The Social and Spatial Distribution of Wireless Radiation in Greater Hartford, Connecticut

Presented on behalf of Hartford Coalition for Safe Technology (Last updated April 2023)

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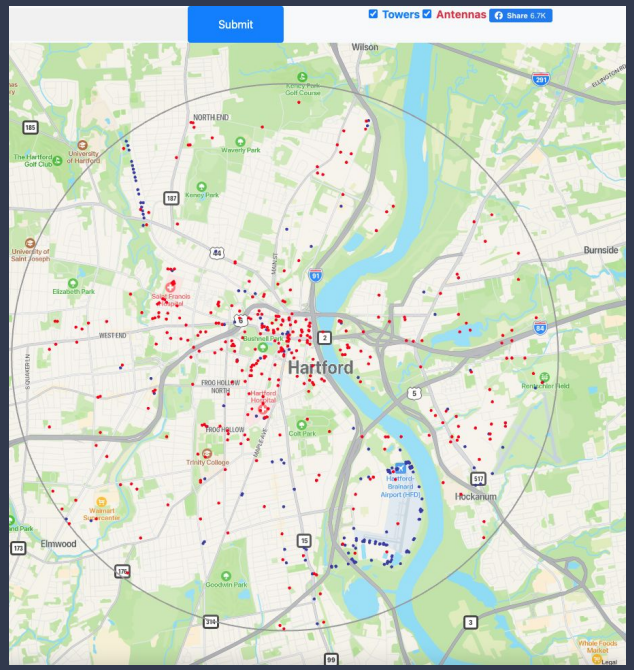
A Case Study of (and Around) Hartford

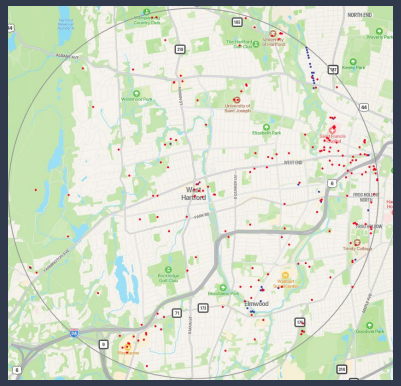
What level of radiation are Hartford residents exposed to? How does this compare to other municipalities?

How is wireless radiation distributed across geographical and sociological space?

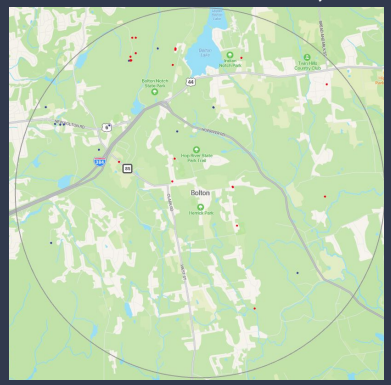
within a 3 mile radius of...



Hartford: 259 Towers 848 Antennas



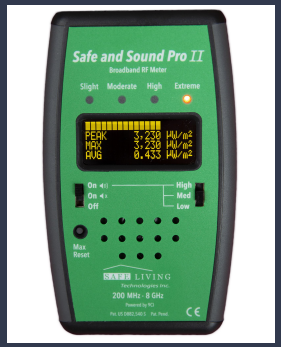
West Hartford: 70 Towers, 370 Antennas



Bolton: 26 Towers, 125 Antennas

	Towers	Antennas
Andover	10	9
Avon	27	247
Bridgeport	102	445
Bloomfield	48	179
New Haven	112	667
Simsbury	33	110
Warren	0	14
Windsor Locks	348	244

antennasearch.com (accessed April 3, 2023)



About the following measurements:

RF measurements taken with a professional RF Meter (Safe and Sound Pro II) on April 3, 2023 between 12-5PM by R. Stephens. Readings were recorded on/around the sidewalk *outside* the main door of each school (and therefore represent a very rough approximation of the environmental radiation in that area, *before* accounting for that which is present inside the school itself). The meter was filmed with an android cell phone while in airplane mode with all radio signals turned off (and Rachael was not holding nor standing beside any known wireless devices, including cars with GPS). Still, since numerous factors were not controlled (e.g., exact distance to front door, precise time of day, presence of surrounding traffic, etc.), these should only be treated as anecdotal evidence.

