

Verizon Wireless Site Compliance Report

Site Name: Wilmington Town
Site Address: 1068 Bonnie View Road
Wilmington, NY 12997
Structure Type: Monopole (105' AGL)

Report generated on: January 23, 2025
Report by: Benjamin Schnable
Customer Contact: Walt Chernosky

**Verizon Wireless will be compliant with the FCC
Rules and Regulations in all publicly
accessible areas.**



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1 Executive Summary

Verizon Wireless has contracted with InfraServices Group Wireless, LLC (Sitesafe), an independent radiofrequency (RF) regulatory and engineering consulting firm, to determine if the proposed telecommunications facility is in compliance with the Federal Communications Commission (FCC) Rules and Regulations for RF emissions (see Appendix A of this report for further explanation of the FCC Rules and Regulations). This document and the conclusions herein are based on the information provided by representatives of Verizon Wireless which is assumed to be true and correct.

Verizon Wireless is proposing to construct a new 105' Monopole (109' overall height - top of lightning rod) and collocate (3) Samsung MT6413-77A integrated antennas and (6) JMA MX06FHG865-HG antennas at a centerline of 100' above ground level. The non-integrated antennas will be powered by (6) new dual-band remote radio heads in a locked and secured equipment cabinet at ground level. Upon completion of the installation, the following frequency bands will be in service: 751 MHz LTE, 850 MHz LTE/5G, 1900 MHz PCS, 2100 MHz AWS1/AWS3 LTE, and 3700 MHz C-Band 5G.

The analysis evaluates the telecommunications facility with respect to the General Public maximum permissible exposure (MPE) limits ("General Public" is also referred to as "Uncontrolled Environment"; see Appendix A for further explanation of this classification). Sitesafe has taken into consideration the existing/proposed Verizon Wireless antenna system as well as any other collocated antenna systems at the subject location.

Based on the analysis, Sitesafe has determined that:

Verizon Wireless will comply in all publicly accessible areas with the FCC Rules and Regulations governing human exposure to RF electromagnetic fields as described in 47 CFR § 1.1307(b) and 1.1310 in accordance with the methods for evaluating compliance contained in OET Bulletin 65.

Furthermore, with the proposed Verizon Wireless antenna configuration in service, the composite exposure from this facility in all areas at ground level will be below 1% of the General Public MPE limit, or over 100 times less than the maximum allowed exposure in publicly accessible areas.



2 Analysis

In this analysis, Sitesafe has taken into consideration the proposed Verizon Wireless antenna system at the subject location. No other antenna systems are currently proposed.

Using this data, software modeling was performed for all transmitting antennas located at the site. Sitesafe has assumed a 100% duty cycle and maximum radiated power. The site has been modeled with these assumptions to determine the maximum potential RF energy density. Sitesafe believes this to be a worst-case analysis based on the best available data.

