**PUBLIC CORRESPONDENCE**

The following is public correspondence received by the City Clerk's Office after the posting of the original agenda. Individual contact information has been redacted for privacy. This may *not* be a comprehensive collection of the public correspondence, but staff makes its best effort to include all correspondence received to date.

To send correspondence to the City Council, on matters listed on the agenda please email PublicComment@losaltosca.gov

**From:** Roberta Phillips
**To:** City Council; Public Comment
**Subject:** Small Cell Node Towers/ Council Meeting April 12,2022
**Date:** Tuesday, April 5, 2022 11:48:41 AM

Dear Council Members

I attended the Planning Commission meeting March 3,2020m and many questions were not answered regarding the small cell node towers in Los Altos

I live on San Antonio Road which is targeted for small cell node towers. I am in the R1 district which is residential and now the new proposal wants to ignore that . I am concerned about the noise. The road is already noisey and adding more noise is unacceptable. Adding more poles is visually unacceptable. Please stop industrializing my neighborhood.

At the Planning Commision meeting it was stated that changing the current ordinance will NOT result in dropping the current lawsuits. If the carriers still plan on suing the City, then so be it.

I don't see the reasoning that some residential neighborhoods are protected and others are not. How is that fair ?

Below is the email I sent to the Planning Commision.

RobertaPhillips

[redacted]

Roberta Phillips [redacted] > Sun, Feb 27, 2:51 PM

to planningcommission, City

Dear Planning Commissioners
The existing ordinance 11.12 may or may not be sufficient to address the installation of 5 G small cell nodes in Los Altos. If a change is not absolutely necessary then please do not change it and stick with what we have now. What has case law proven ? What are we as a City allowed to do or not do, to allow or prohibit 5G? What are our attorneys recommending as to what will fly with a judge? What is happening with the pending lawsuits? Will changing the ordinance end the lawsuits ? How many small cell node towers are needed in Los Altos ? What is the maximum distance towers need to be spread apart to have the system work? Does AT&T and Verizon want 20 or 200 or 2000? Can the equipment be shared by carriers or will we need to have twice or three times as many as necessary to support 5G from two or three or four carriers ? Before you have this information , I suggest you change nothing as you do not know the consequences of your actions.
The staff seems to be taking the approach of identifying sites based on expressway, arterial ,collector and local collector streets. Perhaps another approach would be to eliminate R1 zoning and school sites as areas where 5G will not be allowed. I see no justifiable reason to industrialize our city by picking certain streets such as San Antonio Rd or El Monte or Cuesta to industrialize, while not touching other residential neighborhoods. If the cell node towers are safe in one area, they should be safe in all areas.
The unsiteleness of the equipment does not belong in R1 residential neighborhoods. The noise generated is not acceptable in the R1 districts.
I am looking forward to the commission finding out the answers to my questions, and ones you may have yourself.
Sincerely
Roberta Phillips

| | |
|---|---|
| **From:** | Roberta Phillips |
| **To:** | City Council; Public Comment |
| **Subject:** | Council meeting April 12,2022 #6 Wireless Telecommunications Facitlites |
| **Date:** | Thursday, April 7, 2022 9:57:16 AM |

Dear Council Members
There are still a lot of questions that have not been answered.
1. Is the proposed small cell node facilities for 4G or 5G or any "G' that may come in the future?
2. A friend in Los Altos has a poll that is currently used by the carriers. It makes a lot of noise because of the fans. Will the new facilities have fans ?Do the fans run day and night? What noise levels are acceptable under our ordinances? There is already noise from traffic.Noise is culmination and adding more noise is unacceptable..
3. Why target San Antonio Rd? I do not want to industrialize this street as sections are R1.There are already tons of polls and it does not seem to be room for any more polls. This is visually unattractive and certainly does not fit with the village character. Are the residents who live on SanAntonio Rd second class citizens?
4. At the Planning Commission meeting it was asked if this new plan would stop the lawsuits. The answer was no. Why change the ordinance if it does not solve the problem of lawsuits ?
Sincerely
Roberta Phillips
[redacted]

**From:** Jane Osborn
**To:** Public Comment; City Council; Gabriel Engeland; Planning Services
**Subject:** Public Comment, Agenda Item #6. April 12, 2022, Wireless Facilities Ordinance
**Date:** Friday, April 8, 2022 5:04:35 PM

---

Dear Honorable Mayor, Vice-Mayor and Council,

This is an edited version of a letter I sent to the planning commission on March 17, 2022.

I'm writing in regard to the proposed revision of the ordinance that determines placement of 5G "small" cell towers (aka, "facilities") within the city. My husband and I were very supportive of the original emergency ordinance passed in 2019. We are opposed to this revised ordinance that is being considered at the upcoming council meeting, especially in it's current form.

This is an important issue, which has a very high degree of interest among residents. This was evidenced by the high turnout at the public meetings held in 2019, at which hundreds of people attended in-person, in addition to people who attended on-line. The turnouts were the highest I have ever seen at council meetings or study sessions over a period of several years. There was standing room only at LAYC, and more chairs had to be brought in--as it was packed close to the back wall. Dozens of people gave testimony expressing concerns during the series of hearings that were held in 2019. Many, if not most of these people appeared to be speaking from a position of experience or expertise in regard to one or more of the areas of concern that they were addressing in their comments.

We are assuming that this revised (amended) ordinance is in response to lawsuits from two of the wireless carriers.

My husband and I have many concerns about the revised 5G ordinance, but I will touch on three of them.

• **It is our opinion that there was not sufficient notice to the public for the 30 day period within which we would be allowed to respond to the recommendation for a negative declaration of environmental impact.** I first learned of this revised ordinance when I received the notice of the planning commission meeting in my in-box on 2/25/22. Apparently the deadline for the public to respond to the recommendation for a negative declaration of environmental impact was 2/24/22. It is my impression that there was not adequate notice to the public both in regard to sufficient time and with respect to visibility of the notice. Considering the degree of interest on the part of residents, there should have been better prior notice. I did not even see a reference to this in any of the weekly city manager newsletters.

**Similarly, we feel that the public and the council would have benefited from a longer period of prior notice with regard to agenda item #6 before holding a public hearing on this very complex and consequential matter.** I realize that a one week notice is customary. However, this revised ordinance is a 119 page document. In my opinion, more time is needed for people to read, digest and respond to this information. This latest draft appears to have been rather extensively revised since it was first presented to the planning commission on March 3, 2022. This is a complex issue with many facets. In addition, these amendments will create significant consequences, including negative consequences, for some residents. It is expected that there could be a very high degree of public interest on this topic, as evidenced by

the extensive and widespread interest shown during a series of public hearings held in 2019. There has not been much public notice that this issue is being re-considered by the council, other than meeting notices. I suspect that most residents, including residents who have an interest in this topic, are unaware that this issue is being re-considered, and have not yet seen a draft of the amended ordinance. Under the circumstances, we are hoping that the council will hold more than one public hearing on this matter, in order to allow the public to weigh-in with their opinions and concerns.

• **The ordinance appears to divide the residents of the city into two classes, or sub groups**. One sub group, people who live on local roads, (or people in the first class), appear to be protected from the negative effects of 5G "small" cell towers on their streets. The second group, which is less privileged (a second class), are not protected equally or to the same degree as the first group,. This second group (the apparent second class) are people who live on local collector streets, collector streets, and arterial streets, or people who live on local roads, but near the local collector, collector, arterial streets, and the expressway.

It appears that this second subgroup of residents is not protected equally from the known and/or suspected negative effects of 5 G small wireless facilities, such as: Visual blight, which will make our residential streets look more industrial; Noise, which was measured by a council member to be 56 dB at one location; Expected loss of property value, (which was estimated by realtors who gave testimony in 2019 to be as much as 20%).

The second sub group also is not as protected from the suspected/potential negative cognitive, academic and other health effects due to Rf emissions--which have been suggested in the research findings of hundreds of scientific studies which have been reported in a growing body of peer reviewed scientific literature.

We are very aware that cities are not allowed to consider health effects due to Section 704 of the Telecommunications Act of 1996, which appears to be outdated and was passed when wireless technology was at a much earlier stage in it's development, and when there were far fewer research findings available. However, this does not mean that adverse academic, cognitive, and other neurological and health effects do not exist.

Many residents have been left with the impression that a subgroup of residents have been targeted to be the "sacrificial lambs" in order to make a lawsuit go away.

It is possible that the people drafting this ordinance did not intend to marginalize one group of residents in this fashion. However, it is my impression that this does not look good, and does not appear to represent good public policy.

• **I was very surprised to hear that the city was recommending a negative declaration of environmental effects, especially in view of the fact that the Natural Resources Defense Council (NRDC) won a lawsuit against the FCC in August 2019, as explained in this publication:**

https://mdsafetech.org/2019/12/08/nepa-the-nrdc-and-5g-neighborhood-cell-towers/

The ruling in this lawsuit appears to give Native American Tribes and all cities "...the right to require a National Environmental Protection Act (NEPA) analysis (provide proof of

exemption) before cell towers are placed.". According to the publication referenced above, this would apply to placement of small cell towers (AKA "wireless facilities").

**It is noteworthy that the NRDC was able to present enough evidence of actual or potential harm to the environment from wireless facilities, (which includes impact on the "human environment"), that they were able to prevail in a lawsuit against the FCC in a federal court.**

*I would like to note that the NRDC is a highly regarded organization, which appears to be staffed by scientists and attorneys with a science background, who are attempting to safeguard the environment. It is significant to note that they were given a rating of 96.1 out of 100 by Charity Navigator.*

**We realize that the city is in a very challenging situation. Please do your best to protect the residents from both known and suspected/potential negative effects of wireless facilities, including loss of aesthetics, expected loss of property values, auditory pollution and noise, and to protect the health and well being of residents in the most equitable manner possible.**

Thank you very much for your consideration.

Respectfully,
Jane Osborn, PhD

E. Jane Osborn, Ph.D. Nationally Certified School Psychologist, NCSP [redacted] Licensed Educational Psychologist, LEP [redacted] Cognitive and Developmental Psychology. [redacted]

| | |
|---|---|
| **From:** | James Tringali |
| **To:** | Public Comment |
| **Cc:** | Theresa Tringali |
| **Subject:** | PUBLIC COMMENT - AGENDA ITEM #6 - April 12, 2022 |
| **Date:** | Saturday, April 9, 2022 6:12:41 PM |

Dear City of Los Altos Planning Commission,

We are appalled seeing the suggestion in the latest draft ordinance (Feb 22, 2022) of using churches as an acceptable back door for embedding small cell towers in our neighborhoods. We don't see how placing small cell towers on church property has less impact on visual blight, noise, safety and our property values than placing them on school property.

We implore the City to stay as true to the original 2019 wireless emergency ordinance as possible and ensure we don't have cell towers placed close to schools, churches and homes. While some residents have expressed valid health concerns of placing cell towers so close to our schools, churches and homes, We understand the City is unable to take these concerns into account due to Federal laws. However, there are other issues We'd like the City to consider including visual blight, noise, safety and property values.

**Visual blight**: The City's utility poles are visually unappealing. We don't want to increase the unsightliness with cell towers on the tops of these poles, not to mention a refrigerator's worth of equipment hanging to the side.

**Noise**: Cell towers make considerable noise from their cooling fans. Having these towers placed so close to our homes would negatively impact our living environment.

**Safety**: Most cell towers have a refrigerator's worth of equipment, including lithium ion batteries that have been known to cause fires. It's not safe to place flammable materials on combustible wooden poles that could potentially burn down a home or neighborhood.

**Property Values**: Cell towers placed so close to homes will reduce the attractiveness of homes in the area. According to Realtor Magazine, a study found that 94% of home buyers would not purchase a home near a cell tower.

Please do not place cell towers close to our homes, churches and schools. Please find alternative locations.

Sincerely,

Los Altos Residents

James and Theresa Tringali

**From:** Trina Weller
**To:** Public Comment
**Date:** Monday, April 11, 2022 7:52:40 PM

---

Dear City Council Members:

Regarding the proposed modifications to the ordinance for small wireless facilities, I object to the inequitable treatment of and failure to represent residents who live on and adjacent to arterials, collectors, and local collectors. These locations are ranked as more preferred than other "residentially zoned" streets. Most of the collectors and local collectors in Los Altos, however, are residentially zoned! All residents of Los Altos will benefit equally from the 5G upgrade, so all neighborhoods should equally bear the brunt of the visual blight, noise, and estimated decrease in property values.

The authors of the revised ordinance state they are recommending the higher density of facilities on the local collectors, collectors, and arterial streets to retain the beauty and essential rural character throughout Los Altos, (p. 38 and p. 39). In other words, they think it is OK to destroy the character and safety and livability of some streets (collectors, local collectors, adjacent local roads, and arterials) in order to retain the beauty and character of the rest of the streets. There is absolutely no justification for this creation of two classes of residents.

Please remove this preference to protect the character of all residential properties equally.

Regards,
Katherine Weller
Los Altos Resident

**From:** Melissa Smith
**To:** Public Comment
**Date:** Tuesday, April 12, 2022 11:18:34 AM
**Attachments:** Los Altos Letter Final 4 11 2022 PDF(1).pdf

---

Dear Los Altos City Council,

I strongly support Dr. Cindy Russell's attached letter regarding the Los Altos Wireless Ordinance and ask that you include all of the requests that she has brought to the attention of the Council and place them in the updated ordinance.

Sincerely,
Melissa Smith

To: Los Altos City Council
council@losaltosca.gov
aenander@losaltosca.gov
smeadows@losaltosca.gov
nfligor@losaltosca.gov
lleeeng@losaltosca.gov
jweinberg@losaltosca.gov

From: Cindy Russell, MD

Re: Revisions to 2019 Los Altos Ordinance to Regulate Small Wireless Facilities

Date April 11, 2022

Dear Los Altos City Council:
I am writing today to strongly urge you to reinstate (with legally appropriate revisions) several of the major aspects of the original 2019 Small Cell Wireless Ordinance that diminish blight and protect the beauty, character and health of your lovely Silicon Valley community. In addition, after reading the new 2022 proposed Wireless Facilities Ordinance it appears that some important provisions may have been missed in crafting a new Small Cell ordinance which are critical for the safety of the residents and also reduce liability for the city. This includes several insurance provisions, minor modifications to existing facilities, permiting process, and more.

Encinitas and Malibu have passed ordinances which have elements that are protective but allow flexibility for cities and exceptions/waivers for the carriers. They remain uncontested.

- **Encinitas, CA-** Revised from 2019- Passed June 20, 2020 https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/Resolution%20No.%202020-38%20With%20Policy.pdf?ver=2020-07-13-192634-373
- **Malibu Resolution 21-17 –** Attached please find an executed copy of Res. 21-17 is officially binding because Ordinance 484 adopts it by reference.

I will summarize my ask of the Los Altos City Council with these key points below, followed by backup for those points with additional pertinent legal information which does impact the issue of health/science, as per a court ruling from the second highest court in the land on August 13, 2021, a ruling that referred to the existing RF radiation regulatory limits as "arbitrary and capricious". Arbitrary and capricious means that the law and/or the facts were knowingly disregarded. That is a high bar indeed and the plaintiffs reached that bar. It behooves us to consider what is going on in the courts and pass ordinance language accordingly:

**PLEASE PAUSE:** There are resolutions as mentioned above that have successfully balanced the unique needs of communities with the rights of the telecommunications industry. The new resolution does not have to be passed Tuesday night. Some reflection on the best that Encinitas and Malibu have to offer may benefit all of us in the long run.

# Key Points

1. TITLE OF ORDINANCE: Clarification if this applies to Small Cell or Macro Cells; macro towers must go through conditional use permits

2. LOCATION STANDARDS – PREFERRED SITES

3. WAIVERS FOR STANDARDS

4. FIRE SAFETY

5. APPEALS PROCESS

Thank you for passing the 2019 Wireless Facilities Telecommunications Ordinance. The original wireless facilities ordinance for Los Altos took into consideration public concerns, was well thought out and protects the city of Los Altos from poorly designed and poorly placed cell towers.

I understand, however, that there is a lawsuit against the City for Los Altos from Verizon and AT&T claiming that the 2019 ordinance as written "effectively prohibits" wireless communications. You are commended for taking on this task of revising the ordinance in response. Some of the 2022 proposed changes are good and clarify the permitting process for carriers to avoid lawsuits and provide for "personal wireless services", however, I believe there are some gaps in protections and flexibility for the city that I would like to point out which could be remedied in addition to some clarifications.

It is important to consider adding the provisions below. As you note with the FCC lawsuit to reevaluation the 20 year-old FCC safety standards, the courts have judged that the FCC did not take into account several aspects of human health and environmental effects in setting their standards. We do not know what the future holds for the federal Telecommunications Act of 1996 or state law. The city of Los Altos needs to be prepared to alter its ordinance in case there is a change in the law in the future.

**Representative Anna Eshoo Supports Local Control for Cell Towers**
The 2018 FCC small cell order that fast tracks deployment of small cells in order to "cut the red tape" has prompted cities around the country, like Los Altos, to write these emergency ordinances and now revise them. The FCC Declaratory ruling has been considered an overreach of the Telecom Industry which dominates the FCC (FCC: Captured Agency, N. Alster), overriding the basic rights of cities to have local control. This was recognized by our local representative Anna Eshoo who in 2019 introduced HR530 to protect the rights of states and government by deeming that the *"Federal Communications Commission's Declaratory Ruling in ''Third Report and Order and Declaratory Ruling'' (FCC 18-111) shall have no force or effect."* This bill had 52 co-sponsors. Senator Feinstein introduced in 2019 a companion federal bill SB 2012 to block the FCC order. Neither moved.

Representative Eshoo also sent a letter to the FCC in 2020 to ask that the vote on the FCC order be delayed stating, ***"we worry that if this Declaratory Ruling does not benefit from meaningful input from local governments, the result could undermine municipalities' ability to balance their responsibilities to public safety and community design with their desire to ensure access to affordable wireless networks and the next generation services."***

Please fight for the rights of your residents and government as our local representatives have done. You have more power than you know. Please exercise it.

# Important Provisions to Add

## 1) Title of Ordinance

To clarify whether the ordinance title should apply only to Small Wireless Facilities or if this is for both Small Cell and Macro Towers it may be helpful to rename the ordinance to its original title and keep the descriptions separate within the ordinance. It is not clear to me in this rewrite. Small cell applications are different than for macro towers due to difference in structure of towers, power emitted and location in right of way as per FCC ruling.

(Section 14.82.050) See Encinitas Small Cell wireless Ordinance. Resolution 2019- 91- REGULATING SMALL WIRELESS FACILITIES AND OTHER INFRASTRUCTURE DEPLOYMENTS IN THE PUBLIC RIGHTS-OF-WAY
https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/CC%20Policy%20C035.pdf

2) **Location Standards- Preferred Sites**- Despite what the telecommunications industry says, you as a city can still have preferred sites and less preferred sites in your ordinance. (Encinitas and Malibu Ordinances) You can add an exception clause or waiver process to allow for placement of a cell tower if the carrier proves it is necessary (and other locations are not technically feasible) for "Personal Wireless Services" under the 1996 Telecom Act of 1996 and so that this does not constitute an "effective prohibition".
*** Special Zones can be designated for schools, day care centers, residential dwellings, protected habitat or trees, parks, etc.**
* Keep the 1000 foot distance between towers, **not 200 feet.** Explanation below.

Here are examples of Location Standards in the Encinitas Small Cell Wireless Ordinance passed in June, 2020 and in Malibu April 2021, which to date are uncontested.

# Encinitas Ordinance Passed June 10, 2020

## SECTION 10. LOCATION STANDARDS

1. (a) **Restricted Site Locations.** All of the following locations will be deemed "Restricted Site Locations" that require an exception pursuant to SECTION 13 of this Policy:

    1. (1) any location within a residential zone;
    2. (2) any location within 500 feet from a residential dwelling unit;
    3. (3) any location within 500 feet from a daycare facility or primary school;
    4. (4) any location within a Very High Fire Hazard Severity Zone; and
    5. (5) any location within the Ecological Resource/Open Space/Park Zone.

    (b) **Location Preferences.** To better assist applicants and decision makers understand and respond to the community's aesthetic preferences and values, this subsection sets out listed preferences for locations to be used in connection with small wireless facilities in an ordered hierarchy. Applications that involve lesser-preferred locations may be approved so long as the applicant demonstrates by clear and convincing evidence in the written record that: (1) any more preferred locations or structures within 500 feet from the proposed site would be technically infeasible; and (2) if the proposed site or the most- preferred location within 500 feet from the proposed site is within a Restricted Site Location, the applicant qualifies for an exception pursuant to SECTION 13 of this Policy. The City prefers small cells in the public rights-of-way to be installed in locations, ordered from most preferred to least preferred, as follows:

    (1) locations within industrial zones, commercial zones, business parks or office professional zones on or along prime arterials;

    (2) locations within industrial zones, commercial zones, business parks or office professional zones on or along major arterials;

    (3) locations within industrial zones, commercial zones, business parks or office professional zones on or along collector roads;

    (4) locations within industrial zones, commercial zones, business parks or office professional zones on or along local streets;

    (5) any location within 500 feet from any residential zone;

    (6) locations within residential zones on or along prime arterials;

    (7) locations within residential zones on or along major arterials;

    (8) locations within residential zones on or along collector roads;

    (9) locations within residential zones on or along local streets;

(10) any location within 1,000 feet from an existing/proposed small wireless facility;

In the event that a proposed facility would be within 500 feet from two or more restricted site locations (as defined in Subsection 10(a)), and the proposed facility qualifies for an exception pursuant to SECTION 13 of this Policy, the technically feasible location furthest from all such restricted site locations will be deemed to be the most preferred alternative.

(c) **Encroachments Over Private Property.** No small cell antennas, accessory equipment or other improvements may encroach onto or over any private or other property outside the public rights-of-way without the property owner's express written consent.

## Malibu Wireless Ordinance Resolution 21-17 Standards Passed April 2021.

https://www.malibucity.org/DocumentCenter/View/27969/Ordinance-No-484

### Location Standards for All Facilities

The location standards for all wireless communications facilities, other than those that qualify as eligible facilities requests, are as follows:

1. No wireless telecommunication facility shall be located within five hundred (500) feet of any school, playground, or park unless a finding is made, based on technical evidence acceptable to the reviewing authority showing a clear need for the facility and that no technically feasible alternative site exists. Except for facilities installed on the same pole or tower as an existing wireless telecommunication facility, wireless telecommunication facilities located within any residential zone district shall not be located within one thousand (1,000) feet of any other wireless communications facility, except from those facilities placed on utility poles along Pacific Coast Highway, unless a waiver is granted.
2. All new freestanding wireless communications facilities and monopoles shall be set back a minimum distance of at least one hundred and twenty (120%) percent of the height of the facility or monopole from any property line abutting a residentially zoned property. This minimum setback is not subject to the waivers allowed under Section 7 of this Resolution.
3. Location preference for wireless communications facilities should be given to the following:
    1. Property designated non-residential (except for public open space and recreational vehicle park zoning districts), unless otherwise prohibited pursuant to this title.
    2. Facilities attached or sited adjacent to existing structures. Whenever possible, facilities shall be located on and/or inside existing structures. Appropriate types of existing structures may include, but are not limited to: buildings, water tanks, telephone poles and utility towers and poles, sign standards, light standards and roadway overpasses.
    3. Sites with minimum separation. Sites that are more than five hundred (500) feet from school, playgrounds, and parks.

4. Sites that are not highly visible from adjacent roadways.
5. Unless otherwise indicated in MMC Chapter 17.46 or these Standards, no wireless facility shall be installed on an exposed ridgeline unless the facility blends with the

surrounding existing natural and man-made environment and a finding is made that no other location is technically feasible.

6. The City expressly designates residential, public open space and recreational vehicle park zoning districts, parks and schools as the least appropriate possible locations, and the absolute last choices for siting.

## 3) Waivers for Standards

Malibu Wireless Facilities Ordinance 2021 has added a section on Waivers for Standards that clarifies the process and protects the city from liability.

**Resolution No. 21-17 Page 9**

1. A waiver of one or more of these Standards may be granted in the following circumstances:
    1. Pursuant to MMC Section 17.46.060(D), if an applicant demonstrates to the Planning Commission through clear and convincing evidence that denial of an application would, within the meaning of federal law, prohibit or effectively prohibit the provision of personal wireless services, or otherwise violate applicable laws or regulations;
    2. If an applicant demonstrates to the Planning Commission through clear and convincing evidence set forth in a feasibility study that compliance with a requirement of these Standards would be technically infeasible and the proposed wireless facility complies with the requirements of these Standards to the greatest extent technically feasible. For example, an exception to a requirement to conceal antennas in a shroud may be granted if shrouding is shown to be technically infeasible and an alternative concealment such as a colored film wrap is proposed; or
    3. If an applicant demonstrates to the Planning Commission with clear and convincing evidence that the particular engineering, design or location proposed involves an alternative that better meets the purposes of Chapter 17.46 and only minor non-compliance with a requirement of these design Standards and results in no increase in public visual impact to the community or provides other benefits. For example, an exception to the wireless facility location limitations may be granted when the applicant can demonstrate that the placement is less visible from viewsheds of residences or shielded by vegetation or existing infrastructure (such as barriers), or is less physically intrusive (for example, less impactful to tree roots or reduces noise). Among other factors, in deciding whether or not to grant an exception, the Planning Commission may consider the impact of expansions to the facility that the applicant would be entitled to make as of right if granted.
2. Waivers may only be requested at the time an application is initially submitted for a discretionary permit. The request must include both the specific provision(s) from which waiver is sought and the basis of the request, including all supporting evidence on which the applicant relies. Any request for waiver after the City has deemed an application

complete constitutes a material change to the proposed wireless facility and shall be considered a new application. A request for waiver from one or more

## 4) Fire Safety

**All electrical equipment including small cell towers are a fire risk. The fire cannot be put out in a conventional manner with firefighters blasting water on the fire. They have to wait until the power is shut off or electrocution will result.**

**Examples are**

- **San Diego tower that caught fire in a high school stadium- https://fox5sandiego.com/news/local-news/stadium-light-catches-fire-at-south-bay-high-school/**
- **The Malibu fire in 2007 due to pole overload.** CPUC finds Edison and 4 telecom carriers $51.5 million - https://www.latimes.com/local/lanow/la-me-ln-malibu-fire-settlements-approved-state-puc-20130919-story.html

Considering the increase in wildfires and the risk of earthquakes. Fire safety is a priority for citizens. **The Malibu Wireless Facilities Ordinance 2021 has language in the Fire Safety Standards that can be incorporated.** In the attached Executed Copy of Malibu Res. 21-17, please note fire language on pages 2, 3, 5, 8, 11, 12, and particularly beginning on page 23 with "Electrical and Structural Safety Information."

## 5) Appeals Process

Language for appeal is not in the ordinance
Applications.

A) Any person adversely affected by a decision of the Director pursuant to this Chapter may request an administrative hearing to appeal the Director's decision. In order to request a hearing, the person shall submit to the City Clerk in the manner directed in the Director's decision notice a fully completed request for administrative hearing form along with a full amount of the appeal fee set by the City Council (by way of check or money order). The request for administrative hearing shall be incomplete if it does not include the appeal fee in the full amount. … etc.

## Precaution is Warranted

We understand that, as per Section 704 of the 1996 Telecommunications Act, environmental concerns, and as courts have interpreted these it includes heath impacts, cannot be a factor in denial of cell towers but we are early in the game.
Public health and ecosystem health are still important issues with new 5G systems untested for long term or short term safety for either human health or environmental health. 5G systems with a complex mix of low, medium and high frequencies (thus the need for macro and microcells) are very onerous to measure, requiring very expensive complex equipment that is very difficult

for engineers to accomplish let alone city facility engineers. Precaution in placement is paramount in this discussion. Once cell towers are placed there is no going back and you just wait for people to experience symptoms or develop cancer or a neurologic condition that you will not be able to sort out from the common toxic exposures we all encounter on a daily basis.

Elon Musk tells us that 5G millimeter wave systems are not needed for autonomous cars. 5G millimeter wavelengths are also not required for "personal wireless services". For the later this technology can be effectively replaced with safer and more secure fiberoptic networks and current wireless technologies. I will explain why health matters.

## Health Matters

I am a practicing physician who has studied the health impacts of environmental toxins through our local County Medical Association and the California Medical Association for over 25 years. I began studying the health impacts of wireless radiation when I learned of a proposal to place a cell tower on my daughter's school.

After 10 years of research into the literature and talking to a variety of people affected by cell towers and wireless radiation I, like many others in the medical and scientific community, have come to the conclusion that wireless radiation is a pollutant just like lead or pesticides or mercury or toxic industrial waste. The mechanisms are similar - oxidation, the effects are broad on all living organisms and people are often unaware they are exposed to the toxin - unless they are "sensitive". Wireless radiation causes oxidative stress on organisms and stem cells, and at low levels of radiation. These low levels cause a slow decline in physiologic processes, and for those who have become sensitive- an immediate reaction.

## Antioxidants and Health

As we now know small amounts of toxins can cause harm in certain windows of development thus children are more vulnerable. We also know effects are cumulative. People vary in their vulnerability due to age, genetics and other toxic exposures. Not all people react the same. Our health, wellness and aging are determined by oxidation levels in our tissues that injure our DNA, proteins and lipids, thus antioxidants in foods have been shown to block oxidation, neutralize cellular injury and promote health. This is well established in the nutrition literature. The literature also demonstrates that taking antioxidants (Vitamin E, zinc and melatonin) protects the cell from oxidation injury from wireless radiation. Oxidative stress plays a major part in the development of chronic, degenerative and inflammatory illnesses such as cancer, autoimmune disorders, aging, cataracts, rheumatoid arthritis, cardiovascular and neurodegenerative diseases, as well as some acute pathologies (trauma, stroke**). It is well established that wireless radiation at non-thermal levels causes oxidative stress**. Effects of this are cumulative on our DNA, lipids and cellular membranes.

## We Evolved in a Low Electromagnetic Environment

The natural environment of the Earth is electromagnetic. We have terrestrial electric and magnetic fields, radiation from the sun and cosmic microwaves. All living things evolved in

harmony with the Earth's natural but very very low-level electromagnetic rhythms. Birds, bees and mammals have magnetite in their bodies and brains that use the Earth's magnetic field for the delicate tasks of navigation and foraging. Our human nervous system, heart, reproductive and endocrine systems rely on minute electromagnetic signals for complex functions. Manmade electromagnetic fields (EMF) emitted by our modern technology can distort our bodies electric currents, delicate cell membranes and cause broad dysfunction. This can be with long term or sometimes short exposures with higher power and different pulsations. Science has shown us that organisms adapt to constant electromagnetic fields found in nature much easier than artificial pulsed radiation that is emitted from cell towers and wireless devices. It makes perfect sense that wireless radiation can be harmful to living organisms even it does not knock an electron out of its orbit.

## Wildlife

You need to consider the unique ecosystem which surrounds this lovely town. Science has shown us that levels of artificial electromagnetic radiation we are increasingly exposed to is harming not only humans but the sensitive environment that we tend to ignore but depend upon for our sustenance and mental health. https://mdsafetech.org/environmental-and-wildlife-effects/

## New Review on Wildlife and wireless Radiofrequency Radiation

The most comprehensive 3 part peer reviewed article by Levitt, Lai and Manville (2021) provides an updated, thorough and well referenced overview of RFR and effects on all wildlife, revealing a disturbing picture of the future if we continue to expand wireless in our homes, communities and for the commercialization of space.

The authors state, *"But is there a larger environmental downside to rising ambient EMF exposures — particularly RFR — from popular mobile communication devices, WiFi antennas, and all accompanying infrastructure that is being overlooked by environmentalists, researchers, and government regulators alike. We may be missing critical physiological effects across species based on obsolete assumptions about low-level far-field exposures being too weak to adversely affect living tissue. We have yet to take into consideration the unique physiologies of other species, or how they use the environment in ways that humans do not, when we assume that the unfettered use of EMF/RFR can continue unabated and be allowed to grow indefinitely*." **Effects of non-ionizing electromagnetic fields on flora and fauna, part 1.** Rising ambient EMF levels in the environment. (2021) Levitt BB et al. Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/

**MOEF Report on Wildlife**
The Inter-Ministerial Committee (IMC) of expert scientists reviewed the literature of the effects of RF-EMF radiations on wildlife, humans and the biosphere. In their 2010 MOEF Report they found that out of the 919 research papers collected on birds, bees, plants, other animals, and humans, 593 showed impacts, 180 showed no impacts, and 196 were inconclusive studies. All organisms had effects.

**Human Effects–** 62% showed effects, 13% no effect and 25% inconclusive **Plant Effects–** 87% showed effects and 13% were inconclusive

**Wildlife Effects-** 62% showed effects, 4% no effect and 36% inconclusive **Bee Effects**—85% showed effects and 15% no effect

**Bird Effects**- 77% showed effects, 10% no effect and 13% inconclusive **Current Standards are Scientifically Out of Date**

## UNESCO World Heritage Wildlife Area Species Disappearing

An abundance of peer reviewed literature demonstrates adverse impacts to the environment with declines in insect, bird and wildlife populations in cities and where cell towers are placed. This spells disaster for biodiversity, fragile wildlife areas, critical pollinators and agriculture, especially with additive effects of pesticides, toxins and loss of habitat. A report on Unesco's Mt. Nardia World Heritage Park documents this slow decline in populations of species after cell towers were placed. Unesco Report on Disappearance of Species from Mt. Nardia Park World Heritage Area 2000-2015 with Increased Expansion of Telecommunications Antenna. Ethno-Botonist Mark Broomhall. UNESCO Report on Disappearance of Species from Mt. Nardia with Increased EMR 2000-2015

## Cell Tower Health Effects

Current standards are based on short term thermal exposures and discount the abundant peer reviewed literature on harm from low level, non -thermal effects. It is clear that the limits for radiofrequency radiation are set too high in the U.S. and Canada. These limits are 100 times higher than that of Italy and Russia, who set their standards based on methodical research on immunologic, neurologic and biologic effects of low-level radiation fields. Current U.S. limits are up to 1,000 microwatts/cm2 with symptoms seen at levels of 0.005 microwatts /cm2.

## Physicians in Germany ask for Health Investigation of Cell Towers in 2005

An open letter from Dr. Cornelia Waldmann-Selsam was sent to the German State Chancellor, Edmund Stoiber, on behalf of 114 physicians (Bamberger Appeal) asking for an investigation into the newly reported adverse health symptoms of 356 residents who lived near cell towers in Oberfranken, Germany. Dr. Waldmann-Selsam noted, "*Many humans get sick from emissions far below the recommended limit values, which consider only thermal effects, and we have a sickness picture with characteristic symptom combinations, which are new to us physicians," The list of symptoms were, " Sleep disturbances, tiredness, concentration impairment, forgetfulness, problem with finding words, depressive tendencies, tinnitus, sudden loss of hearing, hearing loss, giddiness, nose bleeds, visual disturbances, frequent infections, sinusitis, joint and limb pains, nerve and soft tissue pains, feeling of numbness, heart rhythm disturbances,*

*increased blood pressure , hormonal disturbances, night-time sweat, nausea." Resident noted almost immediate improvement when moving away*."

Dr. Waldmann-Selsam goes on to say, "*physicians were able to prove, by re-testing the patients, the normalization of blood pressure, heart rhythm, hormone disturbances, visual disturbances, neurological symptoms, blood picture*,". She called this an emergency medical situation and requested an official health investigation. http://www.next-up.org/pdf/Letter_to_Edmund_Stoiber.pdf

## Cell Tower Effects on Cognition and Learning

The majority of studies, which have been done internationally, have shown an increase in neurologic symptoms in a percentage of residents living near cell towers. Symptoms vary with the distance from the cell tower. Symptoms include insomnia, headache, heart palpitations, dizziness, poor concentration, and fatigue. A study in Japan (Shinjyo 2014) showed a decrease in symptoms when the cell tower was removed. There is also a well done study showing blood abnormalities in those living nearest to cell towers (Zothansiama 2017). DNA and lipid abnormalities were seen along with reduction in internal antioxidants which provide protection from pollutants.

Moreover, a recent study conducted over a 2 year period looked at effects of cell towers near two schools by Meo et al (2018) and clearly demonstrated cognitive dysfunction in students closest to the higher power cell tower.

## Firefighters Fighting Fires and Now Cell Towers

After noticing that many of the firefighters where developing neurologic symptoms when first responder cell towers were placed on the fire stations the International Association of Firefighters studied the matter and passed a resolution in 2004 asking that cell towers not be placed in proximity to fire stations. In AB 537 (Quirk), signed into law by Gov. Newsom on October 4, 2021, the firefighters achieved the first ever health/readiness exemption in the world.

**Every fire station in California is now exempt from having a 5G tower on their station.** This movement began when cell towers were initially targeted for fire stations because of their location and the revenue received by the cities. Many firefighters developed symptoms including headaches, fatigue, memory impairment and insomnia within a week of the installation of the towers. An exemption was inserted in California bills on cell towers. AB 57 (Quirk 2015) has an exemption on the grounds of health effects. AB 537 (Quirk 2021) also has this exemption and reads, "*Due to the unique duties and infrastructure requirements for the swift and effective deployment of firefighters, this section does not apply to a collocation or siting application for a wireless telecommunications facility where the project is proposed for placement on fire department facilities."* SB 649 (Hueso, Quirk and Dodd 2018) also had a health exemption for firefighters and was vetoed by Governor Brown.

## 500 Meter (1640 ft) Buffer from Cell Tower Recommended

Cell tower health studies that show impacts from cell towers with symptoms within about 1500 feet of the cell towers. That is why Pearce et al (2019**) recommended a "500 Meter buffer around schools, hospitals and homes "Limiting liability with positioning to minimize negative health effects of cellular phone towers."**

## Cancer and Cell Towers

3 Studies investigated the rates of cancer and cell towers looking at the distance from cell towers and the incidence of cancer. They found the rate of cancer incidence increased significantly in those living within about 350 -400 meters (around 1000 feet) to the cell tower.

Dode 2011 performed a 10 year study (1996-2006) examining the distance from cell towers and cancer clusters. He and his colleagues found a highly significant increase in cancers in those living within 500 meters of the cell tower. They noted "The largest density power was 40.78 μW/cm2, and the smallest was 0.04 μW/cm2." The current guidelines are about 1000 μW/cm2. The authors conclude "Measured values stay below Brazilian Federal Law limits that are the same of ICNIRP. The human exposure pattern guidelines are inadequate. More restrictive limits must be adopted urgently."

Wolf and Wolf 2004 investigated the rates of cancer versus distance from cell towers in small towns in Israel. He found the rate of cancer incidence was 129 cases per 10,000 persons per year in those living within 350 meters of a cell tower versus a rate of 16-31/10,000 in those living greater than 350 meters from the cell tower.

**Eger (2004)** showed an increase in the development of new cancer cases within a 10 year period if residents lived within 400 meters of a cell tower. Their results revealed that within 5 years of operation of a transmitting station the relative risk of cancer development tripled in residents near the cell towers compared to residents outside the area.

**Insurance Has an Exclusion for Radiofrequency Radiation as an Emerging Risk** Insurance companies consider wireless radiation to be similar to asbestos in long term health impacts and do not provide coverage from harm for RF health effects. The cities are left with that liability unless they can provide insurance.
In a 2019 report, **New Emerging Risk Insights**, by Swiss RE Insurance Company, the second largest reinsurance company in the world, **5G is listed as an emerging concern** in the high risk category within 3 years. Included in the high-risk trends are artificial intelligence and the existential threats of climate change. "*The top five emerging risks in our SONAR 2019 report are digital technology's clash with legacy hardware, potential threats from the spread of 5G mobile networks, increasingly limited fiscal and monetary flexibility by central banks, genetic testing's implications on life insurers, and the impact of climate change on the life and health sector.*" https://www.swissre.com/institute/research/sonar/sonar2019.html

## National Academy of Sciences Report on the Havana Syndrome and Harm from RFR

A recent report by the National Academy of Sciences concluded that the "sonic attacks" on diplomats in Cuba and China were most likely due to pulsed radiofrequency from directed energy weapons. They had symptoms similar to those who live near cell towers (headache, nausea, insomnia, dizziness, memory loss, heart palpitations, depression). Dr. Beatrice Golomb wrote the most extensive report to date on this subject linking these mystery "directed energy attacks" to pulsed microwaves similar to the wireless devices we use daily. In the case of these high powered beams there was documented injury to brain networks found by the University of Pittsburg physicians who studied the diplomats. Dr Golomb highlights that **the strength of the health effects are related to the peak power not the average power. The pulse makes the poison.**

**The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** is a comprehensive guide written by many scientists and physicians in Europe who are part of the European Academy for Environmental Medicine (EUROPAEM) – EMF working group who have recognized and treated those with electrosensitivity for many years. This is a thorough, well researched and well-referenced scientific paper that is based on the 2012 Austrian Medical Association **Guidelines for the Diagnosis and Treatment of EMF Illness**. A questionnaire from their group is included in the attachments.

## New Hampshire 5G Commission Finds Radiofrequency Radiation Problematic

The first Commission formed in the United States to study the environmental and health effects of 5G technology released their comprehensive final report November 1, 2020. The Commission to Study the Environmental and Health Effects of Evolving 5G Technology was mandated by HB 522 passed by the state legislature in New Hampshire. Their final report included 15 recommendations addressing the need for public education about wireless hazards, RF health studies, RF measurements, cell antenna setbacks, fiberoptic rather than wireless deployment, commercial warning signs and wildlife protection. After hearing extensive testimony in a series of 13 meetings over the course of a year and reviewing an abundance of research, the Commission highlighted the lack of a single definition for 5G, **insufficient evidence of safety for 5$^{th}$ generation technology**, a concern that safety standards for wireless technologies have not been updated with the latest science and that 5G is largely a marketing concept. They also expressed concern that the FCC has a long history of being accountable to industry over the desires of communities and individuals.

## FCC Told by DC Court to Reevaluate Safety Standards

On August 13, 2021 a joint lawsuit was won by petitioners against the Federal Communications Commission (FCC) for failure to protect human health and the environment by dismissing scientific evidence of harm from wireless radiation. The Petitioners challenged the FCC's refusal

to reevaluate and update their 24-year-old radiofrequency (RF) safety guidelines for existing and new telecommunications technologies. The DC Circuit Court of Appeals ruled that the majority of the RF radiation standards established by the FCC did not use "reasoned decision-making" (they did not go by the science) and thus the standards were considered by the court to have been set in an "arbitrary and capricious" manner. This was an extremely high bar for the Plaintiffs to reach. The Circuit Court of Appeals rarely admonishes a federal agency or commission in this way. The DC Circuit Court of Appeals returned this decision back to the FCC and ordered the FCC to re-examine its standards for wireless radiation exposure and provide a review of wireless harms that is compliant with the law for non-cancer harms.

The Court Decision stated, "The National Environmental Policy Act ("NEPA") and it's implementing regulations require federal agencies to "establish procedures to account for the environmental effects of [their] proposed actions." And "To fulfill its obligations under NEPA, the Commission has promulgated guidelines for human exposure to RF radiation…The Commission last updated its limits for RF exposure in 1996… The ANSI and IEEE developed limits are designed to protect against "thermal effects" of exposure to RF radiation, but not "non-thermal" effects. In March 2013, the Commission issued a notice of inquiry regarding the adequacy of its 1996 guidelines in response to changes in the ubiquity of wireless devices and in scientific standards and research since 1996. In December 2019, the Commission issued a final order resolving its 2013 notice of inquiry by declining to undertake any of the changes contemplated in the notice of inquiry. Petitioners challenge the 2019 final order under NEPA and the Administrative Procedure Act ("APA").

## 5G: A Manufactured Need by Industry

Reports indicate that the telecommunications industry has largely manufactured a "need" for expanding wireless technology in cities, while halting projects for safer fiberoptic broadband. Note a 2020 European Parliament report, **5G: State of Play in Europe, USA and Asia. In Depth Analysis,** suggests 5G is a manufactured need. "*As 5G is driven by the telecoms supply industry, and its long tail of component manufacturers, a major campaign is under way to convince governments that the economy and jobs will be strongly stimulated by 5G deployment."*

In my opinion, from all the research I have done, it appears the telecommunications industry has influenced laws to prevent health or environmental effects from being considered in the placement of cell towers (See FCC Captured Agency). They knew of the harm in early studies done by Dr. George Carlo in the 1990's but suppressed the data so they could move forward. That is well documented in Dr. Carlo's book, "Cell phones: Invisible Hazards in The Wireless Age".
A blizzard of robust science has appeared now to show biological and health impacts of wireless technology, but it is still denied, and the basis for genuinely safe RF radiation guidelines is flawed. An exponential growth in cell towers is now being played out with cities being left on their own to figure out how to regulate these towers locally. Industry places a heavy hand and complex laws on local policy makers who must navigate these complex FCC policies to prevent legal action.

## Board of Health in Pittsfield Massachusetts Orders Verizon to Cease and Desist

For the first time in the U.S. a Board of Health has issued a cease and desist order to Verizon to remove or shut off a cell tower after 17 people in a neighborhood reported they became ill after the Verizon cell tower was turned on. Courtney Gilardi and her 2 children as well as residents living near the cell tower, reported experiencing a constellation of symptoms including stabbing headaches, nausea, vomiting, dizziness, "buzzing in the head", and insomnia so severe her family had to move to the next town and into a house with no heat and no hot water to escape the sickness. Other neighbors drove an hour away to sleep at a relative's house or slept in their cars away from the tower. These are classic symptoms of electromagnetic illness experienced in firefighters and military personnel working on radar and well documented by NASA, the Air Force and other military agencies as well as the "Havana Syndrome". These symptoms were also seen in Japan after 2 cell towers were turned on and when the tower was removed the resident's symptoms largely resolved.

## Apple stops 5G Phone MMW: Is This the Death of 5G Millimeter Wavelengths?

You are probably aware that Verizon and AT&T built special hotspots in many cities in the U.S. to house 5G high band millimeter wavelengths that were to revolutionize wireless with ultrafast speeds. These small wavelengths the size of bees have been put into some community small cells which need to be about 1000 feet apart without obstruction to function properly. Apple, who already has some 5G MMW phones, just announced that it is not building any millimeter wave spectrum antennas in its next generation SE iphones. With 4G LTE low and mid band wavelengths they apparently do not need the millimeter 5G bandwidth. The article notes, "It's not a surprise that Apple is dropping the spectrum from its phones. It costs chip space and power for every additional spectrum that is supported by a cellphone. Cell manufacturers care more about long battery life than they do about a technology that never made it out of the downtowns of a few major cities."

**FCC Limits: A False Sense of Security**

We are told by the FCC that wireless radiation and cell towers are safe within current safety guidelines, or that we do not really know if there is harm or that the research is inconclusive or that it is not ionizing (like x-rays) so it cannot hurt us. This is the same dismissive and doubt creating language used by the tobacco industry and a host of other chemical companies to protect their toxic products, thus profits. The research shows that we do know, beyond a doubt, that wireless radiation is harmful to all living systems below the current safety standards. The most obvious evidence is that more and more children and adults are reporting symptoms of electrosensitivity (EHS) in the presence of wireless radiation when they live in a home near a cell tower, or use a cell phone, or in schools where wireless devices and cell towers are increasing.

Please use your authority and wisdom to keep this ordinance strong. Take more time if you need to in order for you to sort this out and be sure of your decision. Remember that you all live in Los Altos as well so you are protecting you and your families and the next generation as well.

Sincerely,

Cindy Russell, MD

**Attached- Malibu Ordinances**

## References


- Pearce (2019**) 500 Meter buffer recommended around schools, hospitals and homes. "Limiting liability with positioning to minimize negative health effects of cellular phone towers."** (2019) Pearce M. Environmental Research, Nov 2019; https://www.sciencedirect.com/science/article/abs/pii/S0013935119306425
- Waldman-Selsam, C. (2004). **Bamberg Appeal, on behalf of 114 physicians**. Open Letter to Edmund Stoiber, Prime Minister, Germany, August 3. http://www.vws.org /documents/cell- project- documents/BambergAppeal.pdf
- Waldmann-Selsam C 2016. **Radiofrequency radiation injures trees around mobile phone base stations. (2016).** Waldmann-Selsam C et al. Science of the Total Environment. 572 (2016) 554-569. https://www.researchgate.net/publication/306435017_Radiofrequency_radiation_injures_trees_around_mobile_phone_base_stations
- **The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** https://www.degruyter.com/document/doi/10.1515/reveh-2016-0011/html
- **Researcher links diplomats' mystery illness to radiofrequency/microwave radiation.** Eureka alert. August 29, 2018. American Academy for the Advancement of Science. https://www.eurekalert.org/pub_releases/2018-08/uoc–rld082918.php
- **Diplomats in China report similar brain injuries as Americans in Cuba:** In 2016 and 2017, 25 Americans in the U.S. embassy in Cuba suffered serious, unexplained brain injuries. Now, at least 15 American officials in China are reporting similar symptoms. 60 Minutes reports. March 15, 2019. https://www.cbsnews.com/news/diplomats-in-china-report-similar-brain-injuries-as-americans-in-cuba-60-minutes/
- Swanson RL (2018) **Neurological Manifestations Among US Government Personnel Reporting Directional Audible and Sensory Phenomena in Havana, Cuba. (2018)** Swanson RL et al. JAMA. 2018 Mar 20;319(11):1125-1133. https://jamanetwork.com/journals/jama/fullarticle/2673168
- Levitt, Lai, Manville. (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 1. Rising ambient EMF levels in the environment.** Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 2 impacts: how species interact with natural and man-made EMF**. Rev Environ Health. 2021 Jul 8. https://pubmed.ncbi.nlm.nih.gov/34243228/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 3. Exposure standards, public policy, laws, and future directions.** Rev Environ Health. 2021 Sep 27. https://pubmed.ncbi.nlm.nih.gov/34563106/

- PanagopoulosDJ. (2013**) Electromagnetic Interaction Between Environmental Fields and Living Systems Determines Health and Well Being.** University of Athens, Department of Biology, Athens, Greece Radiation and Environmental Biophysics Research Centre, Athens, Greece. Electromagnetic Fields, Nova
- **MOEF Report on Possible Impacts of Communication Cell Towers on Wildlife Including Birds and Bees. (2010)** The Ministry of Environment and Forest. Report on Possible Impacts of Communication Towers on Wildlife Including Birds and Bees. (2010) Ministry of the Environment and Forests (MOEF) India. https://ecfsapi.fcc.gov/file/7520958381.pdf
- Sciences. http://www.wendywalksfores.com/uploads/1/3/9/0/13908728/panagopoulos-nova-2013-emfs-chapter-1.pdf
- **SwissRe Insurance-** Sonar 2019: New emerging risk insights. https://www.swissre.com/institute/research/sonar/sonar2019.html
- **Landmark Lawsuit Filed Against FCC for Failing to Reevaluate 5G and Wireless Safety.** Sept 23, 2020. PST. https://mdsafetech.org/2020/09/23/landmark-lawsuit-filed-against-fcc-for-failing-to-reevaluate-5g-and-wireless-safety/
- **Final Report on Commission to Study the Environmental and Health Effects of Evolving 5G Technology.** State of New Hampshire, General Court. Nov 1, 2020. http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf
- **We Have No Reason to Believe 5G Is Safe.**The technology is coming, but contrary to what some people say, there could be health risks. (2019) Scientific American. Joel M. Moskowitz. Oct 17, 2019. https://blogs.scientificamerican.com/observations/we-have-no-reason-to-believe-5g-is-safe/
- **5G wireless telecommunications expansion: Public health and environmental implications. (2018) Russell CL**. Environ Res. 2018 Apr 11. https://www.ncbi.nlm.nih.gov/pubmed/29655646. or at https://ecfsapi.fcc.gov/file/10913927726988/5%20G%20wireless%20telecommunications%20expansion%3A%20Public%20health%20and%20environmental%20implications.pdf
- **Firefighters Fighting Fires and Now Cell Towers-** https://mdsafetech.org/2019/09/28/firefighters-fighting-fires-and-now-cell-towers/
- **5G: State of Play in Europe, USA and Asia. In Depth Analysis, European Parliament.** https://www.europarl.europa.eu/RegData/etudes/IDAN/2019/631060/IPOL_IDA(2019)631060_EN.pdf
- **Apple ditches mmWave 5G with newest iPhone.** https://www.lightreading.com/5g/apple-ditches-mmwave-5g-with-newest-iphone/d/d-id/775901

**From:** Arisha S
**To:** Public Comment; City Council
**Date:** Tuesday, April 12, 2022 11:33:02 AM
**Attachments:** Los Altos Letter Final 4 11 2022 PDF(1).pdf

---

Dear Los Altos City Council,

I strongly support Dr. Cindy Russell's attached letter regarding the Los Altos Wireless Ordinance and ask that you include all of the requests that she has brought to the attention of the Council and place them in the updated ordinance.

Sincerely,
Ariadna Solovyova
Mountain View resident, frequent Los Altos visitor

To: Los Altos City Council
council@losaltosca.gov
aenander@losaltosca.gov
smeadows@losaltosca.gov
nfligor@losaltosca.gov
lleeeng@losaltosca.gov
jweinberg@losaltosca.gov

From: Cindy Russell, MD

Re: Revisions to 2019 Los Altos Ordinance to Regulate Small Wireless Facilities

Date April 11, 2022

Dear Los Altos City Council:
I am writing today to strongly urge you to reinstate (with legally appropriate revisions) several of the major aspects of the original 2019 Small Cell Wireless Ordinance that diminish blight and protect the beauty, character and health of your lovely Silicon Valley community. In addition, after reading the new 2022 proposed Wireless Facilities Ordinance it appears that some important provisions may have been missed in crafting a new Small Cell ordinance which are critical for the safety of the residents and also reduce liability for the city. This includes several insurance provisions, minor modifications to existing facilities, permiting process, and more.

Encinitas and Malibu have passed ordinances which have elements that are protective but allow flexibility for cities and exceptions/waivers for the carriers. They remain uncontested.

- **Encinitas, CA-** Revised from 2019- Passed June 20, 2020 https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/Resolution%20No.%202020-38%20With%20Policy.pdf?ver=2020-07-13-192634-373
- **Malibu Resolution 21-17 –** Attached please find an executed copy of Res. 21-17 is officially binding because Ordinance 484 adopts it by reference.

I will summarize my ask of the Los Altos City Council with these key points below, followed by backup for those points with additional pertinent legal information which does impact the issue of health/science, as per a court ruling from the second highest court in the land on August 13, 2021, a ruling that referred to the existing RF radiation regulatory limits as "arbitrary and capricious". Arbitrary and capricious means that the law and/or the facts were knowingly disregarded. That is a high bar indeed and the plaintiffs reached that bar. It behooves us to consider what is going on in the courts and pass ordinance language accordingly:

**PLEASE PAUSE:** There are resolutions as mentioned above that have successfully balanced the unique needs of communities with the rights of the telecommunications industry. The new resolution does not have to be passed Tuesday night. Some reflection on the best that Encinitas and Malibu have to offer may benefit all of us in the long run.

# Key Points

1. TITLE OF ORDINANCE: Clarification if this applies to Small Cell or Macro Cells; macro towers must go through conditional use permits

2. LOCATION STANDARDS – PREFERRED SITES

3. WAIVERS FOR STANDARDS

4. FIRE SAFETY

5. APPEALS PROCESS

Thank you for passing the 2019 Wireless Facilities Telecommunications Ordinance. The original wireless facilities ordinance for Los Altos took into consideration public concerns, was well thought out and protects the city of Los Altos from poorly designed and poorly placed cell towers.

I understand, however, that there is a lawsuit against the City for Los Altos from Verizon and AT&T claiming that the 2019 ordinance as written "effectively prohibits" wireless communications. You are commended for taking on this task of revising the ordinance in response. Some of the 2022 proposed changes are good and clarify the permitting process for carriers to avoid lawsuits and provide for "personal wireless services", however, I believe there are some gaps in protections and flexibility for the city that I would like to point out which could be remedied in addition to some clarifications.

It is important to consider adding the provisions below. As you note with the FCC lawsuit to reevaluation the 20 year-old FCC safety standards, the courts have judged that the FCC did not take into account several aspects of human health and environmental effects in setting their standards. We do not know what the future holds for the federal Telecommunications Act of 1996 or state law. The city of Los Altos needs to be prepared to alter its ordinance in case there is a change in the law in the future.

**Representative Anna Eshoo Supports Local Control for Cell Towers**
The 2018 FCC small cell order that fast tracks deployment of small cells in order to "cut the red tape" has prompted cities around the country, like Los Altos, to write these emergency ordinances and now revise them. The FCC Declaratory ruling has been considered an overreach of the Telecom Industry which dominates the FCC (FCC: Captured Agency, N. Alster), overriding the basic rights of cities to have local control. This was recognized by our local representative Anna Eshoo who in 2019 introduced HR530 to protect the rights of states and government by deeming that the *"Federal Communications Commission's Declaratory Ruling in ''Third Report and Order and Declaratory Ruling'' (FCC 18-111) shall have no force or effect."* This bill had 52 co-sponsors. Senator Feinstein introduced in 2019 a companion federal bill SB 2012 to block the FCC order. Neither moved.

Representative Eshoo also sent a letter to the FCC in 2020 to ask that the vote on the FCC order be delayed stating, ***"we worry that if this Declaratory Ruling does not benefit from meaningful input from local governments, the result could undermine municipalities' ability to balance their responsibilities to public safety and community design with their desire to ensure access to affordable wireless networks and the next generation services."***

Please fight for the rights of your residents and government as our local representatives have done. You have more power than you know. Please exercise it.

# Important Provisions to Add

## 1) Title of Ordinance

To clarify whether the ordinance title should apply only to Small Wireless Facilities or if this is for both Small Cell and Macro Towers it may be helpful to rename the ordinance to its original title and keep the descriptions separate within the ordinance. It is not clear to me in this rewrite. Small cell applications are different than for macro towers due to difference in structure of towers, power emitted and location in right of way as per FCC ruling.

(Section 14.82.050) See Encinitas Small Cell wireless Ordinance. Resolution 2019- 91- REGULATING SMALL WIRELESS FACILITIES AND OTHER INFRASTRUCTURE DEPLOYMENTS IN THE PUBLIC RIGHTS-OF-WAY
https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/CC%20Policy%20C035.pdf

2) **Location Standards- Preferred Sites**- Despite what the telecommunications industry says, you as a city can still have preferred sites and less preferred sites in your ordinance. (Encinitas and Malibu Ordinances) You can add an exception clause or waiver process to allow for placement of a cell tower if the carrier proves it is necessary (and other locations are not technically feasible) for "Personal Wireless Services" under the 1996 Telecom Act of 1996 and so that this does not constitute an "effective prohibition".
*** Special Zones can be designated for schools, day care centers, residential dwellings, protected habitat or trees, parks, etc.**
* Keep the 1000 foot distance between towers, **not 200 feet.** Explanation below.

Here are examples of Location Standards in the Encinitas Small Cell Wireless Ordinance passed in June, 2020 and in Malibu April 2021, which to date are uncontested.

# Encinitas Ordinance Passed June 10, 2020

## SECTION 10. LOCATION STANDARDS

1. (a) **Restricted Site Locations.** All of the following locations will be deemed "Restricted Site Locations" that require an exception pursuant to SECTION 13 of this Policy:

    1. (1) any location within a residential zone;
    2. (2) any location within 500 feet from a residential dwelling unit;
    3. (3) any location within 500 feet from a daycare facility or primary school;
    4. (4) any location within a Very High Fire Hazard Severity Zone; and
    5. (5) any location within the Ecological Resource/Open Space/Park Zone.

