How to take action and measure cell tower radiation while not getting lied to.

Prepared by our neighborhhod

Contents

Step 1: Make a list of the name, address, phone number, email address and business affiliation of everybody who makes money off of the cell phone tower:

1. The building owner
2. The building tenant
3. The sub-tenant
4. The State
5. The licensing agency
6. The tax department
7. The service and maintenance company who checks on the towers under contract
8. The school district
9. Parents or workers who have stock or employment benefits programs tied into any of the above
10. The City
11. The Federal government
12. The contractor who erects the towers (ie: Harris)
13. The contractor who wires up the towers
14. The cell companies who send signals through the towers
15. The advertisers who pay the cell companies who send signals through the towers
16. Other related beneficiaries

Step 2 The popularity of cell phones and wireless communication devices has resulted in a proliferation of cell towers across the American landscape. Opposition to the placement of these towers has sometimes developed among segments of the population, usually based upon esthetics, concern over the electromagnetic radiation, or both.

The report that we provide will permit comparison of measured levels with FCC Maximum Permissible Exposures (MPEs), precautionary guidelines, and routine background levels for comparable environments. If new antennas or towers are planned for our location, a site survey will be used to establish a baseline RF level for later comparison (before and after testing). Follow-up readings will then be provided at substantially reduced cost compared to the initial survey.

The purpose of this testing is to empower our community to make responsible, fact-based decisions about the RF environment surrounding our community, facility, home, or school. We are using

advanced equipment to perform the most accurate and comprehensive RF exposure assessments in the industry. We are addressing the issue of low-level, long-term, non-thermal exposures, and articulating the scientific rationale for a precautionary exposure guideline.

This is NOT a standard RF compliance surveys. This is enhanced testing that involves more detailed data collection, and a more extensive and broader coverage report, than a conventional compliance survey. Our surveys incorporate procedures and equipment to separately measure cellular power density, in addition to the composite power density (the combination of all RF signals present). We are using top quality professional equipment, and extensive procedural safeguards, to ensure the highest degree of RF measurement accuracy.

Standards vs. Guidelines - The Rationale for Testing

Regulations adopted by the Federal Communications Commission (FCC) in 1996, and fully implemented in 2000, limit human exposure to electromagnetic radiation from cell phone, broadcast, and other radio communication systems. Both U.S. and international standards governing exposure to radio frequency (RF) fields have long existed, and the FCC regulations were adapted from a pre-existing standard. They establish Maximum Permissible Exposures, or MPEs, for the full range of frequencies encountered near transmitting equipment, towers, and antennas. These are the formal exposure standards in the U.S., and have full regulatory force. The cell phone industry lobbied these standards into effect and that industry is known to be compromised on a profits-over-safety basis.

For broadcast towers and building mounted cellular antennas, much higher exposures are possible, although the MPEs are still unlikely to be exceeded in areas accessible to the public. So why are people concerned about cell towers, or RF exposure in general? Is some caution warranted? Three reasons for this concern are recognized:

1. Some people don't trust the cell phone companies or the government to act with the public's best interest in mind.

2. Many people equate the potential adverse health effects of **cell phone** use, which has received a lot of media coverage, with the presence of **cell towers**.

3. The existing exposure limitations are based primarily on the avoidance of energy deposition in the body sufficient to cause heating of tissue. More recent research data indicates that some types of radio frequency fields influence cellular function through mechanisms that do **not** involve heating. Therefore, the existing limitations may be based upon incomplete and outdated science, and thus not fully protective.

To address the issues raised by recent health effects research (#3 above), it is necessary to look beyond the current exposure limits. Through a review of research on exposure to radio frequency radiation, it is

possible to identify a range of numbers below which no adverse effects have been noted (or which have been reported only in limited or questionable studies), and above which potentially adverse effects have been seen. This range of numbers can form the basis for a "**precautionary guideline**." However, reference to such a precautionary guideline will permit those individuals who seek a level of protection beyond that conferred by existing standards to do so in a rational manner while research proceeds on this important public health issue.

Technical Challenges for RF Site Surveys

Measurement of the emissions from cell towers presents particular technical challenges beyond those encountered for broadcast antenna sites. To understand these challenges, a few comments about radio frequency measurement are required.

Protocols for the measurement of RF energy for the purpose of human exposure assessment often recommend the use of an "isotropic broadband probe" because this type of sensor responds equally to energy arriving from any direction, and over a broad frequency range, as does the human body. These instruments are commonly used because they permit a quick and simple measurement. Unfortunately, some of the meters used for typical RF compliance surveys are unable to accurately measure the low power densities present at some cell sites. An alternate approach is required.

Isotropic Broadband RF Meter

A related problem involves the concurrent presence of other signals besides those from the cell phone system. The "broadband" characteristic of the isotropic broadband probe means that it will measure any signals across a wide range of frequencies. The reading produced by the instrument will be the combination of all signals present. In a large number of cases, the other signals present near a cell tower will be as strong as the cellular signals that one is trying to measure. Realistically, this composite measurement of all signals may be the most relevant exposure metric, but an interpretation of the significance of a reading sometimes requires that one know the frequency of the signal that produced it. For instance, is it FM, TV, cellular, or something else?

One of the most significant RF measurement problems, and one responsible for some of the greatest inaccuracy, involves an instrument erroneous response that can occur when there are two or more strong signals present at the same time. A very large proportion of antenna sites (cell and broadcast) now have multiple strong signals. Instrument design can minimize this problem, but many of the commonly used isotropic broadband meters perform very poorly in this multi-signal environment. The result is a reading that is much higher than actual, sometimes double (100% error).

Portable Spectrum Analyzer from Agilent Technologies

An additional challenge results from the fact that power density levels at a cell tower site are not always constant, as they usually are at a broadcast antenna site. People use their cell phones more at some times of the day, and on some days of the week, than at others. The cellular service providers maintain additional capacity in the form of multiple channels which will become active as needed to meet demand. Each active channel adds to the measured power density at the cell site. The variable nature of power density levels at some sites must be taken into account. When necessary, we shall employ timed signal averaging or data logging to produce an accurate assessment.

Calibrated Broadband Antenna from Aaronia USA

RF measurement surveys conducted by us will employ procedures and equipment to address each of the challenges noted above. A **spectrum analyzer** is used for identification of RF sources, and for assessment of the relative magnitude of signals in different frequency ranges. The use of this instrument with a calibrated antenna will allow a sensitive and precise "channel power measurement" across selected frequency ranges, or measurement of the strength of an individual signal. In some cases, we also use a high sensitivity **isotropic broadband probe** for measurement of the composite power density. Our comprehensive analytical report summarizes all this data in a concise and understandable format, but includes an Appendix with detailed site data, such as the spectrum analyzer plots shown below.

Investigative Report Radio Frequency Fields of the OUR TOWN School District Antenna Emissions in biologically and/or carcinogenic inducing ranges. Prepared by OUR TOWN Parents and Community Review Board. OUR TOWN, California

Site Location: OUR TOWN School Grounds

Survey Dates:

Date 1:

Date 2:

Provided to:

Parents of the children of the OUR TOWN School District: The Governor’s office- State of

California; The OUR TOWN School District; The Mayors Office- City of OUR TOWN; Producer- 60 Minutes; Editor- San Francisco Chronicle; Editor- The New York Times; Editor- The Oakland Tribune; Editor- The Marin Independent Journal; Regional Director- Federal Bureau of Investigation; Attorney General- State of California; Director- Federal Communications Commission;

Introduction Exposure to electromagnetic fields, or EMF, has become an issue of concern for a great many people and is an active area of biophysical research. Discussion over the possible biological effects of electromagnetic fields first began to surface in the late 1960s following the introduction of new, higher voltage electric power transmission lines. An argument can be made that initial speculation regarding possible detrimental health effects of these lines arose among property owners who objected to their presence due to esthetic factors and the resulting loss of property values. In association with environmental action groups, who opposed construction of the lines on the basis of physical destruction and segmentation of habitat, an alliance was formed which worked to bring the issue into public awareness.

