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# DBM Engineering, P.C.

**Independent, 3<sup>rd</sup> party radio  
frequency emissions and design  
experts serving all major wireless  
providers, tower developers,  
federal and state courts**



## **Licensed Professional Engineer since 2006**

- Member of the National Society of Professional Engineers
- Member of the Pennsylvania Society of Professional Engineers

## **Lehigh University, Bethlehem, PA**

- Master of Engineering, Electrical Engineering, May 2005
- Bachelor of Science, Electrical Engineering, May 1999

**As a registered Professional Engineer, I am bound by a code of ethics to hold paramount the safety, health, and welfare of the public. All statements and calculations offered though testimony and reports herein are made in an objective and truthful manner pursuant to that code.**

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# Health and Safety Background

Health and safety organizations world-wide have studied potential health effects of RF emissions for decades, and studies continue.



RF emissions exposure at ground level is generally well below Federal Communication Commission standards.

The Federal Communications Commission (FCC) guidelines for operating wireless networks are based on the recommendations of federal health and safety agencies including:

- The Environmental Protection Agency (EPA)
- The Food and Drug Administration (FDA)
- The National Institute for Occupational Safety and Health (NIOSH)
- The Occupational Safety and Health Administration (OSHA)
- The Institute of Electrical and Electronics Engineers (IEEE)
- The National Council on Radiation Protection and Measurements (NCRP)

Wireless technology, equipment and network operations are highly regulated.

More information can be found through these organizations:

**Federal Communications Commission Radio Frequency Safety Program:**

[http://wireless.fcc.gov/siting/FCC\\_LSGAC\\_RF\\_Guide.pdf](http://wireless.fcc.gov/siting/FCC_LSGAC_RF_Guide.pdf)

<http://www.fcc.gov/oet/rfsafety/>

**World Health Organization:**

<http://www.who.int/peh-emf/publications/facts/fs304/en/>

**American Cancer Society**

<http://www.cancer.org/cancer/cancercauses/othercarcinogens/athome/cellular-phone-towers>

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# September 2024 World Health Organization Findings

**A WHO commissioned review of 63 studies has found no link between mobile phone use and an increased risk of brain cancer. The findings concluded that despite the massive increase in wireless technology use over decades, the incidence of brain cancers has not risen.**



## **Key findings of the review**

- No increased risk of brain cancer. The systematic review found no association between mobile phone use and an increased risk of brain tumors, such as glioma and meningioma, even for long-term or heavy users.
- Other cancers. The review also found no increased risk of other head or neck cancers, including leukemia and cancers of the pituitary and salivary glands, associated with mobile phone exposure.
- No link to base stations. No increased cancer risks were found in relation to living near or having occupational exposure to mobile phone base stations or transmitters.
- Consistent with earlier findings. This review aligns with previous conclusions, including research from the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), that found overall brain tumor rates remained stable despite a significant rise in mobile phone use.

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# August 2021 Remand to the FCC by the D.C. Circuit Court

*“To be clear, we take no position on the scientific debate regarding the health and environmental effects of RF radiation – we merely conclude that the Commission’s cursory analysis of material record evidence was insufficient as a matter of law...”*