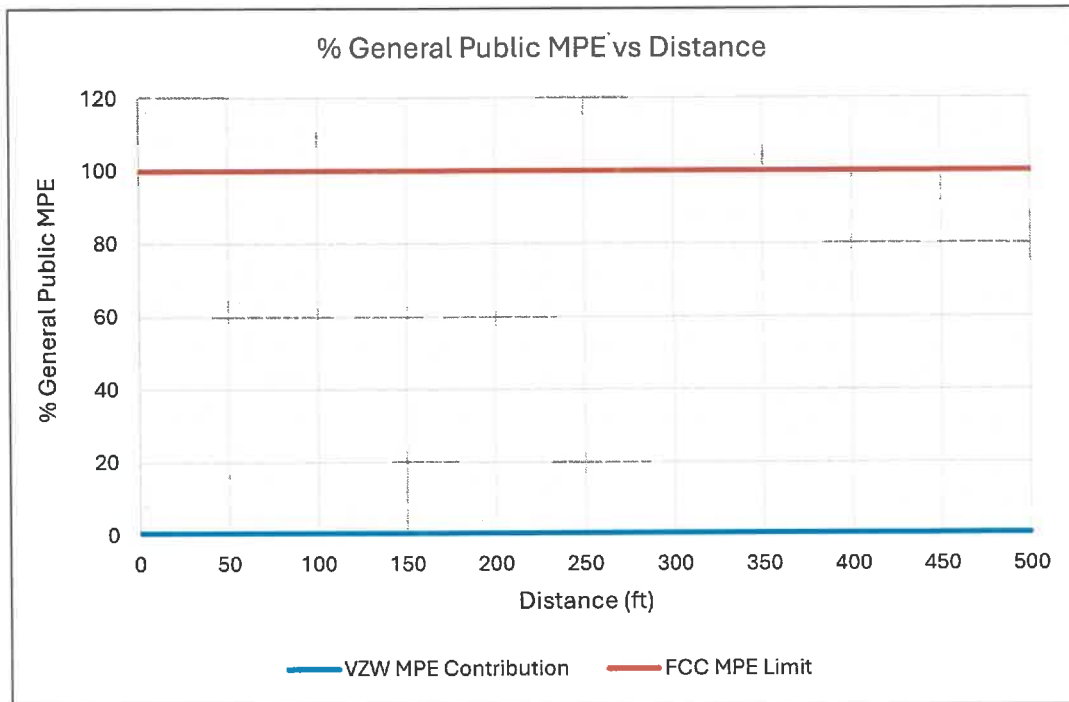
The power density calculations performed by the software tool use FCC prescribed methodologies as contained in OET Bulletin 65, which was compiled by the FCC to provide assistance in evaluating compliance with FCC guidelines for human exposure to electromagnetic fields.

As stated in Section 1, based on this analysis, the calculated ground level exposure from the Verizon Wireless antenna system alone as well as the composite exposure from all existing/proposed licensees will be below 1% of the General Public MPE limit.

Keep in mind that the FCC did not arbitrarily establish their own standards but rather adopted the recommendations of national and international organizations such as the National Council on Radiation Protection and Measurements (NCRP), the American National Standards Institute (ANSI) and the Institute of Electrical and Electronics Engineers (IEEE). These recommendations were developed by expert scientists and engineers following extensive evaluation of the potential biological effects from RF exposure. The FCC MPE limits are based on thresholds for known adverse effects, and they were designed to provide a substantial margin of safety. There is a safety factor of 50 built into the General Public MPE limits, and the predicted Verizon Wireless exposure levels are over 100 times below these very conservative limits.

In cases where such compliance exists, the subject of electromagnetic field safety is preempted by the Telecommunications Act of 1996, which states: "No state or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the (Federal Communication) Commission's regulations concerning such emissions."

Lastly, the graph below provides a visual depiction of the rather insignificant electromagnetic field exposure contribution from the Verizon Wireless antenna system at any distance from the base of the structure. This portrays how low the Verizon Wireless contribution is when compared to the General Public MPE limit.





3 Antenna Inventory

The following antenna inventory contains data provided by the customer and/or gathered by Sitesafe personnel which was used to perform the analysis:

Ant #	Operator	Antenna Make/Model	TX Freq. (MHz)	Tech.	Az. (Deg)	ERP (Watts)	AGL (ft)	MDT	EDT
1	VZW (Proposed)	JMA SON_MX06FHG865-HG	700	LTE	300	2559.12	100	0	0 to 10
1	VZW (Proposed)	JMA SON_MX06FHG865-HG	850	LTE	300	1371.07	100	0	0 to 10
1	VZW (Proposed)	JMA SON_MX06FHG865-HG	850	5G	300	1371.07	100	0	0 to 10
1	VZW (Proposed)	JMA SON_MX06FHG865-HG	2100	LTE	300	4876.29	100	0	0 to 7
1	VZW (Proposed)	JMA SON_MX06FHG865-HG	2100	LTE	300	4876.29	100	0	0 to 7
2	VZW (Proposed)	JMA SON_MX06FHG865-HG	700	LTE	300	2559.12	100	0	0 to 10
2	VZW (Proposed)	JMA SON_MX06FHG865-HG	850	LTE	300	1371.07	100	0	0 to 10
2	VZW (Proposed)	JMA SON_MX06FHG865-HG	850	5G	300	1371.07	100	0	0 to 10
2	VZW (Proposed)	JMA SON_MX06FHG865-HG	1900	LTE	300	8111.85	100	0	0 to 7
3	VZW (Proposed)	SAMSUNG SON_MT6413-77A_UBeam_32port_8_2 08.19.24 VZW	3700	C-Band	300	69206.95	100	0	0
4	VZW (Proposed)	JMA SON_MX06FHG865-HG	700	LTE	60	2559.12	100	0	0 to 10
4	VZW (Proposed)	JMA SON_MX06FHG865-HG	850	LTE	60	1371.07	100	0	0 to 10
4	VZW (Proposed)	JMA SON_MX06FHG865-HG	850	5G	60	1371.07	100	0	0 to 10
4	VZW (Proposed)	JMA SON_MX06FHG865-HG	2100	LTE	60	4876.29	100	0	0 to 7
4	VZW (Proposed)	JMA SON_MX06FHG865-HG	2100	LTE	60	4876.29	100	0	0 to 7
5	VZW (Proposed)	JMA SON_MX06FHG865-HG	700	LTE	60	2559.12	100	0	0 to 10
5	VZW (Proposed)	JMA SON_MX06FHG865-HG	850	LTE	60	1371.07	100	0	0 to 10
5	VZW (Proposed)	JMA SON_MX06FHG865-HG	850	5G	60	1371.07	100	0	0 to 10
5	VZW (Proposed)	JMA SON_MX06FHG865-HG	1900	LTE	60	8111.85	100	0	0 to 7
6	VZW (Proposed)	SAMSUNG SON_MT6413-77A_UBeam_32port_8_2 08.19.24 VZW	3700	C-Band	60	69206.95	100	0	0
7	VZW (Proposed)	JMA SON_MX06FHG865-HG	700	LTE	180	2559.12	100	0	0 to 10
7	VZW (Proposed)	JMA SON_MX06FHG865-HG	850	LTE	180	1371.07	100	0	0 to 10
7	VZW (Proposed)	JMA SON_MX06FHG865-HG	850	5G	180	1371.07	100	0	0 to 10
7	VZW (Proposed)	JMA SON_MX06FHG865-HG	2100	LTE	180	4876.29	100	0	0 to 7
7	VZW (Proposed)	JMA SON_MX06FHG865-HG	2100	LTE	180	4876.29	100	0	0 to 7
8	VZW (Proposed)	JMA SON_MX06FHG865-HG	700	LTE	180	2559.12	100	0	0 to 10
8	VZW (Proposed)	JMA SON_MX06FHG865-HG	850	LTE	180	1371.07	100	0	0 to 10
8	VZW (Proposed)	JMA SON_MX06FHG865-HG	850	5G	180	1371.07	100	0	0 to 10
8	VZW (Proposed)	JMA SON_MX06FHG865-HG	1900	LTE	180	8111.85	100	0	0 to 7
9	VZW (Proposed)	SAMSUNG SON_MT6413-77A_UBeam_32port_8_2 08.19.24 VZW	3700	C-Band	180	69206.95	100	0	0

Notes: Each row with the same number in the *Ant #* column references the same physical antenna. Proposed equipment is tagged as *(Proposed)* under *Operator* or *Antenna Make and Model*. Power values provided by the client and used in the analysis may be greater than what is initially deployed. For additional modeling information, refer to Appendix B of this report.



4 Engineer Certification

The Professional engineer whose seal appears on the cover of this document hereby certifies and affirms:

That I am registered as a Professional Engineer in the jurisdiction indicated in the professional engineering stamp on the cover of this document; and

That I am an employee of InfraServices Group Wireless, LLC, in Blue Bell, Pennsylvania, at which place the staff and I provide RF compliance services to clients in the wireless communications industry; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specially as they apply to the FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Benjamin Schnable.

January 23, 2025



Appendix A – Technical Framework: FCC Rules and Regulations

In 1996, the FCC adopted regulations for evaluating of the effects of RF emissions in 47 CFR § 1.1307(b) and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 (OET Bulletin 65), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996, the FCC periodically reviews these rules and regulations as per its congressional mandate.