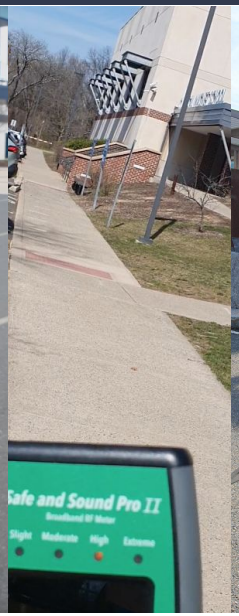
Measuring Radiofrequency (RF) Radiation

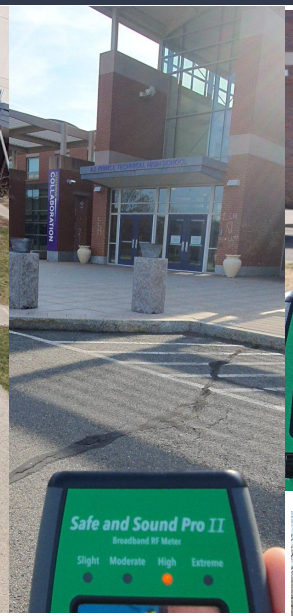
Power Density (microWatts per square meter)	Safe and Sound Pro II	FCC	Physicians for Safe Technology	Building Biology Institute
< .1	Green flashing ("Slight")	"Safe" (for average adult male of 6ft and 200lb, for 30 minute, based on heat or thermal damage)	No Concern	Safe
.1-10	Green flashing/Green ("Slight")		Slight Concern	Unsafe
10-100	Yellow-Orange ("Moderate")		Severe Concern	
100-1000	Orange-Red ("High")		Extreme Concern	
1,000-10,000,000	Red ("Extreme") Red flashing ("Extreme")		Extreme Concern	
10,000,000+	n/a	Unsafe	n/a	

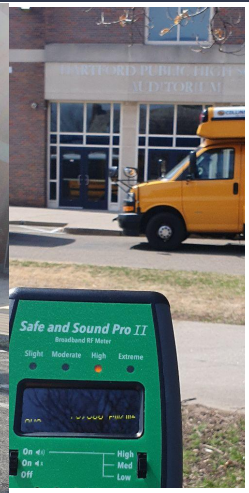
Hartford Public Schools: Elementary/Middle

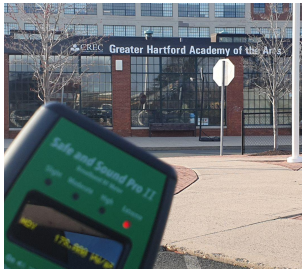
School	RF Category
Webster Microsociety Magnet	Moderate
West Middle	Extreme
Breakthrough Magnet School	Extreme
Whitning Lane	High
Jumoke	Extreme

Hartford Public Schools: Secondary





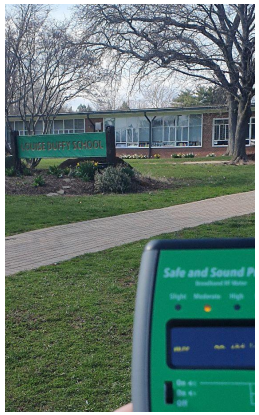


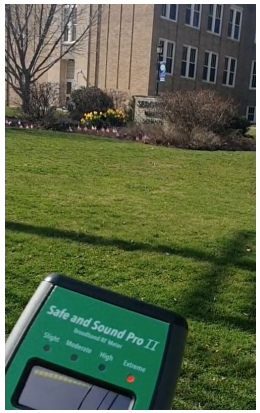


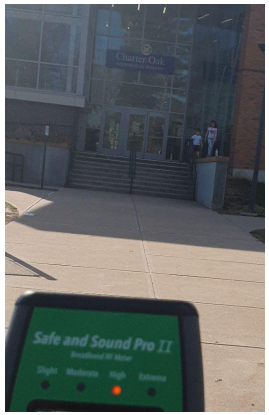
School	RF Category
Weaver	High
Classical Magnet	High
Prince Tech	High
Hartford Public High School	High
Sports & Med. Sciences Magnet	Extreme
Greater Hartford Academy of the Arts	Extreme
Kinsella Magnet School of Performing Arts	Extreme

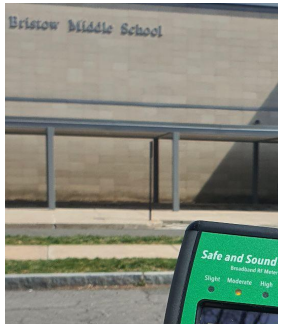
Schools in other (suburban/rural) CT Districts