The first scientific study to attract serious interest in the issue came in 1979 following the work of epidemiologist Nancy Wertheimer, who was looking for possible causes for a number of childhood leukemia cases in the Denver metropolitan area. Her research, performed with physicist Ed Leeper, found that children with leukemia were more than twice as likely to have lived in homes near high current power lines, where the electromagnetic fields were stronger. Research on the issue has accelerated since that time, with mixed results, and will be discussed in greater detail later in this article.

Compromised Parties Based on forensic investigation, the following persons, organizations and entities receive a financial, political, business advantage or *asset-of-other-value* incentive from the broadcast towers in question and any input or action by them should be considered compromised and invalid:

1.

2.

3.

4.

5.

Those parties who have failed to disclose their compromised relationship to our organization are subject to a legal filing by our organization of a Racketeer Influenced and Corrupt Organizations

Action Suit.

(http://en.wikipedia.org/wiki/Racketeer_Influenced_and_Corrupt_Organizations_Act)

Physical Science Concepts The understanding of a few simple physical concepts is important to the discussion of any interaction between external physical agents and biological systems. Surrounding any wire or conductor that carries electricity, there exist both electric and magnetic fields, collectively referred to as electromagnetic fields, or EMF. These fields often extend for considerable distances around the wire. Although the early health effects studies looked primarily at the effects of large cross-country power transmission lines, and to some extent the public still associates EMF with these lines, it has become clear that anywhere electricity is in use, electric and magnetic fields will be present, often at significant intensities. This includes overhead and underground power distribution lines running throughout residential and commercial neighborhoods, certain types of interior structural wiring, as well as many common electrical devices. If detrimental bioeffects were to be confirmed, the ubiquitous nature of electricity in modern society could represent widespread public exposure to a potentially harmful physical agent.

The types of field that we are concerned about from a health effects standpoint are alternating current, or time-varying, fields whose strength and direction change regularly with time. They arise exclusively from man-made sources, specifically electric power and communications systems, and have been present in our environment for only about the past century. The earth's strong, steady-state magnetic field is often cited as a point of comparison with these fields, but this comparison is not especially meaningful since the influence on matter can be quite different between time-varying fields and static (non-time-varying) fields. It should be noted that naturally occurring time-varying fields, associated with geological and meteorological phenomena, do exist but are not considered detrimental. For the purposes of this article we will look at only a small part of the electromagnetic spectrum, the extremely low frequency, or ELF portion. Electric power distribution in the United States is at a frequency of 60 Hz, and falls within this region. This is the part of the spectrum where most of the research has been concentrated, although substantial work has also been done in relation to radio frequency and microwave fields.

Electromagnetic waves at these low frequencies contain relatively small amounts of energy and are often referred to as non-ionizing radiation. An important distinction must be drawn between this and the ionizing radiation with which most of us are familiar. Ionizing radiation, represented by X-rays, gamma rays, cosmic rays, and alpha and beta particle emissions from radioactive materials, has dramatic and well documented detrimental effects on living things. These high frequency waves or particles have enough energy to eject electrons from molecules, and can damage the structure of cells (including DNA) directly, or through the creation of highly reactive free radicals within cells. Low frequency, non-ionizing radiation does not react with matter in this way. It also differs from radiation in the microwave portion of the spectrum in that it lacks the

energy to damage cells by thermal effects. For these reasons, well characterized interaction models which examine the effect of physical or chemical agents have proven inadequate for studying the effects of low frequency electromagnetic fields, and researchers have been presented with a new challenge in identifying biophysical mechanisms of interaction.

Research History and Funding Many hundreds of studies have been conducted over the past two decades, with many more currently underway. Funding for this research in the U.S. has at various times come from the Environmental Protection Agency, the Department of Energy, the National Institute of Environmental Health Sciences, the National Cancer Institute, The National Institute of Occupational Safety and Health, the Food and Drug Administration, the Department of Defense, and a few state programs. The Electric Power Research Institute, a utility organization, has also funded a great deal of research. Some studies sponsored by the National Cancer Institute have incorporated EMF as one part of a broader epidemiological approach. Worldwide, at least 27 countries are involved in EMF research.

Most work currently underway in the U.S. is a part of what has come to be known as the Research and Public Information Dissemination (RAPID) Program. Mandated by Congress as a part of the Energy Policy Act of 1992, this was planned as a five year effort to determine if exposure to low level, low frequency electromagnetic fields is detrimental to health, and if so, to provide an assessment of risk. Funding was set at $65 million for the five years, with half this amount to come from industry and half from the government. This full sum was not forthcoming, since the industry contributions were not mandatory. The DOE and the NIEHS were charged with directing this research. A report to Congress is required in 1998.

At least four large scale literature reviews have been produced by or for agencies of the government in the last seven years. These reports often reached vastly different conclusions, and have served to heighten the controversy surrounding the issue. A report to the Congressional Office of Technology Assessment in 1989 concluded that there was clear evidence of biological effects related to electric and magnetic fields, but that the risk to health was unclear. The authors stressed the importance of additional research, and proposed a policy of "prudent avoidance," which refers to taking those steps to reduce EMF exposure that can be done with minimal cost, until more is known about the possible health effects. In 1990, the EPA produced their "Evaluation of the Potential Carcinogenicity of Electromagnetic Fields." This report, released only in draft form and then withdrawn under some controversy, classified magnetic field exposure as a potential human carcinogen. A report by the Committee on Interagency Radiation Research and Policy Coordination (CIRRPC) of Oak Ridge Associated Universities, at the request of the White House Office of Science and Technology Policy, reached the opposite conclusion. This report, released in 1992, found no convincing evidence of health hazards from electromagnetic fields. In 1991, before initiation of the RAPID Program, Congress had asked the National Academy of Sciences to review the available literature and provide information on the possible biological effects of EMF and, if possible, to perform a risk assessment. This National

Academy of Sciences report, released in 1996, concluded that the current body of scientific data is insufficient to show that exposure to electric and magnetic fields constitutes a health hazard, primarily because no mechanism of action has been identified. It does, however, recognize that a clear association exists between residence near certain types of power lines and the incidence of childhood leukemia, although fields from the lines cannot be proven as the cause.

An extensive rewrite of the 1990 EPA report was completed, and progressed through several steps of scientific and administrative review, but has not been released to the public. Comments from reviewers indicate that it also recognizes an association between cancer and residence near power lines. Limited portions of the draft copy of another report, by the National Council on Radiation Protection, have been published in Microwave News, a scientific newsletter. This report recognized a possible EMF - cancer connection and proposed interim exposure guidelines. Release of these reports are not immediately anticipated.

It must be noted that almost all of the studies which show no effect or which state that cell towers have no biological impact were funded directly, or indirectly by the communications industry.

Epidemiology Research into the possible biological effects of electromagnetic fields has proceeded along three tracks in the years since 1979: epidemiology, whole animal studies, and cell studies. Epidemiology is that branch of medical research which examines patterns of illness in human populations. As an observational technique, it can reveal a statistical association between an illness and a suspected causative agent, but taken alone it is insufficient to prove causality. Supporting evidence, in the form of cell or animal studies and a plausible mechanism of biologic action, is generally required to establish a cause and effect relationship. Most of these epidemiological studies have used some form of cancer as an endpoint.

As noted earlier, an association between childhood leukemia and proximity to power lines was the first realistic indication that exposure to electromagnetic fields may be harmful to health. To date several studies have examined the association between childhood cancer and power lines. The outcomes of these studies are complex and subject to varied interpretation, but at least eight have reported positive results. As the methodologic shortcomings of earlier studies have been overcome by better study designs, the trend of positive results has continued. Many of these studies have shown relative risks of around 1.5 to 2.0, indicating a doubling of the incidence of illness in the exposed population. A widely reported Swedish study, released in late 1992, revealed for the first time some indication of a dose-response gradient, with the number of cases increasing in the presumed higher exposure categories. Large meta-analyses that pool the results of several studies have been performed and the positive association still holds, even when individual studies with positive results are removed from the calculations. It is this consistent pattern of association in the childhood cancer studies that has continued to drive the research into EMF bioeffects.

Epidemiological studies of adult cancers in relation to occupational and residential exposure have

shown some clear associations, but overall the results are mixed, with variation in both the strength of associations and in the cancer types noted. Studies which evaluate non-cancer endpoints, such as adverse reproductive outcomes, suicide and depression, and developmental problems have, with a few exceptions, produced negative results.

Cell Studies Laboratory research on cultured cell systems, referred to as in-vitro research, is often beneficial in establishing the response of a certain cell type to a suspected toxic or mutagenic agent, and in elucidating the molecular mechanism by which an effect may occur. Studies which expose cells to a wide range of electric and magnetic fields have examined the effect of these fields on signal transduction events, intracellular calcium concentrations, genotoxicity, and patterns of gene expression. Effects have been observed on some measures of cellular response, but in most cases at levels many times higher than those likely to be environmentally encountered. No genotoxic effects have been confirmed under any exposure conditions. Some insight into the means by which very weak signals may influence cellular processes has been gained, but no clear mechanism of action has been demonstrated.

Animal Studies Studies of animals exposed to suspected toxic agents are important in predicting potential toxicity to humans, and in confirming an effect indicated by an epidemiological study. They also provide valuable information for estimating the level at which toxicity may occur. Studies of animals, and to a lesser degree humans, exposed to electric and magnetic fields have produced interesting results; but these results neither confirm nor contradict the increased cancer incidence reported in some epidemiological studies.

There has been some evidence in un-compromised studies that EMF alone can cause cancer in animals. However, carcinogenesis is recognized as a multistage process. In a simplification of a clearly complex process, an agent recognized as an initiator can bring about the transformation of a cell in a manner that can lead to cancer. This process can be enhanced by, and is sometimes dependent upon, the effect of an additional agent called a promoter. A few studies of animals treated with a known chemical initiator have shown greater numbers of tumors, or greater tumor mass, in those animals subsequently or concurrently exposed to magnetic fields at moderate to high levels. This effect has most recently been reported in regard to mammary tumors in rodents.

Another effect that has been extensively investigated is suppression of the hormone melatonin, which is produced in the pineal gland of many animals, including humans. Animal studies have shown that certain types of magnetic field exposure can reduce the production of melatonin. Studies of human volunteers under exposure conditions have reported mixed results. Melatonin is important in regulating circadian rhythms in the animal. It is also recognized as having oncostatic properties and is thought to function as an antioxidant in preventing oxidative damage from intracellular free radicals. If it could be shown that EMF exposure alters melatonin production in any significant way, this would represent one mechanism whereby exposure

influences cancer development.

Risk Assessment Risk assessment, in regard to agents that are thought to pose a public health problem, is a well defined process that can produce meaningful and quantitative results. This information can be used by policy makers in developing programs to protect the public from these agents, if protection is warranted, and by individuals in making important life decisions. One of the steps in this process is exposure assessment. This involves determining the extent to which people are exposed to the agent in question. In regard to electromagnetic fields, this has been particularly difficult because the specific characteristics of exposure that may produce detrimental biological effects have not been defined. Examples of proposed exposure metrics include: the average field intensity over a period of time, time spent in the field over some threshold value, field variability, the presence of switching transients on the field waveform, time in the day-night cycle when exposure is received, and the strength and direction of the earth's geomagnetic field in relation to the power frequency field. Until the mechanisms by which electromagnetic fields interact with biologic systems are better understood, these questions cannot be answered, and a fully valid risk assessment will not be possible.

For most people, however, perception of risk is more subjective and qualitative, with perceived risk showing little correlation with actual risk. This has probably been the case in regard to electromagnetic fields, and for a number of reasons. First is the fact that the agent is invisible and not perceptible. Second, exposure is usually involuntary in that many people are financially unable to change their place of residence or place of employment in order to avoid a high exposure environment. Third, electricity and radiation of any type are mysterious, poorly understood, and inherently frightening to most people. On top of all this, the potential consequence of exposure, cancer, is very serious indeed. As an example, for an article in USA Weekend Sunday Magazine in 1993, readers' questions were solicited on a number of environmental health issues. Concern about EMF topped the list. A survey conducted in late 1995 by the Harvard Center for Risk Analysis showed that while most people were somewhat unsure about EMF risk, approximately 38% of them placed the risk in the high category.

Economic Aspects The economic costs of a large scale response to the issue of electromagnetic fields in the environment is potentially very great. Transmission lines would have to be relocated out of densely populated areas, or the homes along the power line corridor would have to be abandoned and the property purchased to provide a buffer zone on both sides of the line. Neighborhood distribution lines would have to be replaced with new low field designs. Changes would also be required in the way power is distributed to individual homes and within large commercial buildings. Who pays for all these changes? If the electric utilities bear the burden, then everyone who pays an electric bill will pay a share. If the government picks up the tab, this translates into higher taxes for everyone. Public opinion surveys show that people in low field environments, who would be largely unaffected by these changes, are reluctant to pay even slightly higher bills to cover the cost of protecting the relative few who would immediately

benefit.

The consequences of a premature response, based on fear and public pressure rather than on legitimate risk information, would be that we all pay substantial costs for unproven benefits, and that resources which could have been utilized in addressing more widely recognized public health problems may have been misdirected. If, on the other hand, no action is taken, and the detrimental health effects of EMFs are confirmed, then lives may be lost unnecessarily. This is the dilemma facing policy makers and the scientists who advise them.

Conclusion Although the science is far from conclusive, a substantial base of data exists from years of research which is highly suggestive of an association between exposure to electromagnetic fields and the development of certain health problems. It is possible that a subset of the population, which may have a genetic predisposition to the development of these conditions, or who have been exposed to chemical or physical initiating agents, may experience enhanced sensitivity to the promotional effects of electromagnetic fields. Identification of these groups of people would be impractical given our current state of knowledge, but their risk would be greater than the general population. The need for continued research, carefully directed toward answering the salient questions raised by previous work, is clear. In the interim, until a realistic risk assessment can be performed and an appropriate societal or regulatory response initiated, the responsibility lies with each individual to learn more about their electromagnetic environment and to exercise a degree of caution consistent with their own approach to uncertain risks.

Appendix Detailed Measurement Results

Test Locations

Spectrum Analyzer Plots

Site Photos

Equipment Calibration Verification (Copies of certificates from manufacturer supplied with equipment)

RF Guideline References

Conversion Data

Reference Documents

Are you tired of cancer and bio-hazard-causing cell phone towers around your family. Here is how to put a stop to it.