    (b) **Location Preferences.** To better assist applicants and decision makers understand and respond to the community's aesthetic preferences and values, this subsection sets out listed preferences for locations to be used in connection with small wireless facilities in an ordered hierarchy. Applications that involve lesser-preferred locations may be approved so long as the applicant demonstrates by clear and convincing evidence in the written record that: (1) any more preferred locations or structures within 500 feet from the proposed site would be technically infeasible; and (2) if the proposed site or the most- preferred location within 500 feet from the proposed site is within a Restricted Site Location, the applicant qualifies for an exception pursuant to SECTION 13 of this Policy. The City prefers small cells in the public rights-of-way to be installed in locations, ordered from most preferred to least preferred, as follows:

    (1) locations within industrial zones, commercial zones, business parks or office professional zones on or along prime arterials;

    (2) locations within industrial zones, commercial zones, business parks or office professional zones on or along major arterials;

    (3) locations within industrial zones, commercial zones, business parks or office professional zones on or along collector roads;

    (4) locations within industrial zones, commercial zones, business parks or office professional zones on or along local streets;

    (5) any location within 500 feet from any residential zone;

    (6) locations within residential zones on or along prime arterials;

    (7) locations within residential zones on or along major arterials;

    (8) locations within residential zones on or along collector roads;

    (9) locations within residential zones on or along local streets;

(10) any location within 1,000 feet from an existing/proposed small wireless facility;

In the event that a proposed facility would be within 500 feet from two or more restricted site locations (as defined in Subsection 10(a)), and the proposed facility qualifies for an exception pursuant to SECTION 13 of this Policy, the technically feasible location furthest from all such restricted site locations will be deemed to be the most preferred alternative.

(c) **Encroachments Over Private Property.** No small cell antennas, accessory equipment or other improvements may encroach onto or over any private or other property outside the public rights-of-way without the property owner's express written consent.

## Malibu Wireless Ordinance Resolution 21-17 Standards Passed April 2021.

https://www.malibucity.org/DocumentCenter/View/27969/Ordinance-No-484

### Location Standards for All Facilities

The location standards for all wireless communications facilities, other than those that qualify as eligible facilities requests, are as follows:

1. No wireless telecommunication facility shall be located within five hundred (500) feet of any school, playground, or park unless a finding is made, based on technical evidence acceptable to the reviewing authority showing a clear need for the facility and that no technically feasible alternative site exists. Except for facilities installed on the same pole or tower as an existing wireless telecommunication facility, wireless telecommunication facilities located within any residential zone district shall not be located within one thousand (1,000) feet of any other wireless communications facility, except from those facilities placed on utility poles along Pacific Coast Highway, unless a waiver is granted.
2. All new freestanding wireless communications facilities and monopoles shall be set back a minimum distance of at least one hundred and twenty (120%) percent of the height of the facility or monopole from any property line abutting a residentially zoned property. This minimum setback is not subject to the waivers allowed under Section 7 of this Resolution.
3. Location preference for wireless communications facilities should be given to the following:
    1. Property designated non-residential (except for public open space and recreational vehicle park zoning districts), unless otherwise prohibited pursuant to this title.
    2. Facilities attached or sited adjacent to existing structures. Whenever possible, facilities shall be located on and/or inside existing structures. Appropriate types of existing structures may include, but are not limited to: buildings, water tanks, telephone poles and utility towers and poles, sign standards, light standards and roadway overpasses.
    3. Sites with minimum separation. Sites that are more than five hundred (500) feet from school, playgrounds, and parks.

4. Sites that are not highly visible from adjacent roadways.
5. Unless otherwise indicated in MMC Chapter 17.46 or these Standards, no wireless facility shall be installed on an exposed ridgeline unless the facility blends with the

surrounding existing natural and man-made environment and a finding is made that no other location is technically feasible.

6. The City expressly designates residential, public open space and recreational vehicle park zoning districts, parks and schools as the least appropriate possible locations, and the absolute last choices for siting.

## 3) Waivers for Standards

Malibu Wireless Facilities Ordinance 2021 has added a section on Waivers for Standards that clarifies the process and protects the city from liability.

**Resolution No. 21-17 Page 9**

1. A waiver of one or more of these Standards may be granted in the following circumstances:
    1. Pursuant to MMC Section 17.46.060(D), if an applicant demonstrates to the Planning Commission through clear and convincing evidence that denial of an application would, within the meaning of federal law, prohibit or effectively prohibit the provision of personal wireless services, or otherwise violate applicable laws or regulations;
    2. If an applicant demonstrates to the Planning Commission through clear and convincing evidence set forth in a feasibility study that compliance with a requirement of these Standards would be technically infeasible and the proposed wireless facility complies with the requirements of these Standards to the greatest extent technically feasible. For example, an exception to a requirement to conceal antennas in a shroud may be granted if shrouding is shown to be technically infeasible and an alternative concealment such as a colored film wrap is proposed; or
    3. If an applicant demonstrates to the Planning Commission with clear and convincing evidence that the particular engineering, design or location proposed involves an alternative that better meets the purposes of Chapter 17.46 and only minor non-compliance with a requirement of these design Standards and results in no increase in public visual impact to the community or provides other benefits. For example, an exception to the wireless facility location limitations may be granted when the applicant can demonstrate that the placement is less visible from viewsheds of residences or shielded by vegetation or existing infrastructure (such as barriers), or is less physically intrusive (for example, less impactful to tree roots or reduces noise). Among other factors, in deciding whether or not to grant an exception, the Planning Commission may consider the impact of expansions to the facility that the applicant would be entitled to make as of right if granted.
2. Waivers may only be requested at the time an application is initially submitted for a discretionary permit. The request must include both the specific provision(s) from which waiver is sought and the basis of the request, including all supporting evidence on which the applicant relies. Any request for waiver after the City has deemed an application

complete constitutes a material change to the proposed wireless facility and shall be considered a new application. A request for waiver from one or more

## 4) Fire Safety

**All electrical equipment including small cell towers are a fire risk. The fire cannot be put out in a conventional manner with firefighters blasting water on the fire. They have to wait until the power is shut off or electrocution will result.**

**Examples are**

- **San Diego tower that caught fire in a high school stadium- https://fox5sandiego.com/news/local-news/stadium-light-catches-fire-at-south-bay-high-school/**
- **The Malibu fire in 2007 due to pole overload.** CPUC finds Edison and 4 telecom carriers $51.5 million - https://www.latimes.com/local/lanow/la-me-ln-malibu-fire-settlements-approved-state-puc-20130919-story.html

Considering the increase in wildfires and the risk of earthquakes. Fire safety is a priority for citizens. **The Malibu Wireless Facilities Ordinance 2021 has language in the Fire Safety Standards that can be incorporated.** In the attached Executed Copy of Malibu Res. 21-17, please note fire language on pages 2, 3, 5, 8, 11, 12, and particularly beginning on page 23 with "Electrical and Structural Safety Information."

## 5) Appeals Process

Language for appeal is not in the ordinance
Applications.

A) Any person adversely affected by a decision of the Director pursuant to this Chapter may request an administrative hearing to appeal the Director's decision. In order to request a hearing, the person shall submit to the City Clerk in the manner directed in the Director's decision notice a fully completed request for administrative hearing form along with a full amount of the appeal fee set by the City Council (by way of check or money order). The request for administrative hearing shall be incomplete if it does not include the appeal fee in the full amount. … etc.

## Precaution is Warranted

We understand that, as per Section 704 of the 1996 Telecommunications Act, environmental concerns, and as courts have interpreted these it includes heath impacts, cannot be a factor in denial of cell towers but we are early in the game.
Public health and ecosystem health are still important issues with new 5G systems untested for long term or short term safety for either human health or environmental health. 5G systems with a complex mix of low, medium and high frequencies (thus the need for macro and microcells) are very onerous to measure, requiring very expensive complex equipment that is very difficult

for engineers to accomplish let alone city facility engineers. Precaution in placement is paramount in this discussion. Once cell towers are placed there is no going back and you just wait for people to experience symptoms or develop cancer or a neurologic condition that you will not be able to sort out from the common toxic exposures we all encounter on a daily basis.

Elon Musk tells us that 5G millimeter wave systems are not needed for autonomous cars. 5G millimeter wavelengths are also not required for "personal wireless services". For the later this technology can be effectively replaced with safer and more secure fiberoptic networks and current wireless technologies. I will explain why health matters.

## Health Matters

I am a practicing physician who has studied the health impacts of environmental toxins through our local County Medical Association and the California Medical Association for over 25 years. I began studying the health impacts of wireless radiation when I learned of a proposal to place a cell tower on my daughter's school.

After 10 years of research into the literature and talking to a variety of people affected by cell towers and wireless radiation I, like many others in the medical and scientific community, have come to the conclusion that wireless radiation is a pollutant just like lead or pesticides or mercury or toxic industrial waste. The mechanisms are similar - oxidation, the effects are broad on all living organisms and people are often unaware they are exposed to the toxin - unless they are "sensitive". Wireless radiation causes oxidative stress on organisms and stem cells, and at low levels of radiation. These low levels cause a slow decline in physiologic processes, and for those who have become sensitive- an immediate reaction.

## Antioxidants and Health

As we now know small amounts of toxins can cause harm in certain windows of development thus children are more vulnerable. We also know effects are cumulative. People vary in their vulnerability due to age, genetics and other toxic exposures. Not all people react the same. Our health, wellness and aging are determined by oxidation levels in our tissues that injure our DNA, proteins and lipids, thus antioxidants in foods have been shown to block oxidation, neutralize cellular injury and promote health. This is well established in the nutrition literature. The literature also demonstrates that taking antioxidants (Vitamin E, zinc and melatonin) protects the cell from oxidation injury from wireless radiation. Oxidative stress plays a major part in the development of chronic, degenerative and inflammatory illnesses such as cancer, autoimmune disorders, aging, cataracts, rheumatoid arthritis, cardiovascular and neurodegenerative diseases, as well as some acute pathologies (trauma, stroke**). It is well established that wireless radiation at non-thermal levels causes oxidative stress**. Effects of this are cumulative on our DNA, lipids and cellular membranes.

## We Evolved in a Low Electromagnetic Environment

The natural environment of the Earth is electromagnetic. We have terrestrial electric and magnetic fields, radiation from the sun and cosmic microwaves. All living things evolved in

harmony with the Earth's natural but very very low-level electromagnetic rhythms. Birds, bees and mammals have magnetite in their bodies and brains that use the Earth's magnetic field for the delicate tasks of navigation and foraging. Our human nervous system, heart, reproductive and endocrine systems rely on minute electromagnetic signals for complex functions. Manmade electromagnetic fields (EMF) emitted by our modern technology can distort our bodies electric currents, delicate cell membranes and cause broad dysfunction. This can be with long term or sometimes short exposures with higher power and different pulsations. Science has shown us that organisms adapt to constant electromagnetic fields found in nature much easier than artificial pulsed radiation that is emitted from cell towers and wireless devices. It makes perfect sense that wireless radiation can be harmful to living organisms even it does not knock an electron out of its orbit.

## Wildlife

You need to consider the unique ecosystem which surrounds this lovely town. Science has shown us that levels of artificial electromagnetic radiation we are increasingly exposed to is harming not only humans but the sensitive environment that we tend to ignore but depend upon for our sustenance and mental health. https://mdsafetech.org/environmental-and-wildlife-effects/

## New Review on Wildlife and wireless Radiofrequency Radiation

The most comprehensive 3 part peer reviewed article by Levitt, Lai and Manville (2021) provides an updated, thorough and well referenced overview of RFR and effects on all wildlife, revealing a disturbing picture of the future if we continue to expand wireless in our homes, communities and for the commercialization of space.

The authors state, *"But is there a larger environmental downside to rising ambient EMF exposures — particularly RFR — from popular mobile communication devices, WiFi antennas, and all accompanying infrastructure that is being overlooked by environmentalists, researchers, and government regulators alike. We may be missing critical physiological effects across species based on obsolete assumptions about low-level far-field exposures being too weak to adversely affect living tissue. We have yet to take into consideration the unique physiologies of other species, or how they use the environment in ways that humans do not, when we assume that the unfettered use of EMF/RFR can continue unabated and be allowed to grow indefinitely*." **Effects of non-ionizing electromagnetic fields on flora and fauna, part 1.** Rising ambient EMF levels in the environment. (2021) Levitt BB et al. Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/

**MOEF Report on Wildlife**
The Inter-Ministerial Committee (IMC) of expert scientists reviewed the literature of the effects of RF-EMF radiations on wildlife, humans and the biosphere. In their 2010 MOEF Report they found that out of the 919 research papers collected on birds, bees, plants, other animals, and humans, 593 showed impacts, 180 showed no impacts, and 196 were inconclusive studies. All organisms had effects.

**Human Effects–** 62% showed effects, 13% no effect and 25% inconclusive **Plant Effects–** 87% showed effects and 13% were inconclusive

**Wildlife Effects-** 62% showed effects, 4% no effect and 36% inconclusive **Bee Effects**—85% showed effects and 15% no effect

**Bird Effects**- 77% showed effects, 10% no effect and 13% inconclusive **Current Standards are Scientifically Out of Date**

## UNESCO World Heritage Wildlife Area Species Disappearing

An abundance of peer reviewed literature demonstrates adverse impacts to the environment with declines in insect, bird and wildlife populations in cities and where cell towers are placed. This spells disaster for biodiversity, fragile wildlife areas, critical pollinators and agriculture, especially with additive effects of pesticides, toxins and loss of habitat. A report on Unesco's Mt. Nardia World Heritage Park documents this slow decline in populations of species after cell towers were placed. Unesco Report on Disappearance of Species from Mt. Nardia Park World Heritage Area 2000-2015 with Increased Expansion of Telecommunications Antenna. Ethno-Botonist Mark Broomhall. UNESCO Report on Disappearance of Species from Mt. Nardia with Increased EMR 2000-2015

## Cell Tower Health Effects

Current standards are based on short term thermal exposures and discount the abundant peer reviewed literature on harm from low level, non -thermal effects. It is clear that the limits for radiofrequency radiation are set too high in the U.S. and Canada. These limits are 100 times higher than that of Italy and Russia, who set their standards based on methodical research on immunologic, neurologic and biologic effects of low-level radiation fields. Current U.S. limits are up to 1,000 microwatts/cm2 with symptoms seen at levels of 0.005 microwatts /cm2.

## Physicians in Germany ask for Health Investigation of Cell Towers in 2005

An open letter from Dr. Cornelia Waldmann-Selsam was sent to the German State Chancellor, Edmund Stoiber, on behalf of 114 physicians (Bamberger Appeal) asking for an investigation into the newly reported adverse health symptoms of 356 residents who lived near cell towers in Oberfranken, Germany. Dr. Waldmann-Selsam noted, "*Many humans get sick from emissions far below the recommended limit values, which consider only thermal effects, and we have a sickness picture with characteristic symptom combinations, which are new to us physicians," The list of symptoms were, " Sleep disturbances, tiredness, concentration impairment, forgetfulness, problem with finding words, depressive tendencies, tinnitus, sudden loss of hearing, hearing loss, giddiness, nose bleeds, visual disturbances, frequent infections, sinusitis, joint and limb pains, nerve and soft tissue pains, feeling of numbness, heart rhythm disturbances,*

*increased blood pressure , hormonal disturbances, night-time sweat, nausea." Resident noted almost immediate improvement when moving away*."

Dr. Waldmann-Selsam goes on to say, "*physicians were able to prove, by re-testing the patients, the normalization of blood pressure, heart rhythm, hormone disturbances, visual disturbances, neurological symptoms, blood picture*,". She called this an emergency medical situation and requested an official health investigation. http://www.next-up.org/pdf/Letter_to_Edmund_Stoiber.pdf

## Cell Tower Effects on Cognition and Learning

The majority of studies, which have been done internationally, have shown an increase in neurologic symptoms in a percentage of residents living near cell towers. Symptoms vary with the distance from the cell tower. Symptoms include insomnia, headache, heart palpitations, dizziness, poor concentration, and fatigue. A study in Japan (Shinjyo 2014) showed a decrease in symptoms when the cell tower was removed. There is also a well done study showing blood abnormalities in those living nearest to cell towers (Zothansiama 2017). DNA and lipid abnormalities were seen along with reduction in internal antioxidants which provide protection from pollutants.

Moreover, a recent study conducted over a 2 year period looked at effects of cell towers near two schools by Meo et al (2018) and clearly demonstrated cognitive dysfunction in students closest to the higher power cell tower.

## Firefighters Fighting Fires and Now Cell Towers

After noticing that many of the firefighters where developing neurologic symptoms when first responder cell towers were placed on the fire stations the International Association of Firefighters studied the matter and passed a resolution in 2004 asking that cell towers not be placed in proximity to fire stations. In AB 537 (Quirk), signed into law by Gov. Newsom on October 4, 2021, the firefighters achieved the first ever health/readiness exemption in the world.

**Every fire station in California is now exempt from having a 5G tower on their station.** This movement began when cell towers were initially targeted for fire stations because of their location and the revenue received by the cities. Many firefighters developed symptoms including headaches, fatigue, memory impairment and insomnia within a week of the installation of the towers. An exemption was inserted in California bills on cell towers. AB 57 (Quirk 2015) has an exemption on the grounds of health effects. AB 537 (Quirk 2021) also has this exemption and reads, "*Due to the unique duties and infrastructure requirements for the swift and effective deployment of firefighters, this section does not apply to a collocation or siting application for a wireless telecommunications facility where the project is proposed for placement on fire department facilities."* SB 649 (Hueso, Quirk and Dodd 2018) also had a health exemption for firefighters and was vetoed by Governor Brown.

## 500 Meter (1640 ft) Buffer from Cell Tower Recommended

Cell tower health studies that show impacts from cell towers with symptoms within about 1500 feet of the cell towers. That is why Pearce et al (2019**) recommended a "500 Meter buffer around schools, hospitals and homes "Limiting liability with positioning to minimize negative health effects of cellular phone towers."**

## Cancer and Cell Towers

3 Studies investigated the rates of cancer and cell towers looking at the distance from cell towers and the incidence of cancer. They found the rate of cancer incidence increased significantly in those living within about 350 -400 meters (around 1000 feet) to the cell tower.

Dode 2011 performed a 10 year study (1996-2006) examining the distance from cell towers and cancer clusters. He and his colleagues found a highly significant increase in cancers in those living within 500 meters of the cell tower. They noted "The largest density power was 40.78 μW/cm2, and the smallest was 0.04 μW/cm2." The current guidelines are about 1000 μW/cm2. The authors conclude "Measured values stay below Brazilian Federal Law limits that are the same of ICNIRP. The human exposure pattern guidelines are inadequate. More restrictive limits must be adopted urgently."

Wolf and Wolf 2004 investigated the rates of cancer versus distance from cell towers in small towns in Israel. He found the rate of cancer incidence was 129 cases per 10,000 persons per year in those living within 350 meters of a cell tower versus a rate of 16-31/10,000 in those living greater than 350 meters from the cell tower.

**Eger (2004)** showed an increase in the development of new cancer cases within a 10 year period if residents lived within 400 meters of a cell tower. Their results revealed that within 5 years of operation of a transmitting station the relative risk of cancer development tripled in residents near the cell towers compared to residents outside the area.

**Insurance Has an Exclusion for Radiofrequency Radiation as an Emerging Risk** Insurance companies consider wireless radiation to be similar to asbestos in long term health impacts and do not provide coverage from harm for RF health effects. The cities are left with that liability unless they can provide insurance.
In a 2019 report, **New Emerging Risk Insights**, by Swiss RE Insurance Company, the second largest reinsurance company in the world, **5G is listed as an emerging concern** in the high risk category within 3 years. Included in the high-risk trends are artificial intelligence and the existential threats of climate change. "*The top five emerging risks in our SONAR 2019 report are digital technology's clash with legacy hardware, potential threats from the spread of 5G mobile networks, increasingly limited fiscal and monetary flexibility by central banks, genetic testing's implications on life insurers, and the impact of climate change on the life and health sector.*" https://www.swissre.com/institute/research/sonar/sonar2019.html

## National Academy of Sciences Report on the Havana Syndrome and Harm from RFR

A recent report by the National Academy of Sciences concluded that the "sonic attacks" on diplomats in Cuba and China were most likely due to pulsed radiofrequency from directed energy weapons. They had symptoms similar to those who live near cell towers (headache, nausea, insomnia, dizziness, memory loss, heart palpitations, depression). Dr. Beatrice Golomb wrote the most extensive report to date on this subject linking these mystery "directed energy attacks" to pulsed microwaves similar to the wireless devices we use daily. In the case of these high powered beams there was documented injury to brain networks found by the University of Pittsburg physicians who studied the diplomats. Dr Golomb highlights that **the strength of the health effects are related to the peak power not the average power. The pulse makes the poison.**

**The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** is a comprehensive guide written by many scientists and physicians in Europe who are part of the European Academy for Environmental Medicine (EUROPAEM) – EMF working group who have recognized and treated those with electrosensitivity for many years. This is a thorough, well researched and well-referenced scientific paper that is based on the 2012 Austrian Medical Association **Guidelines for the Diagnosis and Treatment of EMF Illness**. A questionnaire from their group is included in the attachments.

## New Hampshire 5G Commission Finds Radiofrequency Radiation Problematic

The first Commission formed in the United States to study the environmental and health effects of 5G technology released their comprehensive final report November 1, 2020. The Commission to Study the Environmental and Health Effects of Evolving 5G Technology was mandated by HB 522 passed by the state legislature in New Hampshire. Their final report included 15 recommendations addressing the need for public education about wireless hazards, RF health studies, RF measurements, cell antenna setbacks, fiberoptic rather than wireless deployment, commercial warning signs and wildlife protection. After hearing extensive testimony in a series of 13 meetings over the course of a year and reviewing an abundance of research, the Commission highlighted the lack of a single definition for 5G, **insufficient evidence of safety for 5$^{th}$ generation technology**, a concern that safety standards for wireless technologies have not been updated with the latest science and that 5G is largely a marketing concept. They also expressed concern that the FCC has a long history of being accountable to industry over the desires of communities and individuals.

## FCC Told by DC Court to Reevaluate Safety Standards

On August 13, 2021 a joint lawsuit was won by petitioners against the Federal Communications Commission (FCC) for failure to protect human health and the environment by dismissing scientific evidence of harm from wireless radiation. The Petitioners challenged the FCC's refusal

to reevaluate and update their 24-year-old radiofrequency (RF) safety guidelines for existing and new telecommunications technologies. The DC Circuit Court of Appeals ruled that the majority of the RF radiation standards established by the FCC did not use "reasoned decision-making" (they did not go by the science) and thus the standards were considered by the court to have been set in an "arbitrary and capricious" manner. This was an extremely high bar for the Plaintiffs to reach. The Circuit Court of Appeals rarely admonishes a federal agency or commission in this way. The DC Circuit Court of Appeals returned this decision back to the FCC and ordered the FCC to re-examine its standards for wireless radiation exposure and provide a review of wireless harms that is compliant with the law for non-cancer harms.

The Court Decision stated, "The National Environmental Policy Act ("NEPA") and it's implementing regulations require federal agencies to "establish procedures to account for the environmental effects of [their] proposed actions." And "To fulfill its obligations under NEPA, the Commission has promulgated guidelines for human exposure to RF radiation…The Commission last updated its limits for RF exposure in 1996… The ANSI and IEEE developed limits are designed to protect against "thermal effects" of exposure to RF radiation, but not "non-thermal" effects. In March 2013, the Commission issued a notice of inquiry regarding the adequacy of its 1996 guidelines in response to changes in the ubiquity of wireless devices and in scientific standards and research since 1996. In December 2019, the Commission issued a final order resolving its 2013 notice of inquiry by declining to undertake any of the changes contemplated in the notice of inquiry. Petitioners challenge the 2019 final order under NEPA and the Administrative Procedure Act ("APA").

## 5G: A Manufactured Need by Industry

Reports indicate that the telecommunications industry has largely manufactured a "need" for expanding wireless technology in cities, while halting projects for safer fiberoptic broadband. Note a 2020 European Parliament report, **5G: State of Play in Europe, USA and Asia. In Depth Analysis,** suggests 5G is a manufactured need. "*As 5G is driven by the telecoms supply industry, and its long tail of component manufacturers, a major campaign is under way to convince governments that the economy and jobs will be strongly stimulated by 5G deployment."*

In my opinion, from all the research I have done, it appears the telecommunications industry has influenced laws to prevent health or environmental effects from being considered in the placement of cell towers (See FCC Captured Agency). They knew of the harm in early studies done by Dr. George Carlo in the 1990's but suppressed the data so they could move forward. That is well documented in Dr. Carlo's book, "Cell phones: Invisible Hazards in The Wireless Age".
A blizzard of robust science has appeared now to show biological and health impacts of wireless technology, but it is still denied, and the basis for genuinely safe RF radiation guidelines is flawed. An exponential growth in cell towers is now being played out with cities being left on their own to figure out how to regulate these towers locally. Industry places a heavy hand and complex laws on local policy makers who must navigate these complex FCC policies to prevent legal action.

## Board of Health in Pittsfield Massachusetts Orders Verizon to Cease and Desist

For the first time in the U.S. a Board of Health has issued a cease and desist order to Verizon to remove or shut off a cell tower after 17 people in a neighborhood reported they became ill after the Verizon cell tower was turned on. Courtney Gilardi and her 2 children as well as residents living near the cell tower, reported experiencing a constellation of symptoms including stabbing headaches, nausea, vomiting, dizziness, "buzzing in the head", and insomnia so severe her family had to move to the next town and into a house with no heat and no hot water to escape the sickness. Other neighbors drove an hour away to sleep at a relative's house or slept in their cars away from the tower. These are classic symptoms of electromagnetic illness experienced in firefighters and military personnel working on radar and well documented by NASA, the Air Force and other military agencies as well as the "Havana Syndrome". These symptoms were also seen in Japan after 2 cell towers were turned on and when the tower was removed the resident's symptoms largely resolved.

## Apple stops 5G Phone MMW: Is This the Death of 5G Millimeter Wavelengths?

You are probably aware that Verizon and AT&T built special hotspots in many cities in the U.S. to house 5G high band millimeter wavelengths that were to revolutionize wireless with ultrafast speeds. These small wavelengths the size of bees have been put into some community small cells which need to be about 1000 feet apart without obstruction to function properly. Apple, who already has some 5G MMW phones, just announced that it is not building any millimeter wave spectrum antennas in its next generation SE iphones. With 4G LTE low and mid band wavelengths they apparently do not need the millimeter 5G bandwidth. The article notes, "It's not a surprise that Apple is dropping the spectrum from its phones. It costs chip space and power for every additional spectrum that is supported by a cellphone. Cell manufacturers care more about long battery life than they do about a technology that never made it out of the downtowns of a few major cities."

**FCC Limits: A False Sense of Security**

We are told by the FCC that wireless radiation and cell towers are safe within current safety guidelines, or that we do not really know if there is harm or that the research is inconclusive or that it is not ionizing (like x-rays) so it cannot hurt us. This is the same dismissive and doubt creating language used by the tobacco industry and a host of other chemical companies to protect their toxic products, thus profits. The research shows that we do know, beyond a doubt, that wireless radiation is harmful to all living systems below the current safety standards. The most obvious evidence is that more and more children and adults are reporting symptoms of electrosensitivity (EHS) in the presence of wireless radiation when they live in a home near a cell tower, or use a cell phone, or in schools where wireless devices and cell towers are increasing.

Please use your authority and wisdom to keep this ordinance strong. Take more time if you need to in order for you to sort this out and be sure of your decision. Remember that you all live in Los Altos as well so you are protecting you and your families and the next generation as well.

Sincerely,

Cindy Russell, MD

**Attached- Malibu Ordinances**

## References


- Pearce (2019**) 500 Meter buffer recommended around schools, hospitals and homes. "Limiting liability with positioning to minimize negative health effects of cellular phone towers."** (2019) Pearce M. Environmental Research, Nov 2019; https://www.sciencedirect.com/science/article/abs/pii/S0013935119306425
- Waldman-Selsam, C. (2004). **Bamberg Appeal, on behalf of 114 physicians**. Open Letter to Edmund Stoiber, Prime Minister, Germany, August 3. http://www.vws.org /documents/cell- project- documents/BambergAppeal.pdf
- Waldmann-Selsam C 2016. **Radiofrequency radiation injures trees around mobile phone base stations. (2016).** Waldmann-Selsam C et al. Science of the Total Environment. 572 (2016) 554-569. https://www.researchgate.net/publication/306435017_Radiofrequency_radiation_injures_trees_around_mobile_phone_base_stations
- **The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** https://www.degruyter.com/document/doi/10.1515/reveh-2016-0011/html
- **Researcher links diplomats' mystery illness to radiofrequency/microwave radiation.** Eureka alert. August 29, 2018. American Academy for the Advancement of Science. https://www.eurekalert.org/pub_releases/2018-08/uoc–rld082918.php
- **Diplomats in China report similar brain injuries as Americans in Cuba:** In 2016 and 2017, 25 Americans in the U.S. embassy in Cuba suffered serious, unexplained brain injuries. Now, at least 15 American officials in China are reporting similar symptoms. 60 Minutes reports. March 15, 2019. https://www.cbsnews.com/news/diplomats-in-china-report-similar-brain-injuries-as-americans-in-cuba-60-minutes/
- Swanson RL (2018) **Neurological Manifestations Among US Government Personnel Reporting Directional Audible and Sensory Phenomena in Havana, Cuba. (2018)** Swanson RL et al. JAMA. 2018 Mar 20;319(11):1125-1133. https://jamanetwork.com/journals/jama/fullarticle/2673168
- Levitt, Lai, Manville. (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 1. Rising ambient EMF levels in the environment.** Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 2 impacts: how species interact with natural and man-made EMF**. Rev Environ Health. 2021 Jul 8. https://pubmed.ncbi.nlm.nih.gov/34243228/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 3. Exposure standards, public policy, laws, and future directions.** Rev Environ Health. 2021 Sep 27. https://pubmed.ncbi.nlm.nih.gov/34563106/

- PanagopoulosDJ. (2013**) Electromagnetic Interaction Between Environmental Fields and Living Systems Determines Health and Well Being.** University of Athens, Department of Biology, Athens, Greece Radiation and Environmental Biophysics Research Centre, Athens, Greece. Electromagnetic Fields, Nova
- **MOEF Report on Possible Impacts of Communication Cell Towers on Wildlife Including Birds and Bees. (2010)** The Ministry of Environment and Forest. Report on Possible Impacts of Communication Towers on Wildlife Including Birds and Bees. (2010) Ministry of the Environment and Forests (MOEF) India. https://ecfsapi.fcc.gov/file/7520958381.pdf
- Sciences. http://www.wendywalksfores.com/uploads/1/3/9/0/13908728/panagopoulos-nova-2013-emfs-chapter-1.pdf
- **SwissRe Insurance-** Sonar 2019: New emerging risk insights. https://www.swissre.com/institute/research/sonar/sonar2019.html
- **Landmark Lawsuit Filed Against FCC for Failing to Reevaluate 5G and Wireless Safety.** Sept 23, 2020. PST. https://mdsafetech.org/2020/09/23/landmark-lawsuit-filed-against-fcc-for-failing-to-reevaluate-5g-and-wireless-safety/
- **Final Report on Commission to Study the Environmental and Health Effects of Evolving 5G Technology.** State of New Hampshire, General Court. Nov 1, 2020. http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf
- **We Have No Reason to Believe 5G Is Safe.**The technology is coming, but contrary to what some people say, there could be health risks. (2019) Scientific American. Joel M. Moskowitz. Oct 17, 2019. https://blogs.scientificamerican.com/observations/we-have-no-reason-to-believe-5g-is-safe/
- **5G wireless telecommunications expansion: Public health and environmental implications. (2018) Russell CL**. Environ Res. 2018 Apr 11. https://www.ncbi.nlm.nih.gov/pubmed/29655646. or at https://ecfsapi.fcc.gov/file/10913927726988/5%20G%20wireless%20telecommunications%20expansion%3A%20Public%20health%20and%20environmental%20implications.pdf
- **Firefighters Fighting Fires and Now Cell Towers-** https://mdsafetech.org/2019/09/28/firefighters-fighting-fires-and-now-cell-towers/
- **5G: State of Play in Europe, USA and Asia. In Depth Analysis, European Parliament.** https://www.europarl.europa.eu/RegData/etudes/IDAN/2019/631060/IPOL_IDA(2019)631060_EN.pdf
- **Apple ditches mmWave 5G with newest iPhone.** https://www.lightreading.com/5g/apple-ditches-mmwave-5g-with-newest-iphone/d/d-id/775901

| | |
|---|---|
| **From:** | Brent Smith |
| **To:** | Public Comment; City Council |
| **Date:** | Tuesday, April 12, 2022 11:49:11 AM |
| **Attachments:** | Los Altos Letter Final 4 11 2022 PDF(1).pdf |

---

Dear Los Altos City Council,

I strongly support Dr. Cindy Russell's attached letter regarding the Los Altos Wireless Ordinance and ask that you include all of the requests that she has brought to the attention of the Council and place them in the updated ordinance.

Sincerely,
Brent Smith
Los Altos resident

To: Los Altos City Council
council@losaltosca.gov
aenander@losaltosca.gov
smeadows@losaltosca.gov
nfligor@losaltosca.gov
lleeeng@losaltosca.gov
jweinberg@losaltosca.gov

From: Cindy Russell, MD

Re: Revisions to 2019 Los Altos Ordinance to Regulate Small Wireless Facilities

Date April 11, 2022

Dear Los Altos City Council:
I am writing today to strongly urge you to reinstate (with legally appropriate revisions) several of the major aspects of the original 2019 Small Cell Wireless Ordinance that diminish blight and protect the beauty, character and health of your lovely Silicon Valley community. In addition, after reading the new 2022 proposed Wireless Facilities Ordinance it appears that some important provisions may have been missed in crafting a new Small Cell ordinance which are critical for the safety of the residents and also reduce liability for the city. This includes several insurance provisions, minor modifications to existing facilities, permiting process, and more.

Encinitas and Malibu have passed ordinances which have elements that are protective but allow flexibility for cities and exceptions/waivers for the carriers. They remain uncontested.

- **Encinitas, CA-** Revised from 2019- Passed June 20, 2020 https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/Resolution%20No.%202020-38%20With%20Policy.pdf?ver=2020-07-13-192634-373
- **Malibu Resolution 21-17 –** Attached please find an executed copy of Res. 21-17 is officially binding because Ordinance 484 adopts it by reference.

I will summarize my ask of the Los Altos City Council with these key points below, followed by backup for those points with additional pertinent legal information which does impact the issue of health/science, as per a court ruling from the second highest court in the land on August 13, 2021, a ruling that referred to the existing RF radiation regulatory limits as "arbitrary and capricious". Arbitrary and capricious means that the law and/or the facts were knowingly disregarded. That is a high bar indeed and the plaintiffs reached that bar. It behooves us to consider what is going on in the courts and pass ordinance language accordingly:

**PLEASE PAUSE:** There are resolutions as mentioned above that have successfully balanced the unique needs of communities with the rights of the telecommunications industry. The new resolution does not have to be passed Tuesday night. Some reflection on the best that Encinitas and Malibu have to offer may benefit all of us in the long run.

# Key Points

1. TITLE OF ORDINANCE: Clarification if this applies to Small Cell or Macro Cells; macro towers must go through conditional use permits

2. LOCATION STANDARDS – PREFERRED SITES

3. WAIVERS FOR STANDARDS

4. FIRE SAFETY

5. APPEALS PROCESS

Thank you for passing the 2019 Wireless Facilities Telecommunications Ordinance. The original wireless facilities ordinance for Los Altos took into consideration public concerns, was well thought out and protects the city of Los Altos from poorly designed and poorly placed cell towers.

I understand, however, that there is a lawsuit against the City for Los Altos from Verizon and AT&T claiming that the 2019 ordinance as written "effectively prohibits" wireless communications. You are commended for taking on this task of revising the ordinance in response. Some of the 2022 proposed changes are good and clarify the permitting process for carriers to avoid lawsuits and provide for "personal wireless services", however, I believe there are some gaps in protections and flexibility for the city that I would like to point out which could be remedied in addition to some clarifications.

It is important to consider adding the provisions below. As you note with the FCC lawsuit to reevaluation the 20 year-old FCC safety standards, the courts have judged that the FCC did not take into account several aspects of human health and environmental effects in setting their standards. We do not know what the future holds for the federal Telecommunications Act of 1996 or state law. The city of Los Altos needs to be prepared to alter its ordinance in case there is a change in the law in the future.

**Representative Anna Eshoo Supports Local Control for Cell Towers**
The 2018 FCC small cell order that fast tracks deployment of small cells in order to "cut the red tape" has prompted cities around the country, like Los Altos, to write these emergency ordinances and now revise them. The FCC Declaratory ruling has been considered an overreach of the Telecom Industry which dominates the FCC (FCC: Captured Agency, N. Alster), overriding the basic rights of cities to have local control. This was recognized by our local representative Anna Eshoo who in 2019 introduced HR530 to protect the rights of states and government by deeming that the *"Federal Communications Commission's Declaratory Ruling in ''Third Report and Order and Declaratory Ruling'' (FCC 18-111) shall have no force or effect."* This bill had 52 co-sponsors. Senator Feinstein introduced in 2019 a companion federal bill SB 2012 to block the FCC order. Neither moved.

Representative Eshoo also sent a letter to the FCC in 2020 to ask that the vote on the FCC order be delayed stating, ***"we worry that if this Declaratory Ruling does not benefit from meaningful input from local governments, the result could undermine municipalities' ability to balance their responsibilities to public safety and community design with their desire to ensure access to affordable wireless networks and the next generation services."***

Please fight for the rights of your residents and government as our local representatives have done. You have more power than you know. Please exercise it.

# Important Provisions to Add

## 1) Title of Ordinance

To clarify whether the ordinance title should apply only to Small Wireless Facilities or if this is for both Small Cell and Macro Towers it may be helpful to rename the ordinance to its original title and keep the descriptions separate within the ordinance. It is not clear to me in this rewrite. Small cell applications are different than for macro towers due to difference in structure of towers, power emitted and location in right of way as per FCC ruling.

(Section 14.82.050) See Encinitas Small Cell wireless Ordinance. Resolution 2019- 91- REGULATING SMALL WIRELESS FACILITIES AND OTHER INFRASTRUCTURE DEPLOYMENTS IN THE PUBLIC RIGHTS-OF-WAY
https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/CC%20Policy%20C035.pdf

2) **Location Standards- Preferred Sites**- Despite what the telecommunications industry says, you as a city can still have preferred sites and less preferred sites in your ordinance. (Encinitas and Malibu Ordinances) You can add an exception clause or waiver process to allow for placement of a cell tower if the carrier proves it is necessary (and other locations are not technically feasible) for "Personal Wireless Services" under the 1996 Telecom Act of 1996 and so that this does not constitute an "effective prohibition".
*** Special Zones can be designated for schools, day care centers, residential dwellings, protected habitat or trees, parks, etc.**
* Keep the 1000 foot distance between towers, **not 200 feet.** Explanation below.

Here are examples of Location Standards in the Encinitas Small Cell Wireless Ordinance passed in June, 2020 and in Malibu April 2021, which to date are uncontested.

# Encinitas Ordinance Passed June 10, 2020

## SECTION 10. LOCATION STANDARDS

1. (a) **Restricted Site Locations.** All of the following locations will be deemed "Restricted Site Locations" that require an exception pursuant to SECTION 13 of this Policy:

    1. (1) any location within a residential zone;
    2. (2) any location within 500 feet from a residential dwelling unit;
    3. (3) any location within 500 feet from a daycare facility or primary school;
    4. (4) any location within a Very High Fire Hazard Severity Zone; and
    5. (5) any location within the Ecological Resource/Open Space/Park Zone.

    (b) **Location Preferences.** To better assist applicants and decision makers understand and respond to the community's aesthetic preferences and values, this subsection sets out listed preferences for locations to be used in connection with small wireless facilities in an ordered hierarchy. Applications that involve lesser-preferred locations may be approved so long as the applicant demonstrates by clear and convincing evidence in the written record that: (1) any more preferred locations or structures within 500 feet from the proposed site would be technically infeasible; and (2) if the proposed site or the most- preferred location within 500 feet from the proposed site is within a Restricted Site Location, the applicant qualifies for an exception pursuant to SECTION 13 of this Policy. The City prefers small cells in the public rights-of-way to be installed in locations, ordered from most preferred to least preferred, as follows:

    (1) locations within industrial zones, commercial zones, business parks or office professional zones on or along prime arterials;

    (2) locations within industrial zones, commercial zones, business parks or office professional zones on or along major arterials;

    (3) locations within industrial zones, commercial zones, business parks or office professional zones on or along collector roads;

    (4) locations within industrial zones, commercial zones, business parks or office professional zones on or along local streets;

    (5) any location within 500 feet from any residential zone;

    (6) locations within residential zones on or along prime arterials;

    (7) locations within residential zones on or along major arterials;

    (8) locations within residential zones on or along collector roads;

    (9) locations within residential zones on or along local streets;

(10) any location within 1,000 feet from an existing/proposed small wireless facility;

In the event that a proposed facility would be within 500 feet from two or more restricted site locations (as defined in Subsection 10(a)), and the proposed facility qualifies for an exception pursuant to SECTION 13 of this Policy, the technically feasible location furthest from all such restricted site locations will be deemed to be the most preferred alternative.

(c) **Encroachments Over Private Property.** No small cell antennas, accessory equipment or other improvements may encroach onto or over any private or other property outside the public rights-of-way without the property owner's express written consent.

## Malibu Wireless Ordinance Resolution 21-17 Standards Passed April 2021.

https://www.malibucity.org/DocumentCenter/View/27969/Ordinance-No-484

### Location Standards for All Facilities

The location standards for all wireless communications facilities, other than those that qualify as eligible facilities requests, are as follows:

1. No wireless telecommunication facility shall be located within five hundred (500) feet of any school, playground, or park unless a finding is made, based on technical evidence acceptable to the reviewing authority showing a clear need for the facility and that no technically feasible alternative site exists. Except for facilities installed on the same pole or tower as an existing wireless telecommunication facility, wireless telecommunication facilities located within any residential zone district shall not be located within one thousand (1,000) feet of any other wireless communications facility, except from those facilities placed on utility poles along Pacific Coast Highway, unless a waiver is granted.
2. All new freestanding wireless communications facilities and monopoles shall be set back a minimum distance of at least one hundred and twenty (120%) percent of the height of the facility or monopole from any property line abutting a residentially zoned property. This minimum setback is not subject to the waivers allowed under Section 7 of this Resolution.
3. Location preference for wireless communications facilities should be given to the following:
    1. Property designated non-residential (except for public open space and recreational vehicle park zoning districts), unless otherwise prohibited pursuant to this title.
    2. Facilities attached or sited adjacent to existing structures. Whenever possible, facilities shall be located on and/or inside existing structures. Appropriate types of existing structures may include, but are not limited to: buildings, water tanks, telephone poles and utility towers and poles, sign standards, light standards and roadway overpasses.
    3. Sites with minimum separation. Sites that are more than five hundred (500) feet from school, playgrounds, and parks.

4. Sites that are not highly visible from adjacent roadways.
5. Unless otherwise indicated in MMC Chapter 17.46 or these Standards, no wireless facility shall be installed on an exposed ridgeline unless the facility blends with the

surrounding existing natural and man-made environment and a finding is made that no other location is technically feasible.

6. The City expressly designates residential, public open space and recreational vehicle park zoning districts, parks and schools as the least appropriate possible locations, and the absolute last choices for siting.

## 3) Waivers for Standards

Malibu Wireless Facilities Ordinance 2021 has added a section on Waivers for Standards that clarifies the process and protects the city from liability.

**Resolution No. 21-17 Page 9**

1. A waiver of one or more of these Standards may be granted in the following circumstances:
    1. Pursuant to MMC Section 17.46.060(D), if an applicant demonstrates to the Planning Commission through clear and convincing evidence that denial of an application would, within the meaning of federal law, prohibit or effectively prohibit the provision of personal wireless services, or otherwise violate applicable laws or regulations;
    2. If an applicant demonstrates to the Planning Commission through clear and convincing evidence set forth in a feasibility study that compliance with a requirement of these Standards would be technically infeasible and the proposed wireless facility complies with the requirements of these Standards to the greatest extent technically feasible. For example, an exception to a requirement to conceal antennas in a shroud may be granted if shrouding is shown to be technically infeasible and an alternative concealment such as a colored film wrap is proposed; or
    3. If an applicant demonstrates to the Planning Commission with clear and convincing evidence that the particular engineering, design or location proposed involves an alternative that better meets the purposes of Chapter 17.46 and only minor non-compliance with a requirement of these design Standards and results in no increase in public visual impact to the community or provides other benefits. For example, an exception to the wireless facility location limitations may be granted when the applicant can demonstrate that the placement is less visible from viewsheds of residences or shielded by vegetation or existing infrastructure (such as barriers), or is less physically intrusive (for example, less impactful to tree roots or reduces noise). Among other factors, in deciding whether or not to grant an exception, the Planning Commission may consider the impact of expansions to the facility that the applicant would be entitled to make as of right if granted.
2. Waivers may only be requested at the time an application is initially submitted for a discretionary permit. The request must include both the specific provision(s) from which waiver is sought and the basis of the request, including all supporting evidence on which the applicant relies. Any request for waiver after the City has deemed an application

complete constitutes a material change to the proposed wireless facility and shall be considered a new application. A request for waiver from one or more

## 4) Fire Safety

**All electrical equipment including small cell towers are a fire risk. The fire cannot be put out in a conventional manner with firefighters blasting water on the fire. They have to wait until the power is shut off or electrocution will result.**

**Examples are**

- **San Diego tower that caught fire in a high school stadium- https://fox5sandiego.com/news/local-news/stadium-light-catches-fire-at-south-bay-high-school/**
- **The Malibu fire in 2007 due to pole overload.** CPUC finds Edison and 4 telecom carriers $51.5 million - https://www.latimes.com/local/lanow/la-me-ln-malibu-fire-settlements-approved-state-puc-20130919-story.html

Considering the increase in wildfires and the risk of earthquakes. Fire safety is a priority for citizens. **The Malibu Wireless Facilities Ordinance 2021 has language in the Fire Safety Standards that can be incorporated.** In the attached Executed Copy of Malibu Res. 21-17, please note fire language on pages 2, 3, 5, 8, 11, 12, and particularly beginning on page 23 with "Electrical and Structural Safety Information."

## 5) Appeals Process

Language for appeal is not in the ordinance
Applications.

A) Any person adversely affected by a decision of the Director pursuant to this Chapter may request an administrative hearing to appeal the Director's decision. In order to request a hearing, the person shall submit to the City Clerk in the manner directed in the Director's decision notice a fully completed request for administrative hearing form along with a full amount of the appeal fee set by the City Council (by way of check or money order). The request for administrative hearing shall be incomplete if it does not include the appeal fee in the full amount. … etc.

## Precaution is Warranted

We understand that, as per Section 704 of the 1996 Telecommunications Act, environmental concerns, and as courts have interpreted these it includes heath impacts, cannot be a factor in denial of cell towers but we are early in the game.
Public health and ecosystem health are still important issues with new 5G systems untested for long term or short term safety for either human health or environmental health. 5G systems with a complex mix of low, medium and high frequencies (thus the need for macro and microcells) are very onerous to measure, requiring very expensive complex equipment that is very difficult

for engineers to accomplish let alone city facility engineers. Precaution in placement is paramount in this discussion. Once cell towers are placed there is no going back and you just wait for people to experience symptoms or develop cancer or a neurologic condition that you will not be able to sort out from the common toxic exposures we all encounter on a daily basis.

Elon Musk tells us that 5G millimeter wave systems are not needed for autonomous cars. 5G millimeter wavelengths are also not required for "personal wireless services". For the later this technology can be effectively replaced with safer and more secure fiberoptic networks and current wireless technologies. I will explain why health matters.

## Health Matters

I am a practicing physician who has studied the health impacts of environmental toxins through our local County Medical Association and the California Medical Association for over 25 years. I began studying the health impacts of wireless radiation when I learned of a proposal to place a cell tower on my daughter's school.

After 10 years of research into the literature and talking to a variety of people affected by cell towers and wireless radiation I, like many others in the medical and scientific community, have come to the conclusion that wireless radiation is a pollutant just like lead or pesticides or mercury or toxic industrial waste. The mechanisms are similar - oxidation, the effects are broad on all living organisms and people are often unaware they are exposed to the toxin - unless they are "sensitive". Wireless radiation causes oxidative stress on organisms and stem cells, and at low levels of radiation. These low levels cause a slow decline in physiologic processes, and for those who have become sensitive- an immediate reaction.

## Antioxidants and Health

As we now know small amounts of toxins can cause harm in certain windows of development thus children are more vulnerable. We also know effects are cumulative. People vary in their vulnerability due to age, genetics and other toxic exposures. Not all people react the same. Our health, wellness and aging are determined by oxidation levels in our tissues that injure our DNA, proteins and lipids, thus antioxidants in foods have been shown to block oxidation, neutralize cellular injury and promote health. This is well established in the nutrition literature. The literature also demonstrates that taking antioxidants (Vitamin E, zinc and melatonin) protects the cell from oxidation injury from wireless radiation. Oxidative stress plays a major part in the development of chronic, degenerative and inflammatory illnesses such as cancer, autoimmune disorders, aging, cataracts, rheumatoid arthritis, cardiovascular and neurodegenerative diseases, as well as some acute pathologies (trauma, stroke**). It is well established that wireless radiation at non-thermal levels causes oxidative stress**. Effects of this are cumulative on our DNA, lipids and cellular membranes.

## We Evolved in a Low Electromagnetic Environment

The natural environment of the Earth is electromagnetic. We have terrestrial electric and magnetic fields, radiation from the sun and cosmic microwaves. All living things evolved in

harmony with the Earth's natural but very very low-level electromagnetic rhythms. Birds, bees and mammals have magnetite in their bodies and brains that use the Earth's magnetic field for the delicate tasks of navigation and foraging. Our human nervous system, heart, reproductive and endocrine systems rely on minute electromagnetic signals for complex functions. Manmade electromagnetic fields (EMF) emitted by our modern technology can distort our bodies electric currents, delicate cell membranes and cause broad dysfunction. This can be with long term or sometimes short exposures with higher power and different pulsations. Science has shown us that organisms adapt to constant electromagnetic fields found in nature much easier than artificial pulsed radiation that is emitted from cell towers and wireless devices. It makes perfect sense that wireless radiation can be harmful to living organisms even it does not knock an electron out of its orbit.

## Wildlife

You need to consider the unique ecosystem which surrounds this lovely town. Science has shown us that levels of artificial electromagnetic radiation we are increasingly exposed to is harming not only humans but the sensitive environment that we tend to ignore but depend upon for our sustenance and mental health. https://mdsafetech.org/environmental-and-wildlife-effects/

## New Review on Wildlife and wireless Radiofrequency Radiation

The most comprehensive 3 part peer reviewed article by Levitt, Lai and Manville (2021) provides an updated, thorough and well referenced overview of RFR and effects on all wildlife, revealing a disturbing picture of the future if we continue to expand wireless in our homes, communities and for the commercialization of space.

The authors state, *"But is there a larger environmental downside to rising ambient EMF exposures — particularly RFR — from popular mobile communication devices, WiFi antennas, and all accompanying infrastructure that is being overlooked by environmentalists, researchers, and government regulators alike. We may be missing critical physiological effects across species based on obsolete assumptions about low-level far-field exposures being too weak to adversely affect living tissue. We have yet to take into consideration the unique physiologies of other species, or how they use the environment in ways that humans do not, when we assume that the unfettered use of EMF/RFR can continue unabated and be allowed to grow indefinitely*." **Effects of non-ionizing electromagnetic fields on flora and fauna, part 1.** Rising ambient EMF levels in the environment. (2021) Levitt BB et al. Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/

**MOEF Report on Wildlife**
The Inter-Ministerial Committee (IMC) of expert scientists reviewed the literature of the effects of RF-EMF radiations on wildlife, humans and the biosphere. In their 2010 MOEF Report they found that out of the 919 research papers collected on birds, bees, plants, other animals, and humans, 593 showed impacts, 180 showed no impacts, and 196 were inconclusive studies. All organisms had effects.

**Human Effects–** 62% showed effects, 13% no effect and 25% inconclusive **Plant Effects–** 87% showed effects and 13% were inconclusive

**Wildlife Effects-** 62% showed effects, 4% no effect and 36% inconclusive **Bee Effects**—85% showed effects and 15% no effect

**Bird Effects**- 77% showed effects, 10% no effect and 13% inconclusive **Current Standards are Scientifically Out of Date**

## UNESCO World Heritage Wildlife Area Species Disappearing

An abundance of peer reviewed literature demonstrates adverse impacts to the environment with declines in insect, bird and wildlife populations in cities and where cell towers are placed. This spells disaster for biodiversity, fragile wildlife areas, critical pollinators and agriculture, especially with additive effects of pesticides, toxins and loss of habitat. A report on Unesco's Mt. Nardia World Heritage Park documents this slow decline in populations of species after cell towers were placed. Unesco Report on Disappearance of Species from Mt. Nardia Park World Heritage Area 2000-2015 with Increased Expansion of Telecommunications Antenna. Ethno-Botonist Mark Broomhall. UNESCO Report on Disappearance of Species from Mt. Nardia with Increased EMR 2000-2015

## Cell Tower Health Effects

Current standards are based on short term thermal exposures and discount the abundant peer reviewed literature on harm from low level, non -thermal effects. It is clear that the limits for radiofrequency radiation are set too high in the U.S. and Canada. These limits are 100 times higher than that of Italy and Russia, who set their standards based on methodical research on immunologic, neurologic and biologic effects of low-level radiation fields. Current U.S. limits are up to 1,000 microwatts/cm2 with symptoms seen at levels of 0.005 microwatts /cm2.

## Physicians in Germany ask for Health Investigation of Cell Towers in 2005

An open letter from Dr. Cornelia Waldmann-Selsam was sent to the German State Chancellor, Edmund Stoiber, on behalf of 114 physicians (Bamberger Appeal) asking for an investigation into the newly reported adverse health symptoms of 356 residents who lived near cell towers in Oberfranken, Germany. Dr. Waldmann-Selsam noted, "*Many humans get sick from emissions far below the recommended limit values, which consider only thermal effects, and we have a sickness picture with characteristic symptom combinations, which are new to us physicians," The list of symptoms were, " Sleep disturbances, tiredness, concentration impairment, forgetfulness, problem with finding words, depressive tendencies, tinnitus, sudden loss of hearing, hearing loss, giddiness, nose bleeds, visual disturbances, frequent infections, sinusitis, joint and limb pains, nerve and soft tissue pains, feeling of numbness, heart rhythm disturbances,*

*increased blood pressure , hormonal disturbances, night-time sweat, nausea." Resident noted almost immediate improvement when moving away*."

Dr. Waldmann-Selsam goes on to say, "*physicians were able to prove, by re-testing the patients, the normalization of blood pressure, heart rhythm, hormone disturbances, visual disturbances, neurological symptoms, blood picture*,". She called this an emergency medical situation and requested an official health investigation. http://www.next-up.org/pdf/Letter_to_Edmund_Stoiber.pdf

## Cell Tower Effects on Cognition and Learning

The majority of studies, which have been done internationally, have shown an increase in neurologic symptoms in a percentage of residents living near cell towers. Symptoms vary with the distance from the cell tower. Symptoms include insomnia, headache, heart palpitations, dizziness, poor concentration, and fatigue. A study in Japan (Shinjyo 2014) showed a decrease in symptoms when the cell tower was removed. There is also a well done study showing blood abnormalities in those living nearest to cell towers (Zothansiama 2017). DNA and lipid abnormalities were seen along with reduction in internal antioxidants which provide protection from pollutants.

Moreover, a recent study conducted over a 2 year period looked at effects of cell towers near two schools by Meo et al (2018) and clearly demonstrated cognitive dysfunction in students closest to the higher power cell tower.

## Firefighters Fighting Fires and Now Cell Towers

After noticing that many of the firefighters where developing neurologic symptoms when first responder cell towers were placed on the fire stations the International Association of Firefighters studied the matter and passed a resolution in 2004 asking that cell towers not be placed in proximity to fire stations. In AB 537 (Quirk), signed into law by Gov. Newsom on October 4, 2021, the firefighters achieved the first ever health/readiness exemption in the world.

**Every fire station in California is now exempt from having a 5G tower on their station.** This movement began when cell towers were initially targeted for fire stations because of their location and the revenue received by the cities. Many firefighters developed symptoms including headaches, fatigue, memory impairment and insomnia within a week of the installation of the towers. An exemption was inserted in California bills on cell towers. AB 57 (Quirk 2015) has an exemption on the grounds of health effects. AB 537 (Quirk 2021) also has this exemption and reads, "*Due to the unique duties and infrastructure requirements for the swift and effective deployment of firefighters, this section does not apply to a collocation or siting application for a wireless telecommunications facility where the project is proposed for placement on fire department facilities."* SB 649 (Hueso, Quirk and Dodd 2018) also had a health exemption for firefighters and was vetoed by Governor Brown.

## 500 Meter (1640 ft) Buffer from Cell Tower Recommended

Cell tower health studies that show impacts from cell towers with symptoms within about 1500 feet of the cell towers. That is why Pearce et al (2019**) recommended a "500 Meter buffer around schools, hospitals and homes "Limiting liability with positioning to minimize negative health effects of cellular phone towers."**

## Cancer and Cell Towers

3 Studies investigated the rates of cancer and cell towers looking at the distance from cell towers and the incidence of cancer. They found the rate of cancer incidence increased significantly in those living within about 350 -400 meters (around 1000 feet) to the cell tower.

Dode 2011 performed a 10 year study (1996-2006) examining the distance from cell towers and cancer clusters. He and his colleagues found a highly significant increase in cancers in those living within 500 meters of the cell tower. They noted "The largest density power was 40.78 μW/cm2, and the smallest was 0.04 μW/cm2." The current guidelines are about 1000 μW/cm2. The authors conclude "Measured values stay below Brazilian Federal Law limits that are the same of ICNIRP. The human exposure pattern guidelines are inadequate. More restrictive limits must be adopted urgently."

Wolf and Wolf 2004 investigated the rates of cancer versus distance from cell towers in small towns in Israel. He found the rate of cancer incidence was 129 cases per 10,000 persons per year in those living within 350 meters of a cell tower versus a rate of 16-31/10,000 in those living greater than 350 meters from the cell tower.

**Eger (2004)** showed an increase in the development of new cancer cases within a 10 year period if residents lived within 400 meters of a cell tower. Their results revealed that within 5 years of operation of a transmitting station the relative risk of cancer development tripled in residents near the cell towers compared to residents outside the area.

**Insurance Has an Exclusion for Radiofrequency Radiation as an Emerging Risk** Insurance companies consider wireless radiation to be similar to asbestos in long term health impacts and do not provide coverage from harm for RF health effects. The cities are left with that liability unless they can provide insurance.
In a 2019 report, **New Emerging Risk Insights**, by Swiss RE Insurance Company, the second largest reinsurance company in the world, **5G is listed as an emerging concern** in the high risk category within 3 years. Included in the high-risk trends are artificial intelligence and the existential threats of climate change. "*The top five emerging risks in our SONAR 2019 report are digital technology's clash with legacy hardware, potential threats from the spread of 5G mobile networks, increasingly limited fiscal and monetary flexibility by central banks, genetic testing's implications on life insurers, and the impact of climate change on the life and health sector.*" https://www.swissre.com/institute/research/sonar/sonar2019.html

## National Academy of Sciences Report on the Havana Syndrome and Harm from RFR

A recent report by the National Academy of Sciences concluded that the "sonic attacks" on diplomats in Cuba and China were most likely due to pulsed radiofrequency from directed energy weapons. They had symptoms similar to those who live near cell towers (headache, nausea, insomnia, dizziness, memory loss, heart palpitations, depression). Dr. Beatrice Golomb wrote the most extensive report to date on this subject linking these mystery "directed energy attacks" to pulsed microwaves similar to the wireless devices we use daily. In the case of these high powered beams there was documented injury to brain networks found by the University of Pittsburg physicians who studied the diplomats. Dr Golomb highlights that **the strength of the health effects are related to the peak power not the average power. The pulse makes the poison.**

**The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** is a comprehensive guide written by many scientists and physicians in Europe who are part of the European Academy for Environmental Medicine (EUROPAEM) – EMF working group who have recognized and treated those with electrosensitivity for many years. This is a thorough, well researched and well-referenced scientific paper that is based on the 2012 Austrian Medical Association **Guidelines for the Diagnosis and Treatment of EMF Illness**. A questionnaire from their group is included in the attachments.

## New Hampshire 5G Commission Finds Radiofrequency Radiation Problematic

The first Commission formed in the United States to study the environmental and health effects of 5G technology released their comprehensive final report November 1, 2020. The Commission to Study the Environmental and Health Effects of Evolving 5G Technology was mandated by HB 522 passed by the state legislature in New Hampshire. Their final report included 15 recommendations addressing the need for public education about wireless hazards, RF health studies, RF measurements, cell antenna setbacks, fiberoptic rather than wireless deployment, commercial warning signs and wildlife protection. After hearing extensive testimony in a series of 13 meetings over the course of a year and reviewing an abundance of research, the Commission highlighted the lack of a single definition for 5G, **insufficient evidence of safety for 5$^{th}$ generation technology**, a concern that safety standards for wireless technologies have not been updated with the latest science and that 5G is largely a marketing concept. They also expressed concern that the FCC has a long history of being accountable to industry over the desires of communities and individuals.

## FCC Told by DC Court to Reevaluate Safety Standards

On August 13, 2021 a joint lawsuit was won by petitioners against the Federal Communications Commission (FCC) for failure to protect human health and the environment by dismissing scientific evidence of harm from wireless radiation. The Petitioners challenged the FCC's refusal

to reevaluate and update their 24-year-old radiofrequency (RF) safety guidelines for existing and new telecommunications technologies. The DC Circuit Court of Appeals ruled that the majority of the RF radiation standards established by the FCC did not use "reasoned decision-making" (they did not go by the science) and thus the standards were considered by the court to have been set in an "arbitrary and capricious" manner. This was an extremely high bar for the Plaintiffs to reach. The Circuit Court of Appeals rarely admonishes a federal agency or commission in this way. The DC Circuit Court of Appeals returned this decision back to the FCC and ordered the FCC to re-examine its standards for wireless radiation exposure and provide a review of wireless harms that is compliant with the law for non-cancer harms.

The Court Decision stated, "The National Environmental Policy Act ("NEPA") and it's implementing regulations require federal agencies to "establish procedures to account for the environmental effects of [their] proposed actions." And "To fulfill its obligations under NEPA, the Commission has promulgated guidelines for human exposure to RF radiation…The Commission last updated its limits for RF exposure in 1996… The ANSI and IEEE developed limits are designed to protect against "thermal effects" of exposure to RF radiation, but not "non-thermal" effects. In March 2013, the Commission issued a notice of inquiry regarding the adequacy of its 1996 guidelines in response to changes in the ubiquity of wireless devices and in scientific standards and research since 1996. In December 2019, the Commission issued a final order resolving its 2013 notice of inquiry by declining to undertake any of the changes contemplated in the notice of inquiry. Petitioners challenge the 2019 final order under NEPA and the Administrative Procedure Act ("APA").

## 5G: A Manufactured Need by Industry

Reports indicate that the telecommunications industry has largely manufactured a "need" for expanding wireless technology in cities, while halting projects for safer fiberoptic broadband. Note a 2020 European Parliament report, **5G: State of Play in Europe, USA and Asia. In Depth Analysis,** suggests 5G is a manufactured need. "*As 5G is driven by the telecoms supply industry, and its long tail of component manufacturers, a major campaign is under way to convince governments that the economy and jobs will be strongly stimulated by 5G deployment."*

In my opinion, from all the research I have done, it appears the telecommunications industry has influenced laws to prevent health or environmental effects from being considered in the placement of cell towers (See FCC Captured Agency). They knew of the harm in early studies done by Dr. George Carlo in the 1990's but suppressed the data so they could move forward. That is well documented in Dr. Carlo's book, "Cell phones: Invisible Hazards in The Wireless Age".
A blizzard of robust science has appeared now to show biological and health impacts of wireless technology, but it is still denied, and the basis for genuinely safe RF radiation guidelines is flawed. An exponential growth in cell towers is now being played out with cities being left on their own to figure out how to regulate these towers locally. Industry places a heavy hand and complex laws on local policy makers who must navigate these complex FCC policies to prevent legal action.

## Board of Health in Pittsfield Massachusetts Orders Verizon to Cease and Desist

For the first time in the U.S. a Board of Health has issued a cease and desist order to Verizon to remove or shut off a cell tower after 17 people in a neighborhood reported they became ill after the Verizon cell tower was turned on. Courtney Gilardi and her 2 children as well as residents living near the cell tower, reported experiencing a constellation of symptoms including stabbing headaches, nausea, vomiting, dizziness, "buzzing in the head", and insomnia so severe her family had to move to the next town and into a house with no heat and no hot water to escape the sickness. Other neighbors drove an hour away to sleep at a relative's house or slept in their cars away from the tower. These are classic symptoms of electromagnetic illness experienced in firefighters and military personnel working on radar and well documented by NASA, the Air Force and other military agencies as well as the "Havana Syndrome". These symptoms were also seen in Japan after 2 cell towers were turned on and when the tower was removed the resident's symptoms largely resolved.

## Apple stops 5G Phone MMW: Is This the Death of 5G Millimeter Wavelengths?

You are probably aware that Verizon and AT&T built special hotspots in many cities in the U.S. to house 5G high band millimeter wavelengths that were to revolutionize wireless with ultrafast speeds. These small wavelengths the size of bees have been put into some community small cells which need to be about 1000 feet apart without obstruction to function properly. Apple, who already has some 5G MMW phones, just announced that it is not building any millimeter wave spectrum antennas in its next generation SE iphones. With 4G LTE low and mid band wavelengths they apparently do not need the millimeter 5G bandwidth. The article notes, "It's not a surprise that Apple is dropping the spectrum from its phones. It costs chip space and power for every additional spectrum that is supported by a cellphone. Cell manufacturers care more about long battery life than they do about a technology that never made it out of the downtowns of a few major cities."

**FCC Limits: A False Sense of Security**

We are told by the FCC that wireless radiation and cell towers are safe within current safety guidelines, or that we do not really know if there is harm or that the research is inconclusive or that it is not ionizing (like x-rays) so it cannot hurt us. This is the same dismissive and doubt creating language used by the tobacco industry and a host of other chemical companies to protect their toxic products, thus profits. The research shows that we do know, beyond a doubt, that wireless radiation is harmful to all living systems below the current safety standards. The most obvious evidence is that more and more children and adults are reporting symptoms of electrosensitivity (EHS) in the presence of wireless radiation when they live in a home near a cell tower, or use a cell phone, or in schools where wireless devices and cell towers are increasing.

Please use your authority and wisdom to keep this ordinance strong. Take more time if you need to in order for you to sort this out and be sure of your decision. Remember that you all live in Los Altos as well so you are protecting you and your families and the next generation as well.

Sincerely,

Cindy Russell, MD

**Attached- Malibu Ordinances**

## References


- Pearce (2019**) 500 Meter buffer recommended around schools, hospitals and homes. "Limiting liability with positioning to minimize negative health effects of cellular phone towers."** (2019) Pearce M. Environmental Research, Nov 2019; https://www.sciencedirect.com/science/article/abs/pii/S0013935119306425
- Waldman-Selsam, C. (2004). **Bamberg Appeal, on behalf of 114 physicians**. Open Letter to Edmund Stoiber, Prime Minister, Germany, August 3. http://www.vws.org /documents/cell- project- documents/BambergAppeal.pdf
- Waldmann-Selsam C 2016. **Radiofrequency radiation injures trees around mobile phone base stations. (2016).** Waldmann-Selsam C et al. Science of the Total Environment. 572 (2016) 554-569. https://www.researchgate.net/publication/306435017_Radiofrequency_radiation_injures_trees_around_mobile_phone_base_stations
- **The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** https://www.degruyter.com/document/doi/10.1515/reveh-2016-0011/html
- **Researcher links diplomats' mystery illness to radiofrequency/microwave radiation.** Eureka alert. August 29, 2018. American Academy for the Advancement of Science. https://www.eurekalert.org/pub_releases/2018-08/uoc–rld082918.php
- **Diplomats in China report similar brain injuries as Americans in Cuba:** In 2016 and 2017, 25 Americans in the U.S. embassy in Cuba suffered serious, unexplained brain injuries. Now, at least 15 American officials in China are reporting similar symptoms. 60 Minutes reports. March 15, 2019. https://www.cbsnews.com/news/diplomats-in-china-report-similar-brain-injuries-as-americans-in-cuba-60-minutes/
- Swanson RL (2018) **Neurological Manifestations Among US Government Personnel Reporting Directional Audible and Sensory Phenomena in Havana, Cuba. (2018)** Swanson RL et al. JAMA. 2018 Mar 20;319(11):1125-1133. https://jamanetwork.com/journals/jama/fullarticle/2673168
- Levitt, Lai, Manville. (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 1. Rising ambient EMF levels in the environment.** Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 2 impacts: how species interact with natural and man-made EMF**. Rev Environ Health. 2021 Jul 8. https://pubmed.ncbi.nlm.nih.gov/34243228/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 3. Exposure standards, public policy, laws, and future directions.** Rev Environ Health. 2021 Sep 27. https://pubmed.ncbi.nlm.nih.gov/34563106/

- PanagopoulosDJ. (2013**) Electromagnetic Interaction Between Environmental Fields and Living Systems Determines Health and Well Being.** University of Athens, Department of Biology, Athens, Greece Radiation and Environmental Biophysics Research Centre, Athens, Greece. Electromagnetic Fields, Nova
- **MOEF Report on Possible Impacts of Communication Cell Towers on Wildlife Including Birds and Bees. (2010)** The Ministry of Environment and Forest. Report on Possible Impacts of Communication Towers on Wildlife Including Birds and Bees. (2010) Ministry of the Environment and Forests (MOEF) India. https://ecfsapi.fcc.gov/file/7520958381.pdf
- Sciences. http://www.wendywalksfores.com/uploads/1/3/9/0/13908728/panagopoulos-nova-2013-emfs-chapter-1.pdf
- **SwissRe Insurance-** Sonar 2019: New emerging risk insights. https://www.swissre.com/institute/research/sonar/sonar2019.html
- **Landmark Lawsuit Filed Against FCC for Failing to Reevaluate 5G and Wireless Safety.** Sept 23, 2020. PST. https://mdsafetech.org/2020/09/23/landmark-lawsuit-filed-against-fcc-for-failing-to-reevaluate-5g-and-wireless-safety/
- **Final Report on Commission to Study the Environmental and Health Effects of Evolving 5G Technology.** State of New Hampshire, General Court. Nov 1, 2020. http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf
- **We Have No Reason to Believe 5G Is Safe.**The technology is coming, but contrary to what some people say, there could be health risks. (2019) Scientific American. Joel M. Moskowitz. Oct 17, 2019. https://blogs.scientificamerican.com/observations/we-have-no-reason-to-believe-5g-is-safe/
- **5G wireless telecommunications expansion: Public health and environmental implications. (2018) Russell CL**. Environ Res. 2018 Apr 11. https://www.ncbi.nlm.nih.gov/pubmed/29655646. or at https://ecfsapi.fcc.gov/file/10913927726988/5%20G%20wireless%20telecommunications%20expansion%3A%20Public%20health%20and%20environmental%20implications.pdf
- **Firefighters Fighting Fires and Now Cell Towers-** https://mdsafetech.org/2019/09/28/firefighters-fighting-fires-and-now-cell-towers/
- **5G: State of Play in Europe, USA and Asia. In Depth Analysis, European Parliament.** https://www.europarl.europa.eu/RegData/etudes/IDAN/2019/631060/IPOL_IDA(2019)631060_EN.pdf
- **Apple ditches mmWave 5G with newest iPhone.** https://www.lightreading.com/5g/apple-ditches-mmwave-5g-with-newest-iphone/d/d-id/775901

**From:** Valentina Landa
**To:** Public Comment; City Council
**Date:** Tuesday, April 12, 2022 12:40:42 PM
**Attachments:** Los Altos Letter Final 4 11 2022 PDF(1).pdf

---

Dear Los Altos City Council,

I strongly support Dr. Cindy Russell's attached letter regarding the Los Altos Wireless Ordinance and ask that you include all of the requests that she has brought to the attention of the Council and place them in the updated ordinance.

Thank you,
Valentina

To: Los Altos City Council
council@losaltosca.gov
aenander@losaltosca.gov
smeadows@losaltosca.gov
nfligor@losaltosca.gov
lleeeng@losaltosca.gov
jweinberg@losaltosca.gov

From: Cindy Russell, MD

Re: Revisions to 2019 Los Altos Ordinance to Regulate Small Wireless Facilities

Date April 11, 2022

Dear Los Altos City Council:
I am writing today to strongly urge you to reinstate (with legally appropriate revisions) several of the major aspects of the original 2019 Small Cell Wireless Ordinance that diminish blight and protect the beauty, character and health of your lovely Silicon Valley community. In addition, after reading the new 2022 proposed Wireless Facilities Ordinance it appears that some important provisions may have been missed in crafting a new Small Cell ordinance which are critical for the safety of the residents and also reduce liability for the city. This includes several insurance provisions, minor modifications to existing facilities, permiting process, and more.

Encinitas and Malibu have passed ordinances which have elements that are protective but allow flexibility for cities and exceptions/waivers for the carriers. They remain uncontested.

- **Encinitas, CA-** Revised from 2019- Passed June 20, 2020 https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/Resolution%20No.%202020-38%20With%20Policy.pdf?ver=2020-07-13-192634-373
- **Malibu Resolution 21-17 –** Attached please find an executed copy of Res. 21-17 is officially binding because Ordinance 484 adopts it by reference.

I will summarize my ask of the Los Altos City Council with these key points below, followed by backup for those points with additional pertinent legal information which does impact the issue of health/science, as per a court ruling from the second highest court in the land on August 13, 2021, a ruling that referred to the existing RF radiation regulatory limits as "arbitrary and capricious". Arbitrary and capricious means that the law and/or the facts were knowingly disregarded. That is a high bar indeed and the plaintiffs reached that bar. It behooves us to consider what is going on in the courts and pass ordinance language accordingly:

**PLEASE PAUSE:** There are resolutions as mentioned above that have successfully balanced the unique needs of communities with the rights of the telecommunications industry. The new resolution does not have to be passed Tuesday night. Some reflection on the best that Encinitas and Malibu have to offer may benefit all of us in the long run.

# Key Points

1. TITLE OF ORDINANCE: Clarification if this applies to Small Cell or Macro Cells; macro towers must go through conditional use permits

2. LOCATION STANDARDS – PREFERRED SITES

3. WAIVERS FOR STANDARDS

4. FIRE SAFETY

5. APPEALS PROCESS

Thank you for passing the 2019 Wireless Facilities Telecommunications Ordinance. The original wireless facilities ordinance for Los Altos took into consideration public concerns, was well thought out and protects the city of Los Altos from poorly designed and poorly placed cell towers.

I understand, however, that there is a lawsuit against the City for Los Altos from Verizon and AT&T claiming that the 2019 ordinance as written "effectively prohibits" wireless communications. You are commended for taking on this task of revising the ordinance in response. Some of the 2022 proposed changes are good and clarify the permitting process for carriers to avoid lawsuits and provide for "personal wireless services", however, I believe there are some gaps in protections and flexibility for the city that I would like to point out which could be remedied in addition to some clarifications.

It is important to consider adding the provisions below. As you note with the FCC lawsuit to reevaluation the 20 year-old FCC safety standards, the courts have judged that the FCC did not take into account several aspects of human health and environmental effects in setting their standards. We do not know what the future holds for the federal Telecommunications Act of 1996 or state law. The city of Los Altos needs to be prepared to alter its ordinance in case there is a change in the law in the future.

**Representative Anna Eshoo Supports Local Control for Cell Towers**
The 2018 FCC small cell order that fast tracks deployment of small cells in order to "cut the red tape" has prompted cities around the country, like Los Altos, to write these emergency ordinances and now revise them. The FCC Declaratory ruling has been considered an overreach of the Telecom Industry which dominates the FCC (FCC: Captured Agency, N. Alster), overriding the basic rights of cities to have local control. This was recognized by our local representative Anna Eshoo who in 2019 introduced HR530 to protect the rights of states and government by deeming that the *"Federal Communications Commission's Declaratory Ruling in ''Third Report and Order and Declaratory Ruling'' (FCC 18-111) shall have no force or effect."* This bill had 52 co-sponsors. Senator Feinstein introduced in 2019 a companion federal bill SB 2012 to block the FCC order. Neither moved.

Representative Eshoo also sent a letter to the FCC in 2020 to ask that the vote on the FCC order be delayed stating, ***"we worry that if this Declaratory Ruling does not benefit from meaningful input from local governments, the result could undermine municipalities' ability to balance their responsibilities to public safety and community design with their desire to ensure access to affordable wireless networks and the next generation services."***

Please fight for the rights of your residents and government as our local representatives have done. You have more power than you know. Please exercise it.

# Important Provisions to Add

## 1) Title of Ordinance

To clarify whether the ordinance title should apply only to Small Wireless Facilities or if this is for both Small Cell and Macro Towers it may be helpful to rename the ordinance to its original title and keep the descriptions separate within the ordinance. It is not clear to me in this rewrite. Small cell applications are different than for macro towers due to difference in structure of towers, power emitted and location in right of way as per FCC ruling.

(Section 14.82.050) See Encinitas Small Cell wireless Ordinance. Resolution 2019- 91- REGULATING SMALL WIRELESS FACILITIES AND OTHER INFRASTRUCTURE DEPLOYMENTS IN THE PUBLIC RIGHTS-OF-WAY
https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/CC%20Policy%20C035.pdf

2) **Location Standards- Preferred Sites**- Despite what the telecommunications industry says, you as a city can still have preferred sites and less preferred sites in your ordinance. (Encinitas and Malibu Ordinances) You can add an exception clause or waiver process to allow for placement of a cell tower if the carrier proves it is necessary (and other locations are not technically feasible) for "Personal Wireless Services" under the 1996 Telecom Act of 1996 and so that this does not constitute an "effective prohibition".
*** Special Zones can be designated for schools, day care centers, residential dwellings, protected habitat or trees, parks, etc.**
* Keep the 1000 foot distance between towers, **not 200 feet.** Explanation below.

Here are examples of Location Standards in the Encinitas Small Cell Wireless Ordinance passed in June, 2020 and in Malibu April 2021, which to date are uncontested.

# Encinitas Ordinance Passed June 10, 2020

## SECTION 10. LOCATION STANDARDS

1. (a) **Restricted Site Locations.** All of the following locations will be deemed "Restricted Site Locations" that require an exception pursuant to SECTION 13 of this Policy:

    1. (1) any location within a residential zone;
    2. (2) any location within 500 feet from a residential dwelling unit;
    3. (3) any location within 500 feet from a daycare facility or primary school;
    4. (4) any location within a Very High Fire Hazard Severity Zone; and
    5. (5) any location within the Ecological Resource/Open Space/Park Zone.

    (b) **Location Preferences.** To better assist applicants and decision makers understand and respond to the community's aesthetic preferences and values, this subsection sets out listed preferences for locations to be used in connection with small wireless facilities in an ordered hierarchy. Applications that involve lesser-preferred locations may be approved so long as the applicant demonstrates by clear and convincing evidence in the written record that: (1) any more preferred locations or structures within 500 feet from the proposed site would be technically infeasible; and (2) if the proposed site or the most- preferred location within 500 feet from the proposed site is within a Restricted Site Location, the applicant qualifies for an exception pursuant to SECTION 13 of this Policy. The City prefers small cells in the public rights-of-way to be installed in locations, ordered from most preferred to least preferred, as follows:

    (1) locations within industrial zones, commercial zones, business parks or office professional zones on or along prime arterials;

    (2) locations within industrial zones, commercial zones, business parks or office professional zones on or along major arterials;

    (3) locations within industrial zones, commercial zones, business parks or office professional zones on or along collector roads;

    (4) locations within industrial zones, commercial zones, business parks or office professional zones on or along local streets;

    (5) any location within 500 feet from any residential zone;

    (6) locations within residential zones on or along prime arterials;

    (7) locations within residential zones on or along major arterials;

    (8) locations within residential zones on or along collector roads;

    (9) locations within residential zones on or along local streets;

(10) any location within 1,000 feet from an existing/proposed small wireless facility;

In the event that a proposed facility would be within 500 feet from two or more restricted site locations (as defined in Subsection 10(a)), and the proposed facility qualifies for an exception pursuant to SECTION 13 of this Policy, the technically feasible location furthest from all such restricted site locations will be deemed to be the most preferred alternative.

(c) **Encroachments Over Private Property.** No small cell antennas, accessory equipment or other improvements may encroach onto or over any private or other property outside the public rights-of-way without the property owner's express written consent.

## Malibu Wireless Ordinance Resolution 21-17 Standards Passed April 2021.

https://www.malibucity.org/DocumentCenter/View/27969/Ordinance-No-484

### Location Standards for All Facilities

The location standards for all wireless communications facilities, other than those that qualify as eligible facilities requests, are as follows:

1. No wireless telecommunication facility shall be located within five hundred (500) feet of any school, playground, or park unless a finding is made, based on technical evidence acceptable to the reviewing authority showing a clear need for the facility and that no technically feasible alternative site exists. Except for facilities installed on the same pole or tower as an existing wireless telecommunication facility, wireless telecommunication facilities located within any residential zone district shall not be located within one thousand (1,000) feet of any other wireless communications facility, except from those facilities placed on utility poles along Pacific Coast Highway, unless a waiver is granted.
2. All new freestanding wireless communications facilities and monopoles shall be set back a minimum distance of at least one hundred and twenty (120%) percent of the height of the facility or monopole from any property line abutting a residentially zoned property. This minimum setback is not subject to the waivers allowed under Section 7 of this Resolution.
3. Location preference for wireless communications facilities should be given to the following:
    1. Property designated non-residential (except for public open space and recreational vehicle park zoning districts), unless otherwise prohibited pursuant to this title.
    2. Facilities attached or sited adjacent to existing structures. Whenever possible, facilities shall be located on and/or inside existing structures. Appropriate types of existing structures may include, but are not limited to: buildings, water tanks, telephone poles and utility towers and poles, sign standards, light standards and roadway overpasses.
    3. Sites with minimum separation. Sites that are more than five hundred (500) feet from school, playgrounds, and parks.

4. Sites that are not highly visible from adjacent roadways.
5. Unless otherwise indicated in MMC Chapter 17.46 or these Standards, no wireless facility shall be installed on an exposed ridgeline unless the facility blends with the

surrounding existing natural and man-made environment and a finding is made that no other location is technically feasible.

6. The City expressly designates residential, public open space and recreational vehicle park zoning districts, parks and schools as the least appropriate possible locations, and the absolute last choices for siting.

## 3) Waivers for Standards

Malibu Wireless Facilities Ordinance 2021 has added a section on Waivers for Standards that clarifies the process and protects the city from liability.

**Resolution No. 21-17 Page 9**

1. A waiver of one or more of these Standards may be granted in the following circumstances:
    1. Pursuant to MMC Section 17.46.060(D), if an applicant demonstrates to the Planning Commission through clear and convincing evidence that denial of an application would, within the meaning of federal law, prohibit or effectively prohibit the provision of personal wireless services, or otherwise violate applicable laws or regulations;
    2. If an applicant demonstrates to the Planning Commission through clear and convincing evidence set forth in a feasibility study that compliance with a requirement of these Standards would be technically infeasible and the proposed wireless facility complies with the requirements of these Standards to the greatest extent technically feasible. For example, an exception to a requirement to conceal antennas in a shroud may be granted if shrouding is shown to be technically infeasible and an alternative concealment such as a colored film wrap is proposed; or
    3. If an applicant demonstrates to the Planning Commission with clear and convincing evidence that the particular engineering, design or location proposed involves an alternative that better meets the purposes of Chapter 17.46 and only minor non-compliance with a requirement of these design Standards and results in no increase in public visual impact to the community or provides other benefits. For example, an exception to the wireless facility location limitations may be granted when the applicant can demonstrate that the placement is less visible from viewsheds of residences or shielded by vegetation or existing infrastructure (such as barriers), or is less physically intrusive (for example, less impactful to tree roots or reduces noise). Among other factors, in deciding whether or not to grant an exception, the Planning Commission may consider the impact of expansions to the facility that the applicant would be entitled to make as of right if granted.
2. Waivers may only be requested at the time an application is initially submitted for a discretionary permit. The request must include both the specific provision(s) from which waiver is sought and the basis of the request, including all supporting evidence on which the applicant relies. Any request for waiver after the City has deemed an application

complete constitutes a material change to the proposed wireless facility and shall be considered a new application. A request for waiver from one or more

## 4) Fire Safety

**All electrical equipment including small cell towers are a fire risk. The fire cannot be put out in a conventional manner with firefighters blasting water on the fire. They have to wait until the power is shut off or electrocution will result.**

**Examples are**

- **San Diego tower that caught fire in a high school stadium- https://fox5sandiego.com/news/local-news/stadium-light-catches-fire-at-south-bay-high-school/**
- **The Malibu fire in 2007 due to pole overload.** CPUC finds Edison and 4 telecom carriers $51.5 million - https://www.latimes.com/local/lanow/la-me-ln-malibu-fire-settlements-approved-state-puc-20130919-story.html

Considering the increase in wildfires and the risk of earthquakes. Fire safety is a priority for citizens. **The Malibu Wireless Facilities Ordinance 2021 has language in the Fire Safety Standards that can be incorporated.** In the attached Executed Copy of Malibu Res. 21-17, please note fire language on pages 2, 3, 5, 8, 11, 12, and particularly beginning on page 23 with "Electrical and Structural Safety Information."

## 5) Appeals Process

Language for appeal is not in the ordinance
Applications.

A) Any person adversely affected by a decision of the Director pursuant to this Chapter may request an administrative hearing to appeal the Director's decision. In order to request a hearing, the person shall submit to the City Clerk in the manner directed in the Director's decision notice a fully completed request for administrative hearing form along with a full amount of the appeal fee set by the City Council (by way of check or money order). The request for administrative hearing shall be incomplete if it does not include the appeal fee in the full amount. … etc.

## Precaution is Warranted

We understand that, as per Section 704 of the 1996 Telecommunications Act, environmental concerns, and as courts have interpreted these it includes heath impacts, cannot be a factor in denial of cell towers but we are early in the game.
Public health and ecosystem health are still important issues with new 5G systems untested for long term or short term safety for either human health or environmental health. 5G systems with a complex mix of low, medium and high frequencies (thus the need for macro and microcells) are very onerous to measure, requiring very expensive complex equipment that is very difficult

for engineers to accomplish let alone city facility engineers. Precaution in placement is paramount in this discussion. Once cell towers are placed there is no going back and you just wait for people to experience symptoms or develop cancer or a neurologic condition that you will not be able to sort out from the common toxic exposures we all encounter on a daily basis.

Elon Musk tells us that 5G millimeter wave systems are not needed for autonomous cars. 5G millimeter wavelengths are also not required for "personal wireless services". For the later this technology can be effectively replaced with safer and more secure fiberoptic networks and current wireless technologies. I will explain why health matters.

## Health Matters

I am a practicing physician who has studied the health impacts of environmental toxins through our local County Medical Association and the California Medical Association for over 25 years. I began studying the health impacts of wireless radiation when I learned of a proposal to place a cell tower on my daughter's school.

After 10 years of research into the literature and talking to a variety of people affected by cell towers and wireless radiation I, like many others in the medical and scientific community, have come to the conclusion that wireless radiation is a pollutant just like lead or pesticides or mercury or toxic industrial waste. The mechanisms are similar - oxidation, the effects are broad on all living organisms and people are often unaware they are exposed to the toxin - unless they are "sensitive". Wireless radiation causes oxidative stress on organisms and stem cells, and at low levels of radiation. These low levels cause a slow decline in physiologic processes, and for those who have become sensitive- an immediate reaction.

## Antioxidants and Health

As we now know small amounts of toxins can cause harm in certain windows of development thus children are more vulnerable. We also know effects are cumulative. People vary in their vulnerability due to age, genetics and other toxic exposures. Not all people react the same. Our health, wellness and aging are determined by oxidation levels in our tissues that injure our DNA, proteins and lipids, thus antioxidants in foods have been shown to block oxidation, neutralize cellular injury and promote health. This is well established in the nutrition literature. The literature also demonstrates that taking antioxidants (Vitamin E, zinc and melatonin) protects the cell from oxidation injury from wireless radiation. Oxidative stress plays a major part in the development of chronic, degenerative and inflammatory illnesses such as cancer, autoimmune disorders, aging, cataracts, rheumatoid arthritis, cardiovascular and neurodegenerative diseases, as well as some acute pathologies (trauma, stroke**). It is well established that wireless radiation at non-thermal levels causes oxidative stress**. Effects of this are cumulative on our DNA, lipids and cellular membranes.

## We Evolved in a Low Electromagnetic Environment

The natural environment of the Earth is electromagnetic. We have terrestrial electric and magnetic fields, radiation from the sun and cosmic microwaves. All living things evolved in

harmony with the Earth's natural but very very low-level electromagnetic rhythms. Birds, bees and mammals have magnetite in their bodies and brains that use the Earth's magnetic field for the delicate tasks of navigation and foraging. Our human nervous system, heart, reproductive and endocrine systems rely on minute electromagnetic signals for complex functions. Manmade electromagnetic fields (EMF) emitted by our modern technology can distort our bodies electric currents, delicate cell membranes and cause broad dysfunction. This can be with long term or sometimes short exposures with higher power and different pulsations. Science has shown us that organisms adapt to constant electromagnetic fields found in nature much easier than artificial pulsed radiation that is emitted from cell towers and wireless devices. It makes perfect sense that wireless radiation can be harmful to living organisms even it does not knock an electron out of its orbit.

## Wildlife

You need to consider the unique ecosystem which surrounds this lovely town. Science has shown us that levels of artificial electromagnetic radiation we are increasingly exposed to is harming not only humans but the sensitive environment that we tend to ignore but depend upon for our sustenance and mental health. https://mdsafetech.org/environmental-and-wildlife-effects/

## New Review on Wildlife and wireless Radiofrequency Radiation

The most comprehensive 3 part peer reviewed article by Levitt, Lai and Manville (2021) provides an updated, thorough and well referenced overview of RFR and effects on all wildlife, revealing a disturbing picture of the future if we continue to expand wireless in our homes, communities and for the commercialization of space.

The authors state, *"But is there a larger environmental downside to rising ambient EMF exposures — particularly RFR — from popular mobile communication devices, WiFi antennas, and all accompanying infrastructure that is being overlooked by environmentalists, researchers, and government regulators alike. We may be missing critical physiological effects across species based on obsolete assumptions about low-level far-field exposures being too weak to adversely affect living tissue. We have yet to take into consideration the unique physiologies of other species, or how they use the environment in ways that humans do not, when we assume that the unfettered use of EMF/RFR can continue unabated and be allowed to grow indefinitely*." **Effects of non-ionizing electromagnetic fields on flora and fauna, part 1.** Rising ambient EMF levels in the environment. (2021) Levitt BB et al. Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/

**MOEF Report on Wildlife**
The Inter-Ministerial Committee (IMC) of expert scientists reviewed the literature of the effects of RF-EMF radiations on wildlife, humans and the biosphere. In their 2010 MOEF Report they found that out of the 919 research papers collected on birds, bees, plants, other animals, and humans, 593 showed impacts, 180 showed no impacts, and 196 were inconclusive studies. All organisms had effects.

**Human Effects–** 62% showed effects, 13% no effect and 25% inconclusive **Plant Effects–** 87% showed effects and 13% were inconclusive

**Wildlife Effects-** 62% showed effects, 4% no effect and 36% inconclusive **Bee Effects**—85% showed effects and 15% no effect

**Bird Effects**- 77% showed effects, 10% no effect and 13% inconclusive **Current Standards are Scientifically Out of Date**

## UNESCO World Heritage Wildlife Area Species Disappearing

An abundance of peer reviewed literature demonstrates adverse impacts to the environment with declines in insect, bird and wildlife populations in cities and where cell towers are placed. This spells disaster for biodiversity, fragile wildlife areas, critical pollinators and agriculture, especially with additive effects of pesticides, toxins and loss of habitat. A report on Unesco's Mt. Nardia World Heritage Park documents this slow decline in populations of species after cell towers were placed. Unesco Report on Disappearance of Species from Mt. Nardia Park World Heritage Area 2000-2015 with Increased Expansion of Telecommunications Antenna. Ethno-Botonist Mark Broomhall. UNESCO Report on Disappearance of Species from Mt. Nardia with Increased EMR 2000-2015

## Cell Tower Health Effects

Current standards are based on short term thermal exposures and discount the abundant peer reviewed literature on harm from low level, non -thermal effects. It is clear that the limits for radiofrequency radiation are set too high in the U.S. and Canada. These limits are 100 times higher than that of Italy and Russia, who set their standards based on methodical research on immunologic, neurologic and biologic effects of low-level radiation fields. Current U.S. limits are up to 1,000 microwatts/cm2 with symptoms seen at levels of 0.005 microwatts /cm2.

## Physicians in Germany ask for Health Investigation of Cell Towers in 2005

An open letter from Dr. Cornelia Waldmann-Selsam was sent to the German State Chancellor, Edmund Stoiber, on behalf of 114 physicians (Bamberger Appeal) asking for an investigation into the newly reported adverse health symptoms of 356 residents who lived near cell towers in Oberfranken, Germany. Dr. Waldmann-Selsam noted, "*Many humans get sick from emissions far below the recommended limit values, which consider only thermal effects, and we have a sickness picture with characteristic symptom combinations, which are new to us physicians," The list of symptoms were, " Sleep disturbances, tiredness, concentration impairment, forgetfulness, problem with finding words, depressive tendencies, tinnitus, sudden loss of hearing, hearing loss, giddiness, nose bleeds, visual disturbances, frequent infections, sinusitis, joint and limb pains, nerve and soft tissue pains, feeling of numbness, heart rhythm disturbances,*

*increased blood pressure , hormonal disturbances, night-time sweat, nausea." Resident noted almost immediate improvement when moving away*."

Dr. Waldmann-Selsam goes on to say, "*physicians were able to prove, by re-testing the patients, the normalization of blood pressure, heart rhythm, hormone disturbances, visual disturbances, neurological symptoms, blood picture*,". She called this an emergency medical situation and requested an official health investigation. http://www.next-up.org/pdf/Letter_to_Edmund_Stoiber.pdf

## Cell Tower Effects on Cognition and Learning

The majority of studies, which have been done internationally, have shown an increase in neurologic symptoms in a percentage of residents living near cell towers. Symptoms vary with the distance from the cell tower. Symptoms include insomnia, headache, heart palpitations, dizziness, poor concentration, and fatigue. A study in Japan (Shinjyo 2014) showed a decrease in symptoms when the cell tower was removed. There is also a well done study showing blood abnormalities in those living nearest to cell towers (Zothansiama 2017). DNA and lipid abnormalities were seen along with reduction in internal antioxidants which provide protection from pollutants.

Moreover, a recent study conducted over a 2 year period looked at effects of cell towers near two schools by Meo et al (2018) and clearly demonstrated cognitive dysfunction in students closest to the higher power cell tower.

## Firefighters Fighting Fires and Now Cell Towers

After noticing that many of the firefighters where developing neurologic symptoms when first responder cell towers were placed on the fire stations the International Association of Firefighters studied the matter and passed a resolution in 2004 asking that cell towers not be placed in proximity to fire stations. In AB 537 (Quirk), signed into law by Gov. Newsom on October 4, 2021, the firefighters achieved the first ever health/readiness exemption in the world.

**Every fire station in California is now exempt from having a 5G tower on their station.** This movement began when cell towers were initially targeted for fire stations because of their location and the revenue received by the cities. Many firefighters developed symptoms including headaches, fatigue, memory impairment and insomnia within a week of the installation of the towers. An exemption was inserted in California bills on cell towers. AB 57 (Quirk 2015) has an exemption on the grounds of health effects. AB 537 (Quirk 2021) also has this exemption and reads, "*Due to the unique duties and infrastructure requirements for the swift and effective deployment of firefighters, this section does not apply to a collocation or siting application for a wireless telecommunications facility where the project is proposed for placement on fire department facilities."* SB 649 (Hueso, Quirk and Dodd 2018) also had a health exemption for firefighters and was vetoed by Governor Brown.

## 500 Meter (1640 ft) Buffer from Cell Tower Recommended

Cell tower health studies that show impacts from cell towers with symptoms within about 1500 feet of the cell towers. That is why Pearce et al (2019**) recommended a "500 Meter buffer around schools, hospitals and homes "Limiting liability with positioning to minimize negative health effects of cellular phone towers."**

## Cancer and Cell Towers

3 Studies investigated the rates of cancer and cell towers looking at the distance from cell towers and the incidence of cancer. They found the rate of cancer incidence increased significantly in those living within about 350 -400 meters (around 1000 feet) to the cell tower.

Dode 2011 performed a 10 year study (1996-2006) examining the distance from cell towers and cancer clusters. He and his colleagues found a highly significant increase in cancers in those living within 500 meters of the cell tower. They noted "The largest density power was 40.78 μW/cm2, and the smallest was 0.04 μW/cm2." The current guidelines are about 1000 μW/cm2. The authors conclude "Measured values stay below Brazilian Federal Law limits that are the same of ICNIRP. The human exposure pattern guidelines are inadequate. More restrictive limits must be adopted urgently."

Wolf and Wolf 2004 investigated the rates of cancer versus distance from cell towers in small towns in Israel. He found the rate of cancer incidence was 129 cases per 10,000 persons per year in those living within 350 meters of a cell tower versus a rate of 16-31/10,000 in those living greater than 350 meters from the cell tower.

**Eger (2004)** showed an increase in the development of new cancer cases within a 10 year period if residents lived within 400 meters of a cell tower. Their results revealed that within 5 years of operation of a transmitting station the relative risk of cancer development tripled in residents near the cell towers compared to residents outside the area.

**Insurance Has an Exclusion for Radiofrequency Radiation as an Emerging Risk** Insurance companies consider wireless radiation to be similar to asbestos in long term health impacts and do not provide coverage from harm for RF health effects. The cities are left with that liability unless they can provide insurance.
In a 2019 report, **New Emerging Risk Insights**, by Swiss RE Insurance Company, the second largest reinsurance company in the world, **5G is listed as an emerging concern** in the high risk category within 3 years. Included in the high-risk trends are artificial intelligence and the existential threats of climate change. "*The top five emerging risks in our SONAR 2019 report are digital technology's clash with legacy hardware, potential threats from the spread of 5G mobile networks, increasingly limited fiscal and monetary flexibility by central banks, genetic testing's implications on life insurers, and the impact of climate change on the life and health sector.*" https://www.swissre.com/institute/research/sonar/sonar2019.html

## National Academy of Sciences Report on the Havana Syndrome and Harm from RFR

A recent report by the National Academy of Sciences concluded that the "sonic attacks" on diplomats in Cuba and China were most likely due to pulsed radiofrequency from directed energy weapons. They had symptoms similar to those who live near cell towers (headache, nausea, insomnia, dizziness, memory loss, heart palpitations, depression). Dr. Beatrice Golomb wrote the most extensive report to date on this subject linking these mystery "directed energy attacks" to pulsed microwaves similar to the wireless devices we use daily. In the case of these high powered beams there was documented injury to brain networks found by the University of Pittsburg physicians who studied the diplomats. Dr Golomb highlights that **the strength of the health effects are related to the peak power not the average power. The pulse makes the poison.**

**The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** is a comprehensive guide written by many scientists and physicians in Europe who are part of the European Academy for Environmental Medicine (EUROPAEM) – EMF working group who have recognized and treated those with electrosensitivity for many years. This is a thorough, well researched and well-referenced scientific paper that is based on the 2012 Austrian Medical Association **Guidelines for the Diagnosis and Treatment of EMF Illness**. A questionnaire from their group is included in the attachments.

## New Hampshire 5G Commission Finds Radiofrequency Radiation Problematic

The first Commission formed in the United States to study the environmental and health effects of 5G technology released their comprehensive final report November 1, 2020. The Commission to Study the Environmental and Health Effects of Evolving 5G Technology was mandated by HB 522 passed by the state legislature in New Hampshire. Their final report included 15 recommendations addressing the need for public education about wireless hazards, RF health studies, RF measurements, cell antenna setbacks, fiberoptic rather than wireless deployment, commercial warning signs and wildlife protection. After hearing extensive testimony in a series of 13 meetings over the course of a year and reviewing an abundance of research, the Commission highlighted the lack of a single definition for 5G, **insufficient evidence of safety for 5$^{th}$ generation technology**, a concern that safety standards for wireless technologies have not been updated with the latest science and that 5G is largely a marketing concept. They also expressed concern that the FCC has a long history of being accountable to industry over the desires of communities and individuals.

## FCC Told by DC Court to Reevaluate Safety Standards

On August 13, 2021 a joint lawsuit was won by petitioners against the Federal Communications Commission (FCC) for failure to protect human health and the environment by dismissing scientific evidence of harm from wireless radiation. The Petitioners challenged the FCC's refusal

to reevaluate and update their 24-year-old radiofrequency (RF) safety guidelines for existing and new telecommunications technologies. The DC Circuit Court of Appeals ruled that the majority of the RF radiation standards established by the FCC did not use "reasoned decision-making" (they did not go by the science) and thus the standards were considered by the court to have been set in an "arbitrary and capricious" manner. This was an extremely high bar for the Plaintiffs to reach. The Circuit Court of Appeals rarely admonishes a federal agency or commission in this way. The DC Circuit Court of Appeals returned this decision back to the FCC and ordered the FCC to re-examine its standards for wireless radiation exposure and provide a review of wireless harms that is compliant with the law for non-cancer harms.

The Court Decision stated, "The National Environmental Policy Act ("NEPA") and it's implementing regulations require federal agencies to "establish procedures to account for the environmental effects of [their] proposed actions." And "To fulfill its obligations under NEPA, the Commission has promulgated guidelines for human exposure to RF radiation…The Commission last updated its limits for RF exposure in 1996… The ANSI and IEEE developed limits are designed to protect against "thermal effects" of exposure to RF radiation, but not "non-thermal" effects. In March 2013, the Commission issued a notice of inquiry regarding the adequacy of its 1996 guidelines in response to changes in the ubiquity of wireless devices and in scientific standards and research since 1996. In December 2019, the Commission issued a final order resolving its 2013 notice of inquiry by declining to undertake any of the changes contemplated in the notice of inquiry. Petitioners challenge the 2019 final order under NEPA and the Administrative Procedure Act ("APA").

## 5G: A Manufactured Need by Industry

Reports indicate that the telecommunications industry has largely manufactured a "need" for expanding wireless technology in cities, while halting projects for safer fiberoptic broadband. Note a 2020 European Parliament report, **5G: State of Play in Europe, USA and Asia. In Depth Analysis,** suggests 5G is a manufactured need. "*As 5G is driven by the telecoms supply industry, and its long tail of component manufacturers, a major campaign is under way to convince governments that the economy and jobs will be strongly stimulated by 5G deployment."*

In my opinion, from all the research I have done, it appears the telecommunications industry has influenced laws to prevent health or environmental effects from being considered in the placement of cell towers (See FCC Captured Agency). They knew of the harm in early studies done by Dr. George Carlo in the 1990's but suppressed the data so they could move forward. That is well documented in Dr. Carlo's book, "Cell phones: Invisible Hazards in The Wireless Age".
A blizzard of robust science has appeared now to show biological and health impacts of wireless technology, but it is still denied, and the basis for genuinely safe RF radiation guidelines is flawed. An exponential growth in cell towers is now being played out with cities being left on their own to figure out how to regulate these towers locally. Industry places a heavy hand and complex laws on local policy makers who must navigate these complex FCC policies to prevent legal action.

## Board of Health in Pittsfield Massachusetts Orders Verizon to Cease and Desist

For the first time in the U.S. a Board of Health has issued a cease and desist order to Verizon to remove or shut off a cell tower after 17 people in a neighborhood reported they became ill after the Verizon cell tower was turned on. Courtney Gilardi and her 2 children as well as residents living near the cell tower, reported experiencing a constellation of symptoms including stabbing headaches, nausea, vomiting, dizziness, "buzzing in the head", and insomnia so severe her family had to move to the next town and into a house with no heat and no hot water to escape the sickness. Other neighbors drove an hour away to sleep at a relative's house or slept in their cars away from the tower. These are classic symptoms of electromagnetic illness experienced in firefighters and military personnel working on radar and well documented by NASA, the Air Force and other military agencies as well as the "Havana Syndrome". These symptoms were also seen in Japan after 2 cell towers were turned on and when the tower was removed the resident's symptoms largely resolved.

## Apple stops 5G Phone MMW: Is This the Death of 5G Millimeter Wavelengths?

You are probably aware that Verizon and AT&T built special hotspots in many cities in the U.S. to house 5G high band millimeter wavelengths that were to revolutionize wireless with ultrafast speeds. These small wavelengths the size of bees have been put into some community small cells which need to be about 1000 feet apart without obstruction to function properly. Apple, who already has some 5G MMW phones, just announced that it is not building any millimeter wave spectrum antennas in its next generation SE iphones. With 4G LTE low and mid band wavelengths they apparently do not need the millimeter 5G bandwidth. The article notes, "It's not a surprise that Apple is dropping the spectrum from its phones. It costs chip space and power for every additional spectrum that is supported by a cellphone. Cell manufacturers care more about long battery life than they do about a technology that never made it out of the downtowns of a few major cities."

**FCC Limits: A False Sense of Security**

We are told by the FCC that wireless radiation and cell towers are safe within current safety guidelines, or that we do not really know if there is harm or that the research is inconclusive or that it is not ionizing (like x-rays) so it cannot hurt us. This is the same dismissive and doubt creating language used by the tobacco industry and a host of other chemical companies to protect their toxic products, thus profits. The research shows that we do know, beyond a doubt, that wireless radiation is harmful to all living systems below the current safety standards. The most obvious evidence is that more and more children and adults are reporting symptoms of electrosensitivity (EHS) in the presence of wireless radiation when they live in a home near a cell tower, or use a cell phone, or in schools where wireless devices and cell towers are increasing.

Please use your authority and wisdom to keep this ordinance strong. Take more time if you need to in order for you to sort this out and be sure of your decision. Remember that you all live in Los Altos as well so you are protecting you and your families and the next generation as well.

Sincerely,

Cindy Russell, MD

**Attached- Malibu Ordinances**

## References


- Pearce (2019**) 500 Meter buffer recommended around schools, hospitals and homes. "Limiting liability with positioning to minimize negative health effects of cellular phone towers."** (2019) Pearce M. Environmental Research, Nov 2019; https://www.sciencedirect.com/science/article/abs/pii/S0013935119306425
- Waldman-Selsam, C. (2004). **Bamberg Appeal, on behalf of 114 physicians**. Open Letter to Edmund Stoiber, Prime Minister, Germany, August 3. http://www.vws.org /documents/cell- project- documents/BambergAppeal.pdf
- Waldmann-Selsam C 2016. **Radiofrequency radiation injures trees around mobile phone base stations. (2016).** Waldmann-Selsam C et al. Science of the Total Environment. 572 (2016) 554-569. https://www.researchgate.net/publication/306435017_Radiofrequency_radiation_injures_trees_around_mobile_phone_base_stations
- **The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** https://www.degruyter.com/document/doi/10.1515/reveh-2016-0011/html
- **Researcher links diplomats' mystery illness to radiofrequency/microwave radiation.** Eureka alert. August 29, 2018. American Academy for the Advancement of Science. https://www.eurekalert.org/pub_releases/2018-08/uoc–rld082918.php
- **Diplomats in China report similar brain injuries as Americans in Cuba:** In 2016 and 2017, 25 Americans in the U.S. embassy in Cuba suffered serious, unexplained brain injuries. Now, at least 15 American officials in China are reporting similar symptoms. 60 Minutes reports. March 15, 2019. https://www.cbsnews.com/news/diplomats-in-china-report-similar-brain-injuries-as-americans-in-cuba-60-minutes/
- Swanson RL (2018) **Neurological Manifestations Among US Government Personnel Reporting Directional Audible and Sensory Phenomena in Havana, Cuba. (2018)** Swanson RL et al. JAMA. 2018 Mar 20;319(11):1125-1133. https://jamanetwork.com/journals/jama/fullarticle/2673168
- Levitt, Lai, Manville. (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 1. Rising ambient EMF levels in the environment.** Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 2 impacts: how species interact with natural and man-made EMF**. Rev Environ Health. 2021 Jul 8. https://pubmed.ncbi.nlm.nih.gov/34243228/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 3. Exposure standards, public policy, laws, and future directions.** Rev Environ Health. 2021 Sep 27. https://pubmed.ncbi.nlm.nih.gov/34563106/

- PanagopoulosDJ. (2013**) Electromagnetic Interaction Between Environmental Fields and Living Systems Determines Health and Well Being.** University of Athens, Department of Biology, Athens, Greece Radiation and Environmental Biophysics Research Centre, Athens, Greece. Electromagnetic Fields, Nova
- **MOEF Report on Possible Impacts of Communication Cell Towers on Wildlife Including Birds and Bees. (2010)** The Ministry of Environment and Forest. Report on Possible Impacts of Communication Towers on Wildlife Including Birds and Bees. (2010) Ministry of the Environment and Forests (MOEF) India. https://ecfsapi.fcc.gov/file/7520958381.pdf
- Sciences. http://www.wendywalksfores.com/uploads/1/3/9/0/13908728/panagopoulos-nova-2013-emfs-chapter-1.pdf
- **SwissRe Insurance-** Sonar 2019: New emerging risk insights. https://www.swissre.com/institute/research/sonar/sonar2019.html
- **Landmark Lawsuit Filed Against FCC for Failing to Reevaluate 5G and Wireless Safety.** Sept 23, 2020. PST. https://mdsafetech.org/2020/09/23/landmark-lawsuit-filed-against-fcc-for-failing-to-reevaluate-5g-and-wireless-safety/
- **Final Report on Commission to Study the Environmental and Health Effects of Evolving 5G Technology.** State of New Hampshire, General Court. Nov 1, 2020. http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf
- **We Have No Reason to Believe 5G Is Safe.**The technology is coming, but contrary to what some people say, there could be health risks. (2019) Scientific American. Joel M. Moskowitz. Oct 17, 2019. https://blogs.scientificamerican.com/observations/we-have-no-reason-to-believe-5g-is-safe/
- **5G wireless telecommunications expansion: Public health and environmental implications. (2018) Russell CL**. Environ Res. 2018 Apr 11. https://www.ncbi.nlm.nih.gov/pubmed/29655646. or at https://ecfsapi.fcc.gov/file/10913927726988/5%20G%20wireless%20telecommunications%20expansion%3A%20Public%20health%20and%20environmental%20implications.pdf
- **Firefighters Fighting Fires and Now Cell Towers-** https://mdsafetech.org/2019/09/28/firefighters-fighting-fires-and-now-cell-towers/
- **5G: State of Play in Europe, USA and Asia. In Depth Analysis, European Parliament.** https://www.europarl.europa.eu/RegData/etudes/IDAN/2019/631060/IPOL_IDA(2019)631060_EN.pdf
- **Apple ditches mmWave 5G with newest iPhone.** https://www.lightreading.com/5g/apple-ditches-mmwave-5g-with-newest-iphone/d/d-id/775901

**From:** Rachel Cooley
**To:** Public Comment; City Council
**Date:** Tuesday, April 12, 2022 1:33:16 PM
**Attachments:** Los Altos Letter Final 4 11 2022 PDF(1).pdf

---

Dear Los Altos City Council,

I strongly support Dr. Cindy Russell's attached letter regarding the Los Altos Wireless Ordinance and ask that you include all of the requests that she has brought to the attention of the Council and place them in the updated ordinance.

Sincerely,

Rachel Cooley

To: Los Altos City Council
council@losaltosca.gov
aenander@losaltosca.gov
smeadows@losaltosca.gov
nfligor@losaltosca.gov
lleeeng@losaltosca.gov
jweinberg@losaltosca.gov

From: Cindy Russell, MD

Re: Revisions to 2019 Los Altos Ordinance to Regulate Small Wireless Facilities

Date April 11, 2022

Dear Los Altos City Council:
I am writing today to strongly urge you to reinstate (with legally appropriate revisions) several of the major aspects of the original 2019 Small Cell Wireless Ordinance that diminish blight and protect the beauty, character and health of your lovely Silicon Valley community. In addition, after reading the new 2022 proposed Wireless Facilities Ordinance it appears that some important provisions may have been missed in crafting a new Small Cell ordinance which are critical for the safety of the residents and also reduce liability for the city. This includes several insurance provisions, minor modifications to existing facilities, permiting process, and more.

Encinitas and Malibu have passed ordinances which have elements that are protective but allow flexibility for cities and exceptions/waivers for the carriers. They remain uncontested.

- **Encinitas, CA-** Revised from 2019- Passed June 20, 2020 https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/Resolution%20No.%202020-38%20With%20Policy.pdf?ver=2020-07-13-192634-373
- **Malibu Resolution 21-17 –** Attached please find an executed copy of Res. 21-17 is officially binding because Ordinance 484 adopts it by reference.

I will summarize my ask of the Los Altos City Council with these key points below, followed by backup for those points with additional pertinent legal information which does impact the issue of health/science, as per a court ruling from the second highest court in the land on August 13, 2021, a ruling that referred to the existing RF radiation regulatory limits as "arbitrary and capricious". Arbitrary and capricious means that the law and/or the facts were knowingly disregarded. That is a high bar indeed and the plaintiffs reached that bar. It behooves us to consider what is going on in the courts and pass ordinance language accordingly:

**PLEASE PAUSE:** There are resolutions as mentioned above that have successfully balanced the unique needs of communities with the rights of the telecommunications industry. The new resolution does not have to be passed Tuesday night. Some reflection on the best that Encinitas and Malibu have to offer may benefit all of us in the long run.

# Key Points

1. TITLE OF ORDINANCE: Clarification if this applies to Small Cell or Macro Cells; macro towers must go through conditional use permits

2. LOCATION STANDARDS – PREFERRED SITES

3. WAIVERS FOR STANDARDS

4. FIRE SAFETY

5. APPEALS PROCESS

Thank you for passing the 2019 Wireless Facilities Telecommunications Ordinance. The original wireless facilities ordinance for Los Altos took into consideration public concerns, was well thought out and protects the city of Los Altos from poorly designed and poorly placed cell towers.

I understand, however, that there is a lawsuit against the City for Los Altos from Verizon and AT&T claiming that the 2019 ordinance as written "effectively prohibits" wireless communications. You are commended for taking on this task of revising the ordinance in response. Some of the 2022 proposed changes are good and clarify the permitting process for carriers to avoid lawsuits and provide for "personal wireless services", however, I believe there are some gaps in protections and flexibility for the city that I would like to point out which could be remedied in addition to some clarifications.

It is important to consider adding the provisions below. As you note with the FCC lawsuit to reevaluation the 20 year-old FCC safety standards, the courts have judged that the FCC did not take into account several aspects of human health and environmental effects in setting their standards. We do not know what the future holds for the federal Telecommunications Act of 1996 or state law. The city of Los Altos needs to be prepared to alter its ordinance in case there is a change in the law in the future.

**Representative Anna Eshoo Supports Local Control for Cell Towers**
The 2018 FCC small cell order that fast tracks deployment of small cells in order to "cut the red tape" has prompted cities around the country, like Los Altos, to write these emergency ordinances and now revise them. The FCC Declaratory ruling has been considered an overreach of the Telecom Industry which dominates the FCC (FCC: Captured Agency, N. Alster), overriding the basic rights of cities to have local control. This was recognized by our local representative Anna Eshoo who in 2019 introduced HR530 to protect the rights of states and government by deeming that the *"Federal Communications Commission's Declaratory Ruling in ''Third Report and Order and Declaratory Ruling'' (FCC 18-111) shall have no force or effect."* This bill had 52 co-sponsors. Senator Feinstein introduced in 2019 a companion federal bill SB 2012 to block the FCC order. Neither moved.

Representative Eshoo also sent a letter to the FCC in 2020 to ask that the vote on the FCC order be delayed stating, ***"we worry that if this Declaratory Ruling does not benefit from meaningful input from local governments, the result could undermine municipalities' ability to balance their responsibilities to public safety and community design with their desire to ensure access to affordable wireless networks and the next generation services."***

Please fight for the rights of your residents and government as our local representatives have done. You have more power than you know. Please exercise it.

# Important Provisions to Add

## 1) Title of Ordinance

To clarify whether the ordinance title should apply only to Small Wireless Facilities or if this is for both Small Cell and Macro Towers it may be helpful to rename the ordinance to its original title and keep the descriptions separate within the ordinance. It is not clear to me in this rewrite. Small cell applications are different than for macro towers due to difference in structure of towers, power emitted and location in right of way as per FCC ruling.

(Section 14.82.050) See Encinitas Small Cell wireless Ordinance. Resolution 2019- 91- REGULATING SMALL WIRELESS FACILITIES AND OTHER INFRASTRUCTURE DEPLOYMENTS IN THE PUBLIC RIGHTS-OF-WAY
https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/CC%20Policy%20C035.pdf

2) **Location Standards- Preferred Sites**- Despite what the telecommunications industry says, you as a city can still have preferred sites and less preferred sites in your ordinance. (Encinitas and Malibu Ordinances) You can add an exception clause or waiver process to allow for placement of a cell tower if the carrier proves it is necessary (and other locations are not technically feasible) for "Personal Wireless Services" under the 1996 Telecom Act of 1996 and so that this does not constitute an "effective prohibition".
*** Special Zones can be designated for schools, day care centers, residential dwellings, protected habitat or trees, parks, etc.**
* Keep the 1000 foot distance between towers, **not 200 feet.** Explanation below.

Here are examples of Location Standards in the Encinitas Small Cell Wireless Ordinance passed in June, 2020 and in Malibu April 2021, which to date are uncontested.

# Encinitas Ordinance Passed June 10, 2020

## SECTION 10. LOCATION STANDARDS

1. (a) **Restricted Site Locations.** All of the following locations will be deemed "Restricted Site Locations" that require an exception pursuant to SECTION 13 of this Policy:

    1. (1) any location within a residential zone;
    2. (2) any location within 500 feet from a residential dwelling unit;
    3. (3) any location within 500 feet from a daycare facility or primary school;
    4. (4) any location within a Very High Fire Hazard Severity Zone; and
    5. (5) any location within the Ecological Resource/Open Space/Park Zone.

    (b) **Location Preferences.** To better assist applicants and decision makers understand and respond to the community's aesthetic preferences and values, this subsection sets out listed preferences for locations to be used in connection with small wireless facilities in an ordered hierarchy. Applications that involve lesser-preferred locations may be approved so long as the applicant demonstrates by clear and convincing evidence in the written record that: (1) any more preferred locations or structures within 500 feet from the proposed site would be technically infeasible; and (2) if the proposed site or the most- preferred location within 500 feet from the proposed site is within a Restricted Site Location, the applicant qualifies for an exception pursuant to SECTION 13 of this Policy. The City prefers small cells in the public rights-of-way to be installed in locations, ordered from most preferred to least preferred, as follows:

    (1) locations within industrial zones, commercial zones, business parks or office professional zones on or along prime arterials;

    (2) locations within industrial zones, commercial zones, business parks or office professional zones on or along major arterials;

    (3) locations within industrial zones, commercial zones, business parks or office professional zones on or along collector roads;

    (4) locations within industrial zones, commercial zones, business parks or office professional zones on or along local streets;

    (5) any location within 500 feet from any residential zone;

    (6) locations within residential zones on or along prime arterials;

    (7) locations within residential zones on or along major arterials;

    (8) locations within residential zones on or along collector roads;

    (9) locations within residential zones on or along local streets;

(10) any location within 1,000 feet from an existing/proposed small wireless facility;

In the event that a proposed facility would be within 500 feet from two or more restricted site locations (as defined in Subsection 10(a)), and the proposed facility qualifies for an exception pursuant to SECTION 13 of this Policy, the technically feasible location furthest from all such restricted site locations will be deemed to be the most preferred alternative.

(c) **Encroachments Over Private Property.** No small cell antennas, accessory equipment or other improvements may encroach onto or over any private or other property outside the public rights-of-way without the property owner's express written consent.

## Malibu Wireless Ordinance Resolution 21-17 Standards Passed April 2021.

https://www.malibucity.org/DocumentCenter/View/27969/Ordinance-No-484

### Location Standards for All Facilities

The location standards for all wireless communications facilities, other than those that qualify as eligible facilities requests, are as follows:

1. No wireless telecommunication facility shall be located within five hundred (500) feet of any school, playground, or park unless a finding is made, based on technical evidence acceptable to the reviewing authority showing a clear need for the facility and that no technically feasible alternative site exists. Except for facilities installed on the same pole or tower as an existing wireless telecommunication facility, wireless telecommunication facilities located within any residential zone district shall not be located within one thousand (1,000) feet of any other wireless communications facility, except from those facilities placed on utility poles along Pacific Coast Highway, unless a waiver is granted.
2. All new freestanding wireless communications facilities and monopoles shall be set back a minimum distance of at least one hundred and twenty (120%) percent of the height of the facility or monopole from any property line abutting a residentially zoned property. This minimum setback is not subject to the waivers allowed under Section 7 of this Resolution.
3. Location preference for wireless communications facilities should be given to the following:
    1. Property designated non-residential (except for public open space and recreational vehicle park zoning districts), unless otherwise prohibited pursuant to this title.
    2. Facilities attached or sited adjacent to existing structures. Whenever possible, facilities shall be located on and/or inside existing structures. Appropriate types of existing structures may include, but are not limited to: buildings, water tanks, telephone poles and utility towers and poles, sign standards, light standards and roadway overpasses.
    3. Sites with minimum separation. Sites that are more than five hundred (500) feet from school, playgrounds, and parks.

4. Sites that are not highly visible from adjacent roadways.
5. Unless otherwise indicated in MMC Chapter 17.46 or these Standards, no wireless facility shall be installed on an exposed ridgeline unless the facility blends with the

surrounding existing natural and man-made environment and a finding is made that no other location is technically feasible.

6. The City expressly designates residential, public open space and recreational vehicle park zoning districts, parks and schools as the least appropriate possible locations, and the absolute last choices for siting.

## 3) Waivers for Standards

Malibu Wireless Facilities Ordinance 2021 has added a section on Waivers for Standards that clarifies the process and protects the city from liability.

**Resolution No. 21-17 Page 9**

1. A waiver of one or more of these Standards may be granted in the following circumstances:
    1. Pursuant to MMC Section 17.46.060(D), if an applicant demonstrates to the Planning Commission through clear and convincing evidence that denial of an application would, within the meaning of federal law, prohibit or effectively prohibit the provision of personal wireless services, or otherwise violate applicable laws or regulations;
    2. If an applicant demonstrates to the Planning Commission through clear and convincing evidence set forth in a feasibility study that compliance with a requirement of these Standards would be technically infeasible and the proposed wireless facility complies with the requirements of these Standards to the greatest extent technically feasible. For example, an exception to a requirement to conceal antennas in a shroud may be granted if shrouding is shown to be technically infeasible and an alternative concealment such as a colored film wrap is proposed; or
    3. If an applicant demonstrates to the Planning Commission with clear and convincing evidence that the particular engineering, design or location proposed involves an alternative that better meets the purposes of Chapter 17.46 and only minor non-compliance with a requirement of these design Standards and results in no increase in public visual impact to the community or provides other benefits. For example, an exception to the wireless facility location limitations may be granted when the applicant can demonstrate that the placement is less visible from viewsheds of residences or shielded by vegetation or existing infrastructure (such as barriers), or is less physically intrusive (for example, less impactful to tree roots or reduces noise). Among other factors, in deciding whether or not to grant an exception, the Planning Commission may consider the impact of expansions to the facility that the applicant would be entitled to make as of right if granted.
2. Waivers may only be requested at the time an application is initially submitted for a discretionary permit. The request must include both the specific provision(s) from which waiver is sought and the basis of the request, including all supporting evidence on which the applicant relies. Any request for waiver after the City has deemed an application

complete constitutes a material change to the proposed wireless facility and shall be considered a new application. A request for waiver from one or more

## 4) Fire Safety

**All electrical equipment including small cell towers are a fire risk. The fire cannot be put out in a conventional manner with firefighters blasting water on the fire. They have to wait until the power is shut off or electrocution will result.**

**Examples are**

- **San Diego tower that caught fire in a high school stadium- https://fox5sandiego.com/news/local-news/stadium-light-catches-fire-at-south-bay-high-school/**
- **The Malibu fire in 2007 due to pole overload.** CPUC finds Edison and 4 telecom carriers $51.5 million - https://www.latimes.com/local/lanow/la-me-ln-malibu-fire-settlements-approved-state-puc-20130919-story.html

Considering the increase in wildfires and the risk of earthquakes. Fire safety is a priority for citizens. **The Malibu Wireless Facilities Ordinance 2021 has language in the Fire Safety Standards that can be incorporated.** In the attached Executed Copy of Malibu Res. 21-17, please note fire language on pages 2, 3, 5, 8, 11, 12, and particularly beginning on page 23 with "Electrical and Structural Safety Information."

## 5) Appeals Process

Language for appeal is not in the ordinance
Applications.

A) Any person adversely affected by a decision of the Director pursuant to this Chapter may request an administrative hearing to appeal the Director's decision. In order to request a hearing, the person shall submit to the City Clerk in the manner directed in the Director's decision notice a fully completed request for administrative hearing form along with a full amount of the appeal fee set by the City Council (by way of check or money order). The request for administrative hearing shall be incomplete if it does not include the appeal fee in the full amount. … etc.

## Precaution is Warranted

We understand that, as per Section 704 of the 1996 Telecommunications Act, environmental concerns, and as courts have interpreted these it includes heath impacts, cannot be a factor in denial of cell towers but we are early in the game.
Public health and ecosystem health are still important issues with new 5G systems untested for long term or short term safety for either human health or environmental health. 5G systems with a complex mix of low, medium and high frequencies (thus the need for macro and microcells) are very onerous to measure, requiring very expensive complex equipment that is very difficult

for engineers to accomplish let alone city facility engineers. Precaution in placement is paramount in this discussion. Once cell towers are placed there is no going back and you just wait for people to experience symptoms or develop cancer or a neurologic condition that you will not be able to sort out from the common toxic exposures we all encounter on a daily basis.

Elon Musk tells us that 5G millimeter wave systems are not needed for autonomous cars. 5G millimeter wavelengths are also not required for "personal wireless services". For the later this technology can be effectively replaced with safer and more secure fiberoptic networks and current wireless technologies. I will explain why health matters.

## Health Matters

I am a practicing physician who has studied the health impacts of environmental toxins through our local County Medical Association and the California Medical Association for over 25 years. I began studying the health impacts of wireless radiation when I learned of a proposal to place a cell tower on my daughter's school.

After 10 years of research into the literature and talking to a variety of people affected by cell towers and wireless radiation I, like many others in the medical and scientific community, have come to the conclusion that wireless radiation is a pollutant just like lead or pesticides or mercury or toxic industrial waste. The mechanisms are similar - oxidation, the effects are broad on all living organisms and people are often unaware they are exposed to the toxin - unless they are "sensitive". Wireless radiation causes oxidative stress on organisms and stem cells, and at low levels of radiation. These low levels cause a slow decline in physiologic processes, and for those who have become sensitive- an immediate reaction.

## Antioxidants and Health

As we now know small amounts of toxins can cause harm in certain windows of development thus children are more vulnerable. We also know effects are cumulative. People vary in their vulnerability due to age, genetics and other toxic exposures. Not all people react the same. Our health, wellness and aging are determined by oxidation levels in our tissues that injure our DNA, proteins and lipids, thus antioxidants in foods have been shown to block oxidation, neutralize cellular injury and promote health. This is well established in the nutrition literature. The literature also demonstrates that taking antioxidants (Vitamin E, zinc and melatonin) protects the cell from oxidation injury from wireless radiation. Oxidative stress plays a major part in the development of chronic, degenerative and inflammatory illnesses such as cancer, autoimmune disorders, aging, cataracts, rheumatoid arthritis, cardiovascular and neurodegenerative diseases, as well as some acute pathologies (trauma, stroke**). It is well established that wireless radiation at non-thermal levels causes oxidative stress**. Effects of this are cumulative on our DNA, lipids and cellular membranes.

## We Evolved in a Low Electromagnetic Environment

The natural environment of the Earth is electromagnetic. We have terrestrial electric and magnetic fields, radiation from the sun and cosmic microwaves. All living things evolved in

harmony with the Earth's natural but very very low-level electromagnetic rhythms. Birds, bees and mammals have magnetite in their bodies and brains that use the Earth's magnetic field for the delicate tasks of navigation and foraging. Our human nervous system, heart, reproductive and endocrine systems rely on minute electromagnetic signals for complex functions. Manmade electromagnetic fields (EMF) emitted by our modern technology can distort our bodies electric currents, delicate cell membranes and cause broad dysfunction. This can be with long term or sometimes short exposures with higher power and different pulsations. Science has shown us that organisms adapt to constant electromagnetic fields found in nature much easier than artificial pulsed radiation that is emitted from cell towers and wireless devices. It makes perfect sense that wireless radiation can be harmful to living organisms even it does not knock an electron out of its orbit.

## Wildlife

You need to consider the unique ecosystem which surrounds this lovely town. Science has shown us that levels of artificial electromagnetic radiation we are increasingly exposed to is harming not only humans but the sensitive environment that we tend to ignore but depend upon for our sustenance and mental health. https://mdsafetech.org/environmental-and-wildlife-effects/

## New Review on Wildlife and wireless Radiofrequency Radiation

The most comprehensive 3 part peer reviewed article by Levitt, Lai and Manville (2021) provides an updated, thorough and well referenced overview of RFR and effects on all wildlife, revealing a disturbing picture of the future if we continue to expand wireless in our homes, communities and for the commercialization of space.

The authors state, *"But is there a larger environmental downside to rising ambient EMF exposures — particularly RFR — from popular mobile communication devices, WiFi antennas, and all accompanying infrastructure that is being overlooked by environmentalists, researchers, and government regulators alike. We may be missing critical physiological effects across species based on obsolete assumptions about low-level far-field exposures being too weak to adversely affect living tissue. We have yet to take into consideration the unique physiologies of other species, or how they use the environment in ways that humans do not, when we assume that the unfettered use of EMF/RFR can continue unabated and be allowed to grow indefinitely*." **Effects of non-ionizing electromagnetic fields on flora and fauna, part 1.** Rising ambient EMF levels in the environment. (2021) Levitt BB et al. Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/

**MOEF Report on Wildlife**
The Inter-Ministerial Committee (IMC) of expert scientists reviewed the literature of the effects of RF-EMF radiations on wildlife, humans and the biosphere. In their 2010 MOEF Report they found that out of the 919 research papers collected on birds, bees, plants, other animals, and humans, 593 showed impacts, 180 showed no impacts, and 196 were inconclusive studies. All organisms had effects.

**Human Effects–** 62% showed effects, 13% no effect and 25% inconclusive **Plant Effects–** 87% showed effects and 13% were inconclusive

**Wildlife Effects-** 62% showed effects, 4% no effect and 36% inconclusive **Bee Effects**—85% showed effects and 15% no effect

**Bird Effects**- 77% showed effects, 10% no effect and 13% inconclusive **Current Standards are Scientifically Out of Date**

## UNESCO World Heritage Wildlife Area Species Disappearing

An abundance of peer reviewed literature demonstrates adverse impacts to the environment with declines in insect, bird and wildlife populations in cities and where cell towers are placed. This spells disaster for biodiversity, fragile wildlife areas, critical pollinators and agriculture, especially with additive effects of pesticides, toxins and loss of habitat. A report on Unesco's Mt. Nardia World Heritage Park documents this slow decline in populations of species after cell towers were placed. Unesco Report on Disappearance of Species from Mt. Nardia Park World Heritage Area 2000-2015 with Increased Expansion of Telecommunications Antenna. Ethno-Botonist Mark Broomhall. UNESCO Report on Disappearance of Species from Mt. Nardia with Increased EMR 2000-2015

## Cell Tower Health Effects

Current standards are based on short term thermal exposures and discount the abundant peer reviewed literature on harm from low level, non -thermal effects. It is clear that the limits for radiofrequency radiation are set too high in the U.S. and Canada. These limits are 100 times higher than that of Italy and Russia, who set their standards based on methodical research on immunologic, neurologic and biologic effects of low-level radiation fields. Current U.S. limits are up to 1,000 microwatts/cm2 with symptoms seen at levels of 0.005 microwatts /cm2.

## Physicians in Germany ask for Health Investigation of Cell Towers in 2005

An open letter from Dr. Cornelia Waldmann-Selsam was sent to the German State Chancellor, Edmund Stoiber, on behalf of 114 physicians (Bamberger Appeal) asking for an investigation into the newly reported adverse health symptoms of 356 residents who lived near cell towers in Oberfranken, Germany. Dr. Waldmann-Selsam noted, "*Many humans get sick from emissions far below the recommended limit values, which consider only thermal effects, and we have a sickness picture with characteristic symptom combinations, which are new to us physicians," The list of symptoms were, " Sleep disturbances, tiredness, concentration impairment, forgetfulness, problem with finding words, depressive tendencies, tinnitus, sudden loss of hearing, hearing loss, giddiness, nose bleeds, visual disturbances, frequent infections, sinusitis, joint and limb pains, nerve and soft tissue pains, feeling of numbness, heart rhythm disturbances,*

*increased blood pressure , hormonal disturbances, night-time sweat, nausea." Resident noted almost immediate improvement when moving away*."

Dr. Waldmann-Selsam goes on to say, "*physicians were able to prove, by re-testing the patients, the normalization of blood pressure, heart rhythm, hormone disturbances, visual disturbances, neurological symptoms, blood picture*,". She called this an emergency medical situation and requested an official health investigation. http://www.next-up.org/pdf/Letter_to_Edmund_Stoiber.pdf

## Cell Tower Effects on Cognition and Learning

The majority of studies, which have been done internationally, have shown an increase in neurologic symptoms in a percentage of residents living near cell towers. Symptoms vary with the distance from the cell tower. Symptoms include insomnia, headache, heart palpitations, dizziness, poor concentration, and fatigue. A study in Japan (Shinjyo 2014) showed a decrease in symptoms when the cell tower was removed. There is also a well done study showing blood abnormalities in those living nearest to cell towers (Zothansiama 2017). DNA and lipid abnormalities were seen along with reduction in internal antioxidants which provide protection from pollutants.

Moreover, a recent study conducted over a 2 year period looked at effects of cell towers near two schools by Meo et al (2018) and clearly demonstrated cognitive dysfunction in students closest to the higher power cell tower.

## Firefighters Fighting Fires and Now Cell Towers

After noticing that many of the firefighters where developing neurologic symptoms when first responder cell towers were placed on the fire stations the International Association of Firefighters studied the matter and passed a resolution in 2004 asking that cell towers not be placed in proximity to fire stations. In AB 537 (Quirk), signed into law by Gov. Newsom on October 4, 2021, the firefighters achieved the first ever health/readiness exemption in the world.

**Every fire station in California is now exempt from having a 5G tower on their station.** This movement began when cell towers were initially targeted for fire stations because of their location and the revenue received by the cities. Many firefighters developed symptoms including headaches, fatigue, memory impairment and insomnia within a week of the installation of the towers. An exemption was inserted in California bills on cell towers. AB 57 (Quirk 2015) has an exemption on the grounds of health effects. AB 537 (Quirk 2021) also has this exemption and reads, "*Due to the unique duties and infrastructure requirements for the swift and effective deployment of firefighters, this section does not apply to a collocation or siting application for a wireless telecommunications facility where the project is proposed for placement on fire department facilities."* SB 649 (Hueso, Quirk and Dodd 2018) also had a health exemption for firefighters and was vetoed by Governor Brown.

## 500 Meter (1640 ft) Buffer from Cell Tower Recommended

Cell tower health studies that show impacts from cell towers with symptoms within about 1500 feet of the cell towers. That is why Pearce et al (2019**) recommended a "500 Meter buffer around schools, hospitals and homes "Limiting liability with positioning to minimize negative health effects of cellular phone towers."**

## Cancer and Cell Towers

3 Studies investigated the rates of cancer and cell towers looking at the distance from cell towers and the incidence of cancer. They found the rate of cancer incidence increased significantly in those living within about 350 -400 meters (around 1000 feet) to the cell tower.

Dode 2011 performed a 10 year study (1996-2006) examining the distance from cell towers and cancer clusters. He and his colleagues found a highly significant increase in cancers in those living within 500 meters of the cell tower. They noted "The largest density power was 40.78 μW/cm2, and the smallest was 0.04 μW/cm2." The current guidelines are about 1000 μW/cm2. The authors conclude "Measured values stay below Brazilian Federal Law limits that are the same of ICNIRP. The human exposure pattern guidelines are inadequate. More restrictive limits must be adopted urgently."

Wolf and Wolf 2004 investigated the rates of cancer versus distance from cell towers in small towns in Israel. He found the rate of cancer incidence was 129 cases per 10,000 persons per year in those living within 350 meters of a cell tower versus a rate of 16-31/10,000 in those living greater than 350 meters from the cell tower.

**Eger (2004)** showed an increase in the development of new cancer cases within a 10 year period if residents lived within 400 meters of a cell tower. Their results revealed that within 5 years of operation of a transmitting station the relative risk of cancer development tripled in residents near the cell towers compared to residents outside the area.

**Insurance Has an Exclusion for Radiofrequency Radiation as an Emerging Risk** Insurance companies consider wireless radiation to be similar to asbestos in long term health impacts and do not provide coverage from harm for RF health effects. The cities are left with that liability unless they can provide insurance.
In a 2019 report, **New Emerging Risk Insights**, by Swiss RE Insurance Company, the second largest reinsurance company in the world, **5G is listed as an emerging concern** in the high risk category within 3 years. Included in the high-risk trends are artificial intelligence and the existential threats of climate change. "*The top five emerging risks in our SONAR 2019 report are digital technology's clash with legacy hardware, potential threats from the spread of 5G mobile networks, increasingly limited fiscal and monetary flexibility by central banks, genetic testing's implications on life insurers, and the impact of climate change on the life and health sector.*" https://www.swissre.com/institute/research/sonar/sonar2019.html

## National Academy of Sciences Report on the Havana Syndrome and Harm from RFR

A recent report by the National Academy of Sciences concluded that the "sonic attacks" on diplomats in Cuba and China were most likely due to pulsed radiofrequency from directed energy weapons. They had symptoms similar to those who live near cell towers (headache, nausea, insomnia, dizziness, memory loss, heart palpitations, depression). Dr. Beatrice Golomb wrote the most extensive report to date on this subject linking these mystery "directed energy attacks" to pulsed microwaves similar to the wireless devices we use daily. In the case of these high powered beams there was documented injury to brain networks found by the University of Pittsburg physicians who studied the diplomats. Dr Golomb highlights that **the strength of the health effects are related to the peak power not the average power. The pulse makes the poison.**

**The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** is a comprehensive guide written by many scientists and physicians in Europe who are part of the European Academy for Environmental Medicine (EUROPAEM) – EMF working group who have recognized and treated those with electrosensitivity for many years. This is a thorough, well researched and well-referenced scientific paper that is based on the 2012 Austrian Medical Association **Guidelines for the Diagnosis and Treatment of EMF Illness**. A questionnaire from their group is included in the attachments.

## New Hampshire 5G Commission Finds Radiofrequency Radiation Problematic

The first Commission formed in the United States to study the environmental and health effects of 5G technology released their comprehensive final report November 1, 2020. The Commission to Study the Environmental and Health Effects of Evolving 5G Technology was mandated by HB 522 passed by the state legislature in New Hampshire. Their final report included 15 recommendations addressing the need for public education about wireless hazards, RF health studies, RF measurements, cell antenna setbacks, fiberoptic rather than wireless deployment, commercial warning signs and wildlife protection. After hearing extensive testimony in a series of 13 meetings over the course of a year and reviewing an abundance of research, the Commission highlighted the lack of a single definition for 5G, **insufficient evidence of safety for 5$^{th}$ generation technology**, a concern that safety standards for wireless technologies have not been updated with the latest science and that 5G is largely a marketing concept. They also expressed concern that the FCC has a long history of being accountable to industry over the desires of communities and individuals.

## FCC Told by DC Court to Reevaluate Safety Standards

On August 13, 2021 a joint lawsuit was won by petitioners against the Federal Communications Commission (FCC) for failure to protect human health and the environment by dismissing scientific evidence of harm from wireless radiation. The Petitioners challenged the FCC's refusal

to reevaluate and update their 24-year-old radiofrequency (RF) safety guidelines for existing and new telecommunications technologies. The DC Circuit Court of Appeals ruled that the majority of the RF radiation standards established by the FCC did not use "reasoned decision-making" (they did not go by the science) and thus the standards were considered by the court to have been set in an "arbitrary and capricious" manner. This was an extremely high bar for the Plaintiffs to reach. The Circuit Court of Appeals rarely admonishes a federal agency or commission in this way. The DC Circuit Court of Appeals returned this decision back to the FCC and ordered the FCC to re-examine its standards for wireless radiation exposure and provide a review of wireless harms that is compliant with the law for non-cancer harms.

The Court Decision stated, "The National Environmental Policy Act ("NEPA") and it's implementing regulations require federal agencies to "establish procedures to account for the environmental effects of [their] proposed actions." And "To fulfill its obligations under NEPA, the Commission has promulgated guidelines for human exposure to RF radiation…The Commission last updated its limits for RF exposure in 1996… The ANSI and IEEE developed limits are designed to protect against "thermal effects" of exposure to RF radiation, but not "non-thermal" effects. In March 2013, the Commission issued a notice of inquiry regarding the adequacy of its 1996 guidelines in response to changes in the ubiquity of wireless devices and in scientific standards and research since 1996. In December 2019, the Commission issued a final order resolving its 2013 notice of inquiry by declining to undertake any of the changes contemplated in the notice of inquiry. Petitioners challenge the 2019 final order under NEPA and the Administrative Procedure Act ("APA").

## 5G: A Manufactured Need by Industry

Reports indicate that the telecommunications industry has largely manufactured a "need" for expanding wireless technology in cities, while halting projects for safer fiberoptic broadband. Note a 2020 European Parliament report, **5G: State of Play in Europe, USA and Asia. In Depth Analysis,** suggests 5G is a manufactured need. "*As 5G is driven by the telecoms supply industry, and its long tail of component manufacturers, a major campaign is under way to convince governments that the economy and jobs will be strongly stimulated by 5G deployment."*

In my opinion, from all the research I have done, it appears the telecommunications industry has influenced laws to prevent health or environmental effects from being considered in the placement of cell towers (See FCC Captured Agency). They knew of the harm in early studies done by Dr. George Carlo in the 1990's but suppressed the data so they could move forward. That is well documented in Dr. Carlo's book, "Cell phones: Invisible Hazards in The Wireless Age".
A blizzard of robust science has appeared now to show biological and health impacts of wireless technology, but it is still denied, and the basis for genuinely safe RF radiation guidelines is flawed. An exponential growth in cell towers is now being played out with cities being left on their own to figure out how to regulate these towers locally. Industry places a heavy hand and complex laws on local policy makers who must navigate these complex FCC policies to prevent legal action.

## Board of Health in Pittsfield Massachusetts Orders Verizon to Cease and Desist

For the first time in the U.S. a Board of Health has issued a cease and desist order to Verizon to remove or shut off a cell tower after 17 people in a neighborhood reported they became ill after the Verizon cell tower was turned on. Courtney Gilardi and her 2 children as well as residents living near the cell tower, reported experiencing a constellation of symptoms including stabbing headaches, nausea, vomiting, dizziness, "buzzing in the head", and insomnia so severe her family had to move to the next town and into a house with no heat and no hot water to escape the sickness. Other neighbors drove an hour away to sleep at a relative's house or slept in their cars away from the tower. These are classic symptoms of electromagnetic illness experienced in firefighters and military personnel working on radar and well documented by NASA, the Air Force and other military agencies as well as the "Havana Syndrome". These symptoms were also seen in Japan after 2 cell towers were turned on and when the tower was removed the resident's symptoms largely resolved.

## Apple stops 5G Phone MMW: Is This the Death of 5G Millimeter Wavelengths?

You are probably aware that Verizon and AT&T built special hotspots in many cities in the U.S. to house 5G high band millimeter wavelengths that were to revolutionize wireless with ultrafast speeds. These small wavelengths the size of bees have been put into some community small cells which need to be about 1000 feet apart without obstruction to function properly. Apple, who already has some 5G MMW phones, just announced that it is not building any millimeter wave spectrum antennas in its next generation SE iphones. With 4G LTE low and mid band wavelengths they apparently do not need the millimeter 5G bandwidth. The article notes, "It's not a surprise that Apple is dropping the spectrum from its phones. It costs chip space and power for every additional spectrum that is supported by a cellphone. Cell manufacturers care more about long battery life than they do about a technology that never made it out of the downtowns of a few major cities."

**FCC Limits: A False Sense of Security**

We are told by the FCC that wireless radiation and cell towers are safe within current safety guidelines, or that we do not really know if there is harm or that the research is inconclusive or that it is not ionizing (like x-rays) so it cannot hurt us. This is the same dismissive and doubt creating language used by the tobacco industry and a host of other chemical companies to protect their toxic products, thus profits. The research shows that we do know, beyond a doubt, that wireless radiation is harmful to all living systems below the current safety standards. The most obvious evidence is that more and more children and adults are reporting symptoms of electrosensitivity (EHS) in the presence of wireless radiation when they live in a home near a cell tower, or use a cell phone, or in schools where wireless devices and cell towers are increasing.

Please use your authority and wisdom to keep this ordinance strong. Take more time if you need to in order for you to sort this out and be sure of your decision. Remember that you all live in Los Altos as well so you are protecting you and your families and the next generation as well.

Sincerely,

Cindy Russell, MD

**Attached- Malibu Ordinances**

## References


- Pearce (2019**) 500 Meter buffer recommended around schools, hospitals and homes. "Limiting liability with positioning to minimize negative health effects of cellular phone towers."** (2019) Pearce M. Environmental Research, Nov 2019; https://www.sciencedirect.com/science/article/abs/pii/S0013935119306425
- Waldman-Selsam, C. (2004). **Bamberg Appeal, on behalf of 114 physicians**. Open Letter to Edmund Stoiber, Prime Minister, Germany, August 3. http://www.vws.org /documents/cell- project- documents/BambergAppeal.pdf
- Waldmann-Selsam C 2016. **Radiofrequency radiation injures trees around mobile phone base stations. (2016).** Waldmann-Selsam C et al. Science of the Total Environment. 572 (2016) 554-569. https://www.researchgate.net/publication/306435017_Radiofrequency_radiation_injures_trees_around_mobile_phone_base_stations
- **The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** https://www.degruyter.com/document/doi/10.1515/reveh-2016-0011/html
- **Researcher links diplomats' mystery illness to radiofrequency/microwave radiation.** Eureka alert. August 29, 2018. American Academy for the Advancement of Science. https://www.eurekalert.org/pub_releases/2018-08/uoc–rld082918.php
- **Diplomats in China report similar brain injuries as Americans in Cuba:** In 2016 and 2017, 25 Americans in the U.S. embassy in Cuba suffered serious, unexplained brain injuries. Now, at least 15 American officials in China are reporting similar symptoms. 60 Minutes reports. March 15, 2019. https://www.cbsnews.com/news/diplomats-in-china-report-similar-brain-injuries-as-americans-in-cuba-60-minutes/
- Swanson RL (2018) **Neurological Manifestations Among US Government Personnel Reporting Directional Audible and Sensory Phenomena in Havana, Cuba. (2018)** Swanson RL et al. JAMA. 2018 Mar 20;319(11):1125-1133. https://jamanetwork.com/journals/jama/fullarticle/2673168
- Levitt, Lai, Manville. (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 1. Rising ambient EMF levels in the environment.** Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 2 impacts: how species interact with natural and man-made EMF**. Rev Environ Health. 2021 Jul 8. https://pubmed.ncbi.nlm.nih.gov/34243228/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 3. Exposure standards, public policy, laws, and future directions.** Rev Environ Health. 2021 Sep 27. https://pubmed.ncbi.nlm.nih.gov/34563106/

- PanagopoulosDJ. (2013**) Electromagnetic Interaction Between Environmental Fields and Living Systems Determines Health and Well Being.** University of Athens, Department of Biology, Athens, Greece Radiation and Environmental Biophysics Research Centre, Athens, Greece. Electromagnetic Fields, Nova
- **MOEF Report on Possible Impacts of Communication Cell Towers on Wildlife Including Birds and Bees. (2010)** The Ministry of Environment and Forest. Report on Possible Impacts of Communication Towers on Wildlife Including Birds and Bees. (2010) Ministry of the Environment and Forests (MOEF) India. https://ecfsapi.fcc.gov/file/7520958381.pdf
- Sciences. http://www.wendywalksfores.com/uploads/1/3/9/0/13908728/panagopoulos-nova-2013-emfs-chapter-1.pdf
- **SwissRe Insurance-** Sonar 2019: New emerging risk insights. https://www.swissre.com/institute/research/sonar/sonar2019.html
- **Landmark Lawsuit Filed Against FCC for Failing to Reevaluate 5G and Wireless Safety.** Sept 23, 2020. PST. https://mdsafetech.org/2020/09/23/landmark-lawsuit-filed-against-fcc-for-failing-to-reevaluate-5g-and-wireless-safety/
- **Final Report on Commission to Study the Environmental and Health Effects of Evolving 5G Technology.** State of New Hampshire, General Court. Nov 1, 2020. http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf
- **We Have No Reason to Believe 5G Is Safe.**The technology is coming, but contrary to what some people say, there could be health risks. (2019) Scientific American. Joel M. Moskowitz. Oct 17, 2019. https://blogs.scientificamerican.com/observations/we-have-no-reason-to-believe-5g-is-safe/
- **5G wireless telecommunications expansion: Public health and environmental implications. (2018) Russell CL**. Environ Res. 2018 Apr 11. https://www.ncbi.nlm.nih.gov/pubmed/29655646. or at https://ecfsapi.fcc.gov/file/10913927726988/5%20G%20wireless%20telecommunications%20expansion%3A%20Public%20health%20and%20environmental%20implications.pdf
- **Firefighters Fighting Fires and Now Cell Towers-** https://mdsafetech.org/2019/09/28/firefighters-fighting-fires-and-now-cell-towers/
- **5G: State of Play in Europe, USA and Asia. In Depth Analysis, European Parliament.** https://www.europarl.europa.eu/RegData/etudes/IDAN/2019/631060/IPOL_IDA(2019)631060_EN.pdf
- **Apple ditches mmWave 5G with newest iPhone.** https://www.lightreading.com/5g/apple-ditches-mmwave-5g-with-newest-iphone/d/d-id/775901

RESOLUTION NO. 21-17

A RESOLUTION OF THE CITY OF MALIBU ADOPTING ENGINEERING, DESIGN AND LOCATION STANDARDS, CONDITIONS OF APPROVAL AND BASIC APPLICATION REQUIREMENTS FOR WIRELESS COMMUNICATIONS FACILITIES ON LAND OTHER THAN PUBLIC RIGHT-OF-WAY; AND FINDING THE SAME EXEMPT FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

The City Council of the City of Malibu does hereby find, resolve and order as follows:

SECTION 1. Recitals

A. Malibu Municipal Code (MMC) Chapter 17.46 governs the permitting, installation, and regulation of wireless communications facilities in the City, other than those in the public right-of-way, which are subject to MMC Chapter 12.02.

B. Section 17.46.060(D) provides that "[a]ll applicants shall engineer, design and locate the wireless communications facilities in accordance with the standards and wireless regulations set forth separately though the resolution adopted by the City Council."

C. Being authorized to do so, the City wishes to establish engineering, design and development standards applicable to wireless installations.

D. The City also wishes to set standard conditions of approval and basic application requirements applicable to wireless permits.

E. On April 12_, 2021 the City Council conducted a duly noticed public hearing and received testimony from City staff and all interested parties regarding the and the standards, conditions and requirements.

SECTION 2. Purpose. The purpose of this document is to (1) establish design and location standards (Standards) for wireless communications facilities on land other than public right-of-way; (2) set standard conditions of approval for Wireless Permits (WPs); and (3) set basic application requirements for WPs.

SECTION 3. Definitions. For the purposes of these Standards, the definitions set forth in Malibu Municipal Code (MMC) Section 17.46.040 are incorporated by reference into this Resolution and in addition the following definitions apply:

A. "Park" A parcel, parcels of land or a portion of a parcel intended for active public recreation uses. Parks may include sports fields, playgrounds community buildings and unique or specialized activity areas. Land dedicated for open space and trails are not considered parks for the purposes of this Chapter.

B. "Playground" A portion of land used for and equipped with public facilities for recreation specially by children. A playground includes the sand or rubberized floor around the apparatus.

C. "Pole-mounted facility" means a wireless communications facility that is, or is proposed to be, attached to or contained in a pole.

D. "School" any building, campus or sports field which is designed, constructed or used for education, instruction or school sports, whether public or private, in any branch of knowledge.

E. "Stealth facility" (or "stealth facilities") means a wireless communications facility designed to look like something other than a wireless tower or base station.

SECTION 4. General Standards for all Facilities The following general requirements apply at all times to all wireless communications facilities located in all zoning districts:

A. All wireless communications facilities shall be engineered and designed to minimize the visual impact by means of placement, screening, camouflaging, painting and texturing and to be compatible with existing architectural elements, building materials and other site characteristics. The applicant shall use the smallest and least visible antenna possible to accomplish the facility's objectives. All antennas and support structures shall be painted and/or textured to achieve architectural compatibility with the structures for which they are attached and/or located.

B. Each facility must comply with any and all applicable provisions of the Malibu Municipal Code, including but not limited to provisions of the California Building Code, California Electric Code, California Plumbing Code, California Mechanical Code, and California Fire Code, and any conditions of approval imposed as part of the approval process.

C. Each facility must comply with any and all applicable regulations and standards promulgated or imposed by any state or federal agency, including, but not limited to, the Federal Communications Commission (FCC) and the Federal Aviation Administration (FAA). Further, all wireless communications facilities, associated equipment and services shall comply with Americans with Disabilities Act (ADA) requirements.

D. Fire and Electrical Safety Standards. All wireless communications facilities shall contain:

1. Surge protection for lightning discharge or other significant electrical disturbances; and

2. Signage as required by the permit conditions, the National Electric Code or the Los Angeles County Fire Department Chief or their designee.

E. The facility must at all times comply with all applicable health requirements and standards pertaining to radio frequency emissions.

F. All antennas shall meet the minimum siting distances to habitable structures required for compliance with FCC regulations and standards governing the environmental effects of radio frequency emissions.

G. Noise. Wireless communications facilities and equipment must comply with the City's noise ordinance in MMC Chapter 8.24, or any successor provisions, and be designed to prevent noise and sound from being plainly audible at a distance of fifty (50) feet from the facility or within ten (10) feet of any residence.

H. Signs. No facility may display any signage or advertisement unless it is expressly allowed by this paragraph, necessary for stealth concealment purposes, or required by law or a permit condition. Every facility shall at all times display signage that accurately identifies the facility owner and provides the owner's unique site number and a local or toll-free telephone number to contact the facility owner's operations center.

I. Landscaping. Where appropriate, facilities shall be installed so as to maintain and enhance existing landscaping on the site, including trees, foliage and shrubs, whether or not utilized for screening. In addition to any landscaping used for concealment or screening purposes, the applicant shall replace any existing landscaping displaced during construction or installation of the applicant's facility. The applicant's landscaping plan shall be subject to the City's review and approval but shall, at a minimum, match the existing landscaping and foliage surrounding the installation site consistent with MMC Section 17.53.090. The permittee shall ensure that any vegetation allowed to remain in place under the Fire Code, including vegetation provided for screening, is properly maintained and watered.

J. All electrical support equipment located within cabinets, shelters, or similar structures shall be screened from public view. Roof-mounted electrical support equipment shall be discouraged. Ground-mounted electrical support equipment shall be encouraged. In addition, under grounding of support equipment is required wherever practicable.

K. All antennas shall be located such that any person walking adjacent to the transmitting surface of the antenna will be walking on a grade that is a minimum of eight and one-half feet below the transmitting surface.

L. Lighting of antenna structures and their electrical support equipment is prohibited, except as required by any order or regulation of the FCC or the FAA and except for manually operated emergency lights for use when official operating personnel are on site.

M. A backup power supply must be required for all new wireless communications facilities to the extent allowed by law and in compliance with California Fire Code 1206.2.2.

SECTION 5. Location Standards for All Facilities The location standards for all wireless communications facilities, other than those that qualify as eligible facilities requests, are as follows:

A. No wireless telecommunication facility shall be located within five hundred (500) feet of any school, playground, or park unless a finding is made, based on technical evidence acceptable to the reviewing authority showing a clear need for the facility and that no technically feasible alternative site exists. Except for facilities installed on the same pole or tower as an existing wireless telecommunication facility, wireless telecommunication facilities located within any residential zone district shall not be located within ~~five hundred~~one thousand (~~500~~1,000) feet of any other wireless communications facility, except from those facilities placed on utility poles along Pacific Coast Highway, unless a waiver is granted.

B. All new freestanding wireless communications facilities and monopoles shall be set back a minimum distance of at least one hundred and ~~ten~~ twenty (~~100~~1~~1~~20) percent of the height of the facility or monopole from any property line abutting a residentially zoned property. This minimum setback is not subject to the waivers allowed under Section 7 of this Resolution.

C. Location preference for wireless communications facilities should be given to the following:

1. Property designated non-residential (except for public open space and recreational vehicle park zoning districts), unless otherwise prohibited pursuant to this title.

2. Facilities attached or sited adjacent to existing structures. Whenever possible, facilities shall be located on and/or inside existing structures. Appropriate types of existing structures may include, but are not limited to: buildings, water tanks, telephone poles and utility towers and poles, sign standards, light standards and roadway overpasses.

3. Sites with minimum separation. Sites that are more than five hundred (500) feet from school, playgrounds, and parks.

4. Sites that are not highly visible from adjacent roadways.

5. Unless otherwise indicated in MMC Chapter 17.46 or these Standards, no wireless facility shall be installed on an exposed ridgeline unless the facility blends with the surrounding existing natural and man-made environment and a finding is made that no other location is technically feasible.

6. The City expressly designates residential, public open space and recreational vehicle park zoning districts, parks and schools as the least appropriate possible locations, and the absolute last choices for siting.

SECTION 6. Engineering and Design Standards for all Facilities The general design standards for wireless communications facilities subject to MMC Chapter 17.46 are as follows:

A. Basic Requirements. The proposed wireless facility and its supporting structure (if needed) shall be limited to the minimum size necessary to serve the defined service objectives of the wireless service provider or providers that will be using the facility, except where a larger facility has superior concealment elements.

B. Materials. The materials used shall be non-reflective and non-flammable.

C. Cabinet doors and other openings must be designed to stay securely closed, and openings in all facilities shall be shielded or made the smallest size feasible to protect against fire and wind-blown embers.

D. The tower, or other support structure, and all equipment shall be designed to withstand forces from seismic events. To that end, all wireless facility sites must be built to the applicable standards of Hardening Requirements including but not limited to APCO ANSI 2.106.1–2019, or their replacements. The telecommunications tower, pole or structure when fully loaded with antennas, transmitters, and other equipment and camouflaging shall be designed as determined by the Building Official. All equipment mounting racks and equipment used shall be anchored in such a manner that such a quake will not tip them over, throw the equipment off its shelves, or otherwise act to damage it.

E. All connections between various components of the facility, power lines, and conduit shall be designed in a manner to protect against damage by a natural disaster, a vehicular accident, an act of vandalism or similar external forces.

F. Stealth. The wireless facility shall be stealth. Stealth elements and techniques should be used to blend the facility with surrounding materials

and colors of the support structure and make the facility appear to be something other than a wireless facility. Stealth elements include, but are not limited to, the following:

1. Radio frequency (RF) transparent screening or shrouds;

2. Matching the color of the existing support structure by painting, coating, or otherwise coloring the wireless facility, equipment, mounting brackets, and cabling;

3. Placing cables and wires inside the pole or beneath conduit of the smallest size possible;

4. Minimizing the size of the site;

5. Installing new infrastructure that matches existing infrastructure in the area surrounding the proposed site; and

6. Using paint of durable quality.

7. Built with weather-resistant materials while permitting weathered treatment for aesthetic reasons and to avoid reflective material.

G. Minimum Height. All antennas shall be located such that: (1) any person walking adjacent to the transmitting surface of the antenna will be walking on a grade that is a minimum of eight and one-half feet below the transmitting surface; and (2) no person at ground level will be exposed to an exposure level that is higher than allowed by the FCC's general population exposure rules.

H. Facade-Mounted Equipment. Facade-mounted antennas and equipment shall be architecturally integrated into the building, or other support structure, design and otherwise made as unobtrusive as possible so that the facility does not appear to be a wireless facility. Antennas and equipment should be located entirely within an existing or newly created architectural feature so as to be completely screened from view. Facade-mounted facilities shall generally not extend more than eighteen (18) inches out from and may not project above the building face. Façade-mounted wireless telecommunication facilities shall not exceed twenty-eight (28) feet in height above the ground. However, antenna elements, mounted flush on the facade of an existing structure that exceeds twenty-eight (28) feet, may have a height equal to the height of the building.

I. Ground-Mounted Equipment. Outdoor ground-mounted equipment associated with base stations shall be avoided whenever feasible. In locations visible or accessible to the public, applicants shall conceal outdoor

ground-mounted equipment, including ancillary power generation equipment, with opaque fences or landscape features that mimic the adjacent structure(s) (including, but not limited to, dumpster corrals and other accessory structures) and by painting, texturing, or otherwise concealing the facility as much as possible. Ground-mounted wireless communications facilities shall be located near existing structures or trees at similar heights for screening purposes where feasible. Not more than one ground-mounted antenna, provided that licensed amateur radio station antennas consistent with MMC 17.46.020(B)(2), shall also be permitted on each site.

J. Roof-Mounted Facilities. Roof-mounted antennas and necessary equipment shall be screened from above if visible from higher elevations. Rooftop-mounted wireless telecommunication facilities shall not exceed twenty-eight (28) feet in height or three (3) feet above the roof parapet from which they are attached, whichever is less restrictive. Associated roof-mounted equipment cabinets shall not extend more than three (3) feet above the roof from which it is attached and shall be set back a minimum of ten (10) feet from the edge of the roof. All roof-mounted equipment cabinets shall be located behind a mechanical screen wall. In the event that a roof parapet wall screens the equipment cabinets, a mechanical screen wall will not be required.

K. Freestanding Facilities. Freestanding facilities requiring a new monopole or other new support structure shall be stealth facilities. Further, they shall be located as close as possible to existing above-ground utilities, such as electrical towers or utility poles (which are not scheduled for removal or under grounding for at least 18 months after the date of application), light poles, trees of comparable heights, and in areas where they will not detract from the appearance of the City.

1. Freestanding wireless telecommunication facilities, including monopoles, shall not exceed twenty-eight (28) feet in height and shall not extend higher than the top of the ridgeline nearest the antenna. The height of a freestanding facility shall be measured from the natural undisturbed ground surface below the center of the base of the tower itself to the tip of the highest antenna or piece of equipment attached thereto.

2. Aside from the antenna itself, no additional equipment may be visible. All cables, including, but not limited to, electrical and utility cables, shall be run within the interior of the freestanding facility and shall be camouflaged or hidden to the fullest extent feasible without jeopardizing the physical integrity of the facility.

3. Monopole installations shall be situated so as to utilize existing natural or man-made features including topography, vegetation, buildings, or other structures to provide the greatest amount of visual screening.

4. All antenna components and accessory wireless equipment shall be treated with exterior coatings of a color and texture to match the predominant visual background or existing architectural elements so as to visually blend in with the surrounding development. Subdued colors and non-reflective materials that blend with surrounding materials and colors shall be used.

5. Monopoles shall be no greater in diameter or other cross-sectional dimensions than is necessary for the proper functioning of the facility.

L. All wireless telecommunication facilities shall be designed to prevent unauthorized climbing and graffiti.

M. Fire Safety Standards. All wireless facilities designs shall include:

1. a power shut off, such as by means of rapid entry Knox or similar type systems shall be installed;

2. surge protection devices capable of mitigating a direct or partial direct lightning discharge; and

3. surge protection devices capable of mitigating significant electrical disturbances that may enter the facility via conductive cables.

N. Satellite dish or parabolic antennas shall be situated as close to the ground as possible to reduce visual impact without compromising their function.

O. Support equipment pads, cabinets, shelters and buildings require architectural, landscape, color, fencing, or other camouflage treatment to minimize visual impacts to the extent deemed necessary by the Planning Director. Landscaping screening should also be provided if irrigation water is available.

P. No freestanding facility or ancillary support equipment may be located between the face of a building and a public street, bikeway, park or residence.

SECTION 7. Waivers of These Standards.

A. A waiver of one or more of these Standards may be granted in the following circumstances:

1. Pursuant to MMC Section 17.46.060(D), if an applicant demonstrates to the Planning Commission through clear and convincing evidence that denial of an application would, within the meaning of federal law, prohibit or effectively prohibit the provision of personal wireless services, or otherwise violate applicable laws or regulations;

2. If an applicant demonstrates to the Planning Commission through clear and convincing evidence set forth in a feasibility study that compliance with a requirement of these Standards would be technically infeasible and the proposed wireless facility complies with the requirements of these Standards to the greatest extent technically feasible. For example, an exception to a requirement to conceal antennas in a shroud may be granted if shrouding is shown to be technically infeasible and an alternative concealment such as a colored film wrap is proposed; or

3. If an applicant demonstrates to the Planning Commission with clear and convincing evidence that the particular engineering, design or location proposed involves an alternative that better meets the purposes of Chapter 17.46 and only minor non-compliance with a requirement of these design Standards and results in no increase in public visual impact to the community or provides other benefits. For example, an exception to the wireless facility location limitations may be granted when the applicant can demonstrate that the placement is less visible from viewsheds of residences or shielded by vegetation or existing infrastructure (such as barriers), or is less physically intrusive (for example, less impactful to tree roots or reduces noise). Among other factors, in deciding whether or not to grant an exception, the Planning Commission may consider the impact of expansions to the facility that the applicant would be entitled to make as of right if granted.

B. Waivers may only be requested at the time an application is initially submitted for a discretionary permit. The request must include both the specific provision(s) from which waiver is sought and the basis of the request, including all supporting evidence on which the applicant relies. Any request for waiver after the City has deemed an application complete constitutes a material change to the proposed wireless facility and shall be considered a new application. A request for waiver from one or more

requirements does not relieve the applicant from compliance with all other applicable provisions of law or of MMC Section 17.46.060.

SECTION 8. Standard Conditions of Approval for Permits Under MMC Chapter 17.46.

A. **Generally.** In addition to any supplemental conditions imposed by the Planning Director or Planning Commission, as the case may be, all development permits or conditional use permits granted for wireless communications facilities subject to this Chapter 17.46 shall be subject to the following conditions, unless modified by the approving authority:

1. The permittee shall defend, indemnify, and hold harmless the city or any of its boards, commissions, agents, officers, and employees from any claim, action or proceeding against the city, its boards, commission, agents, officers, or employees to attack, set aside, void, or annul, the approval of the project, or to hold the City liable in whole or in part as a result of the engineering, design, construction or operation of the facility. The City shall promptly notify the provider(s) of any such claim, action or proceeding if the city bears its own attorney's fees and costs, and the city defends the action in good faith.

2. The permittee shall be strictly liable for interference caused by its facilities with city communications systems. The permittee shall be responsible for costs for determining the source of the interference, all costs associated with eliminating the interference (including but not limited to filtering, installing cavities, installing directional antennas, powering down systems, and engineering analysis), and all costs arising from third party claims against the city attributable to the interference.

3. Subsequent submittals for this project shall be in substantial compliance with the plans date-stamped received by the Planning Department on _____. The project shall comply with all conditions of approval stipulated in the referral sheets attached to the agenda report for this project. In the event the project plans conflict with any condition of approval, the condition shall take precedence and revised plans shall be submitted and approved by the Planning Director prior to the Environmental Sustainability Department for plan check.

4. The permit and rights conferred in this approval shall not be effective until the permittee signs, notarizes and returns the Acceptance of Conditions Affidavit accepting the conditions set forth herein. The applicant shall file this form with the Planning Department within 30 days of this decision or prior to issuance of

any development, conditional use, building, electrical or encroachment permit.

5. The applicant shall digitally submit a complete set of plans, including the items required in Condition No. 6 to the Planning Department for consistency review and approval prior to plan check and again prior to the issuance of any building or development permits.

6. The Notice of Decision (including the signed and notarized Acceptance of Conditions Affidavit) shall be copied in its entirety and placed directly onto a separate plan sheet(s) to be included in the development plans prior to submitting any development permits from the City of Malibu Environmental Sustainability Department and encroachment permit.

7. A development permit or conditional use permit, as applicable, shall be valid for a period of ten (10) years from issuance, unless pursuant to another provision of the Code or these conditions, it expires sooner or is terminated. At the end of ten (10) years from the date of issuance, such development or conditional use permit shall automatically expire, unless an extension or renewal has been granted. A person holding a development permit or conditional use permit must either (1) remove the facility within thirty (30) days following the permit's expiration (provided that removal of support structure owned by City, a utility, or another entity authorized to maintain a support structure need not be removed, but must be restored to its prior condition, except as specifically permitted by the City); or (2) prior to expiration, submit an application to renew the permit, which application must, among all other requirements, demonstrate that the impact of the wireless facility cannot be reduced. The wireless facility must remain in place until it is acted upon by the City and all appeals from the City's decision exhausted.

8. The installation and construction authorized by a permit shall be completed within three (3) years after its approval, or it will expire without further action by the City unless prior to the three (3) years the applicant submit an extension request and the City, in its sole discretion, grants a time extension for due cause. The installation and construction authorized by a permit shall conclude, including any necessary post-installation repairs and/or restoration to the property, within thirty (30) days following the day construction commenced. The permittee must provide written notice to City within ten (10) days after completing construction, and may not begin operations until all City and Fire Department (if applicable) inspections have been completed and the project is found to be

consistent with the permit. The expiration date shall be suspended until an appeal and/or litigation regarding the subject permit is resolved.

9. The Planning Director may grant up to four one-year extensions of the timeline, in Condition 7 above, for completing the installation and construction authorized by a development or condition use permit, if the Planning Director finds that the conditions, including but not limited to changes in the wireless ordinance under which the permit approval was issued, have not significantly changed.

10. Any questions of intent or interpretation of any condition of approval will be resolved by the Planning Director upon written request of such interpretation.

11. All structures shall conform to the requirements of the Environmental Sustainability Department, City Public Works Department, FCC and Los Angeles County Fire Department requirements, as applicable. Notwithstanding this review, all required permits, including but not limited to an encroachment permit from the City, shall be secured.

12. Minor changes to the approved plans or the conditions of approval may be approved by the Planning Director, provided such changes achieve substantially the same results and the project is still in compliance with the MMC. An application with all required materials and fees shall be required.

Cultural Resources

13. In the event that potentially important cultural resources are found in the course of geologic testing, work shall immediately cease until a qualified archaeologist can provide an evaluation of the nature and significance of the resources and until the Planning Director can review this information. Where, as a result of this evaluation, the Planning Director determines that the project may have an adverse impact on cultural resources, a Phase II Evaluation of cultural resources shall be required pursuant to MMC Section 17.54.040(D)(4)(b).

14. If human bone is discovered, the procedures described in Section 7050.5 of the California Health and Safety Code shall be followed. These procedures require notification of the coroner. If the coroner determines that the remains are those of a Native American, the applicant shall notify the Native American Heritage Commission by phone within 24 hours. Following notification of the Native

American Heritage Commission, the procedures described in Section 5097.94 and Section 5097.98 of the California Public Resources Code shall be followed.

Wireless Facility Conditions

15. All antennas shall meet the minimum siting distances to public/uncontrolled areas required for compliance with the FCC regulations and standards governing the environmental effects of radio frequency emissions. Permittee shall keep up-to-date on current information from the FCC in regards to maximum permissible radio frequency exposure levels. In the event that the FCC changes its guidelines for human exposure to radio frequency, permittee shall, within 30 days after any such change, submit to the Planning Director a report prepared by a qualified engineer that demonstrates actual compliance with such changed guidelines. The Director may, at permittee's sole cost, retain an independent consultant to evaluate the compliance report and any potential modifications to the permit necessary to conform to the FCC's guidelines. Failure to submit the compliance report required under this condition, or failure to maintain compliance with the FCC's guidelines for human exposure to radio frequency at all times shall constitute grounds for permit revocation.

16. All antennas shall be located so that any person walking adjacent to the transmitting surface of the antenna will be walking on a grade, which is a minimum of eight and one-half feet below the transmitting surface.

17. All antennas, equipment, and support structures shall be engineered and designed to prevent unauthorized climbing.

18. The wireless facility shall be erected, operated, and maintained in compliance with the general requirements set forth in the Standards and any specific requirements in the permit.

19. The antenna and electrical support equipment shall, at all times, be operated in a manner that conforms to the applicable health and safety standards, including those imposed by MMC Chapter 17.46 and this Resolution.

20. Wireless communications facilities and equipment must comply with the City's noise ordinance in MMC 8.24, or any successor provisions, and prevent noise and sound from being plainly audible at a distance of fifty (50) feet from the facility or within ten (10) feet of any residence.

21. The Planning Director's approval is required if a generator is to be placed onsite for temporary or permanent use.

22. All non-ground-mounted equipment associated with the application shall be located no lower than eight feet above grade or ground level on the monopole or support structure.

23. The City or its designee may enter onto the facility area to inspect the facility upon 48 hours prior notice to the permittee. The permittee shall cooperate with all inspections and may be present for any inspection of its facility by the City. The City reserves the right to enter or direct its designee to enter the facility and support, repair, disable, or remove any elements of the facility in emergencies or when the facility threatens imminent harm to persons or property. The City shall make an effort to contact the permittee prior to disabling or removing any facility elements, but in any case, shall notify permittee within 24 hours of doing so.

24. Testing of any equipment shall take place on weekdays only, and only between the hours of 8:30 a.m. and 4:30 p.m., except that testing is prohibited on holidays that fall on a weekday. In addition, testing is prohibited on weekend days.

25. Permittee shall obtain and maintain throughout the term of the permit commercial general liability insurance with a limit of five million dollars ($5,000,000) per occurrence for bodily injury and property damage and six million dollars ($6,000,000) general aggregate including premises operations, contractual liability, personal injury, and products completed operations. The relevant policy(ies) shall name the City, its elected/appointed officials, commission members, officers, representatives, agents, and employees as additional insureds. A true and correct copy of the policy of insurance shall constitute proof of insurance required by this Subsection. Permittee shall use its best efforts to provide thirty (30) days' prior notice to the City of to the cancellation or material modification of any applicable insurance policy. Failure to maintain insurance consistent with this Condition shall automatically void the permit, and the permittee shall immediately deenergize and remove the facility from operation. The policy shall not have a pollution or other exclusion which excludes injuries or damages from EMF/RF exposures.

26. Prior to issuance of a City permit or encroachment permit, the permittee shall file with the City, and shall maintain in good standing throughout the term of the approval, a performance bond or other surety or another form of security for the removal of the

facility in the event that the use is abandoned or the permit expires, or is revoked, or is otherwise terminated. The security shall be in the amount equal to the cost of physically removing the facility and all related facilities and equipment on the site, based on the higher of two contractor's quotes for removal that are provided by the permittee. The permittee shall reimburse the city for staff time associated with the processing and tracking of the bond, based on the hourly rate adopted by the City Council. Reimbursement shall be paid when the security is posted and during each administrative review.

27. Permittee shall not move, alter, temporarily relocate, change, or interfere with any existing structure, improvement, or property without the prior consent of the owner of that structure, improvement, or property. No structure, improvement, or property owned by the City shall be moved to accommodate a permitted activity or encroachment, unless the City determines that such movement will not adversely affect the City or any surrounding businesses or residents, and the Permittee pays all costs and expenses related to the relocation of the City's structure, improvement, or property. Prior to commencement of any work pursuant to any permit, the permittee shall provide the City with documentation establishing to the city's satisfaction that the permittee has the legal right to use or interfere with any other structure, improvement, or property to be affected by permittee's facilities.

28. No possessory interest is created by a Wireless Permit. However, to the extent that a possessory interest is deemed created by a governmental entity with taxation authority, permittee acknowledges that City has given to permittee notice pursuant to California Revenue and Taxation Code Section 107.6 that the use or occupancy of any public property pursuant to a development or conditional use permit may create a possessory interest which may be subject to the payment of property taxes levied upon such interest. Permittee shall be solely liable for, and shall pay and discharge prior to delinquency, any and all possessory interact taxes or other taxes, fees, and assessments levied against permittee's right to possession, occupancy, or use of any public property pursuant to any right of possession, occupancy, or use created by this development or conditional use permit.

29. If not already completed, permittee shall enter into the appropriate agreement with the City, as determined by the City, prior to

constructing, attaching, or operating a facility on municipal infrastructure. This permit is not a substitute for such agreement.

30. If a facility is not operated for a continuous period of three (3) months, the Wireless Permit and any other permit or approval therefor shall be deemed abandoned and terminated automatically, unless before the end of the three (3) month period (i) the Director has determined that the facility has resumed operations, or (ii) the City has received an application to transfer the permit to another service provider. No later than ninety (90) days from the date the facility is determined to have ceased operation, or the permittee has notified the Director of its intent to vacate the site, the permittee shall remove all equipment and improvements associated with the use and shall restore the site to its original condition to the satisfaction of the Director. The permittee shall provide written verification of the removal of the facilities within thirty (30) days of the date the removal is completed. If the facility is not removed within thirty (30) days after the permit has been discontinued pursuant to this subsection, the site shall be deemed to be a nuisance, and the City may cause the facility to be removed at permittee's expense or by calling any bond or other financial assurance to pay for removal. If there are two (2) or more users of a single facility or support structure, then this provision shall apply to the specific elements or parts thereof that were abandoned but will not be effective for the entirety thereof until all users cease use thereof.

31. In the event the City determines that it is necessary to take legal action to enforce any of these conditions, or to revoke a permit, and such legal action is taken, the permittee shall be required to pay any and all costs of such legal action, including reasonable attorney's fees, incurred by the City, even if the matter is not prosecuted to a final judgment or is amicably resolved, unless the City otherwise agrees, in its complete discretion, to waive said fees or any part thereof.

32. Interference with city communications systems and other governmental emergency systems is prohibited. Further, no permits issued pursuant to this chapter of the City Code establish any guarantee or warranty that Licensee's facility will be free from interference from city or third-party communication systems.

Construction

33. Installation hours shall be limited to Monday through Friday from 7:00 a.m. to 7:00 p.m. and Saturdays from 8:00 a.m. to 5:00 p.m. No installation activities shall be permitted on Sundays and City-

designated holidays. The restricted work hours described in this condition do not apply to emergency maintenance necessary to protect health or property. The City of Malibu may issue a Stop Work Order if permittee violates this condition. Construction activities shall be conducted in compliance with, and abide by, all applicable safety codes and permit conditions.

34. All sites must be designed and build to the standards of ANSI/APCO Public Safety Grade Site Hardening Requirements, also referred to as "APCO ANSI 2.106.1-2019".

Site Specific Conditions

35. In the event that the electric service provider does not currently offer an alternative metering option, the permittee shall remove the above-grade electric meter when such option becomes available. Prior to removing the above-grade electric meter, the permittee shall apply for any encroachment and/or other ministerial permit(s) required to perform the removal. Upon removal, the permittee shall restore the affected area to its original condition that existed prior to installation of the equipment.

36. The permittee acknowledges that the City specifically includes conditions of approval related to (a) painting, coloring or finishing the equipment to match the monopole or support structure; (b) undergrounding all equipment to the extent possible; (c) installing equipment within shrouds, conduits and risers as concealment elements engineered and designed to integrate the wireless facility with the surrounding built and natural environment; and (d) specific structural, seismic, electrical, fire and operating/maintenance requirements. Any future modifications to the permittee's wireless facility must maintain or improve all concealment elements and safety precautions.

37. Before the permittee submits any applications for construction, encroachment, excavation or other required permits in connection with this permit, the permittee must incorporate a true and correct copy of this permit, all conditions associated with this permit and any approved photo simulations into the project plans (collectively, the "Approved Plans"). The permittee must construct, install and operate the wireless facility in substantial compliance with the Approved Plans as determined by the Director or the Director's designee. Any substantial or material alterations, modifications or other changes to the Approved Plans, whether requested by the permittee or required by other departments or public agencies with jurisdiction over the wireless facility, must be submitted in a written

request subject to the Director's prior review and approval, who may refer the request to the original approval authority if the Director finds that the requested alteration, modification or other change substantially deviates from the Approved Plans or implicates a significant or substantial land-use concern.

38. The permittee shall install and at all times maintain in good condition a "Network Operations Center Information" and "RF Caution" sign on the utility pole no less than three (3) feet below the antenna (measured from the top of the sign) and no less than nine (9) feet above the ground line (measured from the bottom of the sign). Signs required under this condition shall be installed so that a person can clearly see the sign as he or she approaches within three (3) feet of the antenna structure. If any person on or within the property is or may be exposed to emissions that exceed applicable FCC uncontrolled/general population limits at any time the sign shall expressly so state, and provide instructions on how persons can avoid any such exposure. The sign shall also include the name(s) of the facility owner(s), equipment owner(s) and operator(s)/carrier(s) of the antenna(s), property owner name, as well as emergency phone number(s) for all such parties. The sign shall not be lighted, unless applicable law, rule or regulation requires lighting. No signs or advertising devices other than required certification, warning, required seals or signage, other signage required by law, this Chapter, any City or applicable state code or the Los Angeles County Fire Department Chief or his or her designee shall be permitted. The sign shall be no larger than two (2) square feet.

39. The permittee shall ensure that all signage complies with FCC Office of Engineering and Technology Bulletin 65, CPUC General Order 95 or American National Standards Institute C95.2 for color, symbol, and content conventions. All such signage shall at all times provide a working local or toll-free telephone number to its network operations center, and such telephone number shall be able to reach a live person who can exert transmitter power-down control over this site as required by the FCC.

40. In the event that the FCC changes any of radio frequency signage requirements that are applicable to the project site approved herein or ANSI Z535.1, ANSI Z535.2, and ANSI C95.2 standards that are applicable to the project site approved herein are changed, the permittee, within 30 days of each such change, at its own cost and expense, shall replace the signage at the project site to comply with the current standards.

41. The permittee shall maintain the paint, color and finish of the facility in good condition at all times.

42. All improvements, including foundations, and appurtenant ground wires, shall be removed from the property and the site restored to its original pre-installation conditions within 90 days of cessation of operation or abandonment of the facility.

43. Build-Out Conditions.

    a. Permittee shall not commence any excavation, construction, installation or other work on the project site until and unless it demonstrates to the City Public Works Department that the project complies with these Conditions along with all applicable laws, regulations, codes and other rules related to public health and safety, including without limitation all applicable provisions in California Public Utilities Commission General Order 95 and MMC Chapters 8.12, 8.24 and 15.08.

    b. To the extent that a pole owner or any provision in the MMC or this resolution require greater or more restrictive standards than California Public Utilities Commission General Order 95, if applicable, those standards shall control.

44. Permittee shall at all times maintain compliance with all applicable federal, State and local laws, regulations, ordinances and other rules, including Americans with Disabilities Act (ADA) requirements.

45. The permittee shall cooperate with all inspections. The City and its designees reserve the right to support, repair, disable or remove any elements of the facility in emergencies or when the facility threatens imminent harm to persons or property.

46. Permittee shall at all times maintain accurate contact information for all parties responsible for the facility, which shall include a phone number, street mailing address and email address for at least one natural person. All such contact information for responsible parties shall be provided to the Planning Department at the time of permit issuance and within one business day of permittee's receipt of City staff's written request.

47. Permittee shall undertake all reasonable efforts to avoid undue adverse impacts to adjacent properties and/or uses that may arise

from the construction, operation, maintenance, modification and removal of the facility.

48. The site and the facility must be maintained in a neat and clean manner and in accordance with all approved plans and conditions of approval.

49. Permittee shall promptly remove any graffiti on the wireless facility at permittee's sole expense within 48 hours after notice.

Prior to Operation

50. The applicant shall request a final Planning Department inspection and final building inspection by the City of Malibu Environmental Sustainability Department immediately after the wireless facility has been installed and prior to the commencement of services.

51. Within thirty (30) calendar days following the installation of any wireless communications facilities, the applicant shall provide to the Planning Department with a field report prepared by a qualified engineer verifying that the unit has been inspected, tested, and is operating in compliance with FCC standards. Specifically, the on-site post-installation radiofrequency (RF) emissions testing must demonstrate actual compliance with the FCC OET Bulletin 65 RF emissions safety guidelines for general population/uncontrolled RF exposure in all sectors. For this testing, the transmitter shall be operating at maximum operating power, and the testing shall occur outwards to a distance where the RF emissions no longer exceed the uncontrolled/general population limit. Such report and documentation shall include the make and model (or other identifying information) of the unit tested, the date and time of the inspection, a certification that the unit is properly installed and working within applicable FCC limits, and a specific notation of the distance from the transmitter at which the emissions are equal to or less than the uncontrolled/general population limit.

52. The operation of the approved facility shall commence no later than one (1) month after the City completes its post-installation inspections of the facility, any issues with the facility are resolved, and the City receives the RF testing report required in the condition of approval above, or the development or conditional use permit will expire without further action by the City.

Fixed Conditions

53. Violation of any of the conditions of this approval shall be cause for revocation and termination of all rights thereunder.

Eligible Facilities Requests

All permits for an eligible facilities requests under MMC Chapter 17.46 shall be subject to the following conditions and all of the other conditions of approval placed on a Wireless Permit, unless modified by the approving authority:

54. Any permit granted in response to an application qualifying as an eligible facilities request shall be subject to the terms and conditions of the underlying permit.

55. The City's grant or grant by operation of law of an eligible facilities request permit constitutes a federally-mandated modification to the underlying permit or approval for the subject tower or base station. Notwithstanding any permit duration established in another permit condition, the City's grant or grant by operation of law of a eligible facilities request permit will not extend the permit term for the underlying permit or any other underlying regulatory approval, and its term shall be coterminous with the underlying permit or other regulatory approval for the subject tower or base station.

56. The City's grant or grant by operation of law of an eligible facilities request does not waive, and shall not be construed to waive, any standing by the City to challenge Section 6409(a) of the Spectrum Act, any FCC rules that interpret Section 6409(a) of the Spectrum Act, or any modification to Section 6409(a) of the Spectrum Act.

Small Cell Facilities

In addition to the other conditions of approval placed on a Wireless Permit, all permits for a small cell facility under MMC Chapter 17.46 shall be subject to the following additional condition, unless modified by the approving authority:

57. The City's grant of a permit for a small cell facility request does not waive, and shall not be construed to waive, any standing by the city to challenge any FCC orders or rules related to small cell facilities, or any modification to those FCC orders or rules.

SECTION 9. Basic Application Requirements for Permits Under MMC Chapter 17.46.

A. Generally. In addition to providing all required fees, all wireless telecommunication facility carriers or providers shall provide the information required by a separate application form published, and updated

from time to time, by the City. If no such form is available, then the applicant must submit all documents, information, and any other materials necessary to allow the City to make required findings and ensure that the proposed facility will comply with applicable laws and not endanger the public health, safety, or welfare. Such information may include:

1. Contact information for:
    a. Applicant and their representatives
    b. Owner of proposed wireless communications facility
    c. If different from facility owner, the identity of the person or entity responsible for operating the proposed wireless facility
    d. The property owner or owner of the structure on which the proposed wireless facility would be installed
    e. Names, addresses, telephone numbers, and email addresses of anyone acting on behalf of the applicant with regard to the application;
    f. The name, address and phone number of all persons that prepared or assisted in preparing the application and any required reports;
    g. The postal address, parcel number, or utility pole identifier of the property;
    h. The location of the schools, playgrounds and parks within 500 feet of the project site;
    i. Local contact person for emergencies
    j. Assessor's Parcel Number
2. Purpose of new wireless communications facility or amendment
3. Type of Application (Select all that apply)
    a. Eligible Facilities Request
    b. Small Cell – Collocation
    c. Small Cell – New Structure
    d. Collocation (Non-Small Cell)
    e. All Other Wireless Communications Facilities
    f. Permit Renewal
    g. Waiver
4. Letter of authorization signed by the property owner authorizing the applicant to submit and process the application, including executed copies of any leases, letters of agency, or proof of ownership, of private property involved in the project.
5. Authorizations, and Licenses
6. Provide previous approvals, if applicable, and Certificate of Completion. Site inspection fees may apply if a final inspection was never requested
7. Identify all other required permits and approvals for the subject facility.

8. Electrical and Structural Safety Information. The following engineering documents prepared under the responsible charge of and sealed by a California licensed Professional Engineer must be included in the application:
   a. A short circuit and coordination study ("SCCS") calculated pursuant to the IEEE 551-2006: Recommended Practice for Calculating AC Short-Circuit Currents in Industrial and Commercial Power Systems or the latest version of that standard. The study must demonstrate the protection devices will ensure the equipment enclosure will not be breached. The SCCS must include analysis of Voltage Transient Surges due to contact of conductors of different voltages;
   b. A one-line diagram of the electrical system;
   c. Voltage Drop & Load Flow Study;
   d. Load Calculation;
   e. Panel Directories;
   f. A plot plan showing the location of the mounting structure including address, or structure designation, or GPS location on the front sheet;
   g. A plot plan showing the location of the service disconnecting means; and
   h. An elevation drawing of the equipment and the service disconnecting means.
   ~~i. A demonstration there will be signage as required by the California Electric Code or the Los Angeles County Fire Department Chief or their designee~~
   ~~j. A demonstration the service disconnecting means shall be mounted at an elevation determined by the Los Angeles County Fire Chief or their designee in conjunction with the electric utility;~~
   ~~k. A demonstration there will be instructions for deenergizing the equipment by First Responders.~~
9. Structural Safety Information. The structural/civil engineering documents prepared under the responsible charge of and sealed~~as recommended~~ by a California licensed professional civil engineer.
   a. Photo simulations, from at least three different angles, showing the pole and streetscape before and after installation. In some cases, more than three different angles may be required;
   b. The azimuth, size and center-line height location of all proposed and existing antenna(s) on the supporting structure;
   c. The number, type and model of the antenna(s) that will be used with a copy of the specification sheet;

d. The make, model, type and manufacturer of any tower involved and a design plan stating the tower's capacity to accommodate multiple users;

e. Site and Construction Plans. Complete and accurate plans, drawn to scale, signed, and sealed by a California-licensed engineer, land surveyor, and/or architect, which include the following items.

(1) A site plan and elevation drawings for the facility as existing and as proposed with all height and width measurements explicitly stated.

(2) A site plan describing the proposed tower and antenna(s) and all related fixtures, structures, appurtenances and apparatus, including height above pre-existing grade, materials, color and lighting;

(3) A depiction, with height and width measurements explicitly stated, of all existing and proposed transmission equipment.

(4) A depiction of all existing and proposed utility runs and points of contact.

(5) A depiction of the leased or licensed area of the site with all rights-of-way and easements for access and utilities labeled in plan view.

f. Detailed map with locations of the poles or other property on which equipment is to be located, including specific pole identification number, if applicable, and the areas it will service;

g. Description as to why the desired location is superior to other similar locations, from a community perspective, including, but not limited to:

(1) Proximity to residential buildings and descriptions of efforts to prevent any blocking of views of impressive scenes; and

(2) Written documentation demonstrating a good faith effort to locate the proposed facility in the least intrusive location in accordance with the location requirements of this Resolution.~~;~~

h. A description in writing and a visual rendering demonstrating effective screening of all ground-mounted or roof-mounted equipment of the facility from view.

i. Color-coded carrier-generated RF Coverage (propagation) maps, at a scale no smaller than 1 inch (1") to a quarter (1/4) mile with all appropriate legends, showing the coverage for the highest and lowest frequencies to be used by the facility. Frequencies are to be stated numerically, not qualitatively.

Provide a represented value in dB of each colors it specifically represents.

j. If the project involves, modifies or will use an existing facility or structure, a description of the type of structure (e.g., guyed, self-supporting lattice or monopole), and a report on the physical condition of the facility certified by a professional engineer licensed in the state of California.

k. If the application is for a new tower, clear and convincing technical evidence by a carrier or wireless service provider justifying the total height of the proposed facility and the need for such to the exclusion of all reasonable alternatives. Evidence in the form of propagation studies must include all modeling data and assumptions used to produce the studies at the requested height and should take into consideration the ability to collocate other carriers in the future.

l. A siting analysis which identifies other feasible locations within or outside the City which could serve the area intended to be served by the facility, unless the applicant provides compelling technical reasons for providing fewer than the minimum.

m. An affirmation, under penalty of perjury, that the proposed installation will be FCC compliant, in that it will not cause members of the general public to be exposed to RF levels that exceed the emissions levels deemed safe by the FCC. A copy of the fully completed FCC form "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance: Appendix A" titled "Optional Checklist for Determination of Whether a Facility is Categorically Excluded" for each frequency band of RF emissions to be transmitted from the proposed facility upon the approval of the application. All planned radio frequency emissions on all frequency bands must be shown on the Appendix A form(s) attached to the application. All planned radio frequency emissions are to be entered on each Appendix A form only in wattage units of "effective radiated power."

n. A statement detailing the frequency, modulation and class of service of radio or other transmitting equipment;

o. A copy of the FCC license applicable for the intended use of the proposed facilities;

p. A HazMat Business Plan for all new generators, and any storage and/or use of hazardous materials during the project, to include:

i. A list of toxic substances that may develop during arcing or fire that may impede fire suppression efforts;
ii. A list of hazards that may develop during arcing or fire that may impede fire suppression efforts;

q. A demolition plan, if applicable.
r. A written statement of the applicant's willingness to allow other carriers to co-locate on the proposed personal wireless service facility where technically and economically feasible and aesthetically desirable, subject to the qualification that colocation should not occur when public exposures from the resulting higher cumulative sources would exceed FCC limits.
s. Such other information as the Director shall establish.
t. A statement signed by a person with legal authority to bind the applicant attesting under penalty of perjury to the accuracy of the information provided in the application. If attester not an authorized employee of the applicant, then the attester must demonstrate that it is an authorized agent of the applicant, with lawful Power of Attorney from the applicant.

SECTION 10. Environmental Review

This Resolution is not a project within the meaning of Section 15378 of the State of California Environmental Quality Act (CEQA) Guidelines, because it has no potential for resulting in physical change in the environment, directly or indirectly. The Resolution does not authorize any specific development or installation on any specific piece of property within the City's boundaries. Moreover, when and if an application for installation is submitted, the City will at that time conduct preliminary review of the application in accordance with CEQA. Alternatively, even if the Resolution is a "project" within the meaning of State CEQA Guidelines section 15378, the Resolution is exempt from CEQA on multiple grounds. First, the Resolution is exempt CEQA because the City Council's adoption of the Resolution is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. (State CEQA Guidelines, § 15061(b)(3)). That is, approval of the Resolution will not result in the actual installation of any facilities in the City. In order to install a facility in accordance with this Resolution, the wireless provider would have to submit an application for installation of the wireless facility. At that time, the City will have specific and definite information regarding the facility to review in accordance with CEQA. And, in fact, the City will conduct preliminary review under CEQA at that time. Moreover, in the event that the Resolution is interpreted so as to permit installation of wireless communications facilities on a particular site, the installation would be exempt from CEQA review in accordance with either State CEQA Guidelines section 15302 (replacement or reconstruction), State CEQA Guidelines section 15303 (new construction or conversion of small structures), and/or State CEQA Guidelines section 15304 (minor alterations to land).

SECTION 11. This Resolution will become effective immediately upon adoption.

SECTION 12. The City Clerk shall certify to the passage and adoption of this resolution and enter it into the book of original resolutions.

PASSED, APPROVED, and ADOPTED this 12th day of April 2021.

MIKKE PIERSON, Mayor

ATTEST:

(seal)

APPROVED AS TO FORM:

THIS DOCUMENT HAS BEEN REVIEWED
BY THE CITY ATTORNEY'S OFFICE

JOHN COTTI, Interim City Attorney

RESOLUTION NO. 21-17

A RESOLUTION OF THE CITY OF MALIBU ADOPTING ENGINEERING, DESIGN AND LOCATION STANDARDS, CONDITIONS OF APPROVAL AND BASIC APPLICATION REQUIREMENTS FOR WIRELESS COMMUNICATIONS FACILITIES ON LAND OTHER THAN PUBLIC RIGHT-OF-WAY; AND FINDING THE SAME EXEMPT FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

The City Council of the City of Malibu does hereby find, resolve and order as follows:

SECTION 1. Recitals

A. Malibu Municipal Code (MMC) Chapter 17.46 governs the permitting, installation, and regulation of wireless communications facilities in the City, other than those in the public right-of-way, which are subject to MMC Chapter 12.02.

B. Section 17.46.060(D) provides that "[a]ll applicants shall engineer, design and locate the wireless communications facilities in accordance with the standards and wireless regulations set forth separately though the resolution adopted by the City Council."

C. Being authorized to do so, the City wishes to establish engineering, design and development standards applicable to wireless installations.

D. The City also wishes to set standard conditions of approval and basic application requirements applicable to wireless permits.

E. On April 12_, 2021 the City Council conducted a duly noticed public hearing and received testimony from City staff and all interested parties regarding the and the standards, conditions and requirements.

SECTION 2. Purpose. The purpose of this document is to (1) establish design and location standards (Standards) for wireless communications facilities on land other than public right-of-way; (2) set standard conditions of approval for Wireless Permits (WPs); and (3) set basic application requirements for WPs.

SECTION 3. Definitions. For the purposes of these Standards, the definitions set forth in Malibu Municipal Code (MMC) Section 17.46.040 are incorporated by reference into this Resolution and in addition the following definitions apply:

A. "Park" A parcel, parcels of land or a portion of a parcel intended for active public recreation uses. Parks may include sports fields, playgrounds community buildings and unique or specialized activity areas. Land dedicated for open space and trails are not considered parks for the purposes of this Chapter.

B. "Playground" A portion of land used for and equipped with public facilities for recreation specially by children. A playground includes the sand or rubberized floor around the apparatus.

C. "Pole-mounted facility" means a wireless communications facility that is, or is proposed to be, attached to or contained in a pole.

D. "School" any building, campus or sports field which is designed, constructed or used for education, instruction or school sports, whether public or private, in any branch of knowledge.

E. "Stealth facility" (or "stealth facilities") means a wireless communications facility designed to look like something other than a wireless tower or base station.

SECTION 4. General Standards for all Facilities The following general requirements apply at all times to all wireless communications facilities located in all zoning districts:

A. All wireless communications facilities shall be engineered and designed to minimize the visual impact by means of placement, screening, camouflaging, painting and texturing and to be compatible with existing architectural elements, building materials and other site characteristics. The applicant shall use the smallest and least visible antenna possible to accomplish the facility's objectives. All antennas and support structures shall be painted and/or textured to achieve architectural compatibility with the structures for which they are attached and/or located.

B. Each facility must comply with any and all applicable provisions of the Malibu Municipal Code, including but not limited to provisions of the California Building Code, California Electric Code, California Plumbing Code, California Mechanical Code, and California Fire Code, and any conditions of approval imposed as part of the approval process.

C. Each facility must comply with any and all applicable regulations and standards promulgated or imposed by any state or federal agency, including, but not limited to, the Federal Communications Commission (FCC) and the Federal Aviation Administration (FAA). Further, all wireless communications facilities, associated equipment and services shall comply with Americans with Disabilities Act (ADA) requirements.

D. Fire and Electrical Safety Standards. All wireless communications facilities shall contain:

1. Surge protection for lightning discharge or other significant electrical disturbances; and

2. Signage as required by the permit conditions, the National Electric Code or the Los Angeles County Fire Department Chief or their designee.

E. The facility must at all times comply with all applicable health requirements and standards pertaining to radio frequency emissions.

F. All antennas shall meet the minimum siting distances to habitable structures required for compliance with FCC regulations and standards governing the environmental effects of radio frequency emissions.

G. Noise. Wireless communications facilities and equipment must comply with the City's noise ordinance in MMC Chapter 8.24, or any successor provisions, and be designed to prevent noise and sound from being plainly audible at a distance of fifty (50) feet from the facility or within ten (10) feet of any residence.

H. Signs. No facility may display any signage or advertisement unless it is expressly allowed by this paragraph, necessary for stealth concealment purposes, or required by law or a permit condition. Every facility shall at all times display signage that accurately identifies the facility owner and provides the owner's unique site number and a local or toll-free telephone number to contact the facility owner's operations center.

I. Landscaping. Where appropriate, facilities shall be installed so as to maintain and enhance existing landscaping on the site, including trees, foliage and shrubs, whether or not utilized for screening. In addition to any landscaping used for concealment or screening purposes, the applicant shall replace any existing landscaping displaced during construction or installation of the applicant's facility. The applicant's landscaping plan shall be subject to the City's review and approval but shall, at a minimum, match the existing landscaping and foliage surrounding the installation site consistent with MMC Section 17.53.090. The permittee shall ensure that any vegetation allowed to remain in place under the Fire Code, including vegetation provided for screening, is properly maintained and watered.

J. All electrical support equipment located within cabinets, shelters, or similar structures shall be screened from public view. Roof-mounted electrical support equipment shall be discouraged. Ground-mounted electrical support equipment shall be encouraged. In addition, under grounding of support equipment is required wherever practicable.

K. All antennas shall be located such that any person walking adjacent to the transmitting surface of the antenna will be walking on a grade that is a minimum of eight and one-half feet below the transmitting surface.

L. Lighting of antenna structures and their electrical support equipment is prohibited, except as required by any order or regulation of the FCC or the FAA and except for manually operated emergency lights for use when official operating personnel are on site.

M. A backup power supply must be required for all new wireless communications facilities to the extent allowed by law and in compliance with California Fire Code 1206.2.2.

SECTION 5. Location Standards for All Facilities The location standards for all wireless communications facilities, other than those that qualify as eligible facilities requests, are as follows:

A. No wireless telecommunication facility shall be located within five hundred (500) feet of any school, playground, or park unless a finding is made, based on technical evidence acceptable to the reviewing authority showing a clear need for the facility and that no technically feasible alternative site exists. Except for facilities installed on the same pole or tower as an existing wireless telecommunication facility, wireless telecommunication facilities located within any residential zone district shall not be located within one thousand (1,000) feet of any other wireless communications facility, except from those facilities placed on utility poles along Pacific Coast Highway, unless a waiver is granted.

B. All new freestanding wireless communications facilities and monopoles shall be set back a minimum distance of at least one hundred and twenty (120) percent of the height of the facility or monopole from any property line abutting a residentially zoned property. This minimum setback is not subject to the waivers allowed under Section 7 of this Resolution.

C. Location preference for wireless communications facilities should be given to the following:

1. Property designated non-residential (except for public open space and recreational vehicle park zoning districts), unless otherwise prohibited pursuant to this title.

2. Facilities attached or sited adjacent to existing structures. Whenever possible, facilities shall be located on and/or inside existing structures. Appropriate types of existing structures may include, but are not limited to: buildings, water tanks, telephone poles and utility towers and poles, sign standards, light standards and roadway overpasses.

3. Sites with minimum separation. Sites that are more than five hundred (500) feet from school, playgrounds, and parks.

4. Sites that are not highly visible from adjacent roadways.

5. Unless otherwise indicated in MMC Chapter 17.46 or these Standards, no wireless facility shall be installed on an exposed ridgeline unless the facility blends with the surrounding existing natural and man-made environment and a finding is made that no other location is technically feasible.

6. The City expressly designates residential, public open space and recreational vehicle park zoning districts, parks and schools as the least appropriate possible locations, and the absolute last choices for siting.

SECTION 6. Engineering and Design Standards for all Facilities The general design standards for wireless communications facilities subject to MMC Chapter 17.46 are as follows:

A. Basic Requirements. The proposed wireless facility and its supporting structure (if needed) shall be limited to the minimum size necessary to serve the defined service objectives of the wireless service provider or providers that will be using the facility, except where a larger facility has superior concealment elements.

B. Materials. The materials used shall be non-reflective and non-flammable.

C. Cabinet doors and other openings must be designed to stay securely closed, and openings in all facilities shall be shielded or made the smallest size feasible to protect against fire and wind-blown embers.

D. The tower, or other support structure, and all equipment shall be designed to withstand forces from seismic events. To that end, all wireless facility sites must be built to the applicable standards of Hardening Requirements including but not limited to APCO ANSI 2.106.1–2019, or their replacements. The telecommunications tower, pole or structure when fully loaded with antennas, transmitters, and other equipment and camouflaging shall be designed as determined by the Building Official. All equipment mounting racks and equipment used shall be anchored in such a manner that such a quake will not tip them over, throw the equipment off its shelves, or otherwise act to damage it.

E. All connections between various components of the facility, power lines, and conduit shall be designed in a manner to protect against damage by a natural disaster, a vehicular accident, an act of vandalism or similar external forces.

F. Stealth. The wireless facility shall be stealth. Stealth elements and techniques should be used to blend the facility with surrounding materials

and colors of the support structure and make the facility appear to be something other than a wireless facility. Stealth elements include, but are not limited to, the following:

1. Radio frequency (RF) transparent screening or shrouds;

2. Matching the color of the existing support structure by painting, coating, or otherwise coloring the wireless facility, equipment, mounting brackets, and cabling;

3. Placing cables and wires inside the pole or beneath conduit of the smallest size possible;

4. Minimizing the size of the site;

5. Installing new infrastructure that matches existing infrastructure in the area surrounding the proposed site; and

6. Using paint of durable quality.

7. Built with weather-resistant materials while permitting weathered treatment for aesthetic reasons and to avoid reflective material.

G. Minimum Height. All antennas shall be located such that: (1) any person walking adjacent to the transmitting surface of the antenna will be walking on a grade that is a minimum of eight and one-half feet below the transmitting surface; and (2) no person at ground level will be exposed to an exposure level that is higher than allowed by the FCC's general population exposure rules.

H. Facade-Mounted Equipment. Facade-mounted antennas and equipment shall be architecturally integrated into the building, or other support structure, design and otherwise made as unobtrusive as possible so that the facility does not appear to be a wireless facility. Antennas and equipment should be located entirely within an existing or newly created architectural feature so as to be completely screened from view. Facade-mounted facilities shall generally not extend more than eighteen (18) inches out from and may not project above the building face. Façade-mounted wireless telecommunication facilities shall not exceed twenty-eight (28) feet in height above the ground. However, antenna elements, mounted flush on the facade of an existing structure that exceeds twenty-eight (28) feet, may have a height equal to the height of the building.

I. Ground-Mounted Equipment. Outdoor ground-mounted equipment associated with base stations shall be avoided whenever feasible. In locations visible or accessible to the public, applicants shall conceal outdoor

ground-mounted equipment, including ancillary power generation equipment, with opaque fences or landscape features that mimic the adjacent structure(s) (including, but not limited to, dumpster corrals and other accessory structures) and by painting, texturing, or otherwise concealing the facility as much as possible. Ground-mounted wireless communications facilities shall be located near existing structures or trees at similar heights for screening purposes where feasible. Not more than one ground-mounted antenna, provided that licensed amateur radio station antennas consistent with MMC 17.46.020(B)(2), shall also be permitted on each site.

J. Roof-Mounted Facilities. Roof-mounted antennas and necessary equipment shall be screened from above if visible from higher elevations. Rooftop-mounted wireless telecommunication facilities shall not exceed twenty-eight (28) feet in height or three (3) feet above the roof parapet from which they are attached, whichever is less restrictive. Associated roof-mounted equipment cabinets shall not extend more than three (3) feet above the roof from which it is attached and shall be set back a minimum of ten (10) feet from the edge of the roof. All roof-mounted equipment cabinets shall be located behind a mechanical screen wall. In the event that a roof parapet wall screens the equipment cabinets, a mechanical screen wall will not be required.

K. Freestanding Facilities. Freestanding facilities requiring a new monopole or other new support structure shall be stealth facilities. Further, they shall be located as close as possible to existing above-ground utilities, such as electrical towers or utility poles (which are not scheduled for removal or under grounding for at least 18 months after the date of application), light poles, trees of comparable heights, and in areas where they will not detract from the appearance of the City.

1. Freestanding wireless telecommunication facilities, including monopoles, shall not exceed twenty-eight (28) feet in height and shall not extend higher than the top of the ridgeline nearest the antenna. The height of a freestanding facility shall be measured from the natural undisturbed ground surface below the center of the base of the tower itself to the tip of the highest antenna or piece of equipment attached thereto.

2. Aside from the antenna itself, no additional equipment may be visible. All cables, including, but not limited to, electrical and utility cables, shall be run within the interior of the freestanding facility and shall be camouflaged or hidden to the fullest extent feasible without jeopardizing the physical integrity of the facility.

3. Monopole installations shall be situated so as to utilize existing natural or man-made features including topography, vegetation, buildings, or other structures to provide the greatest amount of visual screening.

4. All antenna components and accessory wireless equipment shall be treated with exterior coatings of a color and texture to match the predominant visual background or existing architectural elements so as to visually blend in with the surrounding development. Subdued colors and non-reflective materials that blend with surrounding materials and colors shall be used.

5. Monopoles shall be no greater in diameter or other cross-sectional dimensions than is necessary for the proper functioning of the facility.

L. All wireless telecommunication facilities shall be designed to prevent unauthorized climbing and graffiti.

M. Fire Safety Standards. All wireless facilities designs shall include:

1. a power shut off, such as by means of rapid entry Knox or similar type systems shall be installed;

2. surge protection devices capable of mitigating a direct or partial direct lightning discharge; and

3. surge protection devices capable of mitigating significant electrical disturbances that may enter the facility via conductive cables.

N. Satellite dish or parabolic antennas shall be situated as close to the ground as possible to reduce visual impact without compromising their function.

O. Support equipment pads, cabinets, shelters and buildings require architectural, landscape, color, fencing, or other camouflage treatment to minimize visual impacts to the extent deemed necessary by the Planning Director. Landscaping screening should also be provided if irrigation water is available.

P. No freestanding facility or ancillary support equipment may be located between the face of a building and a public street, bikeway, park or residence.

SECTION 7. Waivers of These Standards.

A. A waiver of one or more of these Standards may be granted in the following circumstances:

1. Pursuant to MMC Section 17.46.060(D), if an applicant demonstrates to the Planning Commission through clear and convincing evidence that denial of an application would, within the meaning of federal law, prohibit or effectively prohibit the provision of personal wireless services, or otherwise violate applicable laws or regulations;

2. If an applicant demonstrates to the Planning Commission through clear and convincing evidence set forth in a feasibility study that compliance with a requirement of these Standards would be technically infeasible and the proposed wireless facility complies with the requirements of these Standards to the greatest extent technically feasible. For example, an exception to a requirement to conceal antennas in a shroud may be granted if shrouding is shown to be technically infeasible and an alternative concealment such as a colored film wrap is proposed; or

3. If an applicant demonstrates to the Planning Commission with clear and convincing evidence that the particular engineering, design or location proposed involves an alternative that better meets the purposes of Chapter 17.46 and only minor non-compliance with a requirement of these design Standards and results in no increase in public visual impact to the community or provides other benefits. For example, an exception to the wireless facility location limitations may be granted when the applicant can demonstrate that the placement is less visible from viewsheds of residences or shielded by vegetation or existing infrastructure (such as barriers), or is less physically intrusive (for example, less impactful to tree roots or reduces noise). Among other factors, in deciding whether or not to grant an exception, the Planning Commission may consider the impact of expansions to the facility that the applicant would be entitled to make as of right if granted.

B. Waivers may only be requested at the time an application is initially submitted for a discretionary permit. The request must include both the specific provision(s) from which waiver is sought and the basis of the request, including all supporting evidence on which the applicant relies. Any request for waiver after the City has deemed an application complete constitutes a material change to the proposed wireless facility and shall be considered a new application. A request for waiver from one or more

requirements does not relieve the applicant from compliance with all other applicable provisions of law or of MMC Section 17.46.060.

SECTION 8. Standard Conditions of Approval for Permits Under MMC Chapter 17.46.

A. **Generally.** In addition to any supplemental conditions imposed by the Planning Director or Planning Commission, as the case may be, all development permits or conditional use permits granted for wireless communications facilities subject to this Chapter 17.46 shall be subject to the following conditions, unless modified by the approving authority:

1. The permittee shall defend, indemnify, and hold harmless the city or any of its boards, commissions, agents, officers, and employees from any claim, action or proceeding against the city, its boards, commission, agents, officers, or employees to attack, set aside, void, or annul, the approval of the project, or to hold the City liable in whole or in part as a result of the engineering, design, construction or operation of the facility. The City shall promptly notify the provider(s) of any such claim, action or proceeding if the city bears its own attorney's fees and costs, and the city defends the action in good faith.

2. The permittee shall be strictly liable for interference caused by its facilities with city communications systems. The permittee shall be responsible for costs for determining the source of the interference, all costs associated with eliminating the interference (including but not limited to filtering, installing cavities, installing directional antennas, powering down systems, and engineering analysis), and all costs arising from third party claims against the city attributable to the interference.

3. Subsequent submittals for this project shall be in substantial compliance with the plans date-stamped received by the Planning Department on _____. The project shall comply with all conditions of approval stipulated in the referral sheets attached to the agenda report for this project. In the event the project plans conflict with any condition of approval, the condition shall take precedence and revised plans shall be submitted and approved by the Planning Director prior to the Environmental Sustainability Department for plan check.

4. The permit and rights conferred in this approval shall not be effective until the permittee signs, notarizes and returns the Acceptance of Conditions Affidavit accepting the conditions set forth herein. The applicant shall file this form with the Planning Department within 30 days of this decision or prior to issuance of

any development, conditional use, building, electrical or encroachment permit.

5. The applicant shall digitally submit a complete set of plans, including the items required in Condition No. 6 to the Planning Department for consistency review and approval prior to plan check and again prior to the issuance of any building or development permits.

6. The Notice of Decision (including the signed and notarized Acceptance of Conditions Affidavit) shall be copied in its entirety and placed directly onto a separate plan sheet(s) to be included in the development plans prior to submitting any development permits from the City of Malibu Environmental Sustainability Department and encroachment permit.

7. A development permit or conditional use permit, as applicable, shall be valid for a period of ten (10) years from issuance, unless pursuant to another provision of the Code or these conditions, it expires sooner or is terminated. At the end of ten (10) years from the date of issuance, such development or conditional use permit shall automatically expire, unless an extension or renewal has been granted. A person holding a development permit or conditional use permit must either (1) remove the facility within thirty (30) days following the permit's expiration (provided that removal of support structure owned by City, a utility, or another entity authorized to maintain a support structure need not be removed, but must be restored to its prior condition, except as specifically permitted by the City); or (2) prior to expiration, submit an application to renew the permit, which application must, among all other requirements, demonstrate that the impact of the wireless facility cannot be reduced. The wireless facility must remain in place until it is acted upon by the City and all appeals from the City's decision exhausted.

8. The installation and construction authorized by a permit shall be completed within three (3) years after its approval, or it will expire without further action by the City unless prior to the three (3) years the applicant submit an extension request and the City, in its sole discretion, grants a time extension for due cause. The installation and construction authorized by a permit shall conclude, including any necessary post-installation repairs and/or restoration to the property, within thirty (30) days following the day construction commenced. The permittee must provide written notice to City within ten (10) days after completing construction, and may not begin operations until all City and Fire Department (if applicable) inspections have been completed and the project is found to be

consistent with the permit. The expiration date shall be suspended until an appeal and/or litigation regarding the subject permit is resolved.

9. The Planning Director may grant up to four one-year extensions of the timeline, in Condition 7 above, for completing the installation and construction authorized by a development or condition use permit, if the Planning Director finds that the conditions, including but not limited to changes in the wireless ordinance under which the permit approval was issued, have not significantly changed.

10. Any questions of intent or interpretation of any condition of approval will be resolved by the Planning Director upon written request of such interpretation.

11. All structures shall conform to the requirements of the Environmental Sustainability Department, City Public Works Department, FCC and Los Angeles County Fire Department requirements, as applicable. Notwithstanding this review, all required permits, including but not limited to an encroachment permit from the City, shall be secured.

12. Minor changes to the approved plans or the conditions of approval may be approved by the Planning Director, provided such changes achieve substantially the same results and the project is still in compliance with the MMC. An application with all required materials and fees shall be required.

Cultural Resources

13. In the event that potentially important cultural resources are found in the course of geologic testing, work shall immediately cease until a qualified archaeologist can provide an evaluation of the nature and significance of the resources and until the Planning Director can review this information. Where, as a result of this evaluation, the Planning Director determines that the project may have an adverse impact on cultural resources, a Phase II Evaluation of cultural resources shall be required pursuant to MMC Section 17.54.040(D)(4)(b).

14. If human bone is discovered, the procedures described in Section 7050.5 of the California Health and Safety Code shall be followed. These procedures require notification of the coroner. If the coroner determines that the remains are those of a Native American, the applicant shall notify the Native American Heritage Commission by phone within 24 hours. Following notification of the Native

American Heritage Commission, the procedures described in Section 5097.94 and Section 5097.98 of the California Public Resources Code shall be followed.

Wireless Facility Conditions

15. All antennas shall meet the minimum siting distances to public/uncontrolled areas required for compliance with the FCC regulations and standards governing the environmental effects of radio frequency emissions. Permittee shall keep up-to-date on current information from the FCC in regards to maximum permissible radio frequency exposure levels. In the event that the FCC changes its guidelines for human exposure to radio frequency, permittee shall, within 30 days after any such change, submit to the Planning Director a report prepared by a qualified engineer that demonstrates actual compliance with such changed guidelines. The Director may, at permittee's sole cost, retain an independent consultant to evaluate the compliance report and any potential modifications to the permit necessary to conform to the FCC's guidelines. Failure to submit the compliance report required under this condition, or failure to maintain compliance with the FCC's guidelines for human exposure to radio frequency at all times shall constitute grounds for permit revocation.

16. All antennas shall be located so that any person walking adjacent to the transmitting surface of the antenna will be walking on a grade, which is a minimum of eight and one-half feet below the transmitting surface.

17. All antennas, equipment, and support structures shall be engineered and designed to prevent unauthorized climbing.

18. The wireless facility shall be erected, operated, and maintained in compliance with the general requirements set forth in the Standards and any specific requirements in the permit.

19. The antenna and electrical support equipment shall, at all times, be operated in a manner that conforms to the applicable health and safety standards, including those imposed by MMC Chapter 17.46 and this Resolution.

20. Wireless communications facilities and equipment must comply with the City's noise ordinance in MMC 8.24, or any successor provisions, and prevent noise and sound from being plainly audible at a distance of fifty (50) feet from the facility or within ten (10) feet of any residence.

21. The Planning Director's approval is required if a generator is to be placed onsite for temporary or permanent use.

22. All non-ground-mounted equipment associated with the application shall be located no lower than eight feet above grade or ground level on the monopole or support structure.

23. The City or its designee may enter onto the facility area to inspect the facility upon 48 hours prior notice to the permittee. The permittee shall cooperate with all inspections and may be present for any inspection of its facility by the City. The City reserves the right to enter or direct its designee to enter the facility and support, repair, disable, or remove any elements of the facility in emergencies or when the facility threatens imminent harm to persons or property. The City shall make an effort to contact the permittee prior to disabling or removing any facility elements, but in any case, shall notify permittee within 24 hours of doing so.

24. Testing of any equipment shall take place on weekdays only, and only between the hours of 8:30 a.m. and 4:30 p.m., except that testing is prohibited on holidays that fall on a weekday. In addition, testing is prohibited on weekend days.

25. Permittee shall obtain and maintain throughout the term of the permit commercial general liability insurance with a limit of five million dollars ($5,000,000) per occurrence for bodily injury and property damage and six million dollars ($6,000,000) general aggregate including premises operations, contractual liability, personal injury, and products completed operations. The relevant policy(ies) shall name the City, its elected/appointed officials, commission members, officers, representatives, agents, and employees as additional insureds. A true and correct copy of the policy of insurance shall constitute proof of insurance required by this Subsection. Permittee shall use its best efforts to provide thirty (30) days' prior notice to the City of to the cancellation or material modification of any applicable insurance policy. Failure to maintain insurance consistent with this Condition shall automatically void the permit, and the permittee shall immediately deenergize and remove the facility from operation. The policy shall not have a pollution or other exclusion which excludes injuries or damages from EMF/RF exposures.

26. Prior to issuance of a City permit or encroachment permit, the permittee shall file with the City, and shall maintain in good standing throughout the term of the approval, a performance bond or other surety or another form of security for the removal of the

facility in the event that the use is abandoned or the permit expires, or is revoked, or is otherwise terminated. The security shall be in the amount equal to the cost of physically removing the facility and all related facilities and equipment on the site, based on the higher of two contractor's quotes for removal that are provided by the permittee. The permittee shall reimburse the city for staff time associated with the processing and tracking of the bond, based on the hourly rate adopted by the City Council. Reimbursement shall be paid when the security is posted and during each administrative review.

27. Permittee shall not move, alter, temporarily relocate, change, or interfere with any existing structure, improvement, or property without the prior consent of the owner of that structure, improvement, or property. No structure, improvement, or property owned by the City shall be moved to accommodate a permitted activity or encroachment, unless the City determines that such movement will not adversely affect the City or any surrounding businesses or residents, and the Permittee pays all costs and expenses related to the relocation of the City's structure, improvement, or property. Prior to commencement of any work pursuant to any permit, the permittee shall provide the City with documentation establishing to the city's satisfaction that the permittee has the legal right to use or interfere with any other structure, improvement, or property to be affected by permittee's facilities.

28. No possessory interest is created by a Wireless Permit. However, to the extent that a possessory interest is deemed created by a governmental entity with taxation authority, permittee acknowledges that City has given to permittee notice pursuant to California Revenue and Taxation Code Section 107.6 that the use or occupancy of any public property pursuant to a development or conditional use permit may create a possessory interest which may be subject to the payment of property taxes levied upon such interest. Permittee shall be solely liable for, and shall pay and discharge prior to delinquency, any and all possessory interact taxes or other taxes, fees, and assessments levied against permittee's right to possession, occupancy, or use of any public property pursuant to any right of possession, occupancy, or use created by this development or conditional use permit.

29. If not already completed, permittee shall enter into the appropriate agreement with the City, as determined by the City, prior to

constructing, attaching, or operating a facility on municipal infrastructure. This permit is not a substitute for such agreement.

30. If a facility is not operated for a continuous period of three (3) months, the Wireless Permit and any other permit or approval therefor shall be deemed abandoned and terminated automatically, unless before the end of the three (3) month period (i) the Director has determined that the facility has resumed operations, or (ii) the City has received an application to transfer the permit to another service provider. No later than ninety (90) days from the date the facility is determined to have ceased operation, or the permittee has notified the Director of its intent to vacate the site, the permittee shall remove all equipment and improvements associated with the use and shall restore the site to its original condition to the satisfaction of the Director. The permittee shall provide written verification of the removal of the facilities within thirty (30) days of the date the removal is completed. If the facility is not removed within thirty (30) days after the permit has been discontinued pursuant to this subsection, the site shall be deemed to be a nuisance, and the City may cause the facility to be removed at permittee's expense or by calling any bond or other financial assurance to pay for removal. If there are two (2) or more users of a single facility or support structure, then this provision shall apply to the specific elements or parts thereof that were abandoned but will not be effective for the entirety thereof until all users cease use thereof.

31. In the event the City determines that it is necessary to take legal action to enforce any of these conditions, or to revoke a permit, and such legal action is taken, the permittee shall be required to pay any and all costs of such legal action, including reasonable attorney's fees, incurred by the City, even if the matter is not prosecuted to a final judgment or is amicably resolved, unless the City otherwise agrees, in its complete discretion, to waive said fees or any part thereof.

32. Interference with city communications systems and other governmental emergency systems is prohibited. Further, no permits issued pursuant to this chapter of the City Code establish any guarantee or warranty that Licensee's facility will be free from interference from city or third-party communication systems.

Construction

33. Installation hours shall be limited to Monday through Friday from 7:00 a.m. to 7:00 p.m. and Saturdays from 8:00 a.m. to 5:00 p.m. No installation activities shall be permitted on Sundays and City-

designated holidays. The restricted work hours described in this condition do not apply to emergency maintenance necessary to protect health or property. The City of Malibu may issue a Stop Work Order if permittee violates this condition. Construction activities shall be conducted in compliance with, and abide by, all applicable safety codes and permit conditions.

34. All sites must be designed and build to the standards of ANSI/APCO Public Safety Grade Site Hardening Requirements, also referred to as "APCO ANSI 2.106.1-2019".

Site Specific Conditions

35. In the event that the electric service provider does not currently offer an alternative metering option, the permittee shall remove the above-grade electric meter when such option becomes available. Prior to removing the above-grade electric meter, the permittee shall apply for any encroachment and/or other ministerial permit(s) required to perform the removal. Upon removal, the permittee shall restore the affected area to its original condition that existed prior to installation of the equipment.

36. The permittee acknowledges that the City specifically includes conditions of approval related to (a) painting, coloring or finishing the equipment to match the monopole or support structure; (b) undergrounding all equipment to the extent possible; (c) installing equipment within shrouds, conduits and risers as concealment elements engineered and designed to integrate the wireless facility with the surrounding built and natural environment; and (d) specific structural, seismic, electrical, fire and operating/maintenance requirements. Any future modifications to the permittee's wireless facility must maintain or improve all concealment elements and safety precautions.

37. Before the permittee submits any applications for construction, encroachment, excavation or other required permits in connection with this permit, the permittee must incorporate a true and correct copy of this permit, all conditions associated with this permit and any approved photo simulations into the project plans (collectively, the "Approved Plans"). The permittee must construct, install and operate the wireless facility in substantial compliance with the Approved Plans as determined by the Director or the Director's designee. Any substantial or material alterations, modifications or other changes to the Approved Plans, whether requested by the permittee or required by other departments or public agencies with jurisdiction over the wireless facility, must be submitted in a written

request subject to the Director's prior review and approval, who may refer the request to the original approval authority if the Director finds that the requested alteration, modification or other change substantially deviates from the Approved Plans or implicates a significant or substantial land-use concern.

38. The permittee shall install and at all times maintain in good condition a "Network Operations Center Information" and "RF Caution" sign on the utility pole no less than three (3) feet below the antenna (measured from the top of the sign) and no less than nine (9) feet above the ground line (measured from the bottom of the sign). Signs required under this condition shall be installed so that a person can clearly see the sign as he or she approaches within three (3) feet of the antenna structure. If any person on or within the property is or may be exposed to emissions that exceed applicable FCC uncontrolled/general population limits at any time the sign shall expressly so state, and provide instructions on how persons can avoid any such exposure. The sign shall also include the name(s) of the facility owner(s), equipment owner(s) and operator(s)/carrier(s) of the antenna(s), property owner name, as well as emergency phone number(s) for all such parties. The sign shall not be lighted, unless applicable law, rule or regulation requires lighting. No signs or advertising devices other than required certification, warning, required seals or signage, other signage required by law, this Chapter, any City or applicable state code or the Los Angeles County Fire Department Chief or his or her designee shall be permitted. The sign shall be no larger than two (2) square feet.

39. The permittee shall ensure that all signage complies with FCC Office of Engineering and Technology Bulletin 65, CPUC General Order 95 or American National Standards Institute C95.2 for color, symbol, and content conventions. All such signage shall at all times provide a working local or toll-free telephone number to its network operations center, and such telephone number shall be able to reach a live person who can exert transmitter power-down control over this site as required by the FCC.

40. In the event that the FCC changes any of radio frequency signage requirements that are applicable to the project site approved herein or ANSI Z535.1, ANSI Z535.2, and ANSI C95.2 standards that are applicable to the project site approved herein are changed, the permittee, within 30 days of each such change, at its own cost and expense, shall replace the signage at the project site to comply with the current standards.

41. The permittee shall maintain the paint, color and finish of the facility in good condition at all times.

42. All improvements, including foundations, and appurtenant ground wires, shall be removed from the property and the site restored to its original pre-installation conditions within 90 days of cessation of operation or abandonment of the facility.

43. Build-Out Conditions.

    a. Permittee shall not commence any excavation, construction, installation or other work on the project site until and unless it demonstrates to the City Public Works Department that the project complies with these Conditions along with all applicable laws, regulations, codes and other rules related to public health and safety, including without limitation all applicable provisions in California Public Utilities Commission General Order 95 and MMC Chapters 8.12, 8.24 and 15.08.

    b. To the extent that a pole owner or any provision in the MMC or this resolution require greater or more restrictive standards than California Public Utilities Commission General Order 95, if applicable, those standards shall control.

44. Permittee shall at all times maintain compliance with all applicable federal, State and local laws, regulations, ordinances and other rules, including Americans with Disabilities Act (ADA) requirements.

45. The permittee shall cooperate with all inspections. The City and its designees reserve the right to support, repair, disable or remove any elements of the facility in emergencies or when the facility threatens imminent harm to persons or property.

46. Permittee shall at all times maintain accurate contact information for all parties responsible for the facility, which shall include a phone number, street mailing address and email address for at least one natural person. All such contact information for responsible parties shall be provided to the Planning Department at the time of permit issuance and within one business day of permittee's receipt of City staff's written request.

47. Permittee shall undertake all reasonable efforts to avoid undue adverse impacts to adjacent properties and/or uses that may arise

from the construction, operation, maintenance, modification and removal of the facility.

48. The site and the facility must be maintained in a neat and clean manner and in accordance with all approved plans and conditions of approval.

49. Permittee shall promptly remove any graffiti on the wireless facility at permittee's sole expense within 48 hours after notice.

Prior to Operation

50. The applicant shall request a final Planning Department inspection and final building inspection by the City of Malibu Environmental Sustainability Department immediately after the wireless facility has been installed and prior to the commencement of services.

51. Within thirty (30) calendar days following the installation of any wireless communications facilities, the applicant shall provide to the Planning Department with a field report prepared by a qualified engineer verifying that the unit has been inspected, tested, and is operating in compliance with FCC standards. Specifically, the on-site post-installation radiofrequency (RF) emissions testing must demonstrate actual compliance with the FCC OET Bulletin 65 RF emissions safety guidelines for general population/uncontrolled RF exposure in all sectors. For this testing, the transmitter shall be operating at maximum operating power, and the testing shall occur outwards to a distance where the RF emissions no longer exceed the uncontrolled/general population limit. Such report and documentation shall include the make and model (or other identifying information) of the unit tested, the date and time of the inspection, a certification that the unit is properly installed and working within applicable FCC limits, and a specific notation of the distance from the transmitter at which the emissions are equal to or less than the uncontrolled/general population limit.

52. The operation of the approved facility shall commence no later than one (1) month after the City completes its post-installation inspections of the facility, any issues with the facility are resolved, and the City receives the RF testing report required in the condition of approval above, or the development or conditional use permit will expire without further action by the City.

Fixed Conditions

53. Violation of any of the conditions of this approval shall be cause for revocation and termination of all rights thereunder.

Eligible Facilities Requests

All permits for an eligible facilities requests under MMC Chapter 17.46 shall be subject to the following conditions and all of the other conditions of approval placed on a Wireless Permit, unless modified by the approving authority:

54. Any permit granted in response to an application qualifying as an eligible facilities request shall be subject to the terms and conditions of the underlying permit.

55. The City's grant or grant by operation of law of an eligible facilities request permit constitutes a federally-mandated modification to the underlying permit or approval for the subject tower or base station. Notwithstanding any permit duration established in another permit condition, the City's grant or grant by operation of law of a eligible facilities request permit will not extend the permit term for the underlying permit or any other underlying regulatory approval, and its term shall be coterminous with the underlying permit or other regulatory approval for the subject tower or base station.

56. The City's grant or grant by operation of law of an eligible facilities request does not waive, and shall not be construed to waive, any standing by the City to challenge Section 6409(a) of the Spectrum Act, any FCC rules that interpret Section 6409(a) of the Spectrum Act, or any modification to Section 6409(a) of the Spectrum Act.

Small Cell Facilities

In addition to the other conditions of approval placed on a Wireless Permit, all permits for a small cell facility under MMC Chapter 17.46 shall be subject to the following additional condition, unless modified by the approving authority:

57. The City's grant of a permit for a small cell facility request does not waive, and shall not be construed to waive, any standing by the city to challenge any FCC orders or rules related to small cell facilities, or any modification to those FCC orders or rules.

SECTION 9. Basic Application Requirements for Permits Under MMC Chapter 17.46.

A. Generally. In addition to providing all required fees, all wireless telecommunication facility carriers or providers shall provide the information required by a separate application form published, and updated

from time to time, by the City. If no such form is available, then the applicant must submit all documents, information, and any other materials necessary to allow the City to make required findings and ensure that the proposed facility will comply with applicable laws and not endanger the public health, safety, or welfare. Such information may include:

1. Contact information for:
   a. Applicant and their representatives
   b. Owner of proposed wireless communications facility
   c. If different from facility owner, the identity of the person or entity responsible for operating the proposed wireless facility
   d. The property owner or owner of the structure on which the proposed wireless facility would be installed
   e. Names, addresses, telephone numbers, and email addresses of anyone acting on behalf of the applicant with regard to the application;
   f. The name, address and phone number of all persons that prepared or assisted in preparing the application and any required reports;
   g. The postal address, parcel number, or utility pole identifier of the property;
   h. The location of the schools, playgrounds and parks within 500 feet of the project site;
   i. Local contact person for emergencies
   j. Assessor's Parcel Number
2. Purpose of new wireless communications facility or amendment
3. Type of Application (Select all that apply)
   a. Eligible Facilities Request
   b. Small Cell – Collocation
   c. Small Cell – New Structure
   d. Collocation (Non-Small Cell)
   e. All Other Wireless Communications Facilities
   f. Permit Renewal
   g. Waiver
4. Letter of authorization signed by the property owner authorizing the applicant to submit and process the application, including executed copies of any leases, letters of agency, or proof of ownership, of private property involved in the project.
5. Authorizations, and Licenses
6. Provide previous approvals, if applicable, and Certificate of Completion. Site inspection fees may apply if a final inspection was never requested
7. Identify all other required permits and approvals for the subject facility.

8. Electrical and Structural Safety Information. The following engineering documents prepared under the responsible charge of and sealed by a California licensed Professional Engineer must be included in the application:
   a. A short circuit and coordination study ("SCCS") calculated pursuant to the IEEE 551-2006: Recommended Practice for Calculating AC Short-Circuit Currents in Industrial and Commercial Power Systems or the latest version of that standard. The study must demonstrate the protection devices will ensure the equipment enclosure will not be breached. The SCCS must include analysis of Voltage Transient Surges due to contact of conductors of different voltages;
   b. A one-line diagram of the electrical system;
   c. Voltage Drop & Load Flow Study;
   d. Load Calculation;
   e. Panel Directories;
   f. A plot plan showing the location of the mounting structure including address, or structure designation, or GPS location on the front sheet;
   g. A plot plan showing the location of the service disconnecting means; and
   h. An elevation drawing of the equipment and the service disconnecting means.
9. Structural Safety Information. The structural/civil engineering documents prepared under the responsible charge of and sealed by a California licensed professional civil engineer.
   a. Photo simulations, from at least three different angles, showing the pole and streetscape before and after installation. In some cases, more than three different angles may be required;
   b. The azimuth, size and center-line height location of all proposed and existing antenna(s) on the supporting structure;
   c. The number, type and model of the antenna(s) that will be used with a copy of the specification sheet;
   d. The make, model, type and manufacturer of any tower involved and a design plan stating the tower's capacity to accommodate multiple users;
   e. Site and Construction Plans. Complete and accurate plans, drawn to scale, signed, and sealed by a California-licensed engineer, land surveyor, and/or architect, which include the following items.
      (1) A site plan and elevation drawings for the facility as existing and as proposed with all height and width measurements explicitly stated.

(2) A site plan describing the proposed tower and antenna(s) and all related fixtures, structures, appurtenances and apparatus, including height above pre-existing grade, materials, color and lighting;
(3) A depiction, with height and width measurements explicitly stated, of all existing and proposed transmission equipment.
(4) A depiction of all existing and proposed utility runs and points of contact.
(5) A depiction of the leased or licensed area of the site with all rights-of-way and easements for access and utilities labeled in plan view.

f. Detailed map with locations of the poles or other property on which equipment is to be located, including specific pole identification number, if applicable, and the areas it will service;

g. Description as to why the desired location is superior to other similar locations, from a community perspective, including, but not limited to:
(1) Proximity to residential buildings and descriptions of efforts to prevent any blocking of views of impressive scenes; and
(2) Written documentation demonstrating a good faith effort to locate the proposed facility in the least intrusive location in accordance with the location requirements of this Resolution.

h. A description in writing and a visual rendering demonstrating effective screening of all ground-mounted or roof-mounted equipment of the facility from view.

i. Color-coded carrier-generated RF Coverage (propagation) maps, at a scale no smaller than 1 inch (1") to a quarter (1/4) mile with all appropriate legends, showing the coverage for the highest and lowest frequencies to be used by the facility. Frequencies are to be stated numerically, not qualitatively. Provide a represented value in dB of each colors it specifically represents.

j. If the project involves, modifies or will use an existing facility or structure, a description of the type of structure (e.g., guyed, self-supporting lattice or monopole), and a report on the physical condition of the facility certified by a professional engineer licensed in the state of California.

k. If the application is for a new tower, clear and convincing technical evidence by a carrier or wireless service provider justifying the total height of the proposed facility and the need for such to the exclusion of all reasonable alternatives.

Evidence in the form of propagation studies must include all modeling data and assumptions used to produce the studies at the requested height and should take into consideration the ability to collocate other carriers in the future.

l. A siting analysis which identifies other feasible locations within or outside the City which could serve the area intended to be served by the facility, unless the applicant provides compelling technical reasons for providing fewer than the minimum.

m. An affirmation, under penalty of perjury, that the proposed installation will be FCC compliant, in that it will not cause members of the general public to be exposed to RF levels that exceed the emissions levels deemed safe by the FCC. A copy of the fully completed FCC form "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance: Appendix A" titled "Optional Checklist for Determination of Whether a Facility is Categorically Excluded" for each frequency band of RF emissions to be transmitted from the proposed facility upon the approval of the application. All planned radio frequency emissions on all frequency bands must be shown on the Appendix A form(s) attached to the application. All planned radio frequency emissions are to be entered on each Appendix A form only in wattage units of "effective radiated power."

n. A statement detailing the frequency, modulation and class of service of radio or other transmitting equipment;

o. A copy of the FCC license applicable for the intended use of the proposed facilities;

p. A HazMat Business Plan for all new generators, and any storage and/or use of hazardous materials during the project, to include:

   i. A list of toxic substances that may develop during arcing or fire that may impede fire suppression efforts;

   ii. A list of hazards that may develop during arcing or fire that may impede fire suppression efforts;

q. A demolition plan, if applicable.

r. A written statement of the applicant's willingness to allow other carriers to co-locate on the proposed personal wireless service facility where technically and economically feasible and aesthetically desirable, subject to the qualification that colocation should not occur when public exposures from the resulting higher cumulative sources would exceed FCC limits.

s. Such other information as the Director shall establish.

t. A statement signed by a person with legal authority to bind the applicant attesting under penalty of perjury to the accuracy of the information provided in the application. If attester not an authorized employee of the applicant, then the attester must demonstrate that it is an authorized agent of the applicant, with lawful Power of Attorney from the applicant.

SECTION 10. Environmental Review

This Resolution is not a project within the meaning of Section 15378 of the State of California Environmental Quality Act (CEQA) Guidelines, because it has no potential for resulting in physical change in the environment, directly or indirectly. The Resolution does not authorize any specific development or installation on any specific piece of property within the City's boundaries. Moreover, when and if an application for installation is submitted, the City will at that time conduct preliminary review of the application in accordance with CEQA. Alternatively, even if the Resolution is a "project" within the meaning of State CEQA Guidelines section 15378, the Resolution is exempt from CEQA on multiple grounds. First, the Resolution is exempt CEQA because the City Council's adoption of the Resolution is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. (State CEQA Guidelines, § 15061(b)(3)). That is, approval of the Resolution will not result in the actual installation of any facilities in the City. In order to install a facility in accordance with this Resolution, the wireless provider would have to submit an application for installation of the wireless facility. At that time, the City will have specific and definite information regarding the facility to review in accordance with CEQA. And, in fact, the City will conduct preliminary review under CEQA at that time. Moreover, in the event that the Resolution is interpreted so as to permit installation of wireless communications facilities on a particular site, the installation would be exempt from CEQA review in accordance with either State CEQA Guidelines section 15302 (replacement or reconstruction), State CEQA Guidelines section 15303 (new construction or conversion of small structures), and/or State CEQA Guidelines section 15304 (minor alterations to land).

SECTION 11. This Resolution will become effective immediately upon adoption.

SECTION 12. The City Clerk shall certify to the passage and adoption of this resolution and enter it into the book of original resolutions.

PASSED, APPROVED, and ADOPTED this 12th day of April 2021.

MIKKE PIERSON, Mayor

ATTEST:

KELSEY PETTIJOHN, Acting City Clerk
(seal)

APPROVED AS TO FORM:

JOHN COTTI, Interim City Attorney

I CERTIFY THAT THE FOREGOING RESOLUTION NO. 21-17 was passed and adopted by the City Council of the City of Malibu at the Regular meeting thereof held on the 12th day of April 2021 by the following vote:

| | | | |
|---|---|---|---|
| AYES: | 5 | Councilmembers: | Farrer, Silverstein, Uhring, Grisanti, Pierson |
| NOES: | 0 | | |
| ABSTAIN: | 0 | | |
| ABSENT: | 0 | | |

KELSEY PETTIJOHN, Acting City Clerk
(seal)

To: Los Altos City Council
council@losaltosca.gov
aenander@losaltosca.gov
smeadows@losaltosca.gov
nfligor@losaltosca.gov
lleeeng@losaltosca.gov
jweinberg@losaltosca.gov

From: Cindy Russell, MD

Re: Revisions to 2019 Los Altos Ordinance to Regulate Small Wireless Facilities

Date April 11, 2022

Dear Los Altos City Council:
I am writing today to strongly urge you to reinstate (with legally appropriate revisions) several of the major aspects of the original 2019 Small Cell Wireless Ordinance that diminish blight and protect the beauty, character and health of your lovely Silicon Valley community. In addition, after reading the new 2022 proposed Wireless Facilities Ordinance it appears that some important provisions may have been missed in crafting a new Small Cell ordinance which are critical for the safety of the residents and also reduce liability for the city. This includes several insurance provisions, minor modifications to existing facilities, permiting process, and more.

Encinitas and Malibu have passed ordinances which have elements that are protective but allow flexibility for cities and exceptions/waivers for the carriers. They remain uncontested.

- **Encinitas, CA-** Revised from 2019- Passed June 20, 2020 https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/Resolution%20No.%202020-38%20With%20Policy.pdf?ver=2020-07-13-192634-373
- **Malibu Resolution 21-17 –** Attached please find an executed copy of Res. 21-17 is officially binding because Ordinance 484 adopts it by reference.

I will summarize my ask of the Los Altos City Council with these key points below, followed by backup for those points with additional pertinent legal information which does impact the issue of health/science, as per a court ruling from the second highest court in the land on August 13, 2021, a ruling that referred to the existing RF radiation regulatory limits as "arbitrary and capricious". Arbitrary and capricious means that the law and/or the facts were knowingly disregarded. That is a high bar indeed and the plaintiffs reached that bar. It behooves us to consider what is going on in the courts and pass ordinance language accordingly:

**PLEASE PAUSE:** There are resolutions as mentioned above that have successfully balanced the unique needs of communities with the rights of the telecommunications industry. The new resolution does not have to be passed Tuesday night. Some reflection on the best that Encinitas and Malibu have to offer may benefit all of us in the long run.

# Key Points

1. TITLE OF ORDINANCE: Clarification if this applies to Small Cell or Macro Cells; macro towers must go through conditional use permits

2. LOCATION STANDARDS – PREFERRED SITES

3. WAIVERS FOR STANDARDS

4. FIRE SAFETY

5. APPEALS PROCESS

Thank you for passing the 2019 Wireless Facilities Telecommunications Ordinance. The original wireless facilities ordinance for Los Altos took into consideration public concerns, was well thought out and protects the city of Los Altos from poorly designed and poorly placed cell towers.

I understand, however, that there is a lawsuit against the City for Los Altos from Verizon and AT&T claiming that the 2019 ordinance as written "effectively prohibits" wireless communications. You are commended for taking on this task of revising the ordinance in response. Some of the 2022 proposed changes are good and clarify the permitting process for carriers to avoid lawsuits and provide for "personal wireless services", however, I believe there are some gaps in protections and flexibility for the city that I would like to point out which could be remedied in addition to some clarifications.

It is important to consider adding the provisions below. As you note with the FCC lawsuit to reevaluation the 20 year-old FCC safety standards, the courts have judged that the FCC did not take into account several aspects of human health and environmental effects in setting their standards. We do not know what the future holds for the federal Telecommunications Act of 1996 or state law. The city of Los Altos needs to be prepared to alter its ordinance in case there is a change in the law in the future.

**Representative Anna Eshoo Supports Local Control for Cell Towers**
The 2018 FCC small cell order that fast tracks deployment of small cells in order to "cut the red tape" has prompted cities around the country, like Los Altos, to write these emergency ordinances and now revise them. The FCC Declaratory ruling has been considered an overreach of the Telecom Industry which dominates the FCC (FCC: Captured Agency, N. Alster), overriding the basic rights of cities to have local control. This was recognized by our local representative Anna Eshoo who in 2019 introduced HR530 to protect the rights of states and government by deeming that the *"Federal Communications Commission's Declaratory Ruling in ''Third Report and Order and Declaratory Ruling'' (FCC 18-111) shall have no force or effect."* This bill had 52 co-sponsors. Senator Feinstein introduced in 2019 a companion federal bill SB 2012 to block the FCC order. Neither moved.

Representative Eshoo also sent a letter to the FCC in 2020 to ask that the vote on the FCC order be delayed stating, ***"we worry that if this Declaratory Ruling does not benefit from meaningful input from local governments, the result could undermine municipalities' ability to balance their responsibilities to public safety and community design with their desire to ensure access to affordable wireless networks and the next generation services."***

Please fight for the rights of your residents and government as our local representatives have done. You have more power than you know. Please exercise it.

# Important Provisions to Add

## 1) Title of Ordinance

To clarify whether the ordinance title should apply only to Small Wireless Facilities or if this is for both Small Cell and Macro Towers it may be helpful to rename the ordinance to its original title and keep the descriptions separate within the ordinance. It is not clear to me in this rewrite. Small cell applications are different than for macro towers due to difference in structure of towers, power emitted and location in right of way as per FCC ruling.

(Section 14.82.050) See Encinitas Small Cell wireless Ordinance. Resolution 2019- 91- REGULATING SMALL WIRELESS FACILITIES AND OTHER INFRASTRUCTURE DEPLOYMENTS IN THE PUBLIC RIGHTS-OF-WAY
https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/CC%20Policy%20C035.pdf

2) **Location Standards- Preferred Sites**- Despite what the telecommunications industry says, you as a city can still have preferred sites and less preferred sites in your ordinance. (Encinitas and Malibu Ordinances) You can add an exception clause or waiver process to allow for placement of a cell tower if the carrier proves it is necessary (and other locations are not technically feasible) for "Personal Wireless Services" under the 1996 Telecom Act of 1996 and so that this does not constitute an "effective prohibition".
*** Special Zones can be designated for schools, day care centers, residential dwellings, protected habitat or trees, parks, etc.**
* Keep the 1000 foot distance between towers, **not 200 feet.** Explanation below.

Here are examples of Location Standards in the Encinitas Small Cell Wireless Ordinance passed in June, 2020 and in Malibu April 2021, which to date are uncontested.

# Encinitas Ordinance Passed June 10, 2020

## SECTION 10. LOCATION STANDARDS

1. (a) **Restricted Site Locations.** All of the following locations will be deemed "Restricted Site Locations" that require an exception pursuant to SECTION 13 of this Policy:

    1. (1) any location within a residential zone;
    2. (2) any location within 500 feet from a residential dwelling unit;
    3. (3) any location within 500 feet from a daycare facility or primary school;
    4. (4) any location within a Very High Fire Hazard Severity Zone; and
    5. (5) any location within the Ecological Resource/Open Space/Park Zone.

    (b) **Location Preferences.** To better assist applicants and decision makers understand and respond to the community's aesthetic preferences and values, this subsection sets out listed preferences for locations to be used in connection with small wireless facilities in an ordered hierarchy. Applications that involve lesser-preferred locations may be approved so long as the applicant demonstrates by clear and convincing evidence in the written record that: (1) any more preferred locations or structures within 500 feet from the proposed site would be technically infeasible; and (2) if the proposed site or the most- preferred location within 500 feet from the proposed site is within a Restricted Site Location, the applicant qualifies for an exception pursuant to SECTION 13 of this Policy. The City prefers small cells in the public rights-of-way to be installed in locations, ordered from most preferred to least preferred, as follows:

    (1) locations within industrial zones, commercial zones, business parks or office professional zones on or along prime arterials;

    (2) locations within industrial zones, commercial zones, business parks or office professional zones on or along major arterials;

    (3) locations within industrial zones, commercial zones, business parks or office professional zones on or along collector roads;

    (4) locations within industrial zones, commercial zones, business parks or office professional zones on or along local streets;

    (5) any location within 500 feet from any residential zone;

    (6) locations within residential zones on or along prime arterials;

    (7) locations within residential zones on or along major arterials;

    (8) locations within residential zones on or along collector roads;

    (9) locations within residential zones on or along local streets;

(10) any location within 1,000 feet from an existing/proposed small wireless facility;

In the event that a proposed facility would be within 500 feet from two or more restricted site locations (as defined in Subsection 10(a)), and the proposed facility qualifies for an exception pursuant to SECTION 13 of this Policy, the technically feasible location furthest from all such restricted site locations will be deemed to be the most preferred alternative.

(c) **Encroachments Over Private Property.** No small cell antennas, accessory equipment or other improvements may encroach onto or over any private or other property outside the public rights-of-way without the property owner's express written consent.

## Malibu Wireless Ordinance Resolution 21-17 Standards Passed April 2021.

https://www.malibucity.org/DocumentCenter/View/27969/Ordinance-No-484

### Location Standards for All Facilities

The location standards for all wireless communications facilities, other than those that qualify as eligible facilities requests, are as follows:

1. No wireless telecommunication facility shall be located within five hundred (500) feet of any school, playground, or park unless a finding is made, based on technical evidence acceptable to the reviewing authority showing a clear need for the facility and that no technically feasible alternative site exists. Except for facilities installed on the same pole or tower as an existing wireless telecommunication facility, wireless telecommunication facilities located within any residential zone district shall not be located within one thousand (1,000) feet of any other wireless communications facility, except from those facilities placed on utility poles along Pacific Coast Highway, unless a waiver is granted.
2. All new freestanding wireless communications facilities and monopoles shall be set back a minimum distance of at least one hundred and twenty (120%) percent of the height of the facility or monopole from any property line abutting a residentially zoned property. This minimum setback is not subject to the waivers allowed under Section 7 of this Resolution.
3. Location preference for wireless communications facilities should be given to the following:
    1. Property designated non-residential (except for public open space and recreational vehicle park zoning districts), unless otherwise prohibited pursuant to this title.
    2. Facilities attached or sited adjacent to existing structures. Whenever possible, facilities shall be located on and/or inside existing structures. Appropriate types of existing structures may include, but are not limited to: buildings, water tanks, telephone poles and utility towers and poles, sign standards, light standards and roadway overpasses.
    3. Sites with minimum separation. Sites that are more than five hundred (500) feet from school, playgrounds, and parks.

4. Sites that are not highly visible from adjacent roadways.
5. Unless otherwise indicated in MMC Chapter 17.46 or these Standards, no wireless facility shall be installed on an exposed ridgeline unless the facility blends with the

surrounding existing natural and man-made environment and a finding is made that no other location is technically feasible.

6. The City expressly designates residential, public open space and recreational vehicle park zoning districts, parks and schools as the least appropriate possible locations, and the absolute last choices for siting.

## 3) Waivers for Standards

Malibu Wireless Facilities Ordinance 2021 has added a section on Waivers for Standards that clarifies the process and protects the city from liability.

**Resolution No. 21-17 Page 9**

1. A waiver of one or more of these Standards may be granted in the following circumstances:
    1. Pursuant to MMC Section 17.46.060(D), if an applicant demonstrates to the Planning Commission through clear and convincing evidence that denial of an application would, within the meaning of federal law, prohibit or effectively prohibit the provision of personal wireless services, or otherwise violate applicable laws or regulations;
    2. If an applicant demonstrates to the Planning Commission through clear and convincing evidence set forth in a feasibility study that compliance with a requirement of these Standards would be technically infeasible and the proposed wireless facility complies with the requirements of these Standards to the greatest extent technically feasible. For example, an exception to a requirement to conceal antennas in a shroud may be granted if shrouding is shown to be technically infeasible and an alternative concealment such as a colored film wrap is proposed; or
    3. If an applicant demonstrates to the Planning Commission with clear and convincing evidence that the particular engineering, design or location proposed involves an alternative that better meets the purposes of Chapter 17.46 and only minor non-compliance with a requirement of these design Standards and results in no increase in public visual impact to the community or provides other benefits. For example, an exception to the wireless facility location limitations may be granted when the applicant can demonstrate that the placement is less visible from viewsheds of residences or shielded by vegetation or existing infrastructure (such as barriers), or is less physically intrusive (for example, less impactful to tree roots or reduces noise). Among other factors, in deciding whether or not to grant an exception, the Planning Commission may consider the impact of expansions to the facility that the applicant would be entitled to make as of right if granted.
2. Waivers may only be requested at the time an application is initially submitted for a discretionary permit. The request must include both the specific provision(s) from which waiver is sought and the basis of the request, including all supporting evidence on which the applicant relies. Any request for waiver after the City has deemed an application

complete constitutes a material change to the proposed wireless facility and shall be considered a new application. A request for waiver from one or more

## 4) Fire Safety

**All electrical equipment including small cell towers are a fire risk. The fire cannot be put out in a conventional manner with firefighters blasting water on the fire. They have to wait until the power is shut off or electrocution will result.**

**Examples are**

- **San Diego tower that caught fire in a high school stadium- https://fox5sandiego.com/news/local-news/stadium-light-catches-fire-at-south-bay-high-school/**
- **The Malibu fire in 2007 due to pole overload.** CPUC finds Edison and 4 telecom carriers $51.5 million - https://www.latimes.com/local/lanow/la-me-ln-malibu-fire-settlements-approved-state-puc-20130919-story.html

Considering the increase in wildfires and the risk of earthquakes. Fire safety is a priority for citizens. **The Malibu Wireless Facilities Ordinance 2021 has language in the Fire Safety Standards that can be incorporated.** In the attached Executed Copy of Malibu Res. 21-17, please note fire language on pages 2, 3, 5, 8, 11, 12, and particularly beginning on page 23 with "Electrical and Structural Safety Information."

## 5) Appeals Process

Language for appeal is not in the ordinance
Applications.

A) Any person adversely affected by a decision of the Director pursuant to this Chapter may request an administrative hearing to appeal the Director's decision. In order to request a hearing, the person shall submit to the City Clerk in the manner directed in the Director's decision notice a fully completed request for administrative hearing form along with a full amount of the appeal fee set by the City Council (by way of check or money order). The request for administrative hearing shall be incomplete if it does not include the appeal fee in the full amount. … etc.

## Precaution is Warranted

We understand that, as per Section 704 of the 1996 Telecommunications Act, environmental concerns, and as courts have interpreted these it includes heath impacts, cannot be a factor in denial of cell towers but we are early in the game.
Public health and ecosystem health are still important issues with new 5G systems untested for long term or short term safety for either human health or environmental health. 5G systems with a complex mix of low, medium and high frequencies (thus the need for macro and microcells) are very onerous to measure, requiring very expensive complex equipment that is very difficult

for engineers to accomplish let alone city facility engineers. Precaution in placement is paramount in this discussion. Once cell towers are placed there is no going back and you just wait for people to experience symptoms or develop cancer or a neurologic condition that you will not be able to sort out from the common toxic exposures we all encounter on a daily basis.

Elon Musk tells us that 5G millimeter wave systems are not needed for autonomous cars. 5G millimeter wavelengths are also not required for "personal wireless services". For the later this technology can be effectively replaced with safer and more secure fiberoptic networks and current wireless technologies. I will explain why health matters.

## Health Matters

I am a practicing physician who has studied the health impacts of environmental toxins through our local County Medical Association and the California Medical Association for over 25 years. I began studying the health impacts of wireless radiation when I learned of a proposal to place a cell tower on my daughter's school.

After 10 years of research into the literature and talking to a variety of people affected by cell towers and wireless radiation I, like many others in the medical and scientific community, have come to the conclusion that wireless radiation is a pollutant just like lead or pesticides or mercury or toxic industrial waste. The mechanisms are similar - oxidation, the effects are broad on all living organisms and people are often unaware they are exposed to the toxin - unless they are "sensitive". Wireless radiation causes oxidative stress on organisms and stem cells, and at low levels of radiation. These low levels cause a slow decline in physiologic processes, and for those who have become sensitive- an immediate reaction.

## Antioxidants and Health

As we now know small amounts of toxins can cause harm in certain windows of development thus children are more vulnerable. We also know effects are cumulative. People vary in their vulnerability due to age, genetics and other toxic exposures. Not all people react the same. Our health, wellness and aging are determined by oxidation levels in our tissues that injure our DNA, proteins and lipids, thus antioxidants in foods have been shown to block oxidation, neutralize cellular injury and promote health. This is well established in the nutrition literature. The literature also demonstrates that taking antioxidants (Vitamin E, zinc and melatonin) protects the cell from oxidation injury from wireless radiation. Oxidative stress plays a major part in the development of chronic, degenerative and inflammatory illnesses such as cancer, autoimmune disorders, aging, cataracts, rheumatoid arthritis, cardiovascular and neurodegenerative diseases, as well as some acute pathologies (trauma, stroke**). It is well established that wireless radiation at non-thermal levels causes oxidative stress**. Effects of this are cumulative on our DNA, lipids and cellular membranes.

## We Evolved in a Low Electromagnetic Environment

The natural environment of the Earth is electromagnetic. We have terrestrial electric and magnetic fields, radiation from the sun and cosmic microwaves. All living things evolved in

harmony with the Earth's natural but very very low-level electromagnetic rhythms. Birds, bees and mammals have magnetite in their bodies and brains that use the Earth's magnetic field for the delicate tasks of navigation and foraging. Our human nervous system, heart, reproductive and endocrine systems rely on minute electromagnetic signals for complex functions. Manmade electromagnetic fields (EMF) emitted by our modern technology can distort our bodies electric currents, delicate cell membranes and cause broad dysfunction. This can be with long term or sometimes short exposures with higher power and different pulsations. Science has shown us that organisms adapt to constant electromagnetic fields found in nature much easier than artificial pulsed radiation that is emitted from cell towers and wireless devices. It makes perfect sense that wireless radiation can be harmful to living organisms even it does not knock an electron out of its orbit.

## Wildlife

You need to consider the unique ecosystem which surrounds this lovely town. Science has shown us that levels of artificial electromagnetic radiation we are increasingly exposed to is harming not only humans but the sensitive environment that we tend to ignore but depend upon for our sustenance and mental health. https://mdsafetech.org/environmental-and-wildlife-effects/

## New Review on Wildlife and wireless Radiofrequency Radiation

The most comprehensive 3 part peer reviewed article by Levitt, Lai and Manville (2021) provides an updated, thorough and well referenced overview of RFR and effects on all wildlife, revealing a disturbing picture of the future if we continue to expand wireless in our homes, communities and for the commercialization of space.

The authors state, *"But is there a larger environmental downside to rising ambient EMF exposures — particularly RFR — from popular mobile communication devices, WiFi antennas, and all accompanying infrastructure that is being overlooked by environmentalists, researchers, and government regulators alike. We may be missing critical physiological effects across species based on obsolete assumptions about low-level far-field exposures being too weak to adversely affect living tissue. We have yet to take into consideration the unique physiologies of other species, or how they use the environment in ways that humans do not, when we assume that the unfettered use of EMF/RFR can continue unabated and be allowed to grow indefinitely*." **Effects of non-ionizing electromagnetic fields on flora and fauna, part 1.** Rising ambient EMF levels in the environment. (2021) Levitt BB et al. Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/

**MOEF Report on Wildlife**
The Inter-Ministerial Committee (IMC) of expert scientists reviewed the literature of the effects of RF-EMF radiations on wildlife, humans and the biosphere. In their 2010 MOEF Report they found that out of the 919 research papers collected on birds, bees, plants, other animals, and humans, 593 showed impacts, 180 showed no impacts, and 196 were inconclusive studies. All organisms had effects.

**Human Effects–** 62% showed effects, 13% no effect and 25% inconclusive **Plant Effects–** 87% showed effects and 13% were inconclusive

**Wildlife Effects-** 62% showed effects, 4% no effect and 36% inconclusive **Bee Effects**—85% showed effects and 15% no effect

**Bird Effects**- 77% showed effects, 10% no effect and 13% inconclusive **Current Standards are Scientifically Out of Date**

## UNESCO World Heritage Wildlife Area Species Disappearing

An abundance of peer reviewed literature demonstrates adverse impacts to the environment with declines in insect, bird and wildlife populations in cities and where cell towers are placed. This spells disaster for biodiversity, fragile wildlife areas, critical pollinators and agriculture, especially with additive effects of pesticides, toxins and loss of habitat. A report on Unesco's Mt. Nardia World Heritage Park documents this slow decline in populations of species after cell towers were placed. Unesco Report on Disappearance of Species from Mt. Nardia Park World Heritage Area 2000-2015 with Increased Expansion of Telecommunications Antenna. Ethno-Botonist Mark Broomhall. UNESCO Report on Disappearance of Species from Mt. Nardia with Increased EMR 2000-2015

## Cell Tower Health Effects

Current standards are based on short term thermal exposures and discount the abundant peer reviewed literature on harm from low level, non -thermal effects. It is clear that the limits for radiofrequency radiation are set too high in the U.S. and Canada. These limits are 100 times higher than that of Italy and Russia, who set their standards based on methodical research on immunologic, neurologic and biologic effects of low-level radiation fields. Current U.S. limits are up to 1,000 microwatts/cm2 with symptoms seen at levels of 0.005 microwatts /cm2.

## Physicians in Germany ask for Health Investigation of Cell Towers in 2005

An open letter from Dr. Cornelia Waldmann-Selsam was sent to the German State Chancellor, Edmund Stoiber, on behalf of 114 physicians (Bamberger Appeal) asking for an investigation into the newly reported adverse health symptoms of 356 residents who lived near cell towers in Oberfranken, Germany. Dr. Waldmann-Selsam noted, "*Many humans get sick from emissions far below the recommended limit values, which consider only thermal effects, and we have a sickness picture with characteristic symptom combinations, which are new to us physicians," The list of symptoms were, " Sleep disturbances, tiredness, concentration impairment, forgetfulness, problem with finding words, depressive tendencies, tinnitus, sudden loss of hearing, hearing loss, giddiness, nose bleeds, visual disturbances, frequent infections, sinusitis, joint and limb pains, nerve and soft tissue pains, feeling of numbness, heart rhythm disturbances,*

*increased blood pressure , hormonal disturbances, night-time sweat, nausea." Resident noted almost immediate improvement when moving away*."

Dr. Waldmann-Selsam goes on to say, "*physicians were able to prove, by re-testing the patients, the normalization of blood pressure, heart rhythm, hormone disturbances, visual disturbances, neurological symptoms, blood picture*,". She called this an emergency medical situation and requested an official health investigation. http://www.next-up.org/pdf/Letter_to_Edmund_Stoiber.pdf

## Cell Tower Effects on Cognition and Learning

The majority of studies, which have been done internationally, have shown an increase in neurologic symptoms in a percentage of residents living near cell towers. Symptoms vary with the distance from the cell tower. Symptoms include insomnia, headache, heart palpitations, dizziness, poor concentration, and fatigue. A study in Japan (Shinjyo 2014) showed a decrease in symptoms when the cell tower was removed. There is also a well done study showing blood abnormalities in those living nearest to cell towers (Zothansiama 2017). DNA and lipid abnormalities were seen along with reduction in internal antioxidants which provide protection from pollutants.

Moreover, a recent study conducted over a 2 year period looked at effects of cell towers near two schools by Meo et al (2018) and clearly demonstrated cognitive dysfunction in students closest to the higher power cell tower.

## Firefighters Fighting Fires and Now Cell Towers

After noticing that many of the firefighters where developing neurologic symptoms when first responder cell towers were placed on the fire stations the International Association of Firefighters studied the matter and passed a resolution in 2004 asking that cell towers not be placed in proximity to fire stations. In AB 537 (Quirk), signed into law by Gov. Newsom on October 4, 2021, the firefighters achieved the first ever health/readiness exemption in the world.

**Every fire station in California is now exempt from having a 5G tower on their station.** This movement began when cell towers were initially targeted for fire stations because of their location and the revenue received by the cities. Many firefighters developed symptoms including headaches, fatigue, memory impairment and insomnia within a week of the installation of the towers. An exemption was inserted in California bills on cell towers. AB 57 (Quirk 2015) has an exemption on the grounds of health effects. AB 537 (Quirk 2021) also has this exemption and reads, "*Due to the unique duties and infrastructure requirements for the swift and effective deployment of firefighters, this section does not apply to a collocation or siting application for a wireless telecommunications facility where the project is proposed for placement on fire department facilities."* SB 649 (Hueso, Quirk and Dodd 2018) also had a health exemption for firefighters and was vetoed by Governor Brown.

## 500 Meter (1640 ft) Buffer from Cell Tower Recommended

Cell tower health studies that show impacts from cell towers with symptoms within about 1500 feet of the cell towers. That is why Pearce et al (2019**) recommended a "500 Meter buffer around schools, hospitals and homes "Limiting liability with positioning to minimize negative health effects of cellular phone towers."**

## Cancer and Cell Towers

3 Studies investigated the rates of cancer and cell towers looking at the distance from cell towers and the incidence of cancer. They found the rate of cancer incidence increased significantly in those living within about 350 -400 meters (around 1000 feet) to the cell tower.

Dode 2011 performed a 10 year study (1996-2006) examining the distance from cell towers and cancer clusters. He and his colleagues found a highly significant increase in cancers in those living within 500 meters of the cell tower. They noted "The largest density power was 40.78 μW/cm2, and the smallest was 0.04 μW/cm2." The current guidelines are about 1000 μW/cm2. The authors conclude "Measured values stay below Brazilian Federal Law limits that are the same of ICNIRP. The human exposure pattern guidelines are inadequate. More restrictive limits must be adopted urgently."

Wolf and Wolf 2004 investigated the rates of cancer versus distance from cell towers in small towns in Israel. He found the rate of cancer incidence was 129 cases per 10,000 persons per year in those living within 350 meters of a cell tower versus a rate of 16-31/10,000 in those living greater than 350 meters from the cell tower.

**Eger (2004)** showed an increase in the development of new cancer cases within a 10 year period if residents lived within 400 meters of a cell tower. Their results revealed that within 5 years of operation of a transmitting station the relative risk of cancer development tripled in residents near the cell towers compared to residents outside the area.

**Insurance Has an Exclusion for Radiofrequency Radiation as an Emerging Risk** Insurance companies consider wireless radiation to be similar to asbestos in long term health impacts and do not provide coverage from harm for RF health effects. The cities are left with that liability unless they can provide insurance.
In a 2019 report, **New Emerging Risk Insights**, by Swiss RE Insurance Company, the second largest reinsurance company in the world, **5G is listed as an emerging concern** in the high risk category within 3 years. Included in the high-risk trends are artificial intelligence and the existential threats of climate change. "*The top five emerging risks in our SONAR 2019 report are digital technology's clash with legacy hardware, potential threats from the spread of 5G mobile networks, increasingly limited fiscal and monetary flexibility by central banks, genetic testing's implications on life insurers, and the impact of climate change on the life and health sector.*" https://www.swissre.com/institute/research/sonar/sonar2019.html

## National Academy of Sciences Report on the Havana Syndrome and Harm from RFR

A recent report by the National Academy of Sciences concluded that the "sonic attacks" on diplomats in Cuba and China were most likely due to pulsed radiofrequency from directed energy weapons. They had symptoms similar to those who live near cell towers (headache, nausea, insomnia, dizziness, memory loss, heart palpitations, depression). Dr. Beatrice Golomb wrote the most extensive report to date on this subject linking these mystery "directed energy attacks" to pulsed microwaves similar to the wireless devices we use daily. In the case of these high powered beams there was documented injury to brain networks found by the University of Pittsburg physicians who studied the diplomats. Dr Golomb highlights that **the strength of the health effects are related to the peak power not the average power. The pulse makes the poison.**

**The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** is a comprehensive guide written by many scientists and physicians in Europe who are part of the European Academy for Environmental Medicine (EUROPAEM) – EMF working group who have recognized and treated those with electrosensitivity for many years. This is a thorough, well researched and well-referenced scientific paper that is based on the 2012 Austrian Medical Association **Guidelines for the Diagnosis and Treatment of EMF Illness**. A questionnaire from their group is included in the attachments.

## New Hampshire 5G Commission Finds Radiofrequency Radiation Problematic

The first Commission formed in the United States to study the environmental and health effects of 5G technology released their comprehensive final report November 1, 2020. The Commission to Study the Environmental and Health Effects of Evolving 5G Technology was mandated by HB 522 passed by the state legislature in New Hampshire. Their final report included 15 recommendations addressing the need for public education about wireless hazards, RF health studies, RF measurements, cell antenna setbacks, fiberoptic rather than wireless deployment, commercial warning signs and wildlife protection. After hearing extensive testimony in a series of 13 meetings over the course of a year and reviewing an abundance of research, the Commission highlighted the lack of a single definition for 5G, **insufficient evidence of safety for 5$^{th}$ generation technology**, a concern that safety standards for wireless technologies have not been updated with the latest science and that 5G is largely a marketing concept. They also expressed concern that the FCC has a long history of being accountable to industry over the desires of communities and individuals.

## FCC Told by DC Court to Reevaluate Safety Standards

On August 13, 2021 a joint lawsuit was won by petitioners against the Federal Communications Commission (FCC) for failure to protect human health and the environment by dismissing scientific evidence of harm from wireless radiation. The Petitioners challenged the FCC's refusal

to reevaluate and update their 24-year-old radiofrequency (RF) safety guidelines for existing and new telecommunications technologies. The DC Circuit Court of Appeals ruled that the majority of the RF radiation standards established by the FCC did not use "reasoned decision-making" (they did not go by the science) and thus the standards were considered by the court to have been set in an "arbitrary and capricious" manner. This was an extremely high bar for the Plaintiffs to reach. The Circuit Court of Appeals rarely admonishes a federal agency or commission in this way. The DC Circuit Court of Appeals returned this decision back to the FCC and ordered the FCC to re-examine its standards for wireless radiation exposure and provide a review of wireless harms that is compliant with the law for non-cancer harms.

The Court Decision stated, "The National Environmental Policy Act ("NEPA") and it's implementing regulations require federal agencies to "establish procedures to account for the environmental effects of [their] proposed actions." And "To fulfill its obligations under NEPA, the Commission has promulgated guidelines for human exposure to RF radiation…The Commission last updated its limits for RF exposure in 1996… The ANSI and IEEE developed limits are designed to protect against "thermal effects" of exposure to RF radiation, but not "non-thermal" effects. In March 2013, the Commission issued a notice of inquiry regarding the adequacy of its 1996 guidelines in response to changes in the ubiquity of wireless devices and in scientific standards and research since 1996. In December 2019, the Commission issued a final order resolving its 2013 notice of inquiry by declining to undertake any of the changes contemplated in the notice of inquiry. Petitioners challenge the 2019 final order under NEPA and the Administrative Procedure Act ("APA").

## 5G: A Manufactured Need by Industry

Reports indicate that the telecommunications industry has largely manufactured a "need" for expanding wireless technology in cities, while halting projects for safer fiberoptic broadband. Note a 2020 European Parliament report, **5G: State of Play in Europe, USA and Asia. In Depth Analysis,** suggests 5G is a manufactured need. "*As 5G is driven by the telecoms supply industry, and its long tail of component manufacturers, a major campaign is under way to convince governments that the economy and jobs will be strongly stimulated by 5G deployment."*

In my opinion, from all the research I have done, it appears the telecommunications industry has influenced laws to prevent health or environmental effects from being considered in the placement of cell towers (See FCC Captured Agency). They knew of the harm in early studies done by Dr. George Carlo in the 1990's but suppressed the data so they could move forward. That is well documented in Dr. Carlo's book, "Cell phones: Invisible Hazards in The Wireless Age".
A blizzard of robust science has appeared now to show biological and health impacts of wireless technology, but it is still denied, and the basis for genuinely safe RF radiation guidelines is flawed. An exponential growth in cell towers is now being played out with cities being left on their own to figure out how to regulate these towers locally. Industry places a heavy hand and complex laws on local policy makers who must navigate these complex FCC policies to prevent legal action.

## Board of Health in Pittsfield Massachusetts Orders Verizon to Cease and Desist

For the first time in the U.S. a Board of Health has issued a cease and desist order to Verizon to remove or shut off a cell tower after 17 people in a neighborhood reported they became ill after the Verizon cell tower was turned on. Courtney Gilardi and her 2 children as well as residents living near the cell tower, reported experiencing a constellation of symptoms including stabbing headaches, nausea, vomiting, dizziness, "buzzing in the head", and insomnia so severe her family had to move to the next town and into a house with no heat and no hot water to escape the sickness. Other neighbors drove an hour away to sleep at a relative's house or slept in their cars away from the tower. These are classic symptoms of electromagnetic illness experienced in firefighters and military personnel working on radar and well documented by NASA, the Air Force and other military agencies as well as the "Havana Syndrome". These symptoms were also seen in Japan after 2 cell towers were turned on and when the tower was removed the resident's symptoms largely resolved.

## Apple stops 5G Phone MMW: Is This the Death of 5G Millimeter Wavelengths?

You are probably aware that Verizon and AT&T built special hotspots in many cities in the U.S. to house 5G high band millimeter wavelengths that were to revolutionize wireless with ultrafast speeds. These small wavelengths the size of bees have been put into some community small cells which need to be about 1000 feet apart without obstruction to function properly. Apple, who already has some 5G MMW phones, just announced that it is not building any millimeter wave spectrum antennas in its next generation SE iphones. With 4G LTE low and mid band wavelengths they apparently do not need the millimeter 5G bandwidth. The article notes, "It's not a surprise that Apple is dropping the spectrum from its phones. It costs chip space and power for every additional spectrum that is supported by a cellphone. Cell manufacturers care more about long battery life than they do about a technology that never made it out of the downtowns of a few major cities."

**FCC Limits: A False Sense of Security**

We are told by the FCC that wireless radiation and cell towers are safe within current safety guidelines, or that we do not really know if there is harm or that the research is inconclusive or that it is not ionizing (like x-rays) so it cannot hurt us. This is the same dismissive and doubt creating language used by the tobacco industry and a host of other chemical companies to protect their toxic products, thus profits. The research shows that we do know, beyond a doubt, that wireless radiation is harmful to all living systems below the current safety standards. The most obvious evidence is that more and more children and adults are reporting symptoms of electrosensitivity (EHS) in the presence of wireless radiation when they live in a home near a cell tower, or use a cell phone, or in schools where wireless devices and cell towers are increasing.

Please use your authority and wisdom to keep this ordinance strong. Take more time if you need to in order for you to sort this out and be sure of your decision. Remember that you all live in Los Altos as well so you are protecting you and your families and the next generation as well.

Sincerely,

Cindy Russell, MD

**Attached- Malibu Ordinances**

## References


- Pearce (2019**) 500 Meter buffer recommended around schools, hospitals and homes. "Limiting liability with positioning to minimize negative health effects of cellular phone towers."** (2019) Pearce M. Environmental Research, Nov 2019; https://www.sciencedirect.com/science/article/abs/pii/S0013935119306425
- Waldman-Selsam, C. (2004). **Bamberg Appeal, on behalf of 114 physicians**. Open Letter to Edmund Stoiber, Prime Minister, Germany, August 3. http://www.vws.org /documents/cell- project- documents/BambergAppeal.pdf
- Waldmann-Selsam C 2016. **Radiofrequency radiation injures trees around mobile phone base stations. (2016).** Waldmann-Selsam C et al. Science of the Total Environment. 572 (2016) 554-569. https://www.researchgate.net/publication/306435017_Radiofrequency_radiation_injures_trees_around_mobile_phone_base_stations
- **The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** https://www.degruyter.com/document/doi/10.1515/reveh-2016-0011/html
- **Researcher links diplomats' mystery illness to radiofrequency/microwave radiation.** Eureka alert. August 29, 2018. American Academy for the Advancement of Science. https://www.eurekalert.org/pub_releases/2018-08/uoc–rld082918.php
- **Diplomats in China report similar brain injuries as Americans in Cuba:** In 2016 and 2017, 25 Americans in the U.S. embassy in Cuba suffered serious, unexplained brain injuries. Now, at least 15 American officials in China are reporting similar symptoms. 60 Minutes reports. March 15, 2019. https://www.cbsnews.com/news/diplomats-in-china-report-similar-brain-injuries-as-americans-in-cuba-60-minutes/
- Swanson RL (2018) **Neurological Manifestations Among US Government Personnel Reporting Directional Audible and Sensory Phenomena in Havana, Cuba. (2018)** Swanson RL et al. JAMA. 2018 Mar 20;319(11):1125-1133. https://jamanetwork.com/journals/jama/fullarticle/2673168
- Levitt, Lai, Manville. (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 1. Rising ambient EMF levels in the environment.** Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 2 impacts: how species interact with natural and man-made EMF**. Rev Environ Health. 2021 Jul 8. https://pubmed.ncbi.nlm.nih.gov/34243228/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 3. Exposure standards, public policy, laws, and future directions.** Rev Environ Health. 2021 Sep 27. https://pubmed.ncbi.nlm.nih.gov/34563106/

- PanagopoulosDJ. (2013**) Electromagnetic Interaction Between Environmental Fields and Living Systems Determines Health and Well Being.** University of Athens, Department of Biology, Athens, Greece Radiation and Environmental Biophysics Research Centre, Athens, Greece. Electromagnetic Fields, Nova
- **MOEF Report on Possible Impacts of Communication Cell Towers on Wildlife Including Birds and Bees. (2010)** The Ministry of Environment and Forest. Report on Possible Impacts of Communication Towers on Wildlife Including Birds and Bees. (2010) Ministry of the Environment and Forests (MOEF) India. https://ecfsapi.fcc.gov/file/7520958381.pdf
- Sciences. http://www.wendywalksfores.com/uploads/1/3/9/0/13908728/panagopoulos-nova-2013-emfs-chapter-1.pdf
- **SwissRe Insurance-** Sonar 2019: New emerging risk insights. https://www.swissre.com/institute/research/sonar/sonar2019.html
- **Landmark Lawsuit Filed Against FCC for Failing to Reevaluate 5G and Wireless Safety.** Sept 23, 2020. PST. https://mdsafetech.org/2020/09/23/landmark-lawsuit-filed-against-fcc-for-failing-to-reevaluate-5g-and-wireless-safety/
- **Final Report on Commission to Study the Environmental and Health Effects of Evolving 5G Technology.** State of New Hampshire, General Court. Nov 1, 2020. http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf
- **We Have No Reason to Believe 5G Is Safe.**The technology is coming, but contrary to what some people say, there could be health risks. (2019) Scientific American. Joel M. Moskowitz. Oct 17, 2019. https://blogs.scientificamerican.com/observations/we-have-no-reason-to-believe-5g-is-safe/
- **5G wireless telecommunications expansion: Public health and environmental implications. (2018) Russell CL**. Environ Res. 2018 Apr 11. https://www.ncbi.nlm.nih.gov/pubmed/29655646. or at https://ecfsapi.fcc.gov/file/10913927726988/5%20G%20wireless%20telecommunications%20expansion%3A%20Public%20health%20and%20environmental%20implications.pdf
- **Firefighters Fighting Fires and Now Cell Towers-** https://mdsafetech.org/2019/09/28/firefighters-fighting-fires-and-now-cell-towers/
- **5G: State of Play in Europe, USA and Asia. In Depth Analysis, European Parliament.** https://www.europarl.europa.eu/RegData/etudes/IDAN/2019/631060/IPOL_IDA(2019)631060_EN.pdf
- **Apple ditches mmWave 5G with newest iPhone.** https://www.lightreading.com/5g/apple-ditches-mmwave-5g-with-newest-iphone/d/d-id/775901

| | |
|---|---|
| **From:** | Susan Foster |
| **To:** | Public Comment |
| **Date:** | Tuesday, April 12, 2022 1:54:33 PM |
| **Attachments:** | Electric Fire Safety Protocol-Malibu Res. 21-17 041122.pdf |

**I am submitting my letter for comment on the proposed small cell ordinance for Los Altos.**

**I am a Fire and Utility consultant and have written the fire safety portions of the Encinitas Ordinance and the Malibu ordinance/resolution.**

**I am submitting content from Malibu that would be helpful to Los Altos from a safety setback perspective.**

**I will be speaking this evening. Thank you in advance for the opportunity.**

SUSAN FOSTER
**Medical Writer**
**Fire & Utility Consultant**
**PO Box 1444**
**Lyons, CO 80540**
[redacted]

*Susan Foster*

PO Box 1444
Lyons, CO 80540
[redacted]

April 11, 2022

To whom it may concern:

Almost exactly one year ago to the day the Malibu City Council unanimously passed a fire safety protocol I wrote in collaboration with Tony Simmons, PE, a California licensed professional engineer. Our insurance and fire safety language is contained in Resolution 21-17.

The insurance and fire safety elements of Res. 21-17 are intended to be brought over to the small cell ordinance which is currently in Urgency Ordinance form. For example, here is our insurance language from Res. 21-17 [Page 14 of 27]:

> 25. Permittee shall obtain and maintain throughout the term of the permit commercial general liability insurance with a limit of five million dollars ($5,000,000) per occurrence for bodily injury and property damage and six million dollars ($6,000,000) general aggregate including premises operations, contractual liability, personal injury, and products completed operations. The relevant policy(ies) shall name the City, its elected/appointed officials, commission members, officers, representatives, agents, and employees as additional insureds. A true and correct copy of the policy of insurance shall constitute proof of insurance required by this Subsection. Permittee shall use its best efforts to provide thirty (30) days' prior notice to the City of to the cancellation or material modification of any applicable insurance policy. Failure to maintain insurance consistent with this Condition shall automatically void the permit, and the permittee shall immediately deenergize and remove the facility from operation. The policy shall not have a pollution or other exclusion which excludes injuries or damages from EMF/RF exposures.

Here is some of our fire safety language [Page 8 of 28; also passed unanimously for the Encinitas small cell ordinance and predicated on the Sebastopol small cell ordinance which had been previously passed]:

> M. Fire Safety Standards. All wireless facilities designs shall include: 1. a power shut off, such as by means of rapid entry Knox or similar type systems shall be installed; 2. surge protection devices capable of mitigating a direct or partial direct lightning discharge; and 3. surge protection devices capable of mitigating significant electrical disturbances that may enter the facility via conductive cables.

Here is Malibu's protocol for guarding against electrical fires within cell towers, frequently referred to as the Electric Fire Safety Protocol:

> Resolution No. 21-17; Page 23 of 27
>
> **Electrical and Structural Safety Information.**
>
> The following engineering documents prepared under the responsible charge of and sealed by a California licensed Professional Engineer must be included in the application:
>
> a. A short circuit and coordination study ("SCCS") calculated pursuant to the IEEE 551-2006: Recommended Practice for Calculating AC Short-Circuit Currents in Industrial and Commercial Power Systems or the latest version of that standard. The study must demonstrate the protection devices will ensure the equipment enclosure will not be breached. The SCCS must include analysis of Voltage Transient Surges due to contact of conductors of different voltages;
>
> b. A one-line diagram of the electrical system;
>
> c. Voltage Drop & Load Flow Study;
>
> d. Load Calculation; e. Panel Directories;
>
> f. A plot plan showing the location of the mounting structure including address, or structure designation, or GPS location on the front sheet;
>
> g. A plot plan showing the location of the service disconnecting means; and
>
> h. An elevation drawing of the equipment and the service disconnecting means.

What we are saying to the carriers is that they are welcome to come to Malibu and apply, but with their applications they must attach items "a. through h." Each item must be signed and sealed by a professional engineer with the telecommunication carrier indicating certain tests have been run and diagrams are accurate and deemed fire safe for life, health and property according to their professional opinion.

Malibu has burned twice as a result of telecommunications fires in the last 15 years, first with the Malibu Canyon Fire in 2007 and in November 2018, the $6 billion Woolsey Fire which destroyed over 400 homes in Malibu. We know at least one of the two ignition points for the Woolsey Fire was a result of a telecommunications lashing wire that came loose. Because the case is still under criminal investigation, we do not know which carrier was involved. But the four carriers involved in overloading utility poles in Malibu in 2007 were all fined by the CPUC and all were accused, along with the utility, of attempting to mislead fire investigators from the CPUC. Thus, fire prevention was not their priority and we do not believe it is now. That is why we are insisting on electrical engineering rigor <u>at the application stage</u> for all towers coming into Malibu.

Res. 21-17 currently applies only to macro towers but is soon to be officially introduced for inclusion in the small cell ordinance. We had been advised by Staff to wait for approval by Coastal Commission before going through this final and official step. However, as cities throughout California know, the Coastal Commission has called for all cities and counties to

reduce utility fires. Telecommunications is a utility so this is an urgent matter. We are urging Malibu to make this an agenda priority immediately, particularly since fire season is upon us.

Res. 21-17 is effective and binding because the Ordinance 484 adopts it by reference. The Electric Fire Safety Protocol is included on page 23 of 27 for your reference. Please see the attached signed and executed Res. 21-17. The fact that it is not on the Malibu City website is an oversight that is being corrected.

I have received calls from multiple cities wanting to and hoping to use our Electric Fire Safety Protocol. We encourage other cities and counties to use this protocol for all your towers but particularly including small cells because so many of them are brought so close to your residents. It does not promise to eliminate cell tower fires but it without doubt will catch some of the engineering flaws that have created electrical fires in the past.

I would further urge significant setbacks from residential, daycare and schools and other densely populated areas. All cell tower fires are electrical fires and they cannot be fought until the power is cut. That can take up to 60 minutes. A representative of PG&E or relevant utility must arrive on scene to inform your firefighters that the power has indeed been cut. Only then can the fire be attacked. Imagine this scenario amidst Santa Ana conditions. Cell towers and telecommunications equipment present a fire danger and people need time to escape.

I would further urge city councils throughout California to understand that new cell towers are not needed for calling 911. The CPUC has already implemented their Resiliency Plan to back up all existing cell towers with 72 hours of coverage even when the power has been cut.

Respectfully submitted,

[redacted]

SUSAN FOSTER
Fire and Utility Consultant

Attached: Resolution 21-17, Executed Copy

| | |
|---|---|
| **From:** | ana pareja |
| **To:** | Public Comment; City Council |
| **Date:** | Tuesday, April 12, 2022 2:09:44 PM |
| **Attachments:** | Los Altos Letter Final 4 11 2022 PDF(1).pdf |

Dear Los Altos City Council,

I'm writing you to let you know that I strongly support Dr. Cindy Russell's attached letter regarding the Los Altos Wireless Ordinance and ask that you include all of the requests that she has brought to the attention of the Council and place them in the updated ordinance.

Sincerely,

Ana Pareja

To: Los Altos City Council
council@losaltosca.gov
aenander@losaltosca.gov
smeadows@losaltosca.gov
nfligor@losaltosca.gov
lleeeng@losaltosca.gov
jweinberg@losaltosca.gov

From: Cindy Russell, MD

Re: Revisions to 2019 Los Altos Ordinance to Regulate Small Wireless Facilities

Date April 11, 2022

Dear Los Altos City Council:
I am writing today to strongly urge you to reinstate (with legally appropriate revisions) several of the major aspects of the original 2019 Small Cell Wireless Ordinance that diminish blight and protect the beauty, character and health of your lovely Silicon Valley community. In addition, after reading the new 2022 proposed Wireless Facilities Ordinance it appears that some important provisions may have been missed in crafting a new Small Cell ordinance which are critical for the safety of the residents and also reduce liability for the city. This includes several insurance provisions, minor modifications to existing facilities, permiting process, and more.

Encinitas and Malibu have passed ordinances which have elements that are protective but allow flexibility for cities and exceptions/waivers for the carriers. They remain uncontested.

- **Encinitas, CA-** Revised from 2019- Passed June 20, 2020 https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/Resolution%20No.%202020-38%20With%20Policy.pdf?ver=2020-07-13-192634-373
- **Malibu Resolution 21-17 –** Attached please find an executed copy of Res. 21-17 is officially binding because Ordinance 484 adopts it by reference.

I will summarize my ask of the Los Altos City Council with these key points below, followed by backup for those points with additional pertinent legal information which does impact the issue of health/science, as per a court ruling from the second highest court in the land on August 13, 2021, a ruling that referred to the existing RF radiation regulatory limits as "arbitrary and capricious". Arbitrary and capricious means that the law and/or the facts were knowingly disregarded. That is a high bar indeed and the plaintiffs reached that bar. It behooves us to consider what is going on in the courts and pass ordinance language accordingly:

**PLEASE PAUSE:** There are resolutions as mentioned above that have successfully balanced the unique needs of communities with the rights of the telecommunications industry. The new resolution does not have to be passed Tuesday night. Some reflection on the best that Encinitas and Malibu have to offer may benefit all of us in the long run.

# Key Points

1. TITLE OF ORDINANCE: Clarification if this applies to Small Cell or Macro Cells; macro towers must go through conditional use permits

2. LOCATION STANDARDS – PREFERRED SITES

3. WAIVERS FOR STANDARDS

4. FIRE SAFETY

5. APPEALS PROCESS

Thank you for passing the 2019 Wireless Facilities Telecommunications Ordinance. The original wireless facilities ordinance for Los Altos took into consideration public concerns, was well thought out and protects the city of Los Altos from poorly designed and poorly placed cell towers.

I understand, however, that there is a lawsuit against the City for Los Altos from Verizon and AT&T claiming that the 2019 ordinance as written "effectively prohibits" wireless communications. You are commended for taking on this task of revising the ordinance in response. Some of the 2022 proposed changes are good and clarify the permitting process for carriers to avoid lawsuits and provide for "personal wireless services", however, I believe there are some gaps in protections and flexibility for the city that I would like to point out which could be remedied in addition to some clarifications.

It is important to consider adding the provisions below. As you note with the FCC lawsuit to reevaluation the 20 year-old FCC safety standards, the courts have judged that the FCC did not take into account several aspects of human health and environmental effects in setting their standards. We do not know what the future holds for the federal Telecommunications Act of 1996 or state law. The city of Los Altos needs to be prepared to alter its ordinance in case there is a change in the law in the future.

**Representative Anna Eshoo Supports Local Control for Cell Towers**
The 2018 FCC small cell order that fast tracks deployment of small cells in order to "cut the red tape" has prompted cities around the country, like Los Altos, to write these emergency ordinances and now revise them. The FCC Declaratory ruling has been considered an overreach of the Telecom Industry which dominates the FCC (FCC: Captured Agency, N. Alster), overriding the basic rights of cities to have local control. This was recognized by our local representative Anna Eshoo who in 2019 introduced HR530 to protect the rights of states and government by deeming that the *"Federal Communications Commission's Declaratory Ruling in ''Third Report and Order and Declaratory Ruling'' (FCC 18-111) shall have no force or effect."* This bill had 52 co-sponsors. Senator Feinstein introduced in 2019 a companion federal bill SB 2012 to block the FCC order. Neither moved.

Representative Eshoo also sent a letter to the FCC in 2020 to ask that the vote on the FCC order be delayed stating, ***"we worry that if this Declaratory Ruling does not benefit from meaningful input from local governments, the result could undermine municipalities' ability to balance their responsibilities to public safety and community design with their desire to ensure access to affordable wireless networks and the next generation services."***

Please fight for the rights of your residents and government as our local representatives have done. You have more power than you know. Please exercise it.

# Important Provisions to Add

## 1) Title of Ordinance

To clarify whether the ordinance title should apply only to Small Wireless Facilities or if this is for both Small Cell and Macro Towers it may be helpful to rename the ordinance to its original title and keep the descriptions separate within the ordinance. It is not clear to me in this rewrite. Small cell applications are different than for macro towers due to difference in structure of towers, power emitted and location in right of way as per FCC ruling.

(Section 14.82.050) See Encinitas Small Cell wireless Ordinance. Resolution 2019- 91- REGULATING SMALL WIRELESS FACILITIES AND OTHER INFRASTRUCTURE DEPLOYMENTS IN THE PUBLIC RIGHTS-OF-WAY
https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/CC%20Policy%20C035.pdf

2) **Location Standards- Preferred Sites**- Despite what the telecommunications industry says, you as a city can still have preferred sites and less preferred sites in your ordinance. (Encinitas and Malibu Ordinances) You can add an exception clause or waiver process to allow for placement of a cell tower if the carrier proves it is necessary (and other locations are not technically feasible) for "Personal Wireless Services" under the 1996 Telecom Act of 1996 and so that this does not constitute an "effective prohibition".
*** Special Zones can be designated for schools, day care centers, residential dwellings, protected habitat or trees, parks, etc.**
* Keep the 1000 foot distance between towers, **not 200 feet.** Explanation below.

Here are examples of Location Standards in the Encinitas Small Cell Wireless Ordinance passed in June, 2020 and in Malibu April 2021, which to date are uncontested.

# Encinitas Ordinance Passed June 10, 2020

## SECTION 10. LOCATION STANDARDS

1. (a) **Restricted Site Locations.** All of the following locations will be deemed "Restricted Site Locations" that require an exception pursuant to SECTION 13 of this Policy:

    1. (1) any location within a residential zone;
    2. (2) any location within 500 feet from a residential dwelling unit;
    3. (3) any location within 500 feet from a daycare facility or primary school;
    4. (4) any location within a Very High Fire Hazard Severity Zone; and
    5. (5) any location within the Ecological Resource/Open Space/Park Zone.

    (b) **Location Preferences.** To better assist applicants and decision makers understand and respond to the community's aesthetic preferences and values, this subsection sets out listed preferences for locations to be used in connection with small wireless facilities in an ordered hierarchy. Applications that involve lesser-preferred locations may be approved so long as the applicant demonstrates by clear and convincing evidence in the written record that: (1) any more preferred locations or structures within 500 feet from the proposed site would be technically infeasible; and (2) if the proposed site or the most- preferred location within 500 feet from the proposed site is within a Restricted Site Location, the applicant qualifies for an exception pursuant to SECTION 13 of this Policy. The City prefers small cells in the public rights-of-way to be installed in locations, ordered from most preferred to least preferred, as follows:

    (1) locations within industrial zones, commercial zones, business parks or office professional zones on or along prime arterials;

    (2) locations within industrial zones, commercial zones, business parks or office professional zones on or along major arterials;

    (3) locations within industrial zones, commercial zones, business parks or office professional zones on or along collector roads;

    (4) locations within industrial zones, commercial zones, business parks or office professional zones on or along local streets;

    (5) any location within 500 feet from any residential zone;

    (6) locations within residential zones on or along prime arterials;

    (7) locations within residential zones on or along major arterials;

    (8) locations within residential zones on or along collector roads;

    (9) locations within residential zones on or along local streets;

(10) any location within 1,000 feet from an existing/proposed small wireless facility;

In the event that a proposed facility would be within 500 feet from two or more restricted site locations (as defined in Subsection 10(a)), and the proposed facility qualifies for an exception pursuant to SECTION 13 of this Policy, the technically feasible location furthest from all such restricted site locations will be deemed to be the most preferred alternative.

(c) **Encroachments Over Private Property.** No small cell antennas, accessory equipment or other improvements may encroach onto or over any private or other property outside the public rights-of-way without the property owner's express written consent.

## Malibu Wireless Ordinance Resolution 21-17 Standards Passed April 2021.

https://www.malibucity.org/DocumentCenter/View/27969/Ordinance-No-484

### Location Standards for All Facilities

The location standards for all wireless communications facilities, other than those that qualify as eligible facilities requests, are as follows:

1. No wireless telecommunication facility shall be located within five hundred (500) feet of any school, playground, or park unless a finding is made, based on technical evidence acceptable to the reviewing authority showing a clear need for the facility and that no technically feasible alternative site exists. Except for facilities installed on the same pole or tower as an existing wireless telecommunication facility, wireless telecommunication facilities located within any residential zone district shall not be located within one thousand (1,000) feet of any other wireless communications facility, except from those facilities placed on utility poles along Pacific Coast Highway, unless a waiver is granted.
2. All new freestanding wireless communications facilities and monopoles shall be set back a minimum distance of at least one hundred and twenty (120%) percent of the height of the facility or monopole from any property line abutting a residentially zoned property. This minimum setback is not subject to the waivers allowed under Section 7 of this Resolution.
3. Location preference for wireless communications facilities should be given to the following:
    1. Property designated non-residential (except for public open space and recreational vehicle park zoning districts), unless otherwise prohibited pursuant to this title.
    2. Facilities attached or sited adjacent to existing structures. Whenever possible, facilities shall be located on and/or inside existing structures. Appropriate types of existing structures may include, but are not limited to: buildings, water tanks, telephone poles and utility towers and poles, sign standards, light standards and roadway overpasses.
    3. Sites with minimum separation. Sites that are more than five hundred (500) feet from school, playgrounds, and parks.

4. Sites that are not highly visible from adjacent roadways.
5. Unless otherwise indicated in MMC Chapter 17.46 or these Standards, no wireless facility shall be installed on an exposed ridgeline unless the facility blends with the

surrounding existing natural and man-made environment and a finding is made that no other location is technically feasible.

6. The City expressly designates residential, public open space and recreational vehicle park zoning districts, parks and schools as the least appropriate possible locations, and the absolute last choices for siting.

## 3) Waivers for Standards

Malibu Wireless Facilities Ordinance 2021 has added a section on Waivers for Standards that clarifies the process and protects the city from liability.

**Resolution No. 21-17 Page 9**

1. A waiver of one or more of these Standards may be granted in the following circumstances:
    1. Pursuant to MMC Section 17.46.060(D), if an applicant demonstrates to the Planning Commission through clear and convincing evidence that denial of an application would, within the meaning of federal law, prohibit or effectively prohibit the provision of personal wireless services, or otherwise violate applicable laws or regulations;
    2. If an applicant demonstrates to the Planning Commission through clear and convincing evidence set forth in a feasibility study that compliance with a requirement of these Standards would be technically infeasible and the proposed wireless facility complies with the requirements of these Standards to the greatest extent technically feasible. For example, an exception to a requirement to conceal antennas in a shroud may be granted if shrouding is shown to be technically infeasible and an alternative concealment such as a colored film wrap is proposed; or
    3. If an applicant demonstrates to the Planning Commission with clear and convincing evidence that the particular engineering, design or location proposed involves an alternative that better meets the purposes of Chapter 17.46 and only minor non-compliance with a requirement of these design Standards and results in no increase in public visual impact to the community or provides other benefits. For example, an exception to the wireless facility location limitations may be granted when the applicant can demonstrate that the placement is less visible from viewsheds of residences or shielded by vegetation or existing infrastructure (such as barriers), or is less physically intrusive (for example, less impactful to tree roots or reduces noise). Among other factors, in deciding whether or not to grant an exception, the Planning Commission may consider the impact of expansions to the facility that the applicant would be entitled to make as of right if granted.
2. Waivers may only be requested at the time an application is initially submitted for a discretionary permit. The request must include both the specific provision(s) from which waiver is sought and the basis of the request, including all supporting evidence on which the applicant relies. Any request for waiver after the City has deemed an application

complete constitutes a material change to the proposed wireless facility and shall be considered a new application. A request for waiver from one or more

## 4) Fire Safety

**All electrical equipment including small cell towers are a fire risk. The fire cannot be put out in a conventional manner with firefighters blasting water on the fire. They have to wait until the power is shut off or electrocution will result.**

**Examples are**

- **San Diego tower that caught fire in a high school stadium- https://fox5sandiego.com/news/local-news/stadium-light-catches-fire-at-south-bay-high-school/**
- **The Malibu fire in 2007 due to pole overload.** CPUC finds Edison and 4 telecom carriers $51.5 million - https://www.latimes.com/local/lanow/la-me-ln-malibu-fire-settlements-approved-state-puc-20130919-story.html

Considering the increase in wildfires and the risk of earthquakes. Fire safety is a priority for citizens. **The Malibu Wireless Facilities Ordinance 2021 has language in the Fire Safety Standards that can be incorporated.** In the attached Executed Copy of Malibu Res. 21-17, please note fire language on pages 2, 3, 5, 8, 11, 12, and particularly beginning on page 23 with "Electrical and Structural Safety Information."

## 5) Appeals Process

Language for appeal is not in the ordinance
Applications.

A) Any person adversely affected by a decision of the Director pursuant to this Chapter may request an administrative hearing to appeal the Director's decision. In order to request a hearing, the person shall submit to the City Clerk in the manner directed in the Director's decision notice a fully completed request for administrative hearing form along with a full amount of the appeal fee set by the City Council (by way of check or money order). The request for administrative hearing shall be incomplete if it does not include the appeal fee in the full amount. … etc.

## Precaution is Warranted

We understand that, as per Section 704 of the 1996 Telecommunications Act, environmental concerns, and as courts have interpreted these it includes heath impacts, cannot be a factor in denial of cell towers but we are early in the game.
Public health and ecosystem health are still important issues with new 5G systems untested for long term or short term safety for either human health or environmental health. 5G systems with a complex mix of low, medium and high frequencies (thus the need for macro and microcells) are very onerous to measure, requiring very expensive complex equipment that is very difficult

for engineers to accomplish let alone city facility engineers. Precaution in placement is paramount in this discussion. Once cell towers are placed there is no going back and you just wait for people to experience symptoms or develop cancer or a neurologic condition that you will not be able to sort out from the common toxic exposures we all encounter on a daily basis.

Elon Musk tells us that 5G millimeter wave systems are not needed for autonomous cars. 5G millimeter wavelengths are also not required for "personal wireless services". For the later this technology can be effectively replaced with safer and more secure fiberoptic networks and current wireless technologies. I will explain why health matters.

## Health Matters

I am a practicing physician who has studied the health impacts of environmental toxins through our local County Medical Association and the California Medical Association for over 25 years. I began studying the health impacts of wireless radiation when I learned of a proposal to place a cell tower on my daughter's school.

After 10 years of research into the literature and talking to a variety of people affected by cell towers and wireless radiation I, like many others in the medical and scientific community, have come to the conclusion that wireless radiation is a pollutant just like lead or pesticides or mercury or toxic industrial waste. The mechanisms are similar - oxidation, the effects are broad on all living organisms and people are often unaware they are exposed to the toxin - unless they are "sensitive". Wireless radiation causes oxidative stress on organisms and stem cells, and at low levels of radiation. These low levels cause a slow decline in physiologic processes, and for those who have become sensitive- an immediate reaction.

## Antioxidants and Health

As we now know small amounts of toxins can cause harm in certain windows of development thus children are more vulnerable. We also know effects are cumulative. People vary in their vulnerability due to age, genetics and other toxic exposures. Not all people react the same. Our health, wellness and aging are determined by oxidation levels in our tissues that injure our DNA, proteins and lipids, thus antioxidants in foods have been shown to block oxidation, neutralize cellular injury and promote health. This is well established in the nutrition literature. The literature also demonstrates that taking antioxidants (Vitamin E, zinc and melatonin) protects the cell from oxidation injury from wireless radiation. Oxidative stress plays a major part in the development of chronic, degenerative and inflammatory illnesses such as cancer, autoimmune disorders, aging, cataracts, rheumatoid arthritis, cardiovascular and neurodegenerative diseases, as well as some acute pathologies (trauma, stroke**). It is well established that wireless radiation at non-thermal levels causes oxidative stress**. Effects of this are cumulative on our DNA, lipids and cellular membranes.

## We Evolved in a Low Electromagnetic Environment

The natural environment of the Earth is electromagnetic. We have terrestrial electric and magnetic fields, radiation from the sun and cosmic microwaves. All living things evolved in

harmony with the Earth's natural but very very low-level electromagnetic rhythms. Birds, bees and mammals have magnetite in their bodies and brains that use the Earth's magnetic field for the delicate tasks of navigation and foraging. Our human nervous system, heart, reproductive and endocrine systems rely on minute electromagnetic signals for complex functions. Manmade electromagnetic fields (EMF) emitted by our modern technology can distort our bodies electric currents, delicate cell membranes and cause broad dysfunction. This can be with long term or sometimes short exposures with higher power and different pulsations. Science has shown us that organisms adapt to constant electromagnetic fields found in nature much easier than artificial pulsed radiation that is emitted from cell towers and wireless devices. It makes perfect sense that wireless radiation can be harmful to living organisms even it does not knock an electron out of its orbit.

## Wildlife

You need to consider the unique ecosystem which surrounds this lovely town. Science has shown us that levels of artificial electromagnetic radiation we are increasingly exposed to is harming not only humans but the sensitive environment that we tend to ignore but depend upon for our sustenance and mental health. https://mdsafetech.org/environmental-and-wildlife-effects/

## New Review on Wildlife and wireless Radiofrequency Radiation

The most comprehensive 3 part peer reviewed article by Levitt, Lai and Manville (2021) provides an updated, thorough and well referenced overview of RFR and effects on all wildlife, revealing a disturbing picture of the future if we continue to expand wireless in our homes, communities and for the commercialization of space.

The authors state, *"But is there a larger environmental downside to rising ambient EMF exposures — particularly RFR — from popular mobile communication devices, WiFi antennas, and all accompanying infrastructure that is being overlooked by environmentalists, researchers, and government regulators alike. We may be missing critical physiological effects across species based on obsolete assumptions about low-level far-field exposures being too weak to adversely affect living tissue. We have yet to take into consideration the unique physiologies of other species, or how they use the environment in ways that humans do not, when we assume that the unfettered use of EMF/RFR can continue unabated and be allowed to grow indefinitely*." **Effects of non-ionizing electromagnetic fields on flora and fauna, part 1.** Rising ambient EMF levels in the environment. (2021) Levitt BB et al. Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/

**MOEF Report on Wildlife**
The Inter-Ministerial Committee (IMC) of expert scientists reviewed the literature of the effects of RF-EMF radiations on wildlife, humans and the biosphere. In their 2010 MOEF Report they found that out of the 919 research papers collected on birds, bees, plants, other animals, and humans, 593 showed impacts, 180 showed no impacts, and 196 were inconclusive studies. All organisms had effects.

**Human Effects–** 62% showed effects, 13% no effect and 25% inconclusive **Plant Effects–** 87% showed effects and 13% were inconclusive

**Wildlife Effects-** 62% showed effects, 4% no effect and 36% inconclusive **Bee Effects**—85% showed effects and 15% no effect

**Bird Effects**- 77% showed effects, 10% no effect and 13% inconclusive **Current Standards are Scientifically Out of Date**

## UNESCO World Heritage Wildlife Area Species Disappearing

An abundance of peer reviewed literature demonstrates adverse impacts to the environment with declines in insect, bird and wildlife populations in cities and where cell towers are placed. This spells disaster for biodiversity, fragile wildlife areas, critical pollinators and agriculture, especially with additive effects of pesticides, toxins and loss of habitat. A report on Unesco's Mt. Nardia World Heritage Park documents this slow decline in populations of species after cell towers were placed. Unesco Report on Disappearance of Species from Mt. Nardia Park World Heritage Area 2000-2015 with Increased Expansion of Telecommunications Antenna. Ethno-Botonist Mark Broomhall. UNESCO Report on Disappearance of Species from Mt. Nardia with Increased EMR 2000-2015

## Cell Tower Health Effects

Current standards are based on short term thermal exposures and discount the abundant peer reviewed literature on harm from low level, non -thermal effects. It is clear that the limits for radiofrequency radiation are set too high in the U.S. and Canada. These limits are 100 times higher than that of Italy and Russia, who set their standards based on methodical research on immunologic, neurologic and biologic effects of low-level radiation fields. Current U.S. limits are up to 1,000 microwatts/cm2 with symptoms seen at levels of 0.005 microwatts /cm2.

## Physicians in Germany ask for Health Investigation of Cell Towers in 2005

An open letter from Dr. Cornelia Waldmann-Selsam was sent to the German State Chancellor, Edmund Stoiber, on behalf of 114 physicians (Bamberger Appeal) asking for an investigation into the newly reported adverse health symptoms of 356 residents who lived near cell towers in Oberfranken, Germany. Dr. Waldmann-Selsam noted, "*Many humans get sick from emissions far below the recommended limit values, which consider only thermal effects, and we have a sickness picture with characteristic symptom combinations, which are new to us physicians," The list of symptoms were, " Sleep disturbances, tiredness, concentration impairment, forgetfulness, problem with finding words, depressive tendencies, tinnitus, sudden loss of hearing, hearing loss, giddiness, nose bleeds, visual disturbances, frequent infections, sinusitis, joint and limb pains, nerve and soft tissue pains, feeling of numbness, heart rhythm disturbances,*

*increased blood pressure , hormonal disturbances, night-time sweat, nausea." Resident noted almost immediate improvement when moving away*."

Dr. Waldmann-Selsam goes on to say, "*physicians were able to prove, by re-testing the patients, the normalization of blood pressure, heart rhythm, hormone disturbances, visual disturbances, neurological symptoms, blood picture*,". She called this an emergency medical situation and requested an official health investigation. http://www.next-up.org/pdf/Letter_to_Edmund_Stoiber.pdf

## Cell Tower Effects on Cognition and Learning

The majority of studies, which have been done internationally, have shown an increase in neurologic symptoms in a percentage of residents living near cell towers. Symptoms vary with the distance from the cell tower. Symptoms include insomnia, headache, heart palpitations, dizziness, poor concentration, and fatigue. A study in Japan (Shinjyo 2014) showed a decrease in symptoms when the cell tower was removed. There is also a well done study showing blood abnormalities in those living nearest to cell towers (Zothansiama 2017). DNA and lipid abnormalities were seen along with reduction in internal antioxidants which provide protection from pollutants.

Moreover, a recent study conducted over a 2 year period looked at effects of cell towers near two schools by Meo et al (2018) and clearly demonstrated cognitive dysfunction in students closest to the higher power cell tower.

## Firefighters Fighting Fires and Now Cell Towers

After noticing that many of the firefighters where developing neurologic symptoms when first responder cell towers were placed on the fire stations the International Association of Firefighters studied the matter and passed a resolution in 2004 asking that cell towers not be placed in proximity to fire stations. In AB 537 (Quirk), signed into law by Gov. Newsom on October 4, 2021, the firefighters achieved the first ever health/readiness exemption in the world.

**Every fire station in California is now exempt from having a 5G tower on their station.** This movement began when cell towers were initially targeted for fire stations because of their location and the revenue received by the cities. Many firefighters developed symptoms including headaches, fatigue, memory impairment and insomnia within a week of the installation of the towers. An exemption was inserted in California bills on cell towers. AB 57 (Quirk 2015) has an exemption on the grounds of health effects. AB 537 (Quirk 2021) also has this exemption and reads, "*Due to the unique duties and infrastructure requirements for the swift and effective deployment of firefighters, this section does not apply to a collocation or siting application for a wireless telecommunications facility where the project is proposed for placement on fire department facilities."* SB 649 (Hueso, Quirk and Dodd 2018) also had a health exemption for firefighters and was vetoed by Governor Brown.

## 500 Meter (1640 ft) Buffer from Cell Tower Recommended

Cell tower health studies that show impacts from cell towers with symptoms within about 1500 feet of the cell towers. That is why Pearce et al (2019**) recommended a "500 Meter buffer around schools, hospitals and homes "Limiting liability with positioning to minimize negative health effects of cellular phone towers."**

## Cancer and Cell Towers

3 Studies investigated the rates of cancer and cell towers looking at the distance from cell towers and the incidence of cancer. They found the rate of cancer incidence increased significantly in those living within about 350 -400 meters (around 1000 feet) to the cell tower.

Dode 2011 performed a 10 year study (1996-2006) examining the distance from cell towers and cancer clusters. He and his colleagues found a highly significant increase in cancers in those living within 500 meters of the cell tower. They noted "The largest density power was 40.78 μW/cm2, and the smallest was 0.04 μW/cm2." The current guidelines are about 1000 μW/cm2. The authors conclude "Measured values stay below Brazilian Federal Law limits that are the same of ICNIRP. The human exposure pattern guidelines are inadequate. More restrictive limits must be adopted urgently."

Wolf and Wolf 2004 investigated the rates of cancer versus distance from cell towers in small towns in Israel. He found the rate of cancer incidence was 129 cases per 10,000 persons per year in those living within 350 meters of a cell tower versus a rate of 16-31/10,000 in those living greater than 350 meters from the cell tower.

**Eger (2004)** showed an increase in the development of new cancer cases within a 10 year period if residents lived within 400 meters of a cell tower. Their results revealed that within 5 years of operation of a transmitting station the relative risk of cancer development tripled in residents near the cell towers compared to residents outside the area.

**Insurance Has an Exclusion for Radiofrequency Radiation as an Emerging Risk** Insurance companies consider wireless radiation to be similar to asbestos in long term health impacts and do not provide coverage from harm for RF health effects. The cities are left with that liability unless they can provide insurance.
In a 2019 report, **New Emerging Risk Insights**, by Swiss RE Insurance Company, the second largest reinsurance company in the world, **5G is listed as an emerging concern** in the high risk category within 3 years. Included in the high-risk trends are artificial intelligence and the existential threats of climate change. "*The top five emerging risks in our SONAR 2019 report are digital technology's clash with legacy hardware, potential threats from the spread of 5G mobile networks, increasingly limited fiscal and monetary flexibility by central banks, genetic testing's implications on life insurers, and the impact of climate change on the life and health sector.*" https://www.swissre.com/institute/research/sonar/sonar2019.html

## National Academy of Sciences Report on the Havana Syndrome and Harm from RFR

A recent report by the National Academy of Sciences concluded that the "sonic attacks" on diplomats in Cuba and China were most likely due to pulsed radiofrequency from directed energy weapons. They had symptoms similar to those who live near cell towers (headache, nausea, insomnia, dizziness, memory loss, heart palpitations, depression). Dr. Beatrice Golomb wrote the most extensive report to date on this subject linking these mystery "directed energy attacks" to pulsed microwaves similar to the wireless devices we use daily. In the case of these high powered beams there was documented injury to brain networks found by the University of Pittsburg physicians who studied the diplomats. Dr Golomb highlights that **the strength of the health effects are related to the peak power not the average power. The pulse makes the poison.**

**The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** is a comprehensive guide written by many scientists and physicians in Europe who are part of the European Academy for Environmental Medicine (EUROPAEM) – EMF working group who have recognized and treated those with electrosensitivity for many years. This is a thorough, well researched and well-referenced scientific paper that is based on the 2012 Austrian Medical Association **Guidelines for the Diagnosis and Treatment of EMF Illness**. A questionnaire from their group is included in the attachments.

## New Hampshire 5G Commission Finds Radiofrequency Radiation Problematic

The first Commission formed in the United States to study the environmental and health effects of 5G technology released their comprehensive final report November 1, 2020. The Commission to Study the Environmental and Health Effects of Evolving 5G Technology was mandated by HB 522 passed by the state legislature in New Hampshire. Their final report included 15 recommendations addressing the need for public education about wireless hazards, RF health studies, RF measurements, cell antenna setbacks, fiberoptic rather than wireless deployment, commercial warning signs and wildlife protection. After hearing extensive testimony in a series of 13 meetings over the course of a year and reviewing an abundance of research, the Commission highlighted the lack of a single definition for 5G, **insufficient evidence of safety for 5$^{th}$ generation technology**, a concern that safety standards for wireless technologies have not been updated with the latest science and that 5G is largely a marketing concept. They also expressed concern that the FCC has a long history of being accountable to industry over the desires of communities and individuals.

## FCC Told by DC Court to Reevaluate Safety Standards

On August 13, 2021 a joint lawsuit was won by petitioners against the Federal Communications Commission (FCC) for failure to protect human health and the environment by dismissing scientific evidence of harm from wireless radiation. The Petitioners challenged the FCC's refusal

to reevaluate and update their 24-year-old radiofrequency (RF) safety guidelines for existing and new telecommunications technologies. The DC Circuit Court of Appeals ruled that the majority of the RF radiation standards established by the FCC did not use "reasoned decision-making" (they did not go by the science) and thus the standards were considered by the court to have been set in an "arbitrary and capricious" manner. This was an extremely high bar for the Plaintiffs to reach. The Circuit Court of Appeals rarely admonishes a federal agency or commission in this way. The DC Circuit Court of Appeals returned this decision back to the FCC and ordered the FCC to re-examine its standards for wireless radiation exposure and provide a review of wireless harms that is compliant with the law for non-cancer harms.

The Court Decision stated, "The National Environmental Policy Act ("NEPA") and it's implementing regulations require federal agencies to "establish procedures to account for the environmental effects of [their] proposed actions." And "To fulfill its obligations under NEPA, the Commission has promulgated guidelines for human exposure to RF radiation…The Commission last updated its limits for RF exposure in 1996… The ANSI and IEEE developed limits are designed to protect against "thermal effects" of exposure to RF radiation, but not "non-thermal" effects. In March 2013, the Commission issued a notice of inquiry regarding the adequacy of its 1996 guidelines in response to changes in the ubiquity of wireless devices and in scientific standards and research since 1996. In December 2019, the Commission issued a final order resolving its 2013 notice of inquiry by declining to undertake any of the changes contemplated in the notice of inquiry. Petitioners challenge the 2019 final order under NEPA and the Administrative Procedure Act ("APA").

## 5G: A Manufactured Need by Industry

Reports indicate that the telecommunications industry has largely manufactured a "need" for expanding wireless technology in cities, while halting projects for safer fiberoptic broadband. Note a 2020 European Parliament report, **5G: State of Play in Europe, USA and Asia. In Depth Analysis,** suggests 5G is a manufactured need. "*As 5G is driven by the telecoms supply industry, and its long tail of component manufacturers, a major campaign is under way to convince governments that the economy and jobs will be strongly stimulated by 5G deployment."*

In my opinion, from all the research I have done, it appears the telecommunications industry has influenced laws to prevent health or environmental effects from being considered in the placement of cell towers (See FCC Captured Agency). They knew of the harm in early studies done by Dr. George Carlo in the 1990's but suppressed the data so they could move forward. That is well documented in Dr. Carlo's book, "Cell phones: Invisible Hazards in The Wireless Age".
A blizzard of robust science has appeared now to show biological and health impacts of wireless technology, but it is still denied, and the basis for genuinely safe RF radiation guidelines is flawed. An exponential growth in cell towers is now being played out with cities being left on their own to figure out how to regulate these towers locally. Industry places a heavy hand and complex laws on local policy makers who must navigate these complex FCC policies to prevent legal action.

## Board of Health in Pittsfield Massachusetts Orders Verizon to Cease and Desist

For the first time in the U.S. a Board of Health has issued a cease and desist order to Verizon to remove or shut off a cell tower after 17 people in a neighborhood reported they became ill after the Verizon cell tower was turned on. Courtney Gilardi and her 2 children as well as residents living near the cell tower, reported experiencing a constellation of symptoms including stabbing headaches, nausea, vomiting, dizziness, "buzzing in the head", and insomnia so severe her family had to move to the next town and into a house with no heat and no hot water to escape the sickness. Other neighbors drove an hour away to sleep at a relative's house or slept in their cars away from the tower. These are classic symptoms of electromagnetic illness experienced in firefighters and military personnel working on radar and well documented by NASA, the Air Force and other military agencies as well as the "Havana Syndrome". These symptoms were also seen in Japan after 2 cell towers were turned on and when the tower was removed the resident's symptoms largely resolved.

## Apple stops 5G Phone MMW: Is This the Death of 5G Millimeter Wavelengths?

You are probably aware that Verizon and AT&T built special hotspots in many cities in the U.S. to house 5G high band millimeter wavelengths that were to revolutionize wireless with ultrafast speeds. These small wavelengths the size of bees have been put into some community small cells which need to be about 1000 feet apart without obstruction to function properly. Apple, who already has some 5G MMW phones, just announced that it is not building any millimeter wave spectrum antennas in its next generation SE iphones. With 4G LTE low and mid band wavelengths they apparently do not need the millimeter 5G bandwidth. The article notes, "It's not a surprise that Apple is dropping the spectrum from its phones. It costs chip space and power for every additional spectrum that is supported by a cellphone. Cell manufacturers care more about long battery life than they do about a technology that never made it out of the downtowns of a few major cities."

**FCC Limits: A False Sense of Security**

We are told by the FCC that wireless radiation and cell towers are safe within current safety guidelines, or that we do not really know if there is harm or that the research is inconclusive or that it is not ionizing (like x-rays) so it cannot hurt us. This is the same dismissive and doubt creating language used by the tobacco industry and a host of other chemical companies to protect their toxic products, thus profits. The research shows that we do know, beyond a doubt, that wireless radiation is harmful to all living systems below the current safety standards. The most obvious evidence is that more and more children and adults are reporting symptoms of electrosensitivity (EHS) in the presence of wireless radiation when they live in a home near a cell tower, or use a cell phone, or in schools where wireless devices and cell towers are increasing.

Please use your authority and wisdom to keep this ordinance strong. Take more time if you need to in order for you to sort this out and be sure of your decision. Remember that you all live in Los Altos as well so you are protecting you and your families and the next generation as well.

Sincerely,

Cindy Russell, MD

**Attached- Malibu Ordinances**

## References


- Pearce (2019**) 500 Meter buffer recommended around schools, hospitals and homes. "Limiting liability with positioning to minimize negative health effects of cellular phone towers."** (2019) Pearce M. Environmental Research, Nov 2019; https://www.sciencedirect.com/science/article/abs/pii/S0013935119306425
- Waldman-Selsam, C. (2004). **Bamberg Appeal, on behalf of 114 physicians**. Open Letter to Edmund Stoiber, Prime Minister, Germany, August 3. http://www.vws.org /documents/cell- project- documents/BambergAppeal.pdf
- Waldmann-Selsam C 2016. **Radiofrequency radiation injures trees around mobile phone base stations. (2016).** Waldmann-Selsam C et al. Science of the Total Environment. 572 (2016) 554-569. https://www.researchgate.net/publication/306435017_Radiofrequency_radiation_injures_trees_around_mobile_phone_base_stations
- **The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** https://www.degruyter.com/document/doi/10.1515/reveh-2016-0011/html
- **Researcher links diplomats' mystery illness to radiofrequency/microwave radiation.** Eureka alert. August 29, 2018. American Academy for the Advancement of Science. https://www.eurekalert.org/pub_releases/2018-08/uoc–rld082918.php
- **Diplomats in China report similar brain injuries as Americans in Cuba:** In 2016 and 2017, 25 Americans in the U.S. embassy in Cuba suffered serious, unexplained brain injuries. Now, at least 15 American officials in China are reporting similar symptoms. 60 Minutes reports. March 15, 2019. https://www.cbsnews.com/news/diplomats-in-china-report-similar-brain-injuries-as-americans-in-cuba-60-minutes/
- Swanson RL (2018) **Neurological Manifestations Among US Government Personnel Reporting Directional Audible and Sensory Phenomena in Havana, Cuba. (2018)** Swanson RL et al. JAMA. 2018 Mar 20;319(11):1125-1133. https://jamanetwork.com/journals/jama/fullarticle/2673168
- Levitt, Lai, Manville. (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 1. Rising ambient EMF levels in the environment.** Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 2 impacts: how species interact with natural and man-made EMF**. Rev Environ Health. 2021 Jul 8. https://pubmed.ncbi.nlm.nih.gov/34243228/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 3. Exposure standards, public policy, laws, and future directions.** Rev Environ Health. 2021 Sep 27. https://pubmed.ncbi.nlm.nih.gov/34563106/

- PanagopoulosDJ. (2013**) Electromagnetic Interaction Between Environmental Fields and Living Systems Determines Health and Well Being.** University of Athens, Department of Biology, Athens, Greece Radiation and Environmental Biophysics Research Centre, Athens, Greece. Electromagnetic Fields, Nova
- **MOEF Report on Possible Impacts of Communication Cell Towers on Wildlife Including Birds and Bees. (2010)** The Ministry of Environment and Forest. Report on Possible Impacts of Communication Towers on Wildlife Including Birds and Bees. (2010) Ministry of the Environment and Forests (MOEF) India. https://ecfsapi.fcc.gov/file/7520958381.pdf
- Sciences. http://www.wendywalksfores.com/uploads/1/3/9/0/13908728/panagopoulos-nova-2013-emfs-chapter-1.pdf
- **SwissRe Insurance-** Sonar 2019: New emerging risk insights. https://www.swissre.com/institute/research/sonar/sonar2019.html
- **Landmark Lawsuit Filed Against FCC for Failing to Reevaluate 5G and Wireless Safety.** Sept 23, 2020. PST. https://mdsafetech.org/2020/09/23/landmark-lawsuit-filed-against-fcc-for-failing-to-reevaluate-5g-and-wireless-safety/
- **Final Report on Commission to Study the Environmental and Health Effects of Evolving 5G Technology.** State of New Hampshire, General Court. Nov 1, 2020. http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf
- **We Have No Reason to Believe 5G Is Safe.**The technology is coming, but contrary to what some people say, there could be health risks. (2019) Scientific American. Joel M. Moskowitz. Oct 17, 2019. https://blogs.scientificamerican.com/observations/we-have-no-reason-to-believe-5g-is-safe/
- **5G wireless telecommunications expansion: Public health and environmental implications. (2018) Russell CL**. Environ Res. 2018 Apr 11. https://www.ncbi.nlm.nih.gov/pubmed/29655646. or at https://ecfsapi.fcc.gov/file/10913927726988/5%20G%20wireless%20telecommunications%20expansion%3A%20Public%20health%20and%20environmental%20implications.pdf
- **Firefighters Fighting Fires and Now Cell Towers-** https://mdsafetech.org/2019/09/28/firefighters-fighting-fires-and-now-cell-towers/
- **5G: State of Play in Europe, USA and Asia. In Depth Analysis, European Parliament.** https://www.europarl.europa.eu/RegData/etudes/IDAN/2019/631060/IPOL_IDA(2019)631060_EN.pdf
- **Apple ditches mmWave 5G with newest iPhone.** https://www.lightreading.com/5g/apple-ditches-mmwave-5g-with-newest-iphone/d/d-id/775901

| | |
|---|---|
| **From:** | roger heyder |
| **To:** | Public Comment; City Council |
| **Date:** | Tuesday, April 12, 2022 3:23:00 PM |

Hello,

This is public comment on Item 6, Wireless Telecommunications Facilities. Please have this read into the record for the meeting, and included as public comment in the meeting minutes.

Thanks -- Roger Heyder, resident of Los Altos

The 5G emergency ordinance was enacted after several large public meetings, where many hundreds of residents supported the 5G ordinance, and only 1 or 2 residents opposed the ordinance. Nothing has changed, yet Council used a back-door approach, via the Planning Commission, to alter the ordinance to the extent of basically eliminating it.

It seems Council supports many outside special interests, and the collecting of money, over the interest of residents. That is unacceptable. Council members that hold that posture should resign immediately, since you are failing in your responsibility to serve the residents of Los Altos. If Council wants to eliminate the 5G ordinance, then do hold a specific, public vote to do so, and residents can see which council members disrespect the residents' clearly stated wishes.

It is essential that Council inform residents how much money the city will make if the ordinance is lifted - right of way fees paid to the city by the 5G providers. That way residents can clearly see how much it takes to sell us out.

Pursuing the effective elimination of the 5G Emergency Ordinance through the Planning Commission, with little to no community visibility and transparency, is sleazy and dishonest. Seemingly pretty standard behavior for both the Planning Commission and Council. It is very hard to understand how residents could have any remaining trust or respect for Council or Planning Commission members. But then, it is unlikely you care much about that, or your behavior would be very different.

**From:** Willem De Lange
**To:** Public Comment
**Date:** Tuesday, April 12, 2022 6:02:54 PM

---

Hi all,

I forgot to add this email address to my sent email earlier today.

Best regards,

Willem

Begin forwarded message:

**From:** Willem De Lange <[redacted]>
**Subject: Agenda Item #6 the City Council Meeting on Tuesday, April 12th, at 7 PM: 5G wireless facilities (small cell towers) for**
**Date:** April 12, 2022 at 5:33:15 PM PDT
**To:** council@losaltosca.gov, planning@losaltosca.gov, Gabriel Engeland <gengeland@losaltosca.gov>

Dear Honorable Mayor, Vice Mayor, City Manager and Council Members,

Potential and suspected biological and health concerns that have been raised by numerous scientists and physicians, based on well-designed research, and reported in peer reviewed literature, is available. Therefore residents should not be discouraged from raising or expressing these concerns. It should help city officials to be aware of the perspectives and concerns of many, many residents, and reasonable to take into consideration. Our impressions are based on having reviewed at least a portion of the growing body of scientific literature (and videos) on this topic, over a period of several years. Willem and I, Margriet, have a background in science, including life-sciences/biological science, so the topic is of great interest to us. Willem has a significant background in science, having a masters degree in physics and electrical engineering!
I like to reveal that a large group of about 100 Los Altos residents are supportive of us to express our concern to city officials and wireless 5G decision makers (we are using an email address list to communicate).

At previous hearings on this subject, a majority of the participants stated wanting the policy to be equitable and fair--but that was not noted by the consultant or whoever wrote this ordinance.
The written testimony within the ordinance, did not change the policy or desire to now wanting to make some residents the second class citizens and "sacrificial lambs" by concentrating most of the cell tower/nodes on some specified residential streets. On the contrary, they even recommended an even higher concentration than was in the original draft, i.e., as close together as 200 feet apart, if including all cell carriers. We could be saturated with small cell towers as dense as one every two or three houses apart.
**Specifically, on page 49, they recommended the first option i.e., reducing the**

**buffers from 1000 feet to 200 feet (for all carriers collectively) on the targeted (second class) streets (i.e., arterials, collectors and local collectors, and parts of local roads near the arterials, collectors and local collectors). They stated the following reason: "The city wireless facilities team recommends adoption of the first option as in our view it most effectively balances the need to allow for technological advances in wireless facilities while preserving the beauty and aesthetics of Los Altos." This makes me feel marginalized and mistreated if you live on one of the targeted streets!**
**The wireless team then goes on to say on page 50: "In addition, several members of the public testifying before the PC requested the city assist in providing improved wireless coverage.". (This was after they made the other statement on page 50 that I noted the testimony of people who live along arterials, collectors and local collectors.) Actually, the "several members of the public" were three men (one who testified at both meetings).**

**In my opinion, this was an overstatement. At the first PC meeting, seven residents expressed concern about the revised ordinance, and one man was in support of it (7 to 1 ratio). At the second meeting, 9 people expressed concerns about the revised ordinance, while 3 men expressed support (9 to 3, or a 3 to 1 ratio). The written communications that had been sent in were even more lopsided, with most of it coming from people who are opposed to allowing cell facilities in residential areas and close to schools.**

**KEY POINT:**

**If homes are on corner lots, like ours at 951 Castilleja Ct, we should not be dealing with a wireless cell tower fully exposed from the street into our side yard. Reason being that this side yard is where we spend the majority of our private time, when outside. Exposure to a cell tower would be devastating to our health, rural feel, beauty and character of our residence! The ordinance should explicitly spell out avoiding placement in front of side yard locations, as I just described. As we have been active in contributing to the wellbeing of the Los Altos community for many years, we feel that we should be listened to, please! A rigid 200 feet distance might therefore not be practical and importantly technically not necessary! The 5G microwaves could carry up to 1,500 feet without obstructions. Therefore I am opposed to having Verizon place repeaters at every 200 feet: overkill and unwanted impact onto residents. Flexibility is key to solve esthetics and radiation exposure of residents, please!**

Thank you for your kind attention and best regards.

Willem and Margriet De Lange
951 Castilleja Ct
Los Altos, CA 94024
[redacted]

**From:** Nicole Wallace
**To:** Public Comment; City Council
**Date:** Tuesday, April 12, 2022 10:05:19 PM
**Attachments:** Los Altos Letter Final 4 11 2022 PDF(1).pdf

---

Dear Los Altos City Council,

I strongly support Dr. Cindy Russell's attached letter regarding the Los Altos Wireless Ordinance and ask that you include all of the requests that she has brought to the attention of the Council and place them in the updated ordinance.

Sincerely,
Nicole Wallace

To: Los Altos City Council
council@losaltosca.gov
aenander@losaltosca.gov
smeadows@losaltosca.gov
nfligor@losaltosca.gov
lleeeng@losaltosca.gov
jweinberg@losaltosca.gov

From: Cindy Russell, MD

Re: Revisions to 2019 Los Altos Ordinance to Regulate Small Wireless Facilities

Date April 11, 2022

Dear Los Altos City Council:
I am writing today to strongly urge you to reinstate (with legally appropriate revisions) several of the major aspects of the original 2019 Small Cell Wireless Ordinance that diminish blight and protect the beauty, character and health of your lovely Silicon Valley community. In addition, after reading the new 2022 proposed Wireless Facilities Ordinance it appears that some important provisions may have been missed in crafting a new Small Cell ordinance which are critical for the safety of the residents and also reduce liability for the city. This includes several insurance provisions, minor modifications to existing facilities, permiting process, and more.

Encinitas and Malibu have passed ordinances which have elements that are protective but allow flexibility for cities and exceptions/waivers for the carriers. They remain uncontested.

- **Encinitas, CA-** Revised from 2019- Passed June 20, 2020 https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/Resolution%20No.%202020-38%20With%20Policy.pdf?ver=2020-07-13-192634-373
- **Malibu Resolution 21-17 –** Attached please find an executed copy of Res. 21-17 is officially binding because Ordinance 484 adopts it by reference.

I will summarize my ask of the Los Altos City Council with these key points below, followed by backup for those points with additional pertinent legal information which does impact the issue of health/science, as per a court ruling from the second highest court in the land on August 13, 2021, a ruling that referred to the existing RF radiation regulatory limits as "arbitrary and capricious". Arbitrary and capricious means that the law and/or the facts were knowingly disregarded. That is a high bar indeed and the plaintiffs reached that bar. It behooves us to consider what is going on in the courts and pass ordinance language accordingly:

**PLEASE PAUSE:** There are resolutions as mentioned above that have successfully balanced the unique needs of communities with the rights of the telecommunications industry. The new resolution does not have to be passed Tuesday night. Some reflection on the best that Encinitas and Malibu have to offer may benefit all of us in the long run.

# Key Points

1. TITLE OF ORDINANCE: Clarification if this applies to Small Cell or Macro Cells; macro towers must go through conditional use permits

2. LOCATION STANDARDS – PREFERRED SITES

3. WAIVERS FOR STANDARDS

4. FIRE SAFETY

5. APPEALS PROCESS

Thank you for passing the 2019 Wireless Facilities Telecommunications Ordinance. The original wireless facilities ordinance for Los Altos took into consideration public concerns, was well thought out and protects the city of Los Altos from poorly designed and poorly placed cell towers.

I understand, however, that there is a lawsuit against the City for Los Altos from Verizon and AT&T claiming that the 2019 ordinance as written "effectively prohibits" wireless communications. You are commended for taking on this task of revising the ordinance in response. Some of the 2022 proposed changes are good and clarify the permitting process for carriers to avoid lawsuits and provide for "personal wireless services", however, I believe there are some gaps in protections and flexibility for the city that I would like to point out which could be remedied in addition to some clarifications.

It is important to consider adding the provisions below. As you note with the FCC lawsuit to reevaluation the 20 year-old FCC safety standards, the courts have judged that the FCC did not take into account several aspects of human health and environmental effects in setting their standards. We do not know what the future holds for the federal Telecommunications Act of 1996 or state law. The city of Los Altos needs to be prepared to alter its ordinance in case there is a change in the law in the future.

**Representative Anna Eshoo Supports Local Control for Cell Towers**
The 2018 FCC small cell order that fast tracks deployment of small cells in order to "cut the red tape" has prompted cities around the country, like Los Altos, to write these emergency ordinances and now revise them. The FCC Declaratory ruling has been considered an overreach of the Telecom Industry which dominates the FCC (FCC: Captured Agency, N. Alster), overriding the basic rights of cities to have local control. This was recognized by our local representative Anna Eshoo who in 2019 introduced HR530 to protect the rights of states and government by deeming that the *"Federal Communications Commission's Declaratory Ruling in ''Third Report and Order and Declaratory Ruling'' (FCC 18-111) shall have no force or effect."* This bill had 52 co-sponsors. Senator Feinstein introduced in 2019 a companion federal bill SB 2012 to block the FCC order. Neither moved.

Representative Eshoo also sent a letter to the FCC in 2020 to ask that the vote on the FCC order be delayed stating, ***"we worry that if this Declaratory Ruling does not benefit from meaningful input from local governments, the result could undermine municipalities' ability to balance their responsibilities to public safety and community design with their desire to ensure access to affordable wireless networks and the next generation services."***

Please fight for the rights of your residents and government as our local representatives have done. You have more power than you know. Please exercise it.

# Important Provisions to Add

## 1) Title of Ordinance

To clarify whether the ordinance title should apply only to Small Wireless Facilities or if this is for both Small Cell and Macro Towers it may be helpful to rename the ordinance to its original title and keep the descriptions separate within the ordinance. It is not clear to me in this rewrite. Small cell applications are different than for macro towers due to difference in structure of towers, power emitted and location in right of way as per FCC ruling.

(Section 14.82.050) See Encinitas Small Cell wireless Ordinance. Resolution 2019- 91- REGULATING SMALL WIRELESS FACILITIES AND OTHER INFRASTRUCTURE DEPLOYMENTS IN THE PUBLIC RIGHTS-OF-WAY
https://encinitasca.gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/CC%20Policy%20C035.pdf

2) **Location Standards- Preferred Sites**- Despite what the telecommunications industry says, you as a city can still have preferred sites and less preferred sites in your ordinance. (Encinitas and Malibu Ordinances) You can add an exception clause or waiver process to allow for placement of a cell tower if the carrier proves it is necessary (and other locations are not technically feasible) for "Personal Wireless Services" under the 1996 Telecom Act of 1996 and so that this does not constitute an "effective prohibition".
*** Special Zones can be designated for schools, day care centers, residential dwellings, protected habitat or trees, parks, etc.**
* Keep the 1000 foot distance between towers, **not 200 feet.** Explanation below.

Here are examples of Location Standards in the Encinitas Small Cell Wireless Ordinance passed in June, 2020 and in Malibu April 2021, which to date are uncontested.

# Encinitas Ordinance Passed June 10, 2020

## SECTION 10. LOCATION STANDARDS

1. (a) **Restricted Site Locations.** All of the following locations will be deemed "Restricted Site Locations" that require an exception pursuant to SECTION 13 of this Policy:

    1. (1) any location within a residential zone;
    2. (2) any location within 500 feet from a residential dwelling unit;
    3. (3) any location within 500 feet from a daycare facility or primary school;
    4. (4) any location within a Very High Fire Hazard Severity Zone; and
    5. (5) any location within the Ecological Resource/Open Space/Park Zone.

    (b) **Location Preferences.** To better assist applicants and decision makers understand and respond to the community's aesthetic preferences and values, this subsection sets out listed preferences for locations to be used in connection with small wireless facilities in an ordered hierarchy. Applications that involve lesser-preferred locations may be approved so long as the applicant demonstrates by clear and convincing evidence in the written record that: (1) any more preferred locations or structures within 500 feet from the proposed site would be technically infeasible; and (2) if the proposed site or the most- preferred location within 500 feet from the proposed site is within a Restricted Site Location, the applicant qualifies for an exception pursuant to SECTION 13 of this Policy. The City prefers small cells in the public rights-of-way to be installed in locations, ordered from most preferred to least preferred, as follows:

    (1) locations within industrial zones, commercial zones, business parks or office professional zones on or along prime arterials;

    (2) locations within industrial zones, commercial zones, business parks or office professional zones on or along major arterials;

    (3) locations within industrial zones, commercial zones, business parks or office professional zones on or along collector roads;

    (4) locations within industrial zones, commercial zones, business parks or office professional zones on or along local streets;

    (5) any location within 500 feet from any residential zone;

    (6) locations within residential zones on or along prime arterials;

    (7) locations within residential zones on or along major arterials;

    (8) locations within residential zones on or along collector roads;

    (9) locations within residential zones on or along local streets;

(10) any location within 1,000 feet from an existing/proposed small wireless facility;

In the event that a proposed facility would be within 500 feet from two or more restricted site locations (as defined in Subsection 10(a)), and the proposed facility qualifies for an exception pursuant to SECTION 13 of this Policy, the technically feasible location furthest from all such restricted site locations will be deemed to be the most preferred alternative.

(c) **Encroachments Over Private Property.** No small cell antennas, accessory equipment or other improvements may encroach onto or over any private or other property outside the public rights-of-way without the property owner's express written consent.

## Malibu Wireless Ordinance Resolution 21-17 Standards Passed April 2021.

https://www.malibucity.org/DocumentCenter/View/27969/Ordinance-No-484

### Location Standards for All Facilities

The location standards for all wireless communications facilities, other than those that qualify as eligible facilities requests, are as follows:

1. No wireless telecommunication facility shall be located within five hundred (500) feet of any school, playground, or park unless a finding is made, based on technical evidence acceptable to the reviewing authority showing a clear need for the facility and that no technically feasible alternative site exists. Except for facilities installed on the same pole or tower as an existing wireless telecommunication facility, wireless telecommunication facilities located within any residential zone district shall not be located within one thousand (1,000) feet of any other wireless communications facility, except from those facilities placed on utility poles along Pacific Coast Highway, unless a waiver is granted.
2. All new freestanding wireless communications facilities and monopoles shall be set back a minimum distance of at least one hundred and twenty (120%) percent of the height of the facility or monopole from any property line abutting a residentially zoned property. This minimum setback is not subject to the waivers allowed under Section 7 of this Resolution.
3. Location preference for wireless communications facilities should be given to the following:
    1. Property designated non-residential (except for public open space and recreational vehicle park zoning districts), unless otherwise prohibited pursuant to this title.
    2. Facilities attached or sited adjacent to existing structures. Whenever possible, facilities shall be located on and/or inside existing structures. Appropriate types of existing structures may include, but are not limited to: buildings, water tanks, telephone poles and utility towers and poles, sign standards, light standards and roadway overpasses.
    3. Sites with minimum separation. Sites that are more than five hundred (500) feet from school, playgrounds, and parks.

4. Sites that are not highly visible from adjacent roadways.
5. Unless otherwise indicated in MMC Chapter 17.46 or these Standards, no wireless facility shall be installed on an exposed ridgeline unless the facility blends with the

surrounding existing natural and man-made environment and a finding is made that no other location is technically feasible.

6. The City expressly designates residential, public open space and recreational vehicle park zoning districts, parks and schools as the least appropriate possible locations, and the absolute last choices for siting.

## 3) Waivers for Standards

Malibu Wireless Facilities Ordinance 2021 has added a section on Waivers for Standards that clarifies the process and protects the city from liability.

**Resolution No. 21-17 Page 9**

1. A waiver of one or more of these Standards may be granted in the following circumstances:
    1. Pursuant to MMC Section 17.46.060(D), if an applicant demonstrates to the Planning Commission through clear and convincing evidence that denial of an application would, within the meaning of federal law, prohibit or effectively prohibit the provision of personal wireless services, or otherwise violate applicable laws or regulations;
    2. If an applicant demonstrates to the Planning Commission through clear and convincing evidence set forth in a feasibility study that compliance with a requirement of these Standards would be technically infeasible and the proposed wireless facility complies with the requirements of these Standards to the greatest extent technically feasible. For example, an exception to a requirement to conceal antennas in a shroud may be granted if shrouding is shown to be technically infeasible and an alternative concealment such as a colored film wrap is proposed; or
    3. If an applicant demonstrates to the Planning Commission with clear and convincing evidence that the particular engineering, design or location proposed involves an alternative that better meets the purposes of Chapter 17.46 and only minor non-compliance with a requirement of these design Standards and results in no increase in public visual impact to the community or provides other benefits. For example, an exception to the wireless facility location limitations may be granted when the applicant can demonstrate that the placement is less visible from viewsheds of residences or shielded by vegetation or existing infrastructure (such as barriers), or is less physically intrusive (for example, less impactful to tree roots or reduces noise). Among other factors, in deciding whether or not to grant an exception, the Planning Commission may consider the impact of expansions to the facility that the applicant would be entitled to make as of right if granted.
2. Waivers may only be requested at the time an application is initially submitted for a discretionary permit. The request must include both the specific provision(s) from which waiver is sought and the basis of the request, including all supporting evidence on which the applicant relies. Any request for waiver after the City has deemed an application

complete constitutes a material change to the proposed wireless facility and shall be considered a new application. A request for waiver from one or more

## 4) Fire Safety

**All electrical equipment including small cell towers are a fire risk. The fire cannot be put out in a conventional manner with firefighters blasting water on the fire. They have to wait until the power is shut off or electrocution will result.**

**Examples are**

- **San Diego tower that caught fire in a high school stadium- https://fox5sandiego.com/news/local-news/stadium-light-catches-fire-at-south-bay-high-school/**
- **The Malibu fire in 2007 due to pole overload.** CPUC finds Edison and 4 telecom carriers $51.5 million - https://www.latimes.com/local/lanow/la-me-ln-malibu-fire-settlements-approved-state-puc-20130919-story.html

Considering the increase in wildfires and the risk of earthquakes. Fire safety is a priority for citizens. **The Malibu Wireless Facilities Ordinance 2021 has language in the Fire Safety Standards that can be incorporated.** In the attached Executed Copy of Malibu Res. 21-17, please note fire language on pages 2, 3, 5, 8, 11, 12, and particularly beginning on page 23 with "Electrical and Structural Safety Information."

## 5) Appeals Process

Language for appeal is not in the ordinance
Applications.

A) Any person adversely affected by a decision of the Director pursuant to this Chapter may request an administrative hearing to appeal the Director's decision. In order to request a hearing, the person shall submit to the City Clerk in the manner directed in the Director's decision notice a fully completed request for administrative hearing form along with a full amount of the appeal fee set by the City Council (by way of check or money order). The request for administrative hearing shall be incomplete if it does not include the appeal fee in the full amount. … etc.

## Precaution is Warranted

We understand that, as per Section 704 of the 1996 Telecommunications Act, environmental concerns, and as courts have interpreted these it includes heath impacts, cannot be a factor in denial of cell towers but we are early in the game.
Public health and ecosystem health are still important issues with new 5G systems untested for long term or short term safety for either human health or environmental health. 5G systems with a complex mix of low, medium and high frequencies (thus the need for macro and microcells) are very onerous to measure, requiring very expensive complex equipment that is very difficult

for engineers to accomplish let alone city facility engineers. Precaution in placement is paramount in this discussion. Once cell towers are placed there is no going back and you just wait for people to experience symptoms or develop cancer or a neurologic condition that you will not be able to sort out from the common toxic exposures we all encounter on a daily basis.

Elon Musk tells us that 5G millimeter wave systems are not needed for autonomous cars. 5G millimeter wavelengths are also not required for "personal wireless services". For the later this technology can be effectively replaced with safer and more secure fiberoptic networks and current wireless technologies. I will explain why health matters.

## Health Matters

I am a practicing physician who has studied the health impacts of environmental toxins through our local County Medical Association and the California Medical Association for over 25 years. I began studying the health impacts of wireless radiation when I learned of a proposal to place a cell tower on my daughter's school.

After 10 years of research into the literature and talking to a variety of people affected by cell towers and wireless radiation I, like many others in the medical and scientific community, have come to the conclusion that wireless radiation is a pollutant just like lead or pesticides or mercury or toxic industrial waste. The mechanisms are similar - oxidation, the effects are broad on all living organisms and people are often unaware they are exposed to the toxin - unless they are "sensitive". Wireless radiation causes oxidative stress on organisms and stem cells, and at low levels of radiation. These low levels cause a slow decline in physiologic processes, and for those who have become sensitive- an immediate reaction.

## Antioxidants and Health

As we now know small amounts of toxins can cause harm in certain windows of development thus children are more vulnerable. We also know effects are cumulative. People vary in their vulnerability due to age, genetics and other toxic exposures. Not all people react the same. Our health, wellness and aging are determined by oxidation levels in our tissues that injure our DNA, proteins and lipids, thus antioxidants in foods have been shown to block oxidation, neutralize cellular injury and promote health. This is well established in the nutrition literature. The literature also demonstrates that taking antioxidants (Vitamin E, zinc and melatonin) protects the cell from oxidation injury from wireless radiation. Oxidative stress plays a major part in the development of chronic, degenerative and inflammatory illnesses such as cancer, autoimmune disorders, aging, cataracts, rheumatoid arthritis, cardiovascular and neurodegenerative diseases, as well as some acute pathologies (trauma, stroke**). It is well established that wireless radiation at non-thermal levels causes oxidative stress**. Effects of this are cumulative on our DNA, lipids and cellular membranes.

## We Evolved in a Low Electromagnetic Environment

The natural environment of the Earth is electromagnetic. We have terrestrial electric and magnetic fields, radiation from the sun and cosmic microwaves. All living things evolved in

harmony with the Earth's natural but very very low-level electromagnetic rhythms. Birds, bees and mammals have magnetite in their bodies and brains that use the Earth's magnetic field for the delicate tasks of navigation and foraging. Our human nervous system, heart, reproductive and endocrine systems rely on minute electromagnetic signals for complex functions. Manmade electromagnetic fields (EMF) emitted by our modern technology can distort our bodies electric currents, delicate cell membranes and cause broad dysfunction. This can be with long term or sometimes short exposures with higher power and different pulsations. Science has shown us that organisms adapt to constant electromagnetic fields found in nature much easier than artificial pulsed radiation that is emitted from cell towers and wireless devices. It makes perfect sense that wireless radiation can be harmful to living organisms even it does not knock an electron out of its orbit.

## Wildlife

You need to consider the unique ecosystem which surrounds this lovely town. Science has shown us that levels of artificial electromagnetic radiation we are increasingly exposed to is harming not only humans but the sensitive environment that we tend to ignore but depend upon for our sustenance and mental health. https://mdsafetech.org/environmental-and-wildlife-effects/

## New Review on Wildlife and wireless Radiofrequency Radiation

The most comprehensive 3 part peer reviewed article by Levitt, Lai and Manville (2021) provides an updated, thorough and well referenced overview of RFR and effects on all wildlife, revealing a disturbing picture of the future if we continue to expand wireless in our homes, communities and for the commercialization of space.

The authors state, *"But is there a larger environmental downside to rising ambient EMF exposures — particularly RFR — from popular mobile communication devices, WiFi antennas, and all accompanying infrastructure that is being overlooked by environmentalists, researchers, and government regulators alike. We may be missing critical physiological effects across species based on obsolete assumptions about low-level far-field exposures being too weak to adversely affect living tissue. We have yet to take into consideration the unique physiologies of other species, or how they use the environment in ways that humans do not, when we assume that the unfettered use of EMF/RFR can continue unabated and be allowed to grow indefinitely*." **Effects of non-ionizing electromagnetic fields on flora and fauna, part 1.** Rising ambient EMF levels in the environment. (2021) Levitt BB et al. Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/

**MOEF Report on Wildlife**
The Inter-Ministerial Committee (IMC) of expert scientists reviewed the literature of the effects of RF-EMF radiations on wildlife, humans and the biosphere. In their 2010 MOEF Report they found that out of the 919 research papers collected on birds, bees, plants, other animals, and humans, 593 showed impacts, 180 showed no impacts, and 196 were inconclusive studies. All organisms had effects.

**Human Effects–** 62% showed effects, 13% no effect and 25% inconclusive **Plant Effects–** 87% showed effects and 13% were inconclusive

**Wildlife Effects-** 62% showed effects, 4% no effect and 36% inconclusive **Bee Effects**—85% showed effects and 15% no effect

**Bird Effects**- 77% showed effects, 10% no effect and 13% inconclusive **Current Standards are Scientifically Out of Date**

## UNESCO World Heritage Wildlife Area Species Disappearing

An abundance of peer reviewed literature demonstrates adverse impacts to the environment with declines in insect, bird and wildlife populations in cities and where cell towers are placed. This spells disaster for biodiversity, fragile wildlife areas, critical pollinators and agriculture, especially with additive effects of pesticides, toxins and loss of habitat. A report on Unesco's Mt. Nardia World Heritage Park documents this slow decline in populations of species after cell towers were placed. Unesco Report on Disappearance of Species from Mt. Nardia Park World Heritage Area 2000-2015 with Increased Expansion of Telecommunications Antenna. Ethno-Botonist Mark Broomhall. UNESCO Report on Disappearance of Species from Mt. Nardia with Increased EMR 2000-2015

## Cell Tower Health Effects

Current standards are based on short term thermal exposures and discount the abundant peer reviewed literature on harm from low level, non -thermal effects. It is clear that the limits for radiofrequency radiation are set too high in the U.S. and Canada. These limits are 100 times higher than that of Italy and Russia, who set their standards based on methodical research on immunologic, neurologic and biologic effects of low-level radiation fields. Current U.S. limits are up to 1,000 microwatts/cm2 with symptoms seen at levels of 0.005 microwatts /cm2.

## Physicians in Germany ask for Health Investigation of Cell Towers in 2005

An open letter from Dr. Cornelia Waldmann-Selsam was sent to the German State Chancellor, Edmund Stoiber, on behalf of 114 physicians (Bamberger Appeal) asking for an investigation into the newly reported adverse health symptoms of 356 residents who lived near cell towers in Oberfranken, Germany. Dr. Waldmann-Selsam noted, "*Many humans get sick from emissions far below the recommended limit values, which consider only thermal effects, and we have a sickness picture with characteristic symptom combinations, which are new to us physicians," The list of symptoms were, " Sleep disturbances, tiredness, concentration impairment, forgetfulness, problem with finding words, depressive tendencies, tinnitus, sudden loss of hearing, hearing loss, giddiness, nose bleeds, visual disturbances, frequent infections, sinusitis, joint and limb pains, nerve and soft tissue pains, feeling of numbness, heart rhythm disturbances,*

*increased blood pressure , hormonal disturbances, night-time sweat, nausea." Resident noted almost immediate improvement when moving away*."