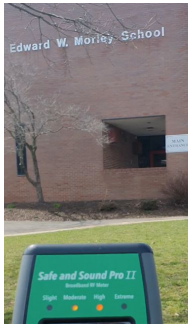
Bolton, CT (“Slight”)







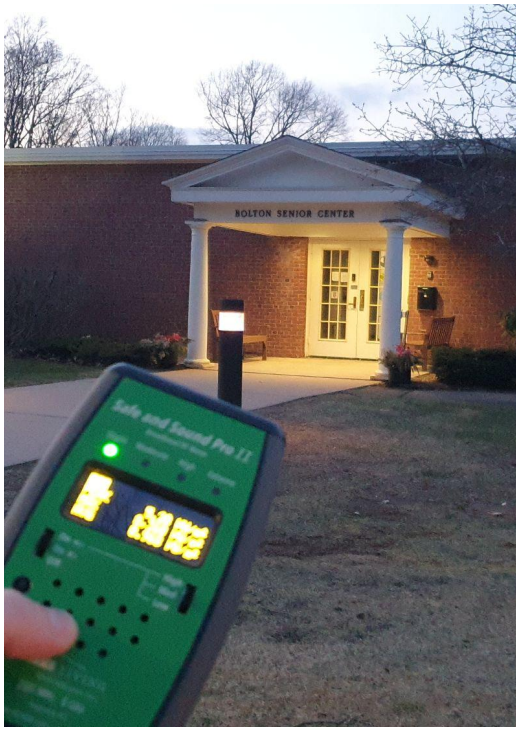




West Hartford, CT
(“Moderate-Extreme”)

Senior Centers (Urban v. Rural)

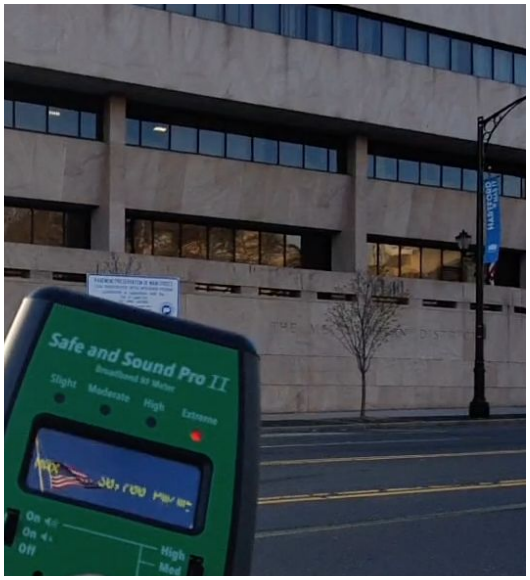
North End of Hartford, CT (“High”)



Bolton, CT (“slight”)

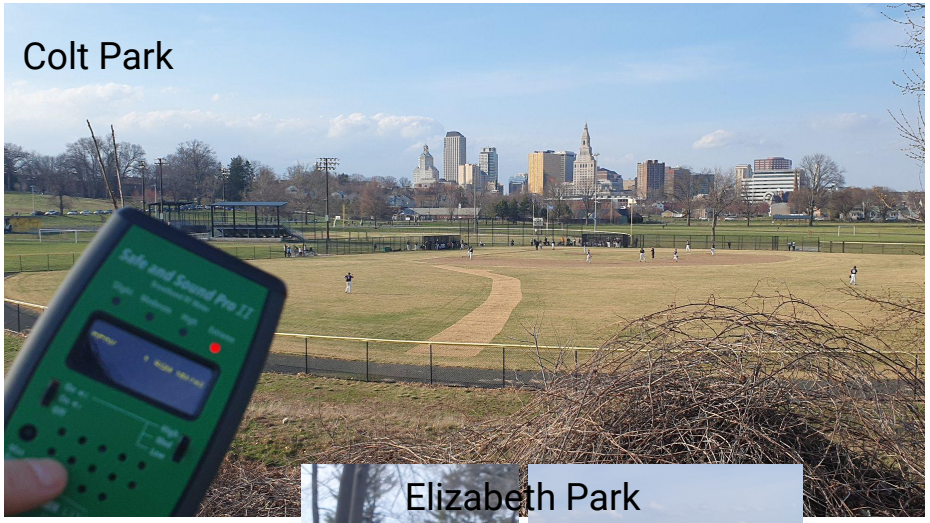
Hartford’s Municipal Buildings

City Hall



The MDC

Hartford’s Parks



Policy and Practice

What are other countries, states, and municipalities doing to protect the public from the health dangers of electromagnetic interference?

International Actions

At least 28 countries have RF limits 10-100 times below FCC limits *or* policies to reduce exposure near homes and schools

RF limits 10-100 times below FCC limits

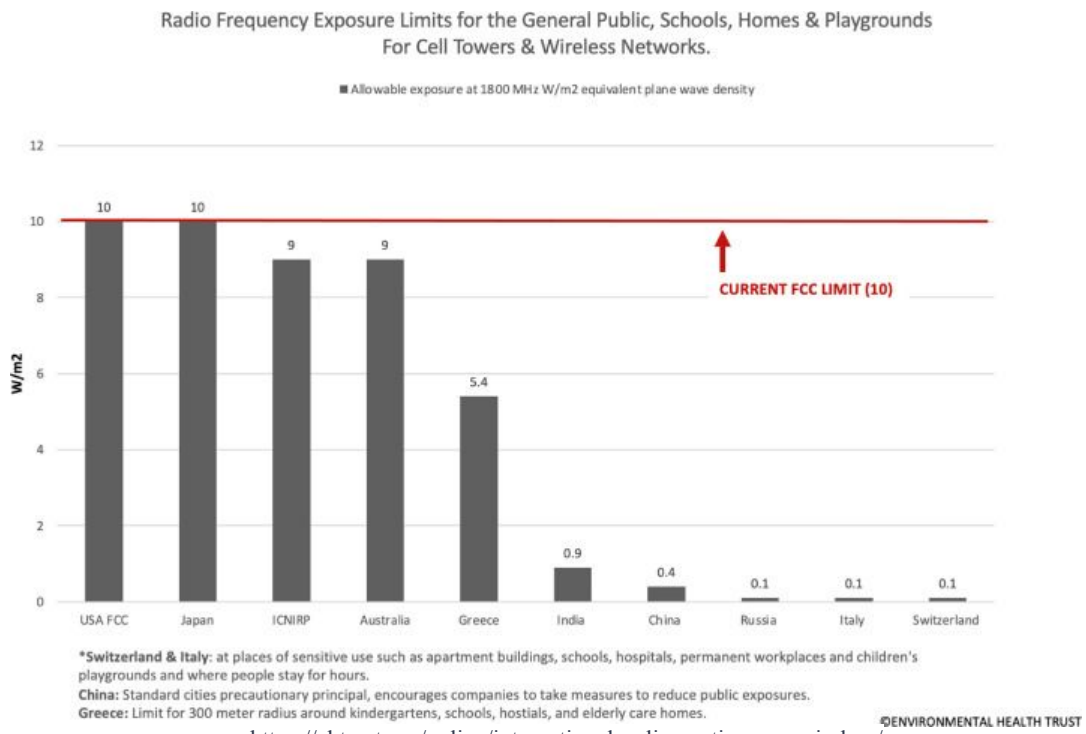
- Italy, Switzerland, India, China, Turkey, Bulgaria, Brussels

Wifi banned/minimized in nurseries, kindergartens, or elementary schools

- France, Israel, Ghent Belgium, French Polynesia, Cyprus, Hospitalet Spain

Cell antennas/towers prohibited in “sensitive areas” (e.g., kindergartens, nursing homes, hospitals)

- Lithuania; Chile; Bangladesh; Israel
- Some municipalities within Australia and India



https://ehtrust.org/policy/international-policy-actions-on-wireless/

U.S. Federal, State, and Local Policies that limit “Local Control”

Federal Level

- 2018/19 FCC policies voted to fasttrack 4G/5G deployment and to limit local communities rights to restrict the buildout

State Level

- About 30 states have “small cell legislation” laws that
  - fast tracks installations (e.g., streamline application process to access public rights of way)
  - discourage local control (e.g., tightens timelines for consideration of cell siting applications)

Local Level

- Ordinances that remove or reduce existing setbacks that for large cell towers

And yet, some states are fighting back....

- Restore local control
  - Massachusetts (S.129 disclosure of radio frequency notifications)
  - California Governor vetoes SB 649, a bill that streamlined 5G and 4G wireless facilities
  - Proposed: California (S.2012 H.R.530), Illinois (HB 4653, HB 5818), Connecticut Bill HB 5107
- Limit exposure for children/schools
  - Proposed: New York A07173 prohibits towers/antennas on school property (new and existing)
- Limit exposure for other “sensitive areas”
  - California (AB57 and SB 649) exempts fire stations from having to install cell antennas
- Smart Meter “Opt-Outs”
  - Proposed: Massachusetts Bill SD.1508 and Connecticut Bill HB 5107
- Acts requiring further research
  - Alaska, New Hampshire, Oregon, Louisiana, Hawaii, Mass., New York (proposed)

Municipalities are fighting back, too…

Ordinances restricting towers/antennas near “sensitive areas” (e.g., homes, schools, hospitals, parks)

- Installation Setback Restrictions
  - ***Los Altos, California*** -- Prohibits installation of small cells on public utility easements in residential neighborhoods *and* establishes **500 foot** setbacks from schools and from multi-family residences in commercial districts
  - ***Shelburne, MA*** – no new wireless antennas in residential zones and no wireless antennas within **3,000 feet** of schools and within **1,500 feet** of homes
  - ***Copake, NY*** – no wireless facility may be within **1,500 feet** from homes, schools, churches, or other buildings containing dwelling units.
  - ***Stockbridge, MA*** no towers built less than **1000 feet** from a school, park or athletic field and **600 feet** from any residence.
  - ***Sallisaw, OK*** – no commercial wireless telecommunications towers within **1,500 feet** of homes.
  - ***Calabasas, CA*** – no “Tier 2” wireless telecommunications facilities within **1,000 feet** of homes and schools.
  - ***Bedford, NH –*** No wireless antennas within **750 feet** from nearest residentially-zoned property.
  - ***Scarsdale, NY*** – No wireless facilities within **500 feet** from homes, schools, parks, and houses of worship.
  - ***Davis, CA*** – no freestanding wireless facilities within **500 feet** of residential zone and schools.
  - ***Westlake Village, CA*** – no facilities within **500 feet** of homes.
  - ***Randolph, MA*** – no wireless antennas within **500 feet** of homes and businesses.
  - ***Petaluma, CA*** – no “small cell” antennas within **500 feet** of homes.
  - ***Suisin City, CA*** – no “small cell” antennas within **500 feet** of homes.
  - ***Contra Costa County, CA*** – no new high-visibility facilities or towers within **300 feet** of residential zones.
  - ***Ithaca, NY*** – any small cell wireless facility shall be **250 feet or more** from any residence, school, or day care facility

Restoring local control over installation

- These ordinances address the
  - ***Application Process*:** instate automatic time limits for permits, require annual recertification fees, establish the right to hire independent consultants at the applicant's expense
  - ***Legal Responsibility*:** require permittees to assume legal responsibility for any liabilities arising from small cell installations
  - ***Notification***: require notification of residents within a certain distance
- Examples
  - ***Greendale, Wisconsin***: The Board of Trustees passed Resolution R2018-20 in November 2018 in opposition to the FCC's September 26, 2018 Order because
    - *"the Order is an unprecedented attack on local control of Greendale's largest asset, the public rights-of-way, for 5G technology; threatens the Village's responsibility to protect the health, safety and welfare of its residents; and threatens the Village of Greendale's designation as a National Historic Landmark"*
  - ***Warren, Connecticut***: ordinance designed
    - *"to locate towers and/or antennas in a manner which protects property values, as well as the general safety, health, welfare and quality of life of the citizens…."*
  - ***Pittsfield, Massachusetts*** S 7.855 issues that telecom companies must: prove preferred site/existing structure does not work; fulfill above ground aesthetic requirements, sound and light restrictions; and prove compliance
    - *"The Zoning Board of Appeals, together with the Community Development Board …finds that it is necessary and beneficial for the health, safety and welfare of the community to update the regulations for development of Wireless Communications Facilities …in the City …"*

Exercising local control to halt installation further 5G deployment and/or called on state/federal governments to do so

- Hawai'i County 5G Resolution
  - The Hawaii County Council voted on July 22 to halt 5G developments on the Big Island until the controversial technology is proven safe
- Farragut, Tennessee 5G Resolution May 14, 2020
  - Farragut, Tennessee City Council approved a resolution calling on state and federal governments to halt 5G until health risks are evaluated by "sound science."
- Keene New Hampshire halts 5G, March 2020
  - New Hampshire City Council of Keene approves temporary 5G ban
- Santa Barbara, California City Council Pauses 5G, March 2020
  - Delays Vote on Verizon Licensing Agreement,
- **Easton, Connecticut issues cease and desist "5G Resolution" (May 7 2020)
  - ban 5G technology rollout citing lack of research, testing

We, the Hartford Coalition for Safe Technology, are asking you, the Director of Hartford's Department of Health and Human Services to:

(1) Support and help to pass CT House Bill (HB) 5107, "An Act Concerning Small Cell Siting and Smart Meter Opt-In"

(2) Educate Hartford residents on the health risks of radiation

CT House Bill (HB) 5107, “An Act Concerning Small Cell Siting and Smart Meter Opt-In”

“To give municipalities different options in conducting the siting for small cell installations and to prohibit electric utilities from installing smart meters if the customer does not opt in and consent to the installation.” (https://www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&bill_num=HB-5107)

Current Status: On 1/9/23 it was referred to Joint Committee on Energy and Technology, where it stagnated

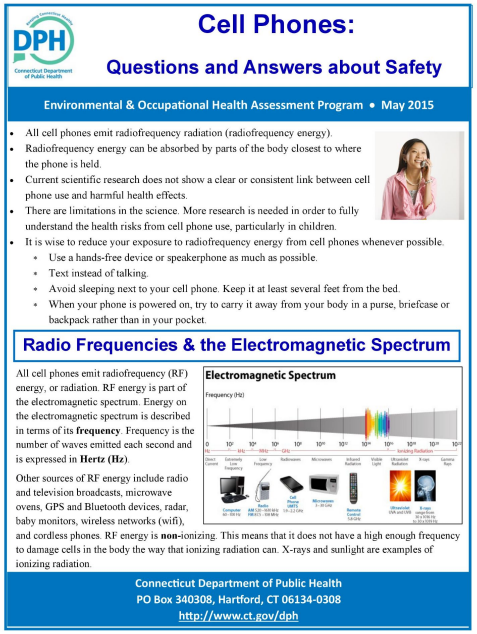
What’s Needed: The next step is to advocate for the bill to be given a public hearing and for testimonies to be given in its support.

Advantages of HB 5107

- Restores local control over small cell installation
- Provides customers with the right to opt-out of smart meters (thereby reducing RF levels)
- Creates jobs (utilities companies will have to hire folks to manually collect the data from each meter)

Will you write a letter of support for HB 5107 ? Will you provide testimony in favor of its passing?

Educate the public on the risks of wireless radiation



Cell Phones:

Questions and Answers about Safety

Environmental & Occupational Health Assessment Program • May 2015

- All cell phones emit radiofrequency radiation (radiofrequency energy).
- Radiofrequency energy can be absorbed by parts of the body closest to where the phone is held.
- Current scientific research does not show a clear or consistent link between cell phone use and harmful health effects.
- There are limitations in the science. More research is needed in order to fully understand the health risks from cell phone use, particularly in children.
- It is wise to reduce your exposure to radiofrequency energy from cell phones whenever possible.
  - Use a hands-free device or speakerphone as much as possible.
  - Text instead of talking.
  - Avoid sleeping next to your cell phone. Keep it at least several feet from the bed.
  - When your phone is powered on, try to carry it away from your body in a purse, briefcase or backpack rather than in your pocket.

Radio Frequencies & the Electromagnetic Spectrum

All cell phones emit radiofrequency (RF) energy, or radiation. RF energy is part of the electromagnetic spectrum. Energy on the electromagnetic spectrum is described in terms of its **frequency**. Frequency is the number of waves emitted each second and is expressed in **Hertz (Hz)**.

Other sources of RF energy include radio and television broadcasts, microwave ovens, GPS and Bluetooth devices, radar, baby monitors, wireless networks (wifi), and cordless phones. RF energy is **non**-ionizing. This means that it does not have a high enough frequency to damage cells in the body the way that ionizing radiation can. X-rays and sunlight are examples of ionizing radiation.

Electromagnetic Spectrum

Frequency (Hz)

Connecticut Department of Public Health
PO Box 340308, Hartford, CT 06134-0308
http://www.ct.gov/dph

https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/dph/environmental_health/eoha/Toxicology_Risk_Assessment/050815CellPhonesFINALpdf.pdf?la=en

- In 2018, Connecticut's Department of Public Health became one of the first in the country to issue specific recommendations for how to limit RF radiation from cell phones
- While the Fact Sheet maintains much of the FCC's narrative, it nonetheless notes the "need for further research" and asserts that:
  - *"It is wise to reduce your exposure to radiofrequency energy …whenever possible."*

Will Hartford's Department of Health and Human Services follow CT's Department of Public Health in educating the public of the risks of RF radiation?

Works Cited

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Thank you!

Please do not hesitate to reach out to us if you have any further questions or would like to continue this conversation.