First you need to promote your cause with the following flier you can download, modify and email and post throughout your community:

sleep-over.jpg

Download File

Next you need to **customize** the following report for your community and distribute it to every media outlet, government committee and neighbor in your area. You will need to buy or lease some of the equipment shown in this report (you can find an HTML version of it HERE):

how_to_measure_cell_tower_radiation_while_not_getting_lied_to.pdf

Download File

Here is an additional document you can find on the internet to add more meat to your presentation:

most_people_are_unware_of_the_radio_frequency.doc

Download File

Here is an example of one neighborhood battle:

http___www.neighborhoodnotes.pdf

Download File

Here is an example of one person making change:

http___www.liveindia.com_news_mobilrtowerradiation.pdf

Download File

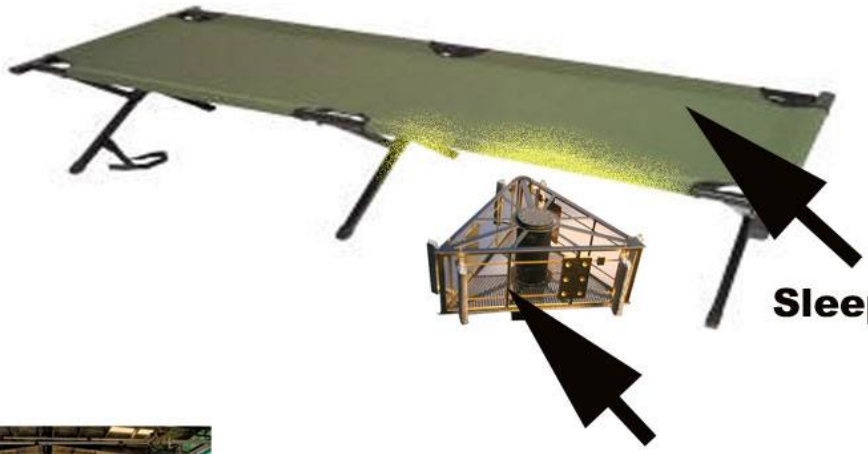
Important!: NEVER tell ANYONE, ahead of time, when you are going to test cell tower radiation near cell towers! Don't tell your neighbors. Don't tell your friends. Don't tell your kids. Don't tell your community groups. The Cell Phone Industry has issued a private memo to its partners to turn down the tower power by up to 50% if they suspect there is testing in the area. Someone always accidentally

leaks the info if you tell even one person. If you care- keep the testing hushed up until after you do it. Test on 3 different days morning, noon and night.

Be prepared for a big fight. The cell phone and tower building companies will push hard to counter your effort. The local officials who are receiving "fees" or bribes will also try to delay and re-direct you.

Sign Up Today for THE BIG CELL TOWER SLEEP-OVER!!!

Balloons, Juice, Science, Fun!!!



Watch as each of the City supporters of the cell phone towers sleep in a cot, in a public building, for a week, with the same fully powered transponder under their cot to prove that there is nothing to fear

Are your public officials being paid to give your children cancer?

Most people are unaware of the Radio Frequency (RF) radiation they are exposed to. Radiation is usually associated with radium, weapons, medical treatments, nuclear power plants and smoke detectors. Before we discuss covert cell towers and other numerous radiating antennas being installed with impunity, we should review the RF spectrum. This will be helpful in understanding how the radio spectrum affects us. We will not discuss HAARP, which is in itself a unique area of the radio spectrum in the shortwave band. Radio Frequency devices of many types. The RD spectrum is regulated by the FCC in America, and other similar regulatory agencies that exist in other countries around the world through international radio agreements. Yet most of them appear to be very unconcerned about health effects.

We will concentrate on the latter in this easy - UNCONTROLLED RF EXPOSURE. RF signals are without a doubt an invisible form of pollution. Most people see a smokestack smoking and scream "OH ! Look at that pollution !" But as we will see, this is not really the most immediate, serious health hazard. What IS known about RF, is that unhealthy effects from it are related to an almost infinite combination of each of the five following factors:
1. FREQUENCY - Certain frequencies are absorbed in the body more than others. For example, the new riot control weapons the Pentagon have operates in the Super-High Frequency (SHF) region. This frequency is about 15 times higher than a conventional microwave oven. Although SHF is not absorbed into the skin, it boils perspiration on the skin causing pain.

2. DURATION - How long you are exposed to the radiation, or how long the transmitter is "on."
3. DISTANCE - How close you are to the antenna. Energy levels decrease with the square of the distance.
4. POWER LEVEL - What the strength of the signal is. This is measured in microwatts, milliwatts and watts. One microwatt is a millionth of a watt, One milliwatt is one-thousandth of a watt. For example, 1,000 milliwatts is one watt.
Cell phone power levels are often in the 100 milliwatt to 4 watt class. In the past, older bag type cell phones people carried around, were up near 4 watts of power. Getting a strong signal was no problem. Today's pocket cell phones are in the 100 milliwatt area. Reducing the power goes with size reduction and a smaller battery. This also reduces cell size, which actually is beneficial
as I'll explain latter.
5. SUSCEPTABILITY - Like tobacco smoke, you cannot tell if you will or will not become ill from RF exposure. But RF heating of body tissues and possible DNA alteration (mutation) happens to 100% of the people exposed to RF. The amount of heating is determined by a combination of the four factors above. The immune system is responsible for cleaning up mutant DNA. But can the immune system clean it out all the defective DNA

and dead cells, and do this indefinitely ? Modern medical science knows there are limits to how much of an assault on the body the immune system can deal with.

WHY RF IS SIMILAR TO RADIOACTIVITY

For those familiar with radiation exposure hazards, the striking parallels to radioactivity are obvious here. RF Frequency is similar to the radiation type, like Alpha, Beta or Gamma. In fact, each of these particles move as a frequency above that of ultraviolet light, and are actually composed of high speed particles. Each of the particle types affects the human body and systems in different ways. RF power level is like the number of particles per second of a radioactive source. Both duration and distance also translate into the realm of radiation exposure.

We know that certain radioactive particles from Alpha particle emitters cause the most damage to lung cells when inhaled. Alpha particle ionizing radiation alters DNA in cells, and can create pre-cursor changes leading to cancer. Tissues and structures in the body that appear on scans and x-rays are sometimes diagnosed as a "pre-cancerous condition" by doctors. Older camping mantle lanterns were very radioactive, because they were made from the element thorium. (The author of this paper found such a radioactive mantle in an older propane lantern. It is believed that most of these are now off the market.)
The reason for discussing the above subject, is to show that anything which alters cellular DNA can be extremely unhealthy. And this is both nuclear radiation and RF. There are also chemical and effects from ultraviolet as well.

THE RF SPECTRUM - WHAT DIFFERENT RF FREQUENCIES DO TO THE HUMAN BODY

For our European friends, please note that all the frequencies referenced below are for the American and Canadian radio spectrum. The lowest frequencies are radio waves, that are actually the same as frequencies as the audio sound which comes out of your speakers. This called VLF, or Very Low Frequency. These waves have wavelengths measured in thousands of miles. They pass through the body without damage.

Commercial AM radio signals, use waves that are also quite long and pass through the body with relative ease. These are also waves, whose wavelengths are measured in hundreds of feet. Shortwave signals are also very long, and this part of the spectrum reaches up to a part of the miltary band, located below TV channel 2.