Dr. Waldmann-Selsam goes on to say, "*physicians were able to prove, by re-testing the patients, the normalization of blood pressure, heart rhythm, hormone disturbances, visual disturbances, neurological symptoms, blood picture*,". She called this an emergency medical situation and requested an official health investigation. http://www.next-up.org/pdf/Letter_to_Edmund_Stoiber.pdf

## Cell Tower Effects on Cognition and Learning

The majority of studies, which have been done internationally, have shown an increase in neurologic symptoms in a percentage of residents living near cell towers. Symptoms vary with the distance from the cell tower. Symptoms include insomnia, headache, heart palpitations, dizziness, poor concentration, and fatigue. A study in Japan (Shinjyo 2014) showed a decrease in symptoms when the cell tower was removed. There is also a well done study showing blood abnormalities in those living nearest to cell towers (Zothansiama 2017). DNA and lipid abnormalities were seen along with reduction in internal antioxidants which provide protection from pollutants.

Moreover, a recent study conducted over a 2 year period looked at effects of cell towers near two schools by Meo et al (2018) and clearly demonstrated cognitive dysfunction in students closest to the higher power cell tower.

## Firefighters Fighting Fires and Now Cell Towers

After noticing that many of the firefighters where developing neurologic symptoms when first responder cell towers were placed on the fire stations the International Association of Firefighters studied the matter and passed a resolution in 2004 asking that cell towers not be placed in proximity to fire stations. In AB 537 (Quirk), signed into law by Gov. Newsom on October 4, 2021, the firefighters achieved the first ever health/readiness exemption in the world.

**Every fire station in California is now exempt from having a 5G tower on their station.** This movement began when cell towers were initially targeted for fire stations because of their location and the revenue received by the cities. Many firefighters developed symptoms including headaches, fatigue, memory impairment and insomnia within a week of the installation of the towers. An exemption was inserted in California bills on cell towers. AB 57 (Quirk 2015) has an exemption on the grounds of health effects. AB 537 (Quirk 2021) also has this exemption and reads, "*Due to the unique duties and infrastructure requirements for the swift and effective deployment of firefighters, this section does not apply to a collocation or siting application for a wireless telecommunications facility where the project is proposed for placement on fire department facilities."* SB 649 (Hueso, Quirk and Dodd 2018) also had a health exemption for firefighters and was vetoed by Governor Brown.

## 500 Meter (1640 ft) Buffer from Cell Tower Recommended

Cell tower health studies that show impacts from cell towers with symptoms within about 1500 feet of the cell towers. That is why Pearce et al (2019**) recommended a "500 Meter buffer around schools, hospitals and homes "Limiting liability with positioning to minimize negative health effects of cellular phone towers."**

## Cancer and Cell Towers

3 Studies investigated the rates of cancer and cell towers looking at the distance from cell towers and the incidence of cancer. They found the rate of cancer incidence increased significantly in those living within about 350 -400 meters (around 1000 feet) to the cell tower.

Dode 2011 performed a 10 year study (1996-2006) examining the distance from cell towers and cancer clusters. He and his colleagues found a highly significant increase in cancers in those living within 500 meters of the cell tower. They noted "The largest density power was 40.78 μW/cm2, and the smallest was 0.04 μW/cm2." The current guidelines are about 1000 μW/cm2. The authors conclude "Measured values stay below Brazilian Federal Law limits that are the same of ICNIRP. The human exposure pattern guidelines are inadequate. More restrictive limits must be adopted urgently."

Wolf and Wolf 2004 investigated the rates of cancer versus distance from cell towers in small towns in Israel. He found the rate of cancer incidence was 129 cases per 10,000 persons per year in those living within 350 meters of a cell tower versus a rate of 16-31/10,000 in those living greater than 350 meters from the cell tower.

**Eger (2004)** showed an increase in the development of new cancer cases within a 10 year period if residents lived within 400 meters of a cell tower. Their results revealed that within 5 years of operation of a transmitting station the relative risk of cancer development tripled in residents near the cell towers compared to residents outside the area.

**Insurance Has an Exclusion for Radiofrequency Radiation as an Emerging Risk** Insurance companies consider wireless radiation to be similar to asbestos in long term health impacts and do not provide coverage from harm for RF health effects. The cities are left with that liability unless they can provide insurance.
In a 2019 report, **New Emerging Risk Insights**, by Swiss RE Insurance Company, the second largest reinsurance company in the world, **5G is listed as an emerging concern** in the high risk category within 3 years. Included in the high-risk trends are artificial intelligence and the existential threats of climate change. "*The top five emerging risks in our SONAR 2019 report are digital technology's clash with legacy hardware, potential threats from the spread of 5G mobile networks, increasingly limited fiscal and monetary flexibility by central banks, genetic testing's implications on life insurers, and the impact of climate change on the life and health sector.*" https://www.swissre.com/institute/research/sonar/sonar2019.html

## National Academy of Sciences Report on the Havana Syndrome and Harm from RFR

A recent report by the National Academy of Sciences concluded that the "sonic attacks" on diplomats in Cuba and China were most likely due to pulsed radiofrequency from directed energy weapons. They had symptoms similar to those who live near cell towers (headache, nausea, insomnia, dizziness, memory loss, heart palpitations, depression). Dr. Beatrice Golomb wrote the most extensive report to date on this subject linking these mystery "directed energy attacks" to pulsed microwaves similar to the wireless devices we use daily. In the case of these high powered beams there was documented injury to brain networks found by the University of Pittsburg physicians who studied the diplomats. Dr Golomb highlights that **the strength of the health effects are related to the peak power not the average power. The pulse makes the poison.**

**The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** is a comprehensive guide written by many scientists and physicians in Europe who are part of the European Academy for Environmental Medicine (EUROPAEM) – EMF working group who have recognized and treated those with electrosensitivity for many years. This is a thorough, well researched and well-referenced scientific paper that is based on the 2012 Austrian Medical Association **Guidelines for the Diagnosis and Treatment of EMF Illness**. A questionnaire from their group is included in the attachments.

## New Hampshire 5G Commission Finds Radiofrequency Radiation Problematic

The first Commission formed in the United States to study the environmental and health effects of 5G technology released their comprehensive final report November 1, 2020. The Commission to Study the Environmental and Health Effects of Evolving 5G Technology was mandated by HB 522 passed by the state legislature in New Hampshire. Their final report included 15 recommendations addressing the need for public education about wireless hazards, RF health studies, RF measurements, cell antenna setbacks, fiberoptic rather than wireless deployment, commercial warning signs and wildlife protection. After hearing extensive testimony in a series of 13 meetings over the course of a year and reviewing an abundance of research, the Commission highlighted the lack of a single definition for 5G, **insufficient evidence of safety for 5$^{th}$ generation technology**, a concern that safety standards for wireless technologies have not been updated with the latest science and that 5G is largely a marketing concept. They also expressed concern that the FCC has a long history of being accountable to industry over the desires of communities and individuals.

## FCC Told by DC Court to Reevaluate Safety Standards

On August 13, 2021 a joint lawsuit was won by petitioners against the Federal Communications Commission (FCC) for failure to protect human health and the environment by dismissing scientific evidence of harm from wireless radiation. The Petitioners challenged the FCC's refusal

to reevaluate and update their 24-year-old radiofrequency (RF) safety guidelines for existing and new telecommunications technologies. The DC Circuit Court of Appeals ruled that the majority of the RF radiation standards established by the FCC did not use "reasoned decision-making" (they did not go by the science) and thus the standards were considered by the court to have been set in an "arbitrary and capricious" manner. This was an extremely high bar for the Plaintiffs to reach. The Circuit Court of Appeals rarely admonishes a federal agency or commission in this way. The DC Circuit Court of Appeals returned this decision back to the FCC and ordered the FCC to re-examine its standards for wireless radiation exposure and provide a review of wireless harms that is compliant with the law for non-cancer harms.

The Court Decision stated, "The National Environmental Policy Act ("NEPA") and it's implementing regulations require federal agencies to "establish procedures to account for the environmental effects of [their] proposed actions." And "To fulfill its obligations under NEPA, the Commission has promulgated guidelines for human exposure to RF radiation…The Commission last updated its limits for RF exposure in 1996… The ANSI and IEEE developed limits are designed to protect against "thermal effects" of exposure to RF radiation, but not "non-thermal" effects. In March 2013, the Commission issued a notice of inquiry regarding the adequacy of its 1996 guidelines in response to changes in the ubiquity of wireless devices and in scientific standards and research since 1996. In December 2019, the Commission issued a final order resolving its 2013 notice of inquiry by declining to undertake any of the changes contemplated in the notice of inquiry. Petitioners challenge the 2019 final order under NEPA and the Administrative Procedure Act ("APA").

## 5G: A Manufactured Need by Industry

Reports indicate that the telecommunications industry has largely manufactured a "need" for expanding wireless technology in cities, while halting projects for safer fiberoptic broadband. Note a 2020 European Parliament report, **5G: State of Play in Europe, USA and Asia. In Depth Analysis,** suggests 5G is a manufactured need. "*As 5G is driven by the telecoms supply industry, and its long tail of component manufacturers, a major campaign is under way to convince governments that the economy and jobs will be strongly stimulated by 5G deployment."*

In my opinion, from all the research I have done, it appears the telecommunications industry has influenced laws to prevent health or environmental effects from being considered in the placement of cell towers (See FCC Captured Agency). They knew of the harm in early studies done by Dr. George Carlo in the 1990's but suppressed the data so they could move forward. That is well documented in Dr. Carlo's book, "Cell phones: Invisible Hazards in The Wireless Age".
A blizzard of robust science has appeared now to show biological and health impacts of wireless technology, but it is still denied, and the basis for genuinely safe RF radiation guidelines is flawed. An exponential growth in cell towers is now being played out with cities being left on their own to figure out how to regulate these towers locally. Industry places a heavy hand and complex laws on local policy makers who must navigate these complex FCC policies to prevent legal action.

## Board of Health in Pittsfield Massachusetts Orders Verizon to Cease and Desist

For the first time in the U.S. a Board of Health has issued a cease and desist order to Verizon to remove or shut off a cell tower after 17 people in a neighborhood reported they became ill after the Verizon cell tower was turned on. Courtney Gilardi and her 2 children as well as residents living near the cell tower, reported experiencing a constellation of symptoms including stabbing headaches, nausea, vomiting, dizziness, "buzzing in the head", and insomnia so severe her family had to move to the next town and into a house with no heat and no hot water to escape the sickness. Other neighbors drove an hour away to sleep at a relative's house or slept in their cars away from the tower. These are classic symptoms of electromagnetic illness experienced in firefighters and military personnel working on radar and well documented by NASA, the Air Force and other military agencies as well as the "Havana Syndrome". These symptoms were also seen in Japan after 2 cell towers were turned on and when the tower was removed the resident's symptoms largely resolved.

## Apple stops 5G Phone MMW: Is This the Death of 5G Millimeter Wavelengths?

You are probably aware that Verizon and AT&T built special hotspots in many cities in the U.S. to house 5G high band millimeter wavelengths that were to revolutionize wireless with ultrafast speeds. These small wavelengths the size of bees have been put into some community small cells which need to be about 1000 feet apart without obstruction to function properly. Apple, who already has some 5G MMW phones, just announced that it is not building any millimeter wave spectrum antennas in its next generation SE iphones. With 4G LTE low and mid band wavelengths they apparently do not need the millimeter 5G bandwidth. The article notes, "It's not a surprise that Apple is dropping the spectrum from its phones. It costs chip space and power for every additional spectrum that is supported by a cellphone. Cell manufacturers care more about long battery life than they do about a technology that never made it out of the downtowns of a few major cities."

**FCC Limits: A False Sense of Security**

We are told by the FCC that wireless radiation and cell towers are safe within current safety guidelines, or that we do not really know if there is harm or that the research is inconclusive or that it is not ionizing (like x-rays) so it cannot hurt us. This is the same dismissive and doubt creating language used by the tobacco industry and a host of other chemical companies to protect their toxic products, thus profits. The research shows that we do know, beyond a doubt, that wireless radiation is harmful to all living systems below the current safety standards. The most obvious evidence is that more and more children and adults are reporting symptoms of electrosensitivity (EHS) in the presence of wireless radiation when they live in a home near a cell tower, or use a cell phone, or in schools where wireless devices and cell towers are increasing.

Please use your authority and wisdom to keep this ordinance strong. Take more time if you need to in order for you to sort this out and be sure of your decision. Remember that you all live in Los Altos as well so you are protecting you and your families and the next generation as well.

Sincerely,

Cindy Russell, MD

**Attached- Malibu Ordinances**

## References


- Pearce (2019**) 500 Meter buffer recommended around schools, hospitals and homes. "Limiting liability with positioning to minimize negative health effects of cellular phone towers."** (2019) Pearce M. Environmental Research, Nov 2019; https://www.sciencedirect.com/science/article/abs/pii/S0013935119306425
- Waldman-Selsam, C. (2004). **Bamberg Appeal, on behalf of 114 physicians**. Open Letter to Edmund Stoiber, Prime Minister, Germany, August 3. http://www.vws.org /documents/cell- project- documents/BambergAppeal.pdf
- Waldmann-Selsam C 2016. **Radiofrequency radiation injures trees around mobile phone base stations. (2016).** Waldmann-Selsam C et al. Science of the Total Environment. 572 (2016) 554-569. https://www.researchgate.net/publication/306435017_Radiofrequency_radiation_injures_trees_around_mobile_phone_base_stations
- **The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** https://www.degruyter.com/document/doi/10.1515/reveh-2016-0011/html
- **Researcher links diplomats' mystery illness to radiofrequency/microwave radiation.** Eureka alert. August 29, 2018. American Academy for the Advancement of Science. https://www.eurekalert.org/pub_releases/2018-08/uoc–rld082918.php
- **Diplomats in China report similar brain injuries as Americans in Cuba:** In 2016 and 2017, 25 Americans in the U.S. embassy in Cuba suffered serious, unexplained brain injuries. Now, at least 15 American officials in China are reporting similar symptoms. 60 Minutes reports. March 15, 2019. https://www.cbsnews.com/news/diplomats-in-china-report-similar-brain-injuries-as-americans-in-cuba-60-minutes/
- Swanson RL (2018) **Neurological Manifestations Among US Government Personnel Reporting Directional Audible and Sensory Phenomena in Havana, Cuba. (2018)** Swanson RL et al. JAMA. 2018 Mar 20;319(11):1125-1133. https://jamanetwork.com/journals/jama/fullarticle/2673168
- Levitt, Lai, Manville. (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 1. Rising ambient EMF levels in the environment.** Rev Environ Health. 2021 May 27. https://pubmed.ncbi.nlm.nih.gov/34047144/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 2 impacts: how species interact with natural and man-made EMF**. Rev Environ Health. 2021 Jul 8. https://pubmed.ncbi.nlm.nih.gov/34243228/
- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 3. Exposure standards, public policy, laws, and future directions.** Rev Environ Health. 2021 Sep 27. https://pubmed.ncbi.nlm.nih.gov/34563106/

- PanagopoulosDJ. (2013**) Electromagnetic Interaction Between Environmental Fields and Living Systems Determines Health and Well Being.** University of Athens, Department of Biology, Athens, Greece Radiation and Environmental Biophysics Research Centre, Athens, Greece. Electromagnetic Fields, Nova
- **MOEF Report on Possible Impacts of Communication Cell Towers on Wildlife Including Birds and Bees. (2010)** The Ministry of Environment and Forest. Report on Possible Impacts of Communication Towers on Wildlife Including Birds and Bees. (2010) Ministry of the Environment and Forests (MOEF) India. https://ecfsapi.fcc.gov/file/7520958381.pdf
- Sciences. http://www.wendywalksfores.com/uploads/1/3/9/0/13908728/panagopoulos-nova-2013-emfs-chapter-1.pdf
- **SwissRe Insurance-** Sonar 2019: New emerging risk insights. https://www.swissre.com/institute/research/sonar/sonar2019.html
- **Landmark Lawsuit Filed Against FCC for Failing to Reevaluate 5G and Wireless Safety.** Sept 23, 2020. PST. https://mdsafetech.org/2020/09/23/landmark-lawsuit-filed-against-fcc-for-failing-to-reevaluate-5g-and-wireless-safety/
- **Final Report on Commission to Study the Environmental and Health Effects of Evolving 5G Technology.** State of New Hampshire, General Court. Nov 1, 2020. http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf
- **We Have No Reason to Believe 5G Is Safe.**The technology is coming, but contrary to what some people say, there could be health risks. (2019) Scientific American. Joel M. Moskowitz. Oct 17, 2019. https://blogs.scientificamerican.com/observations/we-have-no-reason-to-believe-5g-is-safe/
- **5G wireless telecommunications expansion: Public health and environmental implications. (2018) Russell CL**. Environ Res. 2018 Apr 11. https://www.ncbi.nlm.nih.gov/pubmed/29655646. or at https://ecfsapi.fcc.gov/file/10913927726988/5%20G%20wireless%20telecommunications%20expansion%3A%20Public%20health%20and%20environmental%20implications.pdf
- **Firefighters Fighting Fires and Now Cell Towers-** https://mdsafetech.org/2019/09/28/firefighters-fighting-fires-and-now-cell-towers/
- **5G: State of Play in Europe, USA and Asia. In Depth Analysis, European Parliament.** https://www.europarl.europa.eu/RegData/etudes/IDAN/2019/631060/IPOL_IDA(2019)631060_EN.pdf
- **Apple ditches mmWave 5G with newest iPhone.** https://www.lightreading.com/5g/apple-ditches-mmwave-5g-with-newest-iphone/d/d-id/775901

| | |
|---|---|
| **From:** | Angel Rodriguez |
| **To:** | Public Comment |
| **Date:** | Wednesday, April 13, 2022 9:44:16 AM |

**From:** Edgar Saadi [redacted]
**Sent:** Tuesday, April 12, 2022 8:17 PM
**To:** City Council <council@losaltosca.gov>; Planning Services <planning@losaltosca.gov>; Gabriel Engeland <gengeland@losaltosca.gov>
**Subject:** What she said below thank you

Dear City Council members…..

"Regarding the proposed modifications to the ordinance for small wireless facilities, I object to the inequitable treatment of and failure to represent residents who live on and adjacent to arterials, collectors, and local collectors. These locations are ranked as more preferred than other "residentially zoned" streets. Most of the collectors and local collectors in Los Altos, however, are residentially zoned! All residents of Los Altos will benefit equally from the 5G upgrade, so all neighborhoods should equally bear the brunt of the visual blight, noise, and estimated decrease in property values.

The authors of the revised ordinance state they are recommending the higher density of facilities on the local collectors, collectors, and arterial streets to retain the beauty and essential rural character throughout Los Altos, (p. 38 and p. 39). In other words, they think it is OK to destroy the character and safety and livability of some streets (collectors, local collectors, adjacent local roads, and arterials) in order to retain the beauty and character of the rest of the streets. There is absolutely no justification for this creation of two classes of residents.

Please remove this preference to protect the character of all residential properties equally.

Regards,
Katherine Weller
Los Altos Resident"

Best regards
Ed Saadi
1010 Loma Prieta Ct
Los Altos, CA 94024

Sent from my iPhone

**From:** Cindy Russe l
**To:** Andrea Chelemengos; Public Comment
**Date:** Tuesday, April 12, 2022 1:38:38 PM
**Attachments:** Malibu Resolution No. 21-17 as adopted.pdf
Executed Copy Malibu Res. 21-17.PDF
Los Altos Letter Final 4112022 PDF.pdf

---

---------- Forwarded message ---------
From: **Cindy Russell** [redacted]
Date: Mon, Apr 11, 2022 at 11:04 PM
Subject: Los Altos City Council Agenda item #6 Wireless Telecommunications Facilities
To: <aenander@losaltosca gov>, <smeadows@losaltosca gov>, <nfligor@losaltosca gov>, Lynette Lee Eng <lleeeng@losaltosca gov>, <jweinberg@losaltosca gov>, <publiccomments@lossltosca gov>, <council@losaltosca gov>

Dear Los Altos City Council:
Enclosed is my letter to you regarding the revised Wireless facilities ordinance I am attaching it as well as a PDF as well along with the Malibu Ordinance
Thank you for your consideration

To: Los Altos City Council

From: Cindy Russell, MD

Re: Revisions to 2019 Los Altos Ordinance to Regulate Small Wireless Facilities

Date April 11, 2022

Dear Los Altos City Council Members:
I am writing today to strongly urge you to reinstate (with legally appropriate revisions) several of the major aspects of the original 2019 Small Cell Wireless Ordinance that diminish blight and protect the beauty, character and health of your lovely Silicon Valley community In addition, after reading the new 2022 proposed Wireless Facilities Ordinance it appears thatsome important provisions may have been missed in crafting a new Small Cell ordinance which are critical for the safety of the residents and also reduce liability for the city This includes several insurance provisions, permitting process, and more

Encinitas and Malibu have passed ordinances which have elements that are protective but allow flexibility for cities and exceptions/waivers for the carriers They remain uncontested

- **Encinitas, CA-**Revised from 2019- Passed June 20, 2020
  https://encinitasca gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/Resolution%20No %202020-38%20With%20Policy pdf?ver=2020-07-13-192634-373
- **Malibu Resolution 21-17 –** Attached please find an executed copy of Res 21-17 is officially binding because Ordinance 484 adopts it by reference

I will summarize my ask of the Los Altos City Council with these key points below, followed by backup for those points with additional pertinent legal information which does impact the issue of health/science, as per a court ruling from the second highest court in the land on August 13, 2021, a ruling that referred to the existing RF radiation regulatory limits as "arbitrary and capricious" Arbitrary and capricious means that the law and/or the facts were knowingly disregarded That is a high bar indeed and the plaintiffs reached that bar It behooves us to consider what is going on in the courts and pass ordinance language accordingly:

**PLEASE PAUSE:**There are resolutions as mentioned above that have successfully balanced the unique needs of communities with the rights of the telecommunications industry The new resolution does not have to be passed Tuesday night Some reflection on the best that Encinitas and Malibu have to offer may benefit all of us in the long run

## Key Points

1 TITLE OF ORDINANCE: Clarification if this applies to Small Cell or Macro Cells; macro towers must go through conditional use permits

2 LOCATION STANDARDS – PREFERRED SITES

3 WAIVERS FOR STANDARDS

4 FIRE SAFETY

5 APPEALS PROCESS

Thank you for passing the 2019 Wireless Facilities Telecommunications Ordinance The original wireless facilities ordinance for Los Altos took into consideration public concerns, was well thought out and protects the city of Los Altos from poorly designed and poorly placed cell towers

I understand, however, that there is a lawsuit against the City for Los Altos from Verizon and AT&T claiming that the 2019 ordinance as written "effectively prohibits" wireless communications You are commended for taking on this task of revising the ordinance in response Some of the 2022 proposed changes are good and clarify the permitting process for carriers to avoid lawsuits and provide for "personal wireless services", however, I believe there are some gaps in protections and flexibility for the city that I would like to point out which could be remedied in addition to some clarifications

It is important to consider adding the provisions below As you note with the FCC lawsuit to reevaluate the 20 year-old FCC safety standards, the courts have judged that the FCC did not take into account several aspects of human health and environmental effects in setting their standards We do not know what the future holds for the federal Telecommunications Act of 1996 or state law The city of Los Altos needs to be prepared to alter its ordinance in case there is a change in the law in the future

**Representative Anna Eshoo Supports Local Control for Cell Towers**
The 2018 FCC small cell order that fast tracks deployment of small cells in order to "cut the red tape" has prompted cities around the country, like Los Altos, to write these emergency ordinances and now revise them The FCC Declaratory ruling has been considered an overreach of the Telecom Industry which dominates the FCC (FCC: Captured Agency, N Alster), overriding the basic rights of cities to have local control This was recognized by our local representative Anna Eshoo who in 2019 introduced HR530 to protect the rights of states and government by deeming that the *"Federal Communications Commission's Declaratory Ruling in ''Third Report and Order and Declaratory Ruling'' (FCC 18-111) shall have no force or effect."*This bill had 52 co-sponsors Senator Feinstein introduced in 2019 a companion federal bill SB 2012 to block the FCC order Neither moved

Representative Eshoo also sent a letter to the FCC in 2020 to ask that the vote on the FCC order be delayed stating, ***"we worry that if this Declaratory Ruling does not benefit from meaningful input from local governments, the result could undermine municipalities' ability to balance their responsibilities to public safety and community design with their desire to ensure access to affordable wireless networks and the next generation services."***

Please fight for the rights of your residents and government as our local representatives have done You have more power than you know Please exercise it

## Important Provisions to Add

### 1) Title of Ordinance

To clarify whether the ordinance title should apply only to Small Wireless Facilities or if this is for both Small Cell and Macro Towers it may be helpful to rename the ordinance to its original title and keep the descriptions separate within the ordinance It is not clear to me in this rewrite Small cell applications are different than for macro towers due to difference in structure of towers, power emitted and location in right of way as per FCC ruling

(Section 14 82 050) See Encinitas Small Cell wireless Ordinance Resolution 2019- 91- REGULATING SMALL WIRELESS FACILITIES AND OTHER INFRASTRUCTURE

DEPLOYMENTS IN THE PUBLIC RIGHTS-OF-WAYhttps://encinitasca gov/Portals/0/City%20Documents/Documents/Development%20Services/Planning/Land%20Development/Small%20Wireless%20Facilities/CC%20Policy%20C035 pdf

2) **Location Standards- Preferred Sites**- Despite what the telecommunications industry says, you as a city can still have preferred sites and less preferred sites in your ordinance (Encinitas and Malibu Ordinances) You can add an exception clause or waiver process to allow for placement of a cell tower if the carrier proves it is necessary (and other locations are not technically feasible) for "Personal Wireless Services" under the 1996 Telecom Act of 1996 and so that this does not constitute an "effective prohibition"
* **Special Zones can be designated for schools, day care centers, residential dwellings, protected habitat or trees, parks, etc.**
* Keep the 1000 foot distance between towers,**not 200 feet.**Explanation below

Here are examples of Location Standards in the Encinitas Small Cell Wireless Ordinance passed in June, 2020 and in Malibu April 2021, which to date are uncontested

### Encinitas Ordinance Passed June 10, 2020
**SECTION 10. LOCATION STANDARDS**

1 (a) **Restricted Site Locations.** All of the following locations will be deemed "Restricted Site Locations" that require an exception pursuant to SECTION 13 of this Policy

1 (1) any location within a residential zone;
2 (2) any location within 500 feet from a residential dwelling unit;
3 (3) any location within 500 feet from a daycare facility or primary school;
4 (4) any location within a Very High Fire Hazard Severity Zone; and
5 (5) any location within the Ecological Resource/Open Space/Park Zone.

(b) **Location Preferences.** To better assist applicants and decision makers understand and respond to the community s aesthetic preferences and values, this subsection sets out listed preferences for locations to be used in connection with small wireless facilities in an ordered hierarchy. Applications that involve lesser-preferred locations may be approved so long as the applicant demonstrates by clear and convincing evidence in the written record that (1) any more preferred locations or structures within 500 feet from the proposed site would be technically infeasible; and (2) if the proposed site or the most- preferred location within 500 feet from the proposed site is within a Restricted Site Location, the applicant qualifies for an exception pursuant to SECTION 13 of this Policy. The City prefers small cells in the public rights-of-way to be installed in locations, ordered from most preferred to least preferred, as follows

(1) locations within industrial zones, commercial zones, business parks or office professional zones on or along prime arterials;
(2) locations within industrial zones, commercial zones, business parks or office professional zones on or along major arterials;
(3) locations within industrial zones, commercial zones, business parks or office professional zones on or along collector roads;
(4) locations within industrial zones, commercial zones, business parks or office professional zones on or along local streets;
(5) any location within 500 feet from any residential zone;
(6) locations within residential zones on or along prime arterials;
(7) locations within residential zones on or along major arterials;
(8) locations within residential zones on or along collector roads;
(9) locations within residential zones on or along local streets;
(10) any location within 1,000 feet from an existing/proposed small wireless facility;

In the event that a proposed facility would be within 500 feet from two or more restricted site locations (as defined in Subsection 10(a)), and the proposed facility qualifies for an exception pursuant to SECTION 13 of this Policy, the technically feasible location furthest from all such restricted site locations will be deemed to be the most preferred alternative.

(c) **Encroachments Over Private Property.** No small cell antennas, accessory equipment or other improvements may encroach onto or over any private or other property outside the public rights-of-way without the property owner s express written consent.

**Malibu Wireless Ordinance Resolution 21-17 Standards Passed April 2021.** https://www malibucity org/DocumentCenter/View/27969/Ordinance-No-484
Location Standards for All Facilities
The location standards for all wireless communications facilities, other than those that qualify as eligible facilities requests, are as follows:

1 No wireless telecommunication facility shall be located within five hundred (500) feet of any school, playground, or park unless a finding is made, based on technical evidence acceptable to the reviewing authority showing a clear need for the facility and that no technically feasible alternative site exists Except for facilities installed on the same pole or tower as an existing wireless telecommunication facility, wireless telecommunication facilities located within any residential zone district shall not be located within one thousand (1,000) feet of any other wireless communications facility, except from those facilities placed on utility poles along Pacific Coast Highway, unless a waiver is granted
2 All new freestanding wireless communications facilities and monopoles shall be set back a minimum distance of at least one hundred and twenty (120%) percent of the height of the facility or monopole from any property line abutting a residentially zoned property This minimum setback is not subject to the waivers allowed under Section 7 of this Resolution
3 Location preference for wireless communications facilities should be given to the following:
  1 Property designated non-residential (except for public open space and recreational vehicle park zoning districts), unless otherwise prohibited pursuant to this title
  2 Facilities attached or sited adjacent to existing structures Whenever possible, facilities shall be located on and/or inside existing structures Appropriate types of existing structures may include, but are not limited to: buildings, water tanks, telephone poles and utility towers and poles, sign standards, light standards and roadway overpasses
  3 Sites with minimum separation Sites that are more than five hundred (500) feet from school, playgrounds, and parks
4 Sites that are not highly visible from adjacent roadways
5 Unless otherwise indicated in MMC Chapter 17 46 or these Standards, no wireless facility shall be installed on an exposed ridgeline unless the facility blends with the surrounding existing natural and man-made environment and a finding is made that no other location is technically feasible
6 The City expressly designates residential, public open space and recreational vehicle park zoning districts, parks and schools as the least appropriate possible locations, and the absolute last choices for siting

### 3) Waivers for Standards
Malibu Wireless Facilities Ordinance 2021 has added a section on Waivers for Standards that clarifies the process and protects the city from liability
Resolution No 21-17 Page 9

1 A waiver of one or more of these Standards may be granted in the following circumstances:
  1 Pursuant to MMC Section 17 46 060(D), if an applicant demonstrates to the Planning Commission through clear and convincing evidence that denial of an application would, within the meaning of federal law, prohibit or effectively prohibit the provision of personal wireless services, or otherwise violate applicable laws or regulations;
  2 If an applicant demonstrates to the Planning Commission through clear and convincing evidence set forth in a feasibility study that compliance with a requirement of these Standards would be technically infeasible and the proposed wireless facility complies with the requirements of these Standards to the greatest extent technically feasible For example, an exception to a requirement to conceal antennas in a shroud may be granted if shrouding is shown to be technically infeasible and an alternative concealment such as a colored film wrap is proposed; or
  3 If an applicant demonstrates to the Planning Commission with clear and convincing evidence that the particular engineering, design or location proposed involves an alternative that better meets the purposes of Chapter 17 46 and only minor non-compliance with a requirement of these design Standards and results in no increase in public visual impact to the community or provides other benefits For example, an exception to the wireless facility location limitations may be granted when the applicant can demonstrate that the placement is less visible from viewsheds of residences or shielded by vegetation or existing infrastructure (such as barriers), or is less physically intrusive (for example, less impactful to tree roots or reduces noise) Among other factors, in deciding whether or not to grant an exception, the Planning Commission may consider the impact of expansions to the facility that the applicant would be entitled to make as of right if granted
2 Waivers may only be requested at the time an application is initially submitted for a discretionary permit The request must include both the specific provision(s) from which waiver is sought and the basis of the request, including all supporting evidence on which the applicant relies Any request for waiver after the City has deemed an application complete constitutes a material change to the proposed wireless facility and shall be considered a new application A request for waiver from one or more

### 4) Fire Safety
**All electrical equipment including small cell towers are a fire risk. The fire cannot be put out in a conventional manner with firefighters blasting water on the fire. They have to wait until the power is shut off or electrocution will result.**

**Examples are**
- **San Diego tower that caught fire in a high school stadium- https //fox5sandiego.com/news/local-news/stadium-light-catches-fire-at-south-bay-high-school/**
- **The Malibu fire in 2007 due to pole overload.** CPUC finds Edison and 4 telecom carriers $51 5 million - https://www latimes com/local/lanow/la-me-ln-malibu-fire-settlements-approved-state-puc-20130919-story html

Considering the increase in wildfires and the risk of earthquakes Fire safety is a priority for citizens **The Malibu Wireless Facilities Ordinance 2021 has language in the Fire Safety Standards that can be incorporated.** In the attached Executed Copy of Malibu Res 21-17, please note fire language on pages 2, 3, 5, 8, 11, 12, and particularly beginning on page 23 with "Electrical and Structural Safety Information "

### 5) Appeals Process

Language for appeal is not in the ordinance

Applications

A) Any person adversely affected by a decision of the Director pursuant to this Chapter may request an administrative hearing to appeal the Director s decision. In order to request a hearing, the person shall submit to the City Clerk in the manner directed in the Director s decision notice a fully completed request for administrative hearing form along with a full amount of the appeal fee set by the City Council (by way of check or money order). The request for administrative hearing shall be incomplete if it does not include the appeal fee in the full amount. … etc.

### Precaution is Warranted

We understand that, as per Section 704 of the 1996 Telecommunications Act, environmental concerns, and as courts have interpreted these it includes heath impacts, cannot be a factor in denial of cell towers but we are early in the game

Public health and ecosystem health are still important issues with new 5G systems untested for long term or short term safety for either human health or environmental health 5G systems with a complex mix of low, medium and high frequencies (thus the need for macro and microcells) are very onerous to measure, requiring very expensive complex equipment that is very difficult for engineers to accomplish let alone city facility engineers Precaution in placement is paramount in this discussion Once cell towers are placed there is no going back and you just wait for people to experience symptoms or develop cancer or a neurologic condition that you will not be able to sort out from the common toxic exposures we all encounter on a daily basis

Elon Musk tells us that 5G millimeter wave systems are not needed for autonomous cars 5G millimeter wavelengths are also not required for "personal wireless services" For the later this technology can be effectively replaced with safer and more secure fiberoptic networks and current wireless technologies I will explain why health matters

### Health Matters

I am a practicing physician who has studied the health impacts of environmental toxins through our local County Medical Association and the California Medical Association for over 25 years I began studying the health impacts of wireless radiation when I learned of a proposal to place a cell tower on my daughter's school

After 10 years of research into the literature and talking to a variety of people affected by cell towers and wireless radiation I, like many others in the medical and scientific community, have come to the conclusion that wireless radiation is a pollutant just like lead or pesticides or mercury or toxic industrial waste The mechanisms are similar - oxidation, the effects are broad on all living organisms and people are often unaware they are exposed to the toxin - unless they are "sensitive" Wireless radiation causes oxidative stress on organisms and stem cells, and at low levels of radiation These low levels cause a slow decline in physiologic processes, and for those who have become sensitive- an immediate reaction

### Antioxidants and Health

As we now know small amounts of toxins can cause harm in certain windows of development thus children are more vulnerable We also know effects are cumulative People vary in their vulnerability due to age, genetics and other toxic exposures Not all people react the same Our health, wellness and aging are determined by oxidation levels in our tissues that injure our DNA, proteins and lipids, thus antioxidants in foods have been shown to block oxidation, neutralize cellular injury and promote health This is well established in the nutrition literature The literature also demonstrates that taking antioxidants (Vitamin E, zinc and melatonin) protects the cell from oxidation injury from wireless radiation Oxidative stress plays a major part in the development of chronic, degenerative and inflammatory illnesses such as cancer, autoimmune disorders, aging, cataracts, rheumatoid arthritis, cardiovascular and neurodegenerative diseases, as well as some acute pathologies (trauma, stroke**). It is well established that wireless radiation at non-thermal levels causes oxidative stress** Effects of this are cumulative on our DNA, lipids and cellular membranes

### We Evolved in a Low Electromagnetic Environment

The natural environment of the Earth is electromagnetic We have terrestrial electric and magnetic fields, radiation from the sun and cosmic microwaves All living things evolved in harmony with the Earth's natural but very very low-level electromagnetic rhythms Birds, bees and mammals have magnetite in their bodies and brains that use the Earth's magnetic field for the delicate tasks of navigation and foraging Our human nervous system, heart, reproductive and endocrine systems rely on minute electromagnetic signals for complex functions Manmade electromagnetic fields (EMF) emitted by our modern technology can distort our bodies electric currents, delicate cell membranes and cause broad dysfunction This can be with long term or sometimes short exposures with higher power and different pulsations Science has shown us that organisms adapt to constant electromagnetic fields found in nature much easier than artificial pulsed radiation that is emitted from cell towers and wireless devices It makes perfect sense that wireless radiation can be harmful to living organisms even it does not knock an electron out of its orbit

### Wildlife

You need to consider the unique ecosystem which surrounds this lovely town Science has shown us that levels of artificial electromagnetic radiation we are increasingly exposed to is harming not only humans but the sensitive environment that we tend to ignore but depend upon for our sustenance and mental health https://mdsafetech org/environmental-and-wildlife-effects/

### New Review on Wildlife and wireless Radiofrequency Radiation

The most comprehensive 3 part peer reviewed article by Levitt, Lai and Manville (2021) provides an updated, thorough and well referenced overview of RFR and effects on all wildlife, revealing a disturbing picture of the future if we continue to expand wireless in our homes, communities and for the commercialization of space

The authors state, *"But is there a larger environmental downside to rising ambient EMF exposures — particularly RFR — from popular mobile communication devices, WiFi antennas, and all accompanying infrastructure that is being overlooked by environmentalists, researchers, and government regulators alike. We may be missing critical physiological effects across species based on obsolete assumptions about low-level far-field exposures being too weak to adversely affect living tissue. We have yet to take into consideration the unique physiologies of other species, or how they use the environment in ways that humans do not, when we assume that the unfettered use of EMF/RFR can continue unabated and be allowed to grow indefinitely.*" **Effects of non-ionizing electromagnetic fields on flora and fauna, part 1.** Rising ambient EMF levels in the environment (2021) Levitt BB et al Rev Environ Health 2021 May 27 https://pubmed ncbi nlm nih gov/34047144/

**MOEF Report on Wildlife**

The Inter-Ministerial Committee (IMC) of expert scientists reviewed the literature of the effects of RF-EMF radiations on wildlife, humans and the biosphere In their 2010 MOEF Report they found that out of the 919 research papers collected on birds, bees, plants, other animals, and humans, 593 showed impacts, 180 showed no impacts, and 196 were inconclusive studies All organisms had effects

**Human Effects–** 62% showed effects, 13% no effect and 25% inconclusive **Plant Effects–** 87% showed effects and 13% were inconclusive

**Wildlife Effects-** 62% showed effects, 4% no effect and 36% inconclusive **Bee Effects**—85% showed effects and 15% no effect

**Bird Effects**- 77% showed effects, 10% no effect and 13% inconclusive **Current Standards are Scientifically Out of Date**

### UNESCO World Heritage Wildlife Area Species Disappearing

An abundance of peer reviewed literature demonstrates adverse impacts to the environment with declines in insect, bird and wildlife populations in cities and where cell towers are placed This spells disaster for biodiversity, fragile wildlife areas, critical pollinators and agriculture, especially with additive effects of pesticides, toxins and loss of habitat A report on Unesco's Mt Nardia World Heritage Park documents this slow decline in populations of species after cell towers were placed Unesco Report on Disappearance of Species from Mt Nardia Park World Heritage Area 2000-2015 with Increased Expansion of Telecommunications Antenna Ethno- Botonist Mark Broomhall UNESCO Report on Disappearance of Species from Mt Nardia with Increased EMR 2000-2015

### Cell Tower Health Effects

Current standards are based on short term thermal exposures and discount the abundant peer reviewed literature on harm from low level, non -thermal effects It is clear that the limits for radiofrequency radiation are set too high in the U S and Canada These limits are 100 times higher than that of Italy and Russia, who set their standards based on methodical research on immunologic, neurologic and biologic effects of low-level radiation fields Current U S limits are up to 1,000 microwatts/cm2 with symptoms seen at levels of 0 005 microwatts /cm2

### Physicians in Germany ask for Health Investigation of Cell Towers in 2005

An open letter from Dr Cornelia Waldmann-Selsam was sent to the German State Chancellor, Edmund Stoiber, on behalf of 114 physicians (Bamberger Appeal) asking for an investigation into the newly reported adverse health symptoms of 356 residents who lived near cell towers in Oberfranken, Germany Dr Waldmann-Selsam noted, "*Many humans get sick from emissions far below the recommended limit values, which consider only thermal effects, and we have a sickness picture with characteristic symptom combinations, which are new to us physicians," The list of symptoms were, " Sleep disturbances, tiredness, concentration impairment, forgetfulness, problem with finding words, depressive tendencies, tinnitus, sudden loss of hearing, hearing loss, giddiness, nose bleeds, visual disturbances, frequent infections, sinusitis, joint and limb pains, nerve and soft tissue pains, feeling of numbness, heart rhythm disturbances, increased blood pressure , hormonal disturbances, night-time sweat, nausea." Resident noted almost immediate improvement when moving away* "

Dr Waldmann-Selsam goes on to say, "*physicians were able to prove, by re-testing the patients, the normalization of blood pressure, heart rhythm, hormone disturbances, visual disturbances, neurological symptoms, blood picture*," She called this an emergency medical situation and requested an official health investigation http://www next- up org/pdf/Letter_to_Edmund_Stoiber pdf

### Cell Tower Effects on Cognition and Learning

The majority of studies, which have been done internationally, have shown an increase in neurologic symptoms in a percentage of residents living near cell towers Symptoms vary with the distance from the cell tower Symptoms include insomnia, headache, heart palpitations, dizziness, poor concentration, and fatigue A study in Japan (Shinjyo 2014) showed a decrease in symptoms when the

cell tower was removed  There is also a well done study showing blood abnormalities in those living nearest to cell towers (Zothansiama 2017)  DNA and lipid abnormalities were seen along with reduction in internal antioxidants which provide protection from pollutants
Moreover, a recent study conducted over a 2 year period looked at effects of cell towers near two schools by Meo et al (2018) and clearly demonstrated cognitive dysfunction in students closest to the higher power cell tower

### Firefighters Fighting Fires and Now Cell Towers

After noticing that many of the firefighters where developing neurologic symptoms when first responder cell towers were placed on the fire stations the International Association of Firefighters studied the matter and passed a resolution in 2004 asking that cell towers not be placed in proximity to fire stations  In AB 537 (Quirk), signed into law by Gov  Newsom on October 4, 2021, the firefighters achieved the first ever health/readiness exemption in the world

**Every fire station in California is now exempt from having a 5G tower on their station.** This movement began when cell towers were initially targeted for fire stations because of their location and the revenue received by the cities  Many firefighters developed symptoms including headaches, fatigue, memory impairment and insomnia within a week of the installation of the towers  An exemption was inserted in California bills on cell towers  AB 57 (Quirk 2015) has an exemption on the grounds of health effects  AB 537 (Quirk 2021) also has this exemption and reads, "*Due to the unique duties and infrastructure requirements for the swift and effective deployment of firefighters, this section does not apply to a collocation or siting application for a wireless telecommunications facility where the project is proposed for placement on fire department facilities."* SB 649 (Hueso, Quirk and Dodd 2018) also had a health exemption for firefighters and was vetoed by Governor Brown

### 500 Meter (1640 ft) Buffer from Cell Tower Recommended

Cell tower health studies that show impacts from cell towers with symptoms within about 1500 feet of the cell towers  That is why Pearce et al (2019**) recommended a "500 Meter buffer around schools, hospitals and homes "Limiting liability with positioning to minimize negative health effects of cellular phone towers."**

### Cancer and Cell Towers

3 Studies investigated the rates of cancer and cell towers looking at the distance from cell towers and the incidence of cancer  They found the rate of cancer incidence increased significantly in those living within about 350 -400 meters (around 1000 feet)  to the cell tower
Dode 2011 performed a 10 year study (1996-2006) examining the distance from cell towers and cancer clusters  He and his colleagues found a highly significant increase in cancers in those living within 500 meters of the cell tower  They noted "The largest density power was 40 78  µW/cm2, and the smallest was 0 04  µW/cm2 "  The current guidelines are about 1000 µW/cm2  The authors conclude "Measured values stay below Brazilian Federal Law limits that are the same of ICNIRP  The human exposure pattern guidelines are inadequate  More restrictive limits must be adopted urgently "

Wolf and Wolf 2004 investigated the rates of cancer versus distance from cell towers in small towns in Israel  He found the rate of cancer incidence was 129 cases per 10,000 persons per year in those living within 350 meters of a cell tower versus a rate of 16-31/10,000 in those living greater than 350 meters from the cell tower
**Eger (2004)**showed an increase in the development of new cancer cases within a 10 year period if residents lived within 400 meters of a cell tower  Their results revealed that within 5 years of operation of a transmitting station the relative risk of cancer development tripled in residents near the cell towers compared to residents outside the area
**Insurance Has an Exclusion for Radiofrequency Radiation as an Emerging Risk**Insurance companies consider wireless radiation to be similar to asbestos in long term health impacts and do not provide coverage from harm for RF health effects  The cities are left with that liability unless they can provide insurance
In a 2019 report,**New Emerging Risk Insights**, by Swiss RE Insurance Company, the second largest reinsurance company in the world, **5G is listed as an emerging concern** in the high risk category within 3 years  Included in the high-risk trends are artificial intelligence and the existential threats of climate change  "*The top five emerging risks in our SONAR 2019 report are digital technology's clash with legacy hardware, potential threats from the spread of 5G mobile networks, increasingly limited fiscal and monetary flexibility by central banks, genetic testing's implications on life insurers, and the impact of climate change on the life and health sector.*" https://www swissre com/institute/research/sonar/sonar2019 html

### National Academy of Sciences Report on the Havana Syndrome and Harm from RFR

A recent report by the National Academy of Sciences concluded that the "sonic attacks" on diplomats in Cuba and China were most likely due to pulsed radiofrequency from directed energy weapons  They had symptoms similar to those who live near cell towers (headache, nausea, insomnia, dizziness, memory loss, heart palpitations, depression)  Dr  Beatrice Golomb wrote the most extensive report to date on this subject linking these mystery "directed energy attacks" to pulsed microwaves similar to the wireless devices we use daily  In the case of these high powered beams there was documented injury to brain networks found by the University of Pittsburg physicians who studied the diplomats  Dr Golomb highlights that **the strength of the health effects are related to the peak powernot the average power. The pulse makes the poison.**

**The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** is a comprehensive guide written by many scientists and physicians in Europe who are part of the European Academy for Environmental Medicine (EUROPAEM) – EMF working group who have recognized and treated those with electrosensitivity for many years  This is a thorough, well researched and well-referenced scientific paper that is based on the 2012 Austrian Medical Association **Guidelines for the Diagnosis and Treatment of EMF Illness**  A questionnaire from their group is included in the attachments

### New Hampshire 5G Commission Finds Radiofrequency Radiation Problematic

The first Commission formed in the United States to study the environmental and health effects of 5G technology released their comprehensive final report November 1, 2020  The Commission to Study the Environmental and Health Effects of Evolving 5G Technology was mandated by HB 522 passed by the state legislature in New Hampshire  Their final report included 15 recommendations addressing the need for public education about wireless hazards, RF health studies, RF measurements, cell antenna setbacks, fiberoptic rather than wireless deployment, commercial warning signs and wildlife protection  After hearing extensive testimony in a series of 13 meetings over the course of a year and reviewing an abundance of research,
the Commission highlighted the lack of a single definition for 5G, **insufficient evidence of safety for 5th generation technology**, a concern that safety standards for wireless technologies have not been updated with the latest science and that 5G is largely a marketing concept  They also expressed concern that the FCC has a long history of being accountable to industry over the desires of communities and individuals

### FCC Told by DC Court to Reevaluate Safety Standards

On August 13, 2021 a joint lawsuit was won by petitioners against the Federal Communications Commission (FCC) for failure to protect human health and the environment by dismissing scientific evidence of harm from wireless radiation  The Petitioners challenged the FCC's refusal to reevaluate and update their 24-year-old radiofrequency (RF) safety guidelines for existing and new telecommunications technologies  The DC Circuit Court of Appeals ruled that the majority of the RF radiation standards established by the FCC did not use "reasoned decision-making" (they did not go by the science) and thus the standards were considered by the court to have been set in an "arbitrary and capricious" manner  This was an extremely high bar for the Plaintiffs to reach  The Circuit Court of Appeals rarely admonishes a federal agency or commission in this way  The DC Circuit Court of Appeals returned this decision back to the FCC and ordered the FCC to re-examine its standards for wireless radiation exposure and provide a review of wireless harms that is compliant with the law for non-cancer harms

The Court Decision stated, "The National Environmental Policy Act ("NEPA") and it's implementing regulations require federal agencies to "establish procedures to account for the environmental effects of [their] proposed actions " And "To fulfill its obligations under NEPA, the Commission has promulgated guidelines for human exposure to RF radiation  The Commission last updated its limits for RF exposure in 1996  The  ANSI and IEEE developed limits are designed to protect against "thermal effects" of exposure to RF radiation, but not "non- thermal" effects  In March 2013, the Commission issued a notice of inquiry regarding the adequacy of its 1996 guidelines in response to changes in the ubiquity of wireless devices and in scientific standards and research since 1996  In December 2019, the Commission issued a final order resolving its 2013 notice of inquiry by declining to undertake any of the changes contemplated in the notice of inquiry  Petitioners challenge the 2019 final order under NEPA and the Administrative Procedure Act ("APA")

### 5G: A Manufactured Need by Industry?

Reports indicate that the telecommunications industry has largely manufactured a "need" for expanding wireless technology in cities, while halting projects for safer fiberoptic broadband  Note a 2020 European Parliament report, **5G: State of Play in Europe, USA and Asia. In Depth Analysis,**suggests 5G is a manufactured need  "*As 5G is driven by the telecoms supply industry, and its long tail of component manufacturers, a major campaign is under way to convince governments that the economy and jobs will be strongly stimulated by 5G deployment."*
In my opinion, from all the research I have done, it appears the telecommunications industry has influenced laws to prevent health or environmental effects from being considered in the placement of cell towers (See FCC Captured Agency)  They knew of the harm in early studies done by Dr  George Carlo in the 1990's but suppressed the data so they could move forward  That is well documented in Dr  Carlo's book, "Cell phones: Invisible Hazards in The Wireless Age"
A blizzard of robust science has appeared now to show biological and health impacts of wireless technology, but it is still denied, and the basis for genuinely safe RF radiation guidelines isflawed  An exponential growth in cell towers is now being played out with cities being left on their own to figure out how to regulate these towers locally  Industry places a heavy hand and complex laws on local policy makers who must navigate these complex FCC policies to prevent legal action

### Board of Health in Pittsfield Massachusetts Orders Verizon to Cease and Desist

For the first time in the U S  a Board of Health has issued a cease and desist order to Verizon to remove or shut off a cell tower after 17 people in a neighborhood reported they became ill after the Verizon cell tower was turned on  Courtney Gilardi and her 2 children as well as residents living near the cell tower, reported experiencing a constellation of symptoms including stabbing headaches, nausea, vomiting, dizziness, "buzzing in the head", and insomnia so severe her family had to move to the next town and into a house with no heat and no hot water to escape the sickness  Other neighbors drove an hour away to sleep at a relative's house or slept in their cars away from the tower  These are classic symptoms of electromagnetic illness experienced in firefighters and military personnel working on radar and well documented by NASA, the Air Force and other military agencies as well as the "Havana Syndrome"  These symptoms were also seen in Japan after 2 cell towers were turned on and when the tower was removed the resident's symptoms largely resolved

### Apple Stops 5G Phone MMW: Is This the Death of 5G Millimeter Wavelengths?

You are probably aware that Verizon and AT&T built special hotspots in many cities in the U S  to house 5G high band millimeter wavelengths that were to revolutionize wireless with ultrafast speeds  These small wavelengths the size of bees have been put into some community small cells which need to be about 1000 feet apart without obstruction to function properly  Apple, who already has some 5G MMW phones, just announced that it is not building any millimeter wave spectrum antennas in its next generation SE iphones  With 4G LTE low and mid band wavelengths they apparently do not need the millimeter 5G bandwidth  The article notes, "It's not a surprise that Apple is dropping the spectrum from its phones  It costs chip space and power for every additional

spectrum that is supported by a cellphone  Cell manufacturers care more about long battery life than they do about a technology that never made it out of the downtowns of a few major cities ”

**FCC Limits: A False Sense of Security**
We are told by the FCC that wireless radiation and cell towers are safe within current safety guidelines, or that we do not really know if there is harm or that the research is inconclusive or that it is not ionizing (like x-rays) so it cannot hurt us  This is the same dismissive and doubt creating language used by the tobacco industry and a host of other chemical companies to protect their toxic products, thus profits  The research shows that we do know, beyond a doubt, that wireless radiation is harmful to all living systems below the current safety standards  The most obvious evidence is that more and more children and adults are reporting symptoms of electrosensitivity (EHS) in the presence of wireless radiation when they live in a home near a cell tower, or use a cell phone,  or in schools where wireless devices and cell towers are increasing
Please use your authority and wisdom to keep this ordinance strong  Take more time if you need to in order for you to sort this out and be sure of your decision  Remember that you all live in Los Altos as well so you are protecting you,  your families and the next generation as well

Sincerely,
Cindy Russell, MD
**Attached- Malibu Ordinances**

## References


- Pearce (2019) **500 Meter buffer recommended around schools, hospitals and homes. “Limiting liability with positioning to minimize negative health effects of cellular phone towers.”**(2019)  Pearce M  Environmental Research, Nov 2019; https://www sciencedirect com/science/article/abs/pii/S0013935119306425
- Waldman-Selsam, C  (2004) **Bamberg Appeal, on behalf of 114 physicians**  Open Letter to Edmund Stoiber, Prime Minister, Germany, August 3  http://www vws org /documents/cell-project- documents/BambergAppeal pdf
- Waldmann-Selsam C 2016  **Radiofrequency radiation injures trees around mobile phone base stations. (2016).**Waldmann-Selsam C et al  Science of the Total Environment  572 (2016) 554-569  https://www researchgate net/publication/306435017_Radiofrequency_radiation_injures_trees_around_mobile_phone_base_stations
- **The EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses** https://www degruyter com/document/doi/10 1515/reveh-2016-0011/html

- **Researcher links diplomats’ mystery illness to radiofrequency/microwave radiation.** Eureka alert  August 29, 2018  American Academy for the Advancement of Science  https //www.eurekalert.org/pub_releases/2018-08/uoc-rld082918.php
- **Diplomats in China report similar brain injuries as Americans in Cuba:**In 2016 and 2017, 25 Americans in the U S  embassy in Cuba suffered serious, unexplained brain injuries  Now, at least 15 American officials in China are reporting similar symptoms  60 Minutes reports  March 15, 2019  https://www cbsnews com/news/diplomats-in-china-report-similar-brain-injuries-as-americans-in-cuba-60-minutes/
- Swanson RL (2018)  **Neurological Manifestations Among US Government Personnel Reporting Directional Audible and Sensory Phenomena in Havana, Cuba. (2018)**Swanson RL et al  JAMA  2018 Mar 20;319(11):1125-1133  https://jamanetwork com/journals/jama/fullarticle/2673168

- Levitt, Lai, Manville. (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 1. Rising ambient EMF levels in the environment.** Rev Environ Health. 2021 May 27. https //pubmed ncbi nlm nih gov/34047144/

- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 2 impacts: how species interact with natural and man-made EMF**. Rev Environ Health. 2021 Jul 8. https //pubmed.ncbi.nlm.nih.gov/34243228/

- Levitt, Lai, Manville (2021) **Effects of non-ionizing electromagnetic fields on flora and fauna, Part 3. Exposure standards, public policy, laws, and future directions.** Rev Environ Health. 2021 Sep 27. https //pubmed.ncbi.nlm.nih.gov/34563106/

- PanagopoulosDJ. (2013**) Electromagnetic Interaction Between Environmental Fields and Living Systems Determines Health and Well Being.** University of Athens, Department of Biology, Athens, Greece Radiation and Environmental Biophysics Research Centre, Athens, Greece. Electromagnetic Fields, Nova
- **MOEF Report on Possible Impacts of Communication Cell Towers on Wildlife Including Birds and Bees. (2010)** The Ministry of Environment and Forest.  Report on Possible Impacts of Communication Towers on Wildlife Including Birds and Bees. (2010) Ministry of the Environment and Forests (MOEF) India. https //ecfsapi.fcc.gov/file/7520958381.pdf
- Sciences. http //www.wendywalksfores.com/uploads/1/3/9/0/13908728/panagopoulos-nova-2013-emfs-chapter-1.pdf
- **SwissRe Insurance-**Sonar 2019: New emerging risk insights  https://www swissre com/institute/research/sonar/sonar2019 html
- **Landmark Lawsuit Filed Against FCC for Failing to Reevaluate 5G and Wireless Safety.**Sept 23, 2020  PST  https://mdsafetech org/2020/09/23/landmark-lawsuit-filed-against-fcc-for-failing-to-reevaluate-5g-and-wireless-safety/
- **Final Report on Commission to Study the Environmental and Health Effects of Evolving 5G Technology.** State of New Hampshire, General Court  Nov 1, 2020 http://www gencourt state nh us/statstudcomm/committees/1474/reports/5G%20final%20report pdf
- **We Have No Reason to Believe 5G Is Safe.**The technology is coming, but contrary to what some people say, there could be health risks  (2019) Scientific American  Joel M  Moskowitz Oct 17, 2019  https://blogs scientificamerican com/observations/we-have-no-reason-to-believe-5g-is-safe/
- **5G wireless telecommunications expansion: Public health and environmental implications. (2018) Russell CL**  Environ Res  2018 Apr 11  https://www ncbi nlm nih gov/pubmed/29655646  or at https://ecfsapi fcc gov/file/10913927726988/5%20G%20wireless%20telecommunications%20expansion%3A%20Public%20health%20and%20environmental%20implications pdf
- **Firefighters Fighting Fires and Now Cell Towers-**https://mdsafetech org/2019/09/28/firefighters-fighting-fires-and-now-cell-towers/
- **5G: State of Play in Europe, USA and Asia. In Depth Analysis, European Parliament.**https://www europarl europa eu/RegData/etudes/IDAN/2019/631060/IPOL_IDA(2019)631060_EN pdf
- **Apple ditches mmWave 5G with newest iPhone.** https://www lightreading com/5g/apple-ditches-mmwave-5g-with-newest-iphone/d/d-id/775901


--


*Cindy Lee Russell, M.D.*
Executive Director, Physicians for Safe Technology
WWW.MDSafeTech.org


*Our vision is a world where technology serves our needs without undermining our physical, psychosocial or environmental health.*

--


*Cindy Lee Russell, M.D.*
Immediate Past President, Santa Clara County Medical Association
Executive Director, Physicians for Safe Technology
WWW.MDSafeTech.org


*Our vision is a world where technology serves our needs without undermining our physical, psychosocial or environmental health.*