## Timeline Summary

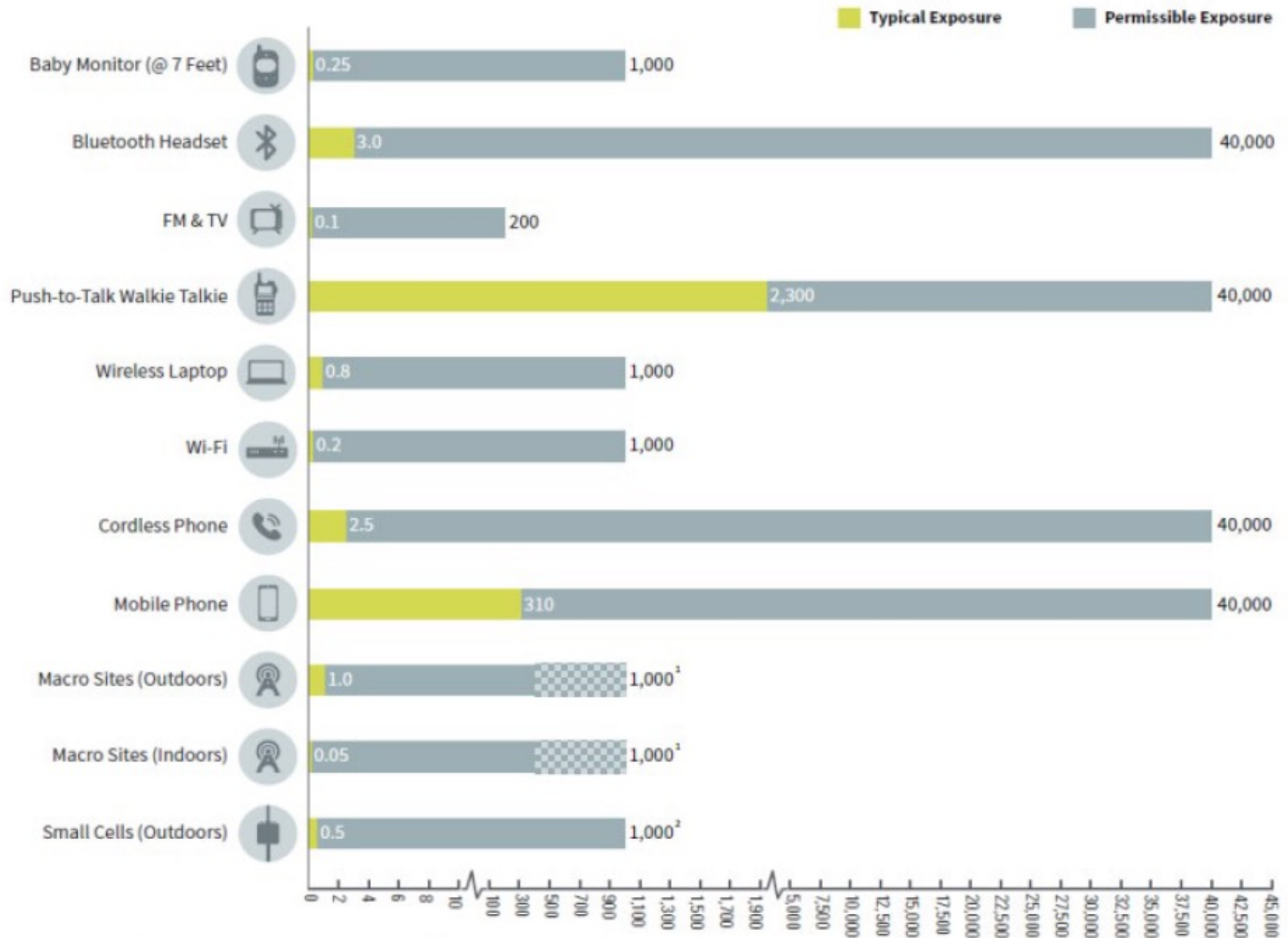
- March 2013 - The FCC issued a notice of inquiry regarding the adequacy of its 1996 guidelines
- December 2019 - The FCC issued a final order resolving its 2103 notice of inquiry declining to undertake any of the changes contemplated in the notice of inquiry
- January 2020 – Timely petitions were made for review of the FCC’s 2019 final order
- August 2021 – The D.C. Circuit Court remand to the FCC
- August 2025 – The Environmental Health Trust filed a petition urging the FCC to take action on the remand

## Key Takeaways

- The FCC Code of Federal Regulation 47 CFR 1.1307 and 1.1310 is the sole law of the land for RF exposure compliance.
- In the unlikely event there are any changes to the code as a result of the remand, all existing wireless facilities must remain compliant with the updated code.

# Common Radiofrequency Exposures ( $\mu\text{W}/\text{cm}^2$ )

( $\mu\text{W}/\text{cm}^2$ ) = microwatts per centimeter squared



1. For macro sites, the grey bar includes a hatched area depicting a range of permissible exposure limits (from  $0.4 \text{ mW}/\text{cm}^2$  to  $1 \text{ mW}/\text{cm}^2$ ), because the limits for macro sites vary depending upon the frequency being used.

2. Small cells operate on frequency bands that are almost exclusively above 1,500 MHz, so the limit of  $1 \text{ mW}/\text{cm}^2$  applies.

Source: Andrew H. Thatcher, Board Certified Health Physicist © 2023



# Surrounding Topography

