you.*

*Amelia*

~\*~

Department of Justice, Civil Rights Division  
28 CFR Part 35  
CRT Docket No. 144, AG Order No. 5729-2023  
RIN 1190-AA79

Notice of Proposed Rulemaking: Nondiscrimination on the Basis of Disability; Accessibility of Web Information and Services of State and Local Government Entities

September 29, 2023

To the Department of Justice:

In 2006, I was diagnosed and treated for the Environmental Illnesses of chemical and electromagnetic hypersensitivities. I was declared 100% disabled at that time. Until then, I had worked full-time for six years as a medical social worker, in Bowdle, South Dakota.

In 2016 my husband and I purchased the rural acreage where we now reside, in the High Desert.

My health improved the longer we lived here.

Then Arizona Public Service, our electricity provider, installed a smart meter on our property on May, 14, 2018.

My health did a 180 downward spiral.

I now live with excruciating pain 24/7, rapid blood pressure drop, weakness, and tremors to name a few symptoms that occur daily. I am unable to live a normal life. My disability worsens as the neighbors all receive smart meters, and more cell towers, antennas, and smart phones enter our living space.

Arizona Public Services' policy is that anything that is not a residence is a "business" and will have a smart meter installed on it as part of APS' equipment enhancement/improvement program.

Due to my reactions to the electromagnetic and chemical exposures, I am unable to enter businesses, the doctor's or dentist's offices, the hospital, stores, or my church and cannot visit friends or my family.

For brief periods, I can use a modified lap-top computer, wrapped in a fabric that somewhat lessens emissions. My husband may be able to build a metal container to keep the modem in.

Going to the bank, for example, is no longer possible because I get sick from the wifi and computers. Passing by the ATM machine in the lobby, or going into the drive-through, lowers my heart rate then I feel what my doctor describes as "ice pick" pain all over my body. In addition I lose track of what I'm doing.

I haven't been able to drive since 2018 when the smart meter was installed. Until last week, once a month my husband drove me into town so I could go to the grocery store, and that was the only time I'd ever get out of the house.

There are two grocery stores in our town. One is a huge chain store I never even tried to go into.

The other one, however, I could manage and I enjoyed it enormously. Once in a while I'd run into someone I knew at the store and if they would turn off their cell phone, we could visit.

Last week I felt terribly sick immediately walking toward them into the store. Something felt very different there.

I did what I could to shop, but by the time I reached the check-out line I was sick. I asked the check-out clerk if she was wearing a smart watch. She said no. I asked if she had a smart phone and she said yes, in her drawer. I asked her to shut it off please, which she did. I asked her what was different in the store, because I was in so much pain, becoming seriously symptomatic, and lost my balance.

She said that management had just upgraded all their computer equipment throughout the store. The self-checkout computer equipment is upgraded too, and so is the customer service desk. This monthly excursion has come to an end.

What I miss the most is that since 2018 I've been unable to go outside my house into the pasture (51 acres) for weeks at a time to brush my horse, due to the smart meters on the neighbors' houses. Now I visit her through the window.

Our smart meter was disabled when lightning struck the power pole. We strongly asked again for an analog meter to replace the smart meter but we were denied.

What was called a "non-emitting meter" was then put in place, and it caused me the same symptoms as the smart meter. It was placed on our well house, 3 football fields from our residence. Our residence, according to APS, has an "analog" meter. We do not believe this to be true as I have the same symptoms.



We had to put specialized filters on our home wiring that extends to the electric box on the pole outside. This is the only measure that has allowed me to remain in our home at present.

Chemical and Electromagnetic illness are both very disabling. Usual outcomes for recovery are very slim. It can be deadly.

My worst nightmare is yet to come, as 5-G will soon be in our area. My symptoms are worsening over time.

Sharon Casjens

Snowflake, AZ

~\*~