Decades ago, people could go to a doctor for aches and pains and be treated with a Diathermy machine. This machine was essentially a shortwave radio transmitter, and operated with a curved antenna that fits the human body. When placed against the skin, the antenna radiated energy that was absorbed deep in the body's tissues. A sufficient power level of RF energy will cause currents of electricity to flow in these tissues, thereby creating warmth. These machines are probably outlawed by now and died a quiet death in America.

RF energy causes molecules to collide with one another creating heat. This occurs in tissues like muscles, as well as blood.

FM stations (located in the radio band near TV channel 6) and over the air television channels 2 through 13 are all in the VHF band. These signals can also pass through the human body without harm. These waves are measured in several feet.

When you look at any TV antenna, multiply the width of the antenna by four, and that will be the wavelength of the wave from the TV transmitter. Hence the term 1/4 wavelength, which is a design rule for most antennas.

Television channels 14 through 83 are in the UHF region. Channel 83 is actually just below analog cell phone frequencies. Programmable police scanners scan police channels that are very close to cell phone frequencies.

(Privacy laws force scanners to block the cell phone band.)

WHERE DOES MICROWAVE BEGIN ?

We are now entering the realm where RF begins to affect the human body at a distance. It is generally considered that any frequency above TV channel 83 is microwave. There is a "fuzzy" line between microwave and non-microwave radio signals. In fact, the upper channels of the UHF band in America are considered the near microwave band. Radio signals operating with short wavelengths measured in centimeters, can increase the temperature of water and tissues at a distance. Although most people equate this only with microwave ovens, this effects happens at lower frequencies. Complex proteins present in blood also break down into toxic materials. These invisible, toxic compounds can cause increasing muscle, joint and nerve pain in people over time as toxins build up in the body. Alteration of proteins and toxin generation not only happens to the body when exposed to RF, but also to food in microwave ovens. Many people have put their microwave ovens on the curb, when they discovered their pain was linked to microwaved food. The effects of microwaved food on the immune system are largely unexplored by mainstream science, but are well known by those that suffer from them.

In reality, Diathermy treatments work on the same principle that microwave ovens operate on, except that microwave ovens use higher power levels and higher frequencies. In later years after Diathermy became popular, it was found that higher RF frequencies allowed heating at a distance, without direct electrode contact. The story about the microwave oven invention is that it was discovered by accident, by an engineer working in an electronics lab. He found the radiation from the equipment melted a candy bar in his pocket. Amana is credited with building and selling the first commonly available oven - the infamous RadarRange. The discovery reminds one of the sticky-note origin story. Another accidental discovery - found while 3M was trying to create a better adhesive..

For many years, everyone treated microwaves as nothing to be concerned about. No one learned from the lessons of Madam and Pierre Curie who tinkered with radium a century ago, and died from radiation poisoning. Remember the comparison of RF with radioactiviting above ? Several decades ago, a man walked past the front of a telephone relay dish on the roof of a building. He suffered no immediate ill effects, but died some days later in the hospital as his organs began to fail. His organs had absorbed the microwave radiation, and were permanently and fatally damaged. He was essentially cooked and didn't know it. If he has walked past a sufficient amount of Plutonium, the same thing would happen but in a different way. He would have still died.

RADIATION BY ANY OTHER NAME IS STILL RADIATION

Today, ALL microwave transmitting dishes and antennas must have radiation stickers on them, if people can become near them. Located on the front nose-cone of aircraft are small warning stickers if they have radar. THe radar MUST be turned off when the aircraft is on the ground, as it is hazardous to ground personnel. Warning stickers use the universal radiation warning symbol, of three triangles inside a circle. This the identical symbol used for radioactive materials. Many in the armed forces know the stories and often unpleasant fate of those that unknowingly walked in front of operating aircraft radar.

C band microwave remote uplink trucks used at sports events use power levels typically on the order of 120 watts. Fortunately all the RF energy is pointed upwards towards a satellite more than 22,000 miles away.

Now with all that said, how are WE being irradiated ? The effects of low level radiation are only now beginning to be understood from the efforts of lab research around the world. There are a number of RF frequencies the FCC has set aside, that have unlimited civilian use. Although related unlicensed transmitter operation is usually limited to short range digital devices like garage door openers and cordless phones, low level RF may have a cumulative effect that is not yet understood. For a more in-depth look at complex microwave frequency allocation assignment by the FCC see [6]. few feet away. Again, think about it in terms of exposure time vs. energy levels. of small coils (or no coils at all) because of the high frequencies employed.
CELL TOWERS - cell tower antennas which operate at power levels of about 10 watts FOR EACH ANTENNA on the tower. Some use higher wattage than that. These directional antennas divide a geographical area into cells of service.

When a cell phone is on, it transmits frequently to notify the phone company it is actually on. As you walk or drive, the cell system determines signal strength and switches you connection to another tower near you. Even when you are not talking, the phone can still radiate energy. If you have it in your shirt or pants pocket or on your belt, body tissues around the antenna on the phone are being irradiated with RF energy. This is an inescapable fact.

Since this is a multi-billion dollar industry, it's very unlikely the public will be told about the health hazards of cell phones. This is about as likely as the public being properly informed about microwave oven risks. As you read on, you'll see the similarities between the two microwave based technologies.

COVERT ANTENNAS

The closer to a radiating antenna you are, the higher the health risk there is. In an effort to increase channel availability for the increasing number of cell phone users, cells have to be made smaller. These are often known as microcells. In the past, cell towers typically covered a 10 mile cell. Microcells today are often less than one mile, depending on local population size. More towers are required to be assured a cell phone will get a channel when talk is pressed, or when someone answers a cell phone.

In 2002, industry officials stated that there were more than 128,000 cell towers across America. About 25% of these were hidden towers, and the remaining number of them were traditional types. [1] Keep in mind that cell tower density is directly connected to population density. There are still parts of North America where no cell towers exist, because population density makes them economically unfeasible.

There is a map showing cell tower proliferation. Although the paper is four years old, it details graphically the density and distribution of cell towers across America at that time, which has greatly increased. [2]

Antennas come in many forms, including trees, cactus, gas station signs and even replacement church steeples Below are some photos of hidden cell towers manufactured by the Larson Company:

Antennas come in many forms, including trees, cactus, gas station signs and even replacement church steeples Below are nine photos of hidden cell towers manufactured by the Larson Company:
A "PINE TREE" THAT SUPPORTS 6 CELL PHONE CARRIERS
EACH RING ON THE TREE, IS A CARRIER ANTENNA CLUSTER

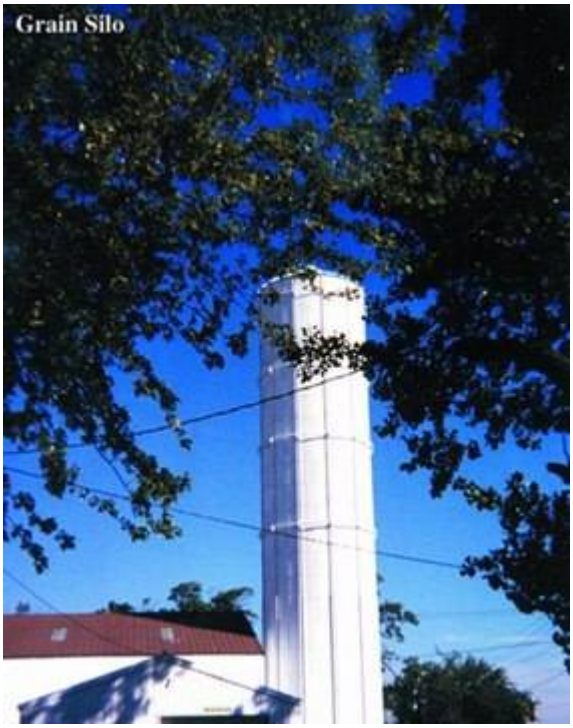
ANOTHER "PINE TREE"
(And you thought fake Christmas Trees were bad !)

CELL PHONE EQUIPMENT
HIDDEN IN FAKE "BOULDER"

SAME "BOULDER" OPENED UP

35' TALL SAQUARO CACTUS ANTENNA
Located in Southern CA.


GRAIN SILO



' PRAISE THE LORD AND PASS THE RADIATION ! '
A money-making lease for a church at Redwood City, CA.

WATER TOWER ANTENNA
(Hooterville, USA ?)

SUNSET PALMS

We can't ignore Local Area Network (LAN) antennas.

These are also a source of radiation, very similar to that of cell towers.
Below is a picture from Mobile Mark's website of their office LAN antenna product. This is a local area network antenna that is ceiling mounted in an office area. What's a few more milliwatts among friends ? How would you like your desk right underneath this omni-directional antenna ? Would you volunteer to sit under it all day, every day ?

VIRTUAL BRICKS FOR FIBERGLAS TOWER STRUCTURES
(Beautifying your healthful RF exposure)

U.K. GASOLINE STATION SIGNS - IN AMERICA NEXT ?

Antenna is inside the vertical sign with the Shell logo

JOLLY OLD ENGLAND IS IRRADIATED AS WELL

In England, angry mobs of people have torn down these gas station signs (like the one shown above) they learned to have cell antennas inside. When they asked workmen installing an antenna, "what are you doing ?" the answer was "you don't want to know." There are news stories in the past, of people that loosen bolts at night and bring down such towers. In America, antenna arrays are very often hidden in plain, white tapered church steeples in suburban areas. A custom built, modernized fiberglass copy of the original wooden church steeple is lowered into place with a crane, complete with antennas already inside. Cell equipment is also hidden from public view. But the radiation is still there. Micro-cell anternnas are designed to serve a small cell area. These antennas are not 100 feet or more high like common cell towers in America, but often just 10 to 20 feet above the ground. However, these antennas also radiate microwave RF energy closer to people, too. Someone could stand or work beside such an antenna and not realize the effect it may have

on them. Many are hidden in church steeple replacements, including Big-Ben-like structures, complete with working clocks on each of the four faces.

Workmen installing a near ground level antenna inside a sign (like the Shell station sign shown above) have people ask "what are you doing ?" The answer they heard was "you don't want to know." There are numerous UK news stories of people that loosen bolts and bring down such towers. In America, antenna arrays are very often hidden plain, white tapered churc steeples in suburban areas. Just out of reach for the public. [3]

CELL PHONE RADIATION STUDIES

In general, all of us MUST keep in mind that the human body is an electrical system. It will be, and is affected by, outside RF energy fields that can promote unwanted nerve stimulation, cancer, heating effects, and many other unwanted effects.

A comparison table for telephone effective radiation head exposure has been developed to provide reference values. [4] This value varies considerably for dozens of different cell phone models tested. DNA breakdown is among the most disturbing findings of studies done, which can lead to illness and tumors. There are now new links to brain cancer being uncovered as you read this. There is new concern over those that wear cell phones on their belts, because of the close proximity of the antenna to kidneys. The liver which can rebuild itself to some degree after being damaged, but your kidneys cannot.

One notices that RF exposure studies in the media from Europe are much more common and considerably more vocal than those done in America. Publishing negative study results in North America will have a negative effect on the billion dollar market, and subsequently affect stock in cell phone companies. Cell companies have managed to keep the lid nailed shut on the box, in so far as mainstream media are concerned, but this can only last for so long. I personally was not convinced of the damage potential of low level RF radiation for more than 20 years. That is, until reading a number of test results, all saying very much the same thing
about observed detrimental effects on living organisms.
At least one such study [5] on health effects was done in Australia. Note the usual scientific cautiousness expressed here, even though other studies have linked RF exposure to tumor growth. Its interesting to note the scientist's other comments, that thermal temperature can increase the negative effects of RF exposure:

EXTRACT START:

"Researchers in Australia have reported one of the first scientific hypotheses that normal mobile phone use can lead to cancer. The research group, lead by radiation expert Dr Peter French, principal scientific officer at the Centre for Immunology Research at St Vincent's Hospital in Sydney, said that mobile phone frequencies well below current safety levels could stress cells in a way that has been shown to increased susceptibility to cancer.

The paper, published in the June issue of the science journal Differentiation, says that repeated exposure to mobile phone radiation acts as a repetitive stress, leading to continuous manufacture of heat shock proteins within cells.

Heat shock proteins are always present in cells at a low level, but are manufactured in larger amounts when the cell is stressed by heat or other environmental factors. They repair other proteins that are adversely affected by the conditions, and are part of the cell's normal reaction to stress. However, if they are produced too often or for too long, they are known to initiate cancer and increase resistance to anti-cancer drugs.

No link shown - Dr. French emphasised that no link has yet seen shown between the specific biological effects of mobile phone radiation and cancer, but that there was now a theoretical framework for such an effect that could be investigated. His previous work has included showing that the production of histamine, a chemical involved in asthma, can be nearly doubled after exposure to cellular frequencies.

To date, most safety levels have been set on the assumption that damage is caused by heating effects of radio waves in human tissue, much higher than the levels at which Dr French claims heat shock proteins are triggered.

His co-authors include Professor Ron Penny, the director of the Centre and one of Australia's leading experts in the cellular effects of HIV, and Professor David McKenzie, head of applied physics at Sydney University."
EXTRACT END

SO WHAT IS THE TRUTH ?

And even though numerous studies exist that prove the negative effects of low level RF fields on the human body, still there also those that claim no negative effects exist. So which is true ? The more realistic studies are those that actually simulate human conditions, where rats in a cage were exposed to the same frequencies, power level and distance from the antenna as people are. Changes to their brain structure were observed after necropsies (animal autopsies) were performed.

This is the type of science that ALL researchers should concentrate on - duplicating human cell phone conditions. People often mistakenly still think that since they are not talking on the phone, it isn't transmitting. To prove this, all one needs to do is to call a phone from another phone, and then call it when its off. Cell systems ping the phone whenever someone calls it even if they don't answer, as well as perdiodically pinging it (covert tracking) even when no one is using it. Pinging commands the phone's transmitter circuits power up and respond, which subsequently generates microwave radiation. The user has no control over these operations if the phone is in standby. Many newer phones today cannot be turned off, unless the battery pack is removed. This does not disable the satellite tracking chip however.

CONCLUSIONS AND COMMENTARY

We are being relentlessly bombarded both indoors and outdoors by many different forms of radiation. As more and more cell phones proliferate like reproducing rabbits out of control, radio bandwidth and channel limitations force companies to add more microcells. Many towers in cities will become obsolete, as these will serve too large of an area. The towers will be most likely converted to other mind control and tracking tasks we won't discuss here. Microcells are worse for humans as these directly result in more RF radiation, as a result of being located closer to people at ground level. There are no other options to keep the cell network operating, because of the limited nature of cell phone technology. Unfortunately the average person won't care, as long as their phone works when they pick it up. Increased RF exposure will inevitably lead to more illness from compromised immune systems, nervous system, brain disorders, organ problems, tumors and cancer.

This problem is very much like cancer. An interesting fact about cancer is that everyone has a different susceptability to it. Some people can smoke their entire lives and not become ill, yet live to be 99 years old. Others cannot. Some can drink hard alcohol their entire lives and never have health problems, while others cannot. Cell phone radiation susceptability will likely inevitably prove to be this way. The studies show that RF radiation exposure can be just as harmful as smoking. People using cell phones and wearing them daily like jewelry should keep that in mind. Pagers are harmless, because they do not emit radiation (unless it is a two-way pager.)

The problem is you don't know how susceptable your body is until its too late. Do you want to wait to find out the hard way ? Is your life and health insurance current ?

All the time we see cell phone foolishness. People often chuckle, sneer and shake their heads at those hooked on cigarettes standing outside stores, puffing away and working hard to accomplish heart attacks, strokes and cancer. These same laughing people then go into a store and place a call on their cell phone, to irradiate themselves.

You hear can easily overhear highly intellectual conversations like this one in a store, while watching people PAYING to irradiate themselves. (Doesn't this remind you of smoking ? Paying to become deathly ill ?)

Here's one conversation I heard:
"I'm entering the store now.....
I'm going down the aisle to where they keep 'em.....
Yup, I can see it now.....
Yes, they have one....
Going to the checkout now to stand in line.....
..... see you later. Bye."
Its hard to imagine anything more pointless. Somewhere a computer generates the "ching-ching" sound of a cash register, as this highly intellectual discussion just billed their account

another dollar or more. They would actually get a better return on their money, if while driving down the road they rolled down the window and tossed the money out. Why a better return ? Because it won't destroy their health ! Personally, I don't own a cell phone, have no interest in owning one, and take comfort to know that when I pick up a PAYPHONE the radiation level is ZERO.

And to add insult to injury - people are PAYING BY THE MINUTE TO GET SICK ! Imagine it ! Yet the average person doesn't seem to want to connect A to B. It's always the same old tired reply from people - "it can't happen to me, it will happen to someone else, the other guy." People need to use mirrors more often because staring back at them is "the other guy !"

We may never know. When my children were growing up, the phone/pager craze was just beginning when they were teenagers. When our son hinted at wanting a pager, I replied "FOR WHAT ?" No real answer was forthcoming. He just wanted one because others had one. We are talking about the future health of our children. It is they who must start becoming concerned about the ill effects caused by imitating others. And the effects of endless strings of cell towers that stretch to the horizon. Today's children must start taking responsibility for the future of THEIR America in every respect.

When we got into trouble as children and then claimed a friend lead us to do something wrong, many of us remember our parents asking us "if they jumped off a bridge, would you jump, too ?" So it is with cell phone use, and it began by thinking no one can live without one. Do we have wait for a major lawsuit award, where the plaintiff is sitting in a wheel chair slumped over from brain cancer proven to be caused by his cell phone to wake up ? By then it may be too late, because once you damage enough DNA it's only a matter of time. So just like cigarettes and excess alcohol consumption- perhaps the time to stop the increase in RF radiation is NOW. Right now, not tomorrow or the day after. NOW. What will be next cell antennas - office chairs with LAN antennas inside them ? A new form of the proverbial "hot seat ?"

A different form of RF radiation is now causing some unusual effects on people. Very high frequency audible tones being heard by people all over the globe. What puts these sounds into the RF realm, is that they can be heard anywhere and are not directional. Our website is studying a number of odd scientific phenomena that few scientists (or no scientists at all) are studying. Some of these areas are not in mainstream science yet, but are real physical manifestations. Our non-profit website is unique, because we encourage public participation. For more information, please visit http://www.data4science.net

What to Do if a Cell Tower is Proposed in Your Neighborhood

Cell towers are being installed in neighborhoods all over Portland. Photo: ©Heather Zinger.

UPDATED 3/7/11

In the last year and a half, many Portlanders living in Beaumont-Wilshire and Irvington, and now more recently in Woodstock and Eastmoreland, have found themselves battling the construction of cell phone and wireless antenna towers (**cell towers**) in their neighborhoods.

The struggle, with overtones of David and Goliath, has pitted neighbors against wireless carriers such as Clearwire, Sprint, and AT&T, who want to install the towers to provide denser wireless Internet coverage. Neighbors have also butted heads with the office of **Commissioner Amanda Fritz**, who oversees the **Office of Cable Franchise and Management**, the city bureau permitting and regulating cell towers.

Neighbors have attended meetings, learned about Portland's zoning and land use laws, researched other cities' ordinances that regulate and site cell towers, and written countless letters and emails opposing the construction of new towers.

"We have learned a great deal in that time for how that process works," says Colin O'Neill, who lives in Beaumont-Wilshire and is a founding member of **RespectPDX**, an organization advocating against constructing cell towers. "It's very disorienting for people who [oppose these towers]."

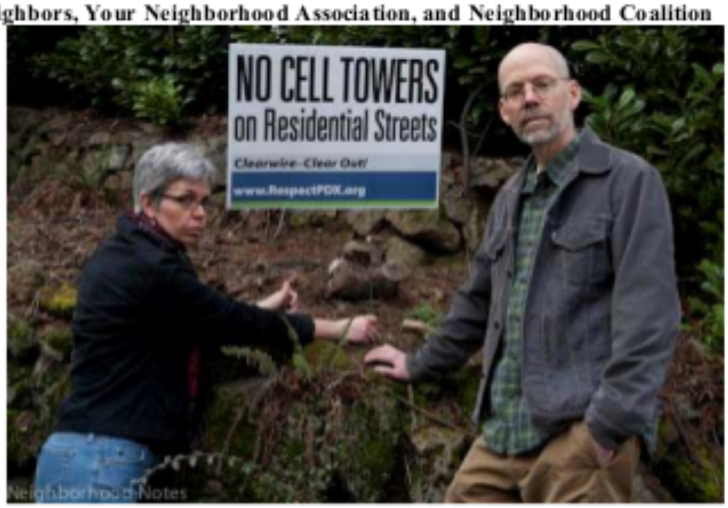
But there are numerous things people can do if they find that a tower has been proposed in their neighborhood, and they oppose it. Here are some suggestions:

Don't Wait

Cell towers can be varied in their height and appearance.

O'Neill says that people opposed to cell towers should not wait to become active until a tower is proposed in their neighborhood. The more people who contact Portland's City Council in opposition to cell towers in their neighborhoods, the more likely they are to take action. "The more people who talk to Amanda Fritz and OCFM and the more complaints they get, hopefully, over time, they will become better at listening to citizen input on this issue and taking the interests of the neighbors into account," says Ric Bernat, another founding member of RespectPDX.

Talk to Other Neighbors, Your Neighborhood Association, and Neighborhood Coalition



Anne Trudeau and Rick Bernat of RespectPDX. Photo: ©Heather Zinger.

If a wireless carrier writes to you stating their intent to build a cell tower in your neighborhood, reach out to other neighborhoods. Wireless carriers are only required to communicate with people living in a 400-foot radius of the tower's proposed location—the equivalent of a block and a half. "It can just go unnoticed by people," says Bernat.

"If they go through a **coalition** also, you may find that other neighborhoods are having the same issue," says Steve Cole, who lives in the Irvington neighborhood.

Kupel and five others canvassed their neighborhood, raising awareness about the proposed SE Cesar Chavez tower, making contact with 350 households, and getting 319 people to sign a letter addressed to Clearwire opposing the tower. "Well over 90% of people said, 'thank you so much! we've been wondering what to do to oppose this,'" Kupel says.

Neighborhood associations and coalitions can also lend support—the Beaumont-Wilshire Neighborhood Association, for example, formally voted to oppose a Clearwire tower proposed on NE 37th and NE Fremont. Coalition offices can also provide information about how to contact City Council, provide meeting spaces, etc.

Learn About Portland's City Ordinance and City Code Regarding Cell Towers

Cell towers contain multiple antennas.

Bernat says it is important to make sure that the wireless carrier is submitting an accurate and complete application to the Office of Cable Franchise and Management. The city code regulating cell towers is found in Chapter 33.274 of the City Charter. Portland has a priority street system stipulating that wireless carriers must try to locate the towers on less residential streets. "It is something that could be beneficial IF it is implemented correctly," information written by RespectPDX says. RespectPDX has a comprehensive toolkit providing information about the city's regulations, how towers are sited in Portland, etc.

"Members of the public typically have no idea if these regulations even exist or that it holds some potential for them to weigh in and have their voice heard," says Kirk Ranzetta, a consultant who aided the Irvington neighborhood fight a tower proposed for NE Stanton and NE 22nd.

"If you're going to challenge the antenna going in, it's good to know all the bases you have for opposing it," Cole says.

Find Out if There are Any Adverse Effects

Some cell towers have equipment mounted to the pole.

Wireless carriers are required to list all the adverse effects an antenna might have in a certain location, including negative aesthetic and visual effects, effects on neighboring homes or buildings, etc. Neighbors cannot claim that health impacts are a possible adverse effect, because the Telecommunications Act of 1996 preempts health from being a concern. (But if the health impacts of cell towers *do* concern you, don't give up, there are organizations that you can join to help create change on the Federal level.)

If there are enough adverse effects in a particular location, it might be reason enough to have the antenna located elsewhere. The Irvington neighbors hired an independent arborist who showed that many trees located around NE Stanton and NE 22nd would die because of equipment Clearwire would have installed in the ground. "It's important that the neighborhoods don't assume that any telecommunication company is going to look at all the adverse effects," Cole says.

Ask if Alternative Sites Have Been Considered

Wireless carriers must prove there are no alternative locations to a proposed tower site.

Wireless carriers are required to prove that there are no other places where the tower can be located. They don't always do this as completely as they should, and it is possible that there is a commercial or industrial area nearby, or a less residential area, that could be proposed as an alternative location by neighbors. RespectPDX recommends that neighbors do not suggest the alternative sites themselves, because it takes responsibility away

from the carrier, and may pit neighbors against each other.

But Dan Kearns, the city attorney for Mosier, worked in 2007 to stop a tower from being located in the town, considers this one of the strongest tools neighbors may have in their tool belt. "It would give them some argument or some protection for residential zones," Kearns says. "I think that neighborhood associations should get together and advocate [that] any cell tower proposed in a residential zone is subject to an alternative sites analysis."

Live in a Historic Neighborhood? Get SHPO Involved

Kirk Ranzetta at the proposed location of the cell tower he helped stop in Irvington. Photo: ©Heather Zinger.

Neighborhoods listed as historic districts by the National Historic Preservation Act may have more protections against a cell tower than non-historic neighborhoods. A tower cannot be placed in a historic neighborhood if it can be demonstrated that the tower negatively affects the neighborhood's historic quality. The Irvington neighborhood was designated a historic district last year, and Kirk Ranzetta helped the neighbors appeal the issue to Oregon's State Historic Preservation Office (SHPO).

Ranzetta says wireless companies are required to file an application with SHPO, and SHPO has to agree that the neighborhood will not be adversely affected. "The applications are not always full or not always as accurate as they probably should be," Ranzetta says. Neighbors can then file a notice of objection to the Federal Communications Commission (FCC). "It's a little bit more of a legal challenge," Ranzetta says, and the FCC is legally required to respond to the objection.

Become a Consulting Party

People with a demonstrated interest in the process can become consulting parties to the application to site a tower. Individuals or organizations can be consulting parties. RespectPDX, the Irvington Community Association and the Northeast Coalition of Neighborhoods are consulting parties to the tower proposed in the Irvington area. Ranzetta says that the wireless carrier and the FCC are required to share all the information related to a specific tower. "It forces everyone into a much more above table discussion," Ranzetta says.

Draw Out the Process

A prolonged fight can encourage the wireless vendor to choose a different site.
Photo: ©Heather Zinger.

By becoming involved and active, neighbors can draw out the amount of time it takes for a wireless company to site a tower. Kearns says the companies "want them up and sited and operating quickly."

"The carriers will generally flip to another site if they run into any other site that promises to drag out," Kearns says.

UPDATE 3/7/11: "Clearwire withdraws controversial cell tower applications after Northeast Portland neighbors and others push back"
by Larry Bingham, The Oregonian

Stop Mass-Killings!
Cell Tower Radiation

by Rajesh Chopra - LiveIndia.com

Instead of writing technical details about radiation that emits from cell-towers which everyone knows. I think it's about time we talk about how this menace can be solved and that's what my article is all about.

Telecom Companies, NGO's and everyone associated with this sector know that cell tower radiation is day-by-day becoming a trouble but still all are overlooking this crisis. The only motivation behind overlooking is Money.

The riches game gets initiated right from the start wherever cell-towers are installed. Telecom company's employees take bribe in advance before installation of tower from the owner of the property in form of six-month rent, that companies are supposed to pay to the owner. Whoever installs cell-tower on their property they instantly starts earning 20 to 25 thousand Rupees every month. Companies are constantly increasing their network and introducing new plans to the market and selling them. Government agencies and NGO's are being showered with Money to keep their eyes closed and in return these cell towers are harming general public's health.

Today we all know that cell towers radiation is messing up our health, We should start thinking from now what effect will this have on our future generation, In what all ways will they be deformed and we should start intriguing initiatives accordingly. All the agencies that are issuing reports which states zero danger from these towers are carrying on research from funds provided by these telecom giants, thus these agencies are not to be trusted at all.

It's about time that we comprehend that Government agencies and NGO's won't be doing anything about this hazard, that's why it's high time, we public should take this grave matter in our hands. It is important to make this issue so huge that government is left with no option.

Its government's fault for spoiling these telecom giants and now these companies are leaving no stone unturned when it comes to playing with Law. Now they are not even bothered about law when it comes to installing these killer towers.

These days I have seen at many places A building's roof has up to two or three towers on first floor and these towers in some cases are directly facing second floor of adjoining building like at Suvidha Kunj, Pitampura, Delhi, where humans live. Thus companies showing no regard for Human life whatsoever. Isn't this making fun of the law formed for public? Today it is very easy to see this kind of installation in many places.

All cell towers should be removed from residential areas and placed where they don't harm and are on proper height and if govt. fails to do this soon.

We public should take the matter in our own hands.

The statements being made by the concerned officials regarding mobile tower radiations are all mere eyewash. Not many are ready to openly discuss about this topic and the reason being Money. Yes, this is a pure money game.

This industry generates a large amount of revenue, a share of which is distributed amongst all departments and hence money has sealed everyone's mouth. If this industry would have incurred loss rather than generating revenue then every political party would have risen from slumber and raised their concern over it. In a situation of loss every party would have included the removal of such towers in its manifesto. But in the present scenario, money has sealed the truth in the hearts of the guilty.

Currently in Delhi, every residential area has multiple mobile towers and Mr Kapil Sibbal claims that this does not release any radiations. Has any authority ever visited the areas for inspection? Or have they even cared to give a clearance certificate to the residents? The topic is a very casual one for the majority with power and the health of public is not what their concern is.

Ten years hence when the number of cancer patients would increase rapidly, then these people would invest heavily in the international treatment and take the credit for improving general public's health. Again, This is all a money game. ..... Rajesh Chopra