FCC regulations define two separate tiers of exposure limits: Occupational or "Controlled Environment" and General Public or "Uncontrolled Environment". The General Public limits are generally five times more conservative or restrictive than the Occupational limits.

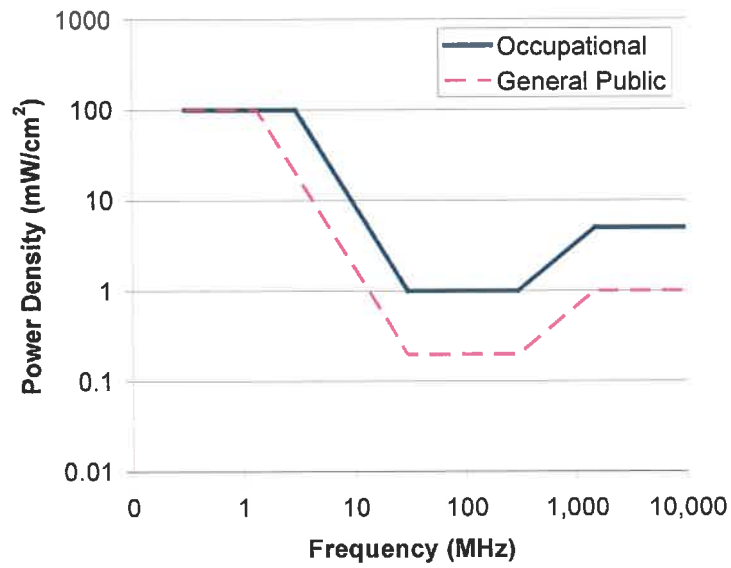
General Public or Uncontrolled limits apply to accessible areas where workers or the general public may be exposed to RF electromagnetic fields.

Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (e.g. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF warning signage.

A site with Controlled environments is evaluated with Occupational limits. All other areas are considered Uncontrolled environments. If a site has no access controls or no RF warning signage, it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The MPE limits utilized in this analysis are outlined in the following diagram and table:

FCC Limits for Maximum Permissible Exposure (MPE) Plane-wave Equivalent Power Density





Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

Appendix B – Definitions

Compliance – The determination of whether a site complies with FCC standards with regards to Human Exposure to Radio Frequency Electromagnetic Fields from transmitting antennas.

Decibel (dB) – A unit for measuring power or strength of a signal.

Duty Cycle – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source. A duty cycle of 100% corresponds to continuous operation.

Effective (or Equivalent) Isotropic Radiated Power (EIRP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Effective Radiated Power (ERP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to a half-wave dipole antenna.

Gain (of an antenna) – The ratio, usually expressed in decibels, of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power density at the same distance. When not specified otherwise, the gain refers to the direction of maximum radiation. Gain may be considered for a specified polarization. Gain may be referenced to an isotropic antenna (dBi) or a half-wave dipole (dBd) antenna.

Generic Antenna – For the purposes of this report, the use of “Generic” as an antenna model means the antenna information was not provided. In the event of unknown information, Sitesafe will use its industry specific knowledge of antenna models to select a worst-case scenario antenna to model the site.

Maximum Permissible Exposure (MPE) – The rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with acceptable safety factor.

OET Bulletin 65 – Technical guideline developed by the FCC’s Office of Engineering and Technology to determine the impact of RF exposure on humans. The guideline was published in August 1997.

Radio Frequency Exposure or Electromagnetic Fields – Electromagnetic waves that are propagated from antennas through space.



Appendix C – Statement of Limiting Conditions

Sitesafe will not be responsible for matters of a legal nature that affect the site or property.

Due to the complexity of some wireless sites, Sitesafe performed this analysis and created this report utilizing best industry practices and due diligence. Sitesafe cannot be held accountable or responsible for anomalies or discrepancies due to actual site conditions or information or data supplied by Verizon Wireless, the site manager, or their affiliates, subcontractors or assigns.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data provided by a second party and physical data collected by Sitesafe, the physical data will be used.



Appendix D – Additional Resources

Additional RF information is available at the following sites:

<https://www.fcc.gov/general/radio-frequency-safety-0>

<https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety>