

Dilbert — Wireless Tech Hazards & Solutions for Schools

Hello School Trustees,



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Dilbert asks, “Is 5G dangerous?” When his boss can’t reassure him, he says, “Maybe I should study it.”

Our goal for Safe School Tech is to clear “electrosmog” from today’s classrooms by providing you with the latest facts about EMFs (electromagnetic fields), in particular microwaves, that are used in **cell phones** and **WiFi** internet. These microwave technologies (which also include smart meters, baby monitors, home security, smart TVs) are much more dangerous than most experts predicted at the start of the Cell Phone and WiFi Age in 1983, especially for kids. Later, we offer solutions— read on.

1 A picture is worth a thousand words.

Here are MRI images showing that *everyone* absorbs microwaves when holding a cell phone to their ear. But the absorption is far greater for children than for adults. Children using their classroom computer are exposed to the *same microwaves* as 3G, 4G, and 5G cell phones produce, so these MRI images should be a wake-up call for parents and educators.

Microwave Cellphone Effects Absorption in the Brain According to Age

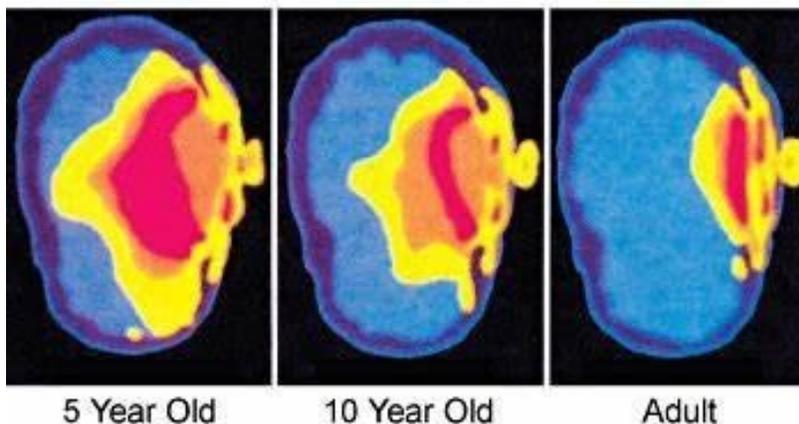


Image courtesy of Dr. Om Gandhi, University of Utah, 1996, IEEE Publication

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2 Glossary

This essay doesn’t use tech jargon, such as ISP, SOHO, LAN, switch, server, WAP. Nor do we explain things like how the World Wide Web is different from the internet. For our purposes, “access to the internet” is like turning on a faucet to “access” water, or going somewhere in a car: We don’t

know the technical explanations for how cars work, but we can explain why wearing a seat belt is better than sitting on it.

- **WiFi** **Wireless** access to the internet via microwave antennas. (Cell phones also use microwaves to access other phones, via cell towers, as well as the internet.)
- **Ethernet** **Wired** access to the internet is possible via an Ethernet cable connecting one's computer or tablet, to a router which accesses the internet by cable (like Comcast) or by phone lines (like Frontier) or via fiber optics (the least available due to the construction expense). An Ethernet connection not only provides faster service but it's impossible to hack, and dangerous microwaves are not used. By adding a Thunderbolt or Lightning adaptor to the Ethernet cable, people can use their cell phone to access the internet without microwaves. (However, *calls* still use microwaves.)
- **EMFs** **Electromagnetic fields** have a common trait: These energy frequencies are able to pass through the near-vacuum of space at the speed of light (or nearly that fast), and these frequencies travel almost that fast in Earth's atmosphere. [See these charts](#). This paper doesn't address the most energetic frequencies— x-rays and gamma rays because they aren't an issue in schools.

The Electromagnetic Spectrum

Non-ionizing (not radioactive)

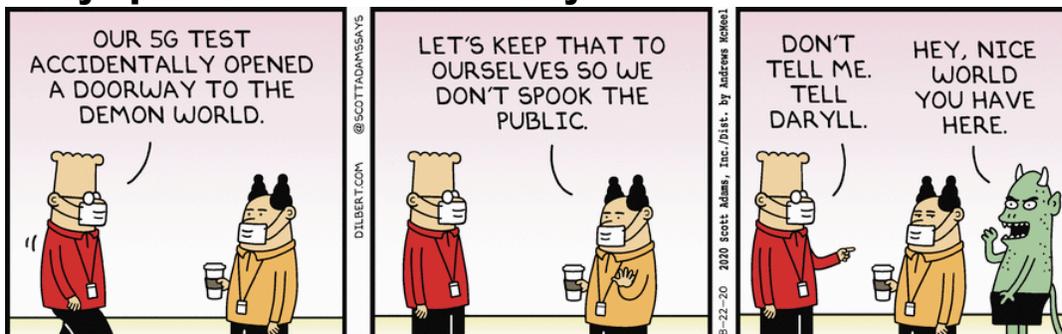
Ionizing (radioactive)

[Radio Waves](#) [Microwaves](#) [Infrared](#) [Visible Light](#) [Ultraviolet](#) [X-rays](#) [Gamma rays](#)

[AM & FM](#) [1G-5G, WiFi, radar](#)

- **Meter** An EMF detector can reveal the level of exposure to the microwaves used for cell phones, WiFi used in computers and tablets, cell towers, 5G small antennas, smart meters, cordless landlines, baby monitors, Bluetooth, wireless security systems. A [Safe & Sound](#) meter uses lights to show exposure: **green = safe**, **yellow = unsafe exposure**, **orange = highly unsafe**, **red = extremely unsafe**.
- **EHS** **Electromagnetic hyper sensitivity**: poor health resulting from WiFi and other wireless tech.
- **Modem** The device that makes it possible to access the internet.
- **Router** To oversimplify a complex system, a router connects a modem to a computer or tablet, either wirelessly or via an Ethernet cable. Home routers typically have 4 outlets to plug in Ethernet cables so that more than one person can reach the internet from their respective devices.

3 Symptoms of wireless toxicity



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Here's more research on the [hazards of 4G, 5G, WiFi](#), and other wireless tech.

Human-generated EMFs are vastly stronger than natural fields, and the [pulsed frequencies](#) used in wireless technology are more harmful than nonpulsed EMFs. All [living things](#) suffer from exposure to them. [Human reactions](#) to high EMF levels depend on each person's vulnerabilities. We can be confident that EMFs are a major cause of these [symptoms](#) because, as fire fighters

discovered (see below), many ailments [recede](#) or [disappear](#) when a person's exposure to [EMFs](#) is [reduced](#) or ended:

ADHD	High blood pressure
Alzheimer's disease	Immune problems
Anxiety	Insomnia
Asthma	Irritability
Brain fog	Male infertility
Cancer	Miscarriage, female infertility
Depression	Muscle aches (despite inactivity)
Diabetes	Nausea
Dry cough	Nosebleed
Dry eye	Rash or skin tingling
Erectile Dysfunction	Shortness of breath
Fatigue	Sense of smell fades
Gut Problems	Tinnitus
Headaches	Vision problems
Heart palpitations	Vertigo

4 Why is the list of symptoms so long?

Dr. Martin Pall, professor emeritus of biochemistry at the University of Washington, also wondered: "[The great puzzle](#) is that these EMFs are comprised of low-energy photons, those with insufficient energy to individually influence the chemistry of the cell... how can such effects of EMFs possibly occur?"

The answer: **voltage-gated calcium channels (VGCCs)**. At minute 2:24, [here](#), Professor William Catterall, who teaches pharmacology at the University of Washington, says, "**Electrical signaling would be useless without calcium channels because every physiological event that's initiated by an electrical signal begins with calcium coming into the cell through calcium channels.**" When Professor Catterall says "electrical signaling" he's referring to microwaves from our wireless tech, which humans have only been able to generate for the past 80 years. No one working on radar (one of the earliest microwave applications) foresaw how seriously microwaves, even at very low levels, would interfere with basic life functions. Indeed, because most electrical engineers and physicists have no idea about VGCCs, they still consider WiFi safe (especially if they are funded by telecom corporations).

Think about it— both animal and [plant cells have VGCCs](#) (which shows how basic to life they are) and each cell has hundreds of these pores, so how can WiFi be "harmless" if the hundreds of VGCCs in each of our 30 trillion cells are swamped with excess calcium whenever a person is near WiFi? Professor Pall describes many consequences of this fundamental disruption to cellular integrity in his [90-page paper](#). In 1983, Motorola et al assumed that microwaves don't penetrate the skin, ignoring advice from the EPA, FDA, OSHA, and NIOSH. By now, Big Telecom, like Big Tobacco before it, knows better. But trillions in sales motivate them to suppress thousands of research papers. See Harvard's Center for Ethics 62-page report, [Captured Agency— How the FCC Is Dominated by the Industries It Presumably Regulates](#).

5 Internet access can be either safe or unsafe.

Your access to the internet will either be **hazardous** (if you use a WiFi connection, which is wireless) or **safe** (if you use an Ethernet cable). Because most schools use WiFi for students to go online with their tablets or laptops, that means kids are exposed to EMFs the **entire time** they are at school, whether they're online or not. Because of all the wireless technology, our EMF meter is in the red zone ("Extreme Exposure") on a school campus, or in a library (or visiting a hospital, or shopping at a mall). In contrast, most offices are wired up because that makes working online faster and more secure, with the extra benefit that it's far safer for the office workers (especially if everyone's cell phones are on airplane mode).

The safe way to connect to the internet is to "wire up" by using **Ethernet** cables from the router to computers. Some will object, "But then students would have to plug in, how inconvenient!"

Wait a minute! Isn't cancer even *more inconvenient*?! As are all the other ailments that correlate with using WiFi, listed above. Imagine Ethernet cables that retract into spools hanging from the ceiling— that's not as inconvenient as wheeling a film projector into the classroom like we did in the 60s, or a TV set with a video cassette player in the 90s. Or, an alternative way to reduce EMFs would be for kids to stay in the same classroom most of the school day, except for science lab, with Ethernet cables for each student (as office workers stay at their own desk every day!) and the teachers rotate in for the different subjects.

Of course, teachers won't like that. But since we gave every student her or his own tablet to take to various classrooms each day and then home, without confirming the Telecom and FCC assurances of safety, *something* has got to change to ensure student health— and *teacher* health!

With Ethernet cables (i.e. being “wired” instead of wireless), students can turn off the Wifi on their computers and the school can turn off WiFi at the router. That means the little WiFi icon  on the router goes dark, which causes the EMF meter to be in the green zone (unless there are some cell phones nearby that are not in airplane mode). [An educator compares WiFi to cell phone exposure in this 15-minute video.](#)

6 References

In just 11 pages (14 pages with the postscripts) you'll read the good news about making school safe again by removing electromagnetic frequencies. Click on any of the 160+ embedded links to see the citation and get more details. For each page we put in 4 days of research— so that you wouldn't have to.

Here are two references no one else is telling you: the whole reason for the huge expense of giving each student a tablet was to boost learning, yet these studies cast doubt on that approach:

- The hoped-for benefits of information and communications tech (ICT) in education are not happening, while the potential for harm from WiFi is being [revealed](#). Sweden leads in wireless education but has [deteriorated](#) the most in the PISA performance surveys in mathematics and reading, 2005 to 2012.
- The Uruguayan pioneering program “one child-one laptop” [did not improve their performance](#) in basic subjects such as math and reading, according to a report from the country's Institute of Economy and financed by the same education authorities.

7 Electromagnetic HyperSensitivity (EHS)

Microwaves are invisible and most people can't feel them, at least at first. That's why there wasn't much research into the health effects of radar. The earliest “canaries in the coalmine” were radar technicians back in World War II, many of whom got strange symptoms from their work, such as a high rate of cataracts or tingling skin. Now we call that reaction “electromagnetic hypersensitivity,” abbreviated as [EHS](#). Initially researchers thought that health problems would arise from microwaves' ability to heat water, just as much higher power microwaves inside a microwave oven do. The [military](#) even developed a [thermal crowd control weapon](#). However, it was the [non-thermal effects](#) that [caused EHS symptoms](#). [Investigative journalists](#) have been trying to alert the public for 50 years.

8 Most doctors don't know about EHS.

Considering how prevalent [wireless technology](#) is, it's odd that neither medical schools nor ongoing education courses bring doctors up to speed on the many ways it causes illness. Often, they learn about EHS from their patients! Just as only a few people have life-threatening allergic reactions to peanuts, not everyone reacts to microwaves. But those who do are typically mystified for years before they find a practitioner who can diagnose their problem, while many more are still waiting for the insight that they could clear up some, or all, of their misery, from ADHD to vertigo, by simply removing wireless tech from their daily life. This list has 1000+ medical [journal studies of wireless harm](#) from around the world.

The [EHS diagnosis](#) can be confirmed by widely available [biomarker](#) lab tests. If you read “The Secret History” (the [burgundy](#) sidebar in the postscript), you’ll see that EHS has actually been around since Edison and Tesla. Today people get sick from wireless tech because an invisible, silent threat of *human-generated* EMFs looms like Mt. Everest over the molehill of Earth’s *naturally occurring* electromagnetic fields. The FCC limit is 10 million microwatts per square metre ($\mu\text{W}/\text{m}^2$)— that’s a billion times more than the [natural background level](#) in which human life has evolved, $0.000001 \mu\text{W}/\text{m}^2$! Wireless harm isn’t limited to humans— many living things show damage, from tiny [insects](#) to tall [trees](#), as this 9th grade [cress sprout](#) experiment shows.

According to Dr. Devra Davis, up to a third of the population have *some* EHS symptoms and 3% of the population have *severe* [symptoms](#). EHS is officially recognized in [Sweden](#) and the syndrome has an International Classification of Diseases ([ICD code number](#)), used by hospitals for identifying a patient’s symptoms when billing for care.

9 We still use cell phones

We in Safe School Tech still have cell phones. But to reduce our exposure to microwaves, we blocked internet access and GPS, so our phones can only call, text or take pictures. That’s why our *Safe and Sound* [EMF meter](#) shows a green light most of the time, which means our phones are not emitting microwaves 24/7. (Of course, when we’re *on a call*, the meter reading is in the red zone, therefore we keep calls brief.) Remember, whatever is true about cell phones is worse for WiFi because it’s on *all* day.

10 How to use cell phones more safely:

This 4-minute video covers the key points, click [here](#).

1. Use Speaker Mode when calling instead of holding it against one’s head (or, use [air tube ear buds](#) instead of [Bluetooth](#) because acoustic transmission emits no electromagnetic fields)
2. Whenever not on a call either turn the phone off or place it in [airplane](#) mode (non-wireless apps still work, such as games, downloaded books, and the camera).

11 How to use computers safely during remote learning:

1. Both schools and homes can dramatically lower children’s exposure to EMFs by “wiring up.” The internet is delivered to a classroom or home router by broadband (DSL, cable, or fiber optic). Most Americans use WiFi (wireless) for the last leg of internet access. The way to drastically lower children’s EMF exposure is to replace WiFi with an [Ethernet](#) cable from the router to the computer or tablet. Remember to turn off the WiFi button on the router or it will continue to fill the area with EMFs even tho’ they aren’t being used.
2. In homes that use a **cell phone as a “hotspot”** in lieu of an internet modem; parents can protect everyone from the EMFs by placing the cell phone far from high traffic areas. Then a 10- or 20-foot Ethernet cable from the cell phone (use a Thunderbolt plug-in adapter) replaces a modem-router, which is the usual wireless internet access. The other end of the Ethernet cable is typically a USB plug that inserts into the computer. Since many tablets don’t have a USB socket, then a second Thunderbolt adapter (or a Lightning adapter for iPads) will carry the internet that last stretch. With wireless tech, “[distance is our friend](#)”— the Inverse Square Law of physics means that a cell phone 9 feet from a child is far [safer](#) than one only 3 feet away.

Note, today’s printers also rely on WiFi. Obviously, it would be inconvenient to wire every computer up to a printer. But schools can reduce EMF emissions from printers to zero by having students use a flash drive to transport a document to the printer. You’ll find more info on reducing EMFs [here](#), [here](#), and [here](#).

12 Healing from Electromagnetic Hypersensitivity (EHS)

Besides avoidance, certain [nutrients](#), such as glutathione, may speed healing. Many people with EHS buy a [bed canopy](#) that looks like a mosquito net but is actually a Faraday cage—the metallic threads woven into the net block 95% of the EMFs coming from outside the home (especially helpful in an apartment with neighbors on each side as well as above and below). This gives people with less severe cases of EHS respite from EMFs while they sleep. But people

with worse EHS can only find relief by moving far into wilderness areas, away from cell towers and antennas, to live in an RV, a tent, or a cabin, at least at the beginning of their healing process.

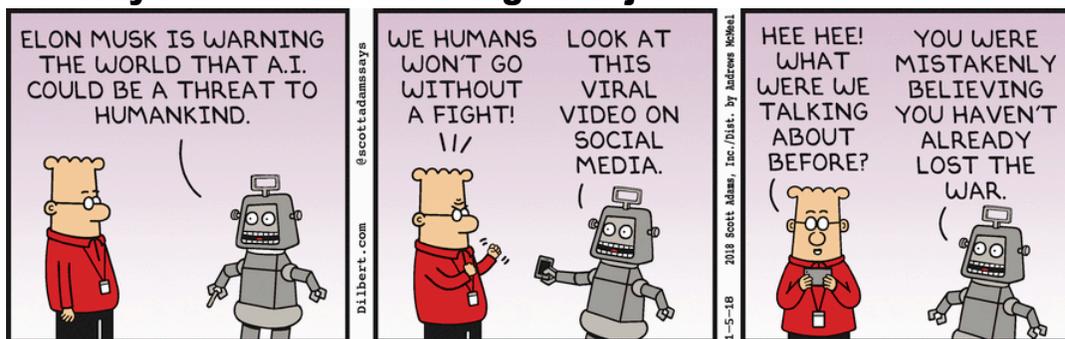
13 Quitting wireless— one family’s experience

This March, when one of our Safe School Tech members invited her daughter, son-in-law and grandson to live with her in the country, they were a little grumpy because they missed the convenience of going online anywhere they perched. Nevertheless, within a few weeks “Grandma’s Low EMF Experiment” became second nature. Their router has 3 extra sockets for Ethernet cables, so they got some 50- and 100-foot cables and now everyone plugs in for their email, videos, and social media. Eventually they’ll move the cables off the hall floor by running them through the attic, but, for now, what is lost in aesthetics is offset by a big gain in health. Also, they found that it’s not too inconvenient to keep their phones on airplane mode whenever they’re not on a call.

14 An EMF meter tells the truth.

Often a person coping with EHS carries an EMF meter in order to know what places to avoid. We suggest every school principal buy a [Safe and Sound EMF meter](#) (\$150)— it’s the fastest way to know which classrooms need mitigation. Meanwhile, we’re happy to lend administrators or teachers our EMF meter.

15 Why isn’t the media doing their job?



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Looking back on 2020, did you see any news stories about the hazards of cell phones, computers, or other WiFi devices (such as smart meters, baby monitors, cordless land lines, home security)?

Probably *not*. Because Telecom has a lot of clout and too much to lose. Of all those devices, cell phones are the biggest money maker. In less than 20 years, the “car phone” melded with the personal computer, the camera, the radio, the TV, and the newspaper. It shrank in size, shed the external antennas and huge batteries, and was swallowed by Facebook and Amazon. Now most people spend hours each day looking at their small screen that’s so perfectly individualized to their preferences. It’s the [biggest addiction](#) in history, but few can admit it. “What water?” says the goldfish.

16 Glimmer of truth

Three articles got through the media blackout, “[5G Is Going to Kill Us All](#),” in the May, 2020, *New Republic*. In smaller circulation periodicals, [this](#) and [this](#). [Naturopaths](#), [chiropractors](#), and other holistic healers (even some aware [MDs](#)) also advise their patients to minimize wireless exposure. One international health organization, WestonAPrice.org, with the banner “Food, Farming, and the Healing Arts,” has consistently covered this otherwise neglected topic, for example [here](#), [here](#) and [here](#).

17 The FCC’s so-called safety standard



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In 1996 the FCC measured the [heating effects](#) of a cell phone held for six minutes against a 1.5-quart artificial head full of water. Since the phone did not cause overheating, that level of EMF energy was declared safe. No surprise, since almost the entire leadership of the FCC come from the telecom industry and return there for much better salaries when they're done with government work.

This year the FCC declined to update their standards, despite 24 intervening years of independent research showing that WiFi technology is harmful, not only from the aforementioned damage to VGCCs but also because the electrons in oxygen atoms react to certain microwave frequencies and make it hard for red blood cells to pick up that oxygen in the lungs (more on this in the [blue](#) postscript).

Why is the FCC indifferent to these facts? Answer: contrary to public perception, the Federal Communications Commission has no obligation for public safety. The FCC was created to sell America's radio and microwave frequencies to the highest bidder.

In fact, FCC leadership, which has always been temporarily borrowed from the industry (the famous D.C. Revolving Door), illegally usurped the EPA's and the FDA's roles as guardians of public safety; **Section 704** of the **1994 Telecommunications Act** declares that [no health or environmental concern](#) can interfere with the placement of telecom equipment such as cell towers and antennas.

Ironically, aesthetics and loss of property value *are* valid reasons, according to the FCC, for denying placement of cell phone antennas (this may end up as the public's main legal leverage because [property values](#) can [drop 20%](#) or more when cell antennas are installed nearby).

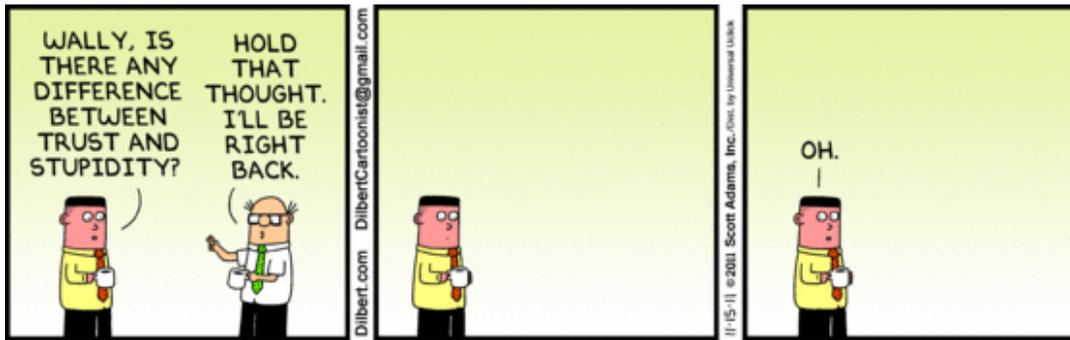
18 Our kids deserve the same protection as fire fighters.

[Fire fighters](#) got an [exemption](#) from mandatory cell antennas on their stations. Why? Because their 12- to 24-hour shifts made them a [natural experiment](#), clearly showing how much worse they felt at work than at home, while people with shorter shifts might never connect their [symptoms](#) to worksite "electrosmog."

19 The profit motive skews science.

Professor Henry Lai at the University of Washington [analyzed](#) 326 cell phone safety studies done between 1990 and 2006. Results: 56% of them found negative biological effects. But when Lai recategorized the studies based on *funding sources* a different trend emerged: 67% of the independently funded studies found a biological effect while only 28% of the industry-funded studies did. Lai's findings were replicated by a [2007 analysis in Environmental Health Perspectives](#), which concluded that industry-funded studies were two and a half times less likely than independent studies to find health effects.

20 If WiFi is so hazardous, why doesn't everyone know?



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A little digging reveals two reasons we never hear about microwave hazards:

1. Corporations in telecommunications and [information technology](#) (IT) [collude](#) to hide the facts.
2. Telecom and IT corporations have [captured regulatory agencies](#) at all levels ([local](#), state, [national](#), international), which would explain why Poland's maximum allowed exposure, set at 0.1 watts per square meter, is 100 times [safer than the U.S.](#) maximum allowed level of 10 W/m². Fortunately, some governments are correcting their mistakes: The [European Parliament](#) is finally admitting the hazards of wireless tech. A number of U.S. [municipalities](#) (Seattle and San Jose among them) have lawsuits to block placement of thousands of new "small cell" wireless antennas. Even uncaptured agencies persist in ignoring the scientific literature going back to the 1940s. Dr. David Carpenter, an expert in environmental toxins, explains why, "When you acknowledge you have a problem, and you're a government agency, you have to *do* something about it." And yet, the French government *does* take action; it [bans cell phones in schools](#) and playgrounds and [limits WiFi time](#) for students.

Sometimes we in Safe School Tech get discouraged by how easily Telecom corporations [duped the public](#). But sooner or later, the truth will out. When parents and educators finally realize the [harm to children](#) from wireless tech, they will demand safer internet access, which, fortunately, is easy and not too expensive (keep reading).

21 Power corrupts



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Although awareness is growing about WiFi hazards, ponder for a moment how these Fortune 100 companies still have enough power to block negative reports and to [weaken wireless regulations](#):

Amazon	Huawei
Apple	IBM
AT&T	Intel
Chrome	Microsoft
Comcast	News Corp (Murdoch)
Disney	Samsung
Facebook	Sony
Google	Verizon

Here's just one example: the [New York Times "debunked"](#) cautionary articles published in [peer-reviewed scientific](#) journals. Yet the *Times* omits any mention of their

own [contract](#) with telecom giant Verizon to supply the news stream for Verizon's impending 5G service. Their conflict of interest spiked the truth.

22 Telecom tells the truth → in 6-point font ←

This was [Apple's warning](#), in 2010, for the iPhone (in gray 6-point font):

"When using iPhone near your body for voice calls or wireless data transmission over a cellular network, keep iPhone at least 15 mm (5/8 inch away from the body), and only use carrying cases, belt clips, or holders that do not have metal parts and that maintain at least 15 mm (5/8 inch) separation."

For folks lacking Super Power Eyesight, here's the Apple warning in full-sized black font:

"When using iPhone near your body for voice calls or wireless data transmission over a cellular network, keep iPhone at least 15 mm (5/8 inch) away from the body, and only use carrying cases, belt clips, or holders that do not have metal parts and that maintain at least 15 mm (5/8 inch) separation [from the body]."

In other words, do not carry it around in a pocket or bra. Who knew?!

And this is what [Google's Chromebook](#) advises educators and students:

"Because the wireless devices (which may be embedded into the notebook) emit less energy than is allowed in radio frequency safety standards and recommendations, manufacturer believes these devices are safe for use. Regardless of the power levels, *care should be taken to minimize human contact during normal operation.*" -[Samsung Chromebook Plus](#)

These "warnings" give Telecom legal cover— "We *told* you to be careful." Another little-known factoid:

Cell phones typically emit more radiation through their backs than through the keypad side. So if you carry the phone facing out, you may be getting an extra dose of radiation, according to Dr. Devra Davis.

23 A bonus

Extra-curious people will find two postscripts that venture far off the beaten path:

- How an infection such as COVID-19 can be made worse by WiFi ([blue](#) text in the postscript)
- How do sunspots predict flu epidemics? ([burgundy](#) text in the postscript)

24 In loco parentis

As you probably learned in your first week as a school trustee, **a district that creates— or ignores— hazardous conditions, whether out of negligence or ignorance, can be held at fault if those conditions cause a personal injury.** Put another way, "Ignorance is no defense in the eyes of the law." That's similar to the Reporting Rule for educators; when we see evidence that a child may be suffering neglect or abuse, we are obliged to report it. (That's one reason why we in Safe School Tech, two of whom are retired teachers, feel obliged to send you this letter!) This message is a call to action! Those who heed the call will not be burdened by regrets in future years.

Our goal is to bring you up to speed on a problem that you didn't know existed. Thank you for reading this far and for considering how to remove this hazard for the children of your district. Here's a [student-made video](#) showing that young people *will* see the value of cell phone caution! 

Teachers working back in the 70s will recall that the staff lounge was a cloud of cigarette smoke and many high schools had an unofficial smoking zone for the 18+ students. But, after decades of indifference, schools began to strictly enforce no smoking on campus. Similarly, soft drinks are no longer sold during school hours, and trans fats are banned from cafeteria food statewide. Someday, EMFs will also be widely recognized as bad for our youth. You don't have to wait for low EMFs to be the law!

25 An ounce of prevention or a pound of cure?

Every school district has a choice— to be at the front of this evolution, or to lag behind, at the cost of students' health each year that WiFi persists in classrooms. Maybe we can learn

something from Russia, which has much stricter guidelines for their schools, as reported by UC Berkeley’s Center for Family and Community Health, click [here](#). Or, check out how France does it, [here](#). You don’t have to know anything about EMFs to be shocked by this 3-minute [video](#) demonstrating the dangerous EMF levels of an iPad. For more details on why the ounce of prevention is better, Merinda Teller, MPH, PhD, provides a short, persuasive summary, [here](#). Jeromy Johnson, once a Silicon Valley engineer, explains [how to](#) “wire up.”

26 Free your students from “EMF chambers”

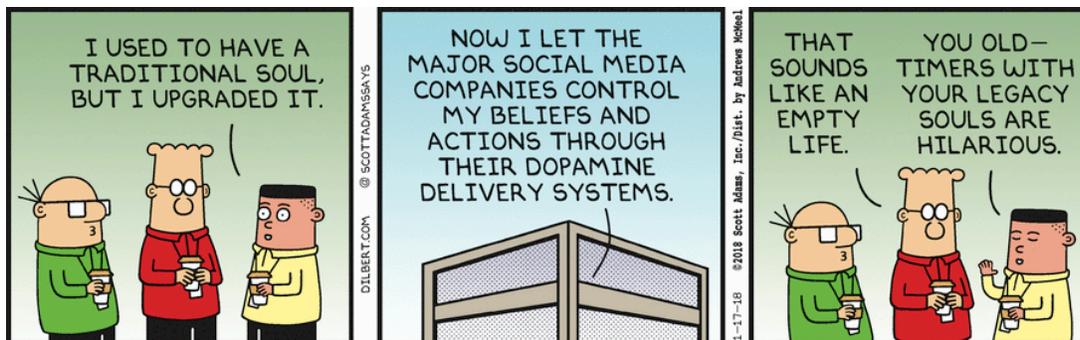
Lucia, an 8th grader, spoke to the Oregon legislature (minute 8) about her fourth grade year of [seeking a diagnosis](#) for her illness. Her mother finally asked the school if they had WiFi. Yes, and Lucia had been sitting directly under the router. A recent Swedish [study](#) measured EMF levels in 18 classrooms from 7 schools. The report published in a peer-reviewed public health journal reminds us: “Since children are obliged by law to attend school, a safe environment is important.” Adding insult to injury, modern school children are exposed to the EMFs from their classmates’ cell phones, which is why all cell phones should be in airplane mode when not on a call.

There’s a further explanation for [students’ high exposure](#). The Environmental Health Trust explains that tablets “have up to five transmitter antennas emitting radiation as a beacon signal that transmits even when the internet is NOT being used.... The bursts continue because the tablet antennas ‘check in’ with what is called a ‘digital handshake’ to the base network which is usually a WiFi router or hotspot, or a nearby cell tower. If the network signal strength is low, then the tablet’s radiation burst is higher. This digital handshape continuously repeats.”

“There is a major legal difference between an exposure that an individual chooses to accept and one that is forced upon a person, especially a dependent, who can do nothing about it.”

- [Dr. Davis Carpenter](#), Director, institute for Health and the Environment

27 Better Grades When Phones Are Banned



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Physiologic stress increases with exposure to EMFs, as do insomnia and depression. So a working hypothesis might be: Reducing EMFs will support:

- Improved student well-being and morale
- Increased staff job satisfaction
- Better attendance due to lower infection rates and lower rates of depression

“Researchers at the London School of Economics, the University of Texas, and Louisiana State University looked at the **impact of cellphones on student performance** by evaluating 91 schools in four cities in the U.K.— Birmingham, London, Leicester and Manchester— before and after cellphone bans.... Across the board, teens’ [test scores increased by 6 percent](#) after phone bans were implemented.... Kids who were struggling academically... improved by **14 percent** after the ban.” This study focused on cell phone use, ignoring another common source of microwave EMFs, namely WiFi, so academic improvement would probably have been even greater if the school had replaced WiFi with Ethernet cables.

Electromagnetically hypersensitive (EHS) people consistently report depression therefore both [suicide](#) and [anxiety](#) would be lower when EMFs are brought down to pre-2000 levels.

Considering all the symptoms of electromagnetic hypersensitivity, attending an EMF-free school for 6 hours a day would boost health and reduce absenteeism from illness.

Perhaps the recent rise in COVID-19 infections in children is due to a few months of greater WiFi exposure as they are “in school” at home. Certainly sheltering in place pushes people of all ages to spend more time online. The evidence below, in [blue font](#), makes a good argument for the connection. All the more reason to wire up!

See “Schools Worldwide Removing the Wi-Fi and Reducing Exposure” [here](#). And learn about the first ever [state bill on wireless radiation in schools](#).

28 “When pointing out a problem, offer a solution.”

Pairing a solution with a complaint is the life lesson that Safe School Tech member Lauren Ayers learned from her favorite school principal, who advised students, teachers, and parents to deal with problems that way. Safe School Tech reveals the problems with wireless *and* we are offering solutions other communities are using.

That’s also why we’re eager to lend you an EMF meter so you can map the red, orange and green areas in each school in your district. Both your staff and your students (not to mention their parents!) will thank you for being proactive.

29 Tho’ Telecom hides the facts, experts have been warning us:

- The California Department of Public Health has some surprisingly robust [guidelines](#) that, alas, are being totally ignored.
- Ditto for [advice](#) from the American Academy of Pediatrics.
- Another warning comes from the 236 scientists who comprise a large percentage of radio frequency researchers; they published over 2,000 journal articles and wrote an [appeal to policy makers](#) to take action on wireless hazards.
- A human fetus is the [most vulnerable](#) to harm from EMFs, including higher rates of [asthma](#) and ADHD later in life, therefore shouldn’t any school staffers or volunteering parents who are pregnant be protected by a low-EMF school environment?
- We learned above (section [3](#), Symptoms) that fertility is reduced from microwave exposure. Remember that every baby girl is born with all two billion eggs she will ever have for creating her own infants; they reside in her ovaries in an immature form until puberty, when they are released month by month. Should girls be exposed to microwaves for 6 hours a day for 13-14 years? Already, [1 in 8 couples](#) in America experience difficulty conceiving, childhood exposure to wireless tech could make those odds so much worse.

30 Caveat Emptor

Here’s a fact you’ll never see in a cell phone ad: the wireless tech industry [won’t cover](#) electronic equipment for [illnesses caused by EMFs](#). Lloyd’s of London’s Risk Assessment Report [compares wireless tech to asbestos](#), since the early research on asbestos was “inconclusive” and only later did it become obvious to everyone that asbestos causes cancer. Due to aps like GPS and internet access, cell phones have up to [7 microwave antennas each!](#)

31 Telecom should make amends.

Incidentally, the cost for replacing WiFi with wired internet should be borne by whoever sold your district all those tablets and computers for your students. After all, they didn’t tell you the truth about WiFi back when you purchased them. They would be wise to cover that cost and thereby avoid any future class action lawsuit filed by school districts.

32 Better late than never.

The EMF problems you’ve just read about are like lice in elementary classrooms— very inconvenient and seemingly difficult to solve. Parents dealing with lice know it’s an uphill battle. But setting the goal and sticking with the plan leads to victory. (The parents in Safe School Tech were happy to find non-toxic ways to get rid of those pests.) Obviously, lice don’t

go away all by themselves— it requires educating families and having a good action plan. Which is exactly what this letter aims to provide for “eradicating” WiFi. If you only open one link in this letter, this page at [Environmental Health Trust](#) will show you that [safe internet access is possible for all your students](#). See [New Hampshire’s Oct. 2020 report](#) on wireless tech. [Palo Alto’s PTA](#) advises parents on WiFi and cellphone safety, other PTAs should too.

Thank you!

You’re a school board member because you care about the students in your community. We hope this message from “out of thin air” will rouse you from the Path of Least Resistance, even if it temporarily adds to your work load. Listening to some whistle blowers and independent scientists on the topic of WiFi will benefit all of us— students, staff, school families, grandparents, trustees and other volunteers. Isn’t better student health worth a little extra effort?

Buen Salud,
Lauren Ayers, on behalf of Safe School Tech

P.S.

“If at first the idea is not absurd, then there is no hope for it.” – Albert Einstein

Most people won’t be interested in these two ‘out in left field’ ideas. Nevertheless, (1) understanding how [human-made EMFs worsen infections](#) like corona viruses such as SARS and COVID-19 will help reduce disability and death from pandemics, and (2) learning how rare events like [natural EMFs from solar storms coincided with pandemics of influenza](#) going back many hundreds of years, broadens our understanding of disease. The evidence of electromagnetic hypersensitivity, (EHS), is clear for both Franklin and Tesla, but also can be found in ancient records, both BCE and CE (Before the Current Era, Current Era).

Does EMF exposure magnify COVID-19 severity?

“The Emperor’s New Virus” is a very provocative article with the premise that EMFs worsen COVID-19, making what is a mild illness for most people into a life-threatening, slow-healing crisis for some. As we know, co-morbidities worsen the prognosis, and explain why most of the fatalities are patients over 60. But there’s more to it than age.

Paul Doyon provides videos, maps, charts and journal articles showing that the COVID-19 virus becomes much [more lethal in 5G roll-out cities like Wuhan](#). You don’t have to read the entire 90-page document to get a sense of the legitimacy of the 5G perspective, even if the proof is not yet fully established.

Another revelation is how many [COVID-19 symptoms are the same as EMF-sensitivity symptoms](#). For instance, the [loss of the sense of smell](#) has long puzzled public health experts.

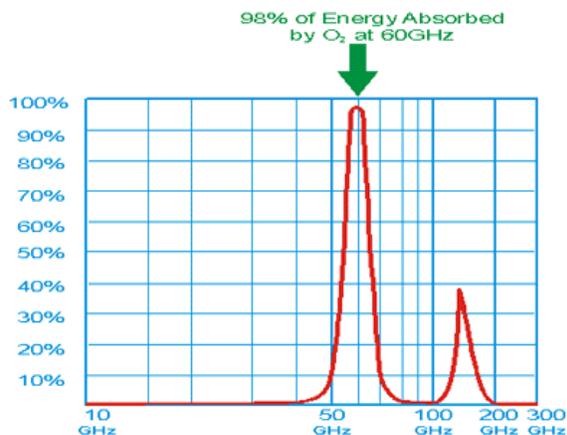
The 3-page synopsis of “The Emperor’s New Virus” is [here](#). and the full 90-page document is [here](#). Further evidence was published this spring, “Correlation between cases of [coronavirus and the presence of 5G networks](#).”

Like Wuhan, Italy is another high fatality COVID-19 infection locus due to a very high per capita use of 5G. People in developed nations already experience astronomically more EMF exposure because of years with pre-5G phones (3G and 4G are in the microwave range of the electromagnetic spectrum along with 5G), so the EMF effect on sick people goes beyond 5G cities.

These facts form an interesting picture when dots are connected:

- 5G cities have more cases of the COVID-19 flu and a higher mortality rate than other locales
- Countries in Central and South America, as well as in Africa, which don’t have a high per capita rate of cell phone or wireless tech use also have lower mortality from COVID-19
- You just read how both 4G and 5G impair the immune system, but keep in mind that 5G is much [more harmful than 4G](#).

The FCC deprives the nation of oxygen.



<https://vertassets.blob.core.windows.net/image/eac387f4/eac387f4-2cc2-11d5-a770-00d0b7694f32/041001akembedded1.gif>

Figure 1: Dry Atmospheric Absorption per Kilometer

Nearly twenty years ago an industry researcher explained why it's so convenient that microwaves at 60 GHz have a special affinity for oxygen, which therefore makes it “*ideal for interference free, fiber-speed connectivity.*” (see the graph) But did he or his bosses ask themselves, “Gee, what does that mean for all living things near these microwaves, since most life forms need air (O₂) and all need water (H₂O)?”

Further, besides the oxygen in water molecules, now we know that microwaves interfere with the ability of the hemoglobin in our blood to bond with the oxygen we breathe in. Breathlessness is a symptom of both EHS as well as the more severe COVID-19 cases.

Remember the supposed scarcity of ventilators during this year's COVID-19 pandemic? It turns out that ventilators don't actually help and, in fact, only one intubated patient in nine survives after they're put on a ventilator. With COVID-19, pressurized air from ventilators doesn't boost oxygen uptake because red blood cells passing near the fragile, microscopic alveoli (tiny air sacs only one cell thick) cannot properly absorb oxygen. Autopsies of COVID-19 patients show that their lungs were full of fluid, and that COVID-19 lungs are often twice their normal weight.

This brings us back to EHS symptoms, which also include hypoxia— low oxygen levels— without patients realizing how serious it is, just like so many COVID-19 patients. Dr. Levitan, a 30-year veteran of emergency medicine, said to the New York Times, “A vast majority of COVID pneumonia patients I met had remarkably low oxygen— seemingly incompatible with life— but they were using their cellphones [with] relatively minimal apparent distress, despite dangerously low oxygen levels.” This strange syndrome has been called “happy hypoxia.”

Here are two good articles about the interplay of COVID-19 and wireless tech: Corona Virus & 5G— Is There a Connection? and Is Coronavirus Contagious?

The Secret History of Electromagnetic Hypersensitivity (EHS)

Surprisingly, illnesses from EMFs have been known since Marconi's time, when he and other early electricity investigators suffered from what came to be called “telegraphic illness” because telegraph operators also were susceptible. In fact, even earlier, Ben Franklin had symptoms of EMF disease, as did other researchers, but they didn't see the connection.

There's more! In The Invisible Rainbow, Arthur Firstenberg writes, “Canadian astronomer Ken Tapping showed that the influenza pandemics over the previous three centuries correlated with peaks in solar magnetic activity, on an 11-year cycle.” In other words, even before scientists were playing around with electricity, “solar winds” from sun spot activity brought enough extra electrical energy to earth that humans, as well as other living things, experienced epidemics of disease and death. Normally Earth's magnetic field protects us from ordinary solar radiation but the extra solar energy broke through our protective barrier.

One hint about the solar origin of certain pandemics is in the word “influenza,” which derives from “the influence of the stars”— even though ancient people probably wouldn’t have blamed that influence on our closest star, the sun.

When industry began generating electricity to power the incandescent bulb and “wireless telegraphy” (radio), each jump in man-made EMFs correlated closely to a new flu epidemic, although, again, the connection never made the news or landed in history books:

“In 1889, full-scale electrification was carried out in the USA and, shortly thereafter, in Europe. That same year, as if by chance, doctors were inundated with cases of **flu**, which had until then appeared only infrequently. The victims’ symptoms were far more neurological in nature, resembling neurasthenia, and did not include respiratory disorders. The pandemic lasted for four years and killed at least a million people.” [Page 4](#)

“The Swedish researchers Ollie Johansson and Orjan Hallberg have shown a clear correlation between breast, prostate and lung cancer rates and the exposure of the population to radio frequencies. They point to a significant increase in rates in 1920, 1955, 1969 ... corresponding respectively to the increase in radio frequency smog due to the introduction of AM radio (1920), FM radio and TV1 (1955), the arrival of color TV2 (1969).... These same researchers have likewise found a very clear linear correlation between the number of FM radio transmitters per region and the incidence of melanomas, with the exposed locations having 11 times more melanomas than the “white zones.” [Page 11](#)

“It can be seen that each new influenza pandemic corresponds to a new advance in electrical technology, such as the Asian flu of 1957-58, following the installation of a powerful radar surveillance system, and the outbreak of Hong Kong flu from July 1968 onwards, following the commissioning of 28 military satellites for space surveillance at the altitude of the Van Allen belts, which protect us from cosmic radiation.” [Page 6](#)

In fact, when Sigmund Freud wrote about neurasthenia in 1895, it was still called ‘telegraphic sickness.’ Freud put the cart before the horse by blaming the physical symptoms on mental illness. He called it ‘neurosis anxiety,’ and now it’s labeled ‘panic attacks.’ The psychological aspect of this syndrome obscures the obvious remedy of removing the EMFs.

These few examples may pique your curiosity to know more. The little-known history of wireless technology comes alive with pithy biographies and fascinating details (backed by over 550 citations). Surprisingly, considering the dry subject, the book is a page turner!

Contact Safe School Tech at SafeSchoolTech@gmail.com 530 796-2463

Date: 10-4-20

DILBERT— Unknown wireless tech hazards & sensible solutions

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[Carol Souza Cole, Pres <Carol.SouzaCole@ycoe.org>](mailto:Carol.SouzaCole@ycoe.org),
[Matt Taylor <Matt.Taylor@ycoe.org>](mailto:Matt.Taylor@ycoe.org),
[Tico Zendejas <tico.zendejas@ycoe.org>](mailto:tico.zendejas@ycoe.org),
[Shelton Yip <Shelton.Yip@ycoe.org>](mailto:Shelton.Yip@ycoe.org),
[Garth Lewis, Supe <Garth.Lewis@ycoe.org>](mailto:Garth.Lewis@ycoe.org),
[Melissa Moreno <melissa.moreno@ycoe.org>](mailto:melissa.moreno@ycoe.org),
[Joe DiNunzio, Pres <jdinunzio@djud.net>](mailto:jdinunzio@djud.net),
[Tom Adams, VP <tadams@djud.net>](mailto:tadams@djud.net),
[Alan Fernandes, Bd <afernandes@djud.net>](mailto:afernandes@djud.net),
[Bob Poppenga, Bd <bpoppenga@djud.net>](mailto:bpoppenga@djud.net),
[Joy Klineberg, Bd <jklineberg@djud.net>](mailto:jklineberg@djud.net),
[John Bowes, Supe <jbowes@djud.net>](mailto:jbowes@djud.net),
[Ashleigh Green <ashleigh.green@espartok12.org>](mailto:ashleigh.green@espartok12.org),
[Amanda Barwis <amanda.barwis@espartok12.org>](mailto:amanda.barwis@espartok12.org),
[Larry Kieny <larry.kieny@espartok12.org>](mailto:larry.kieny@espartok12.org),
[Tracy Nash, Pres <tracy.nash@espartok12.org>](mailto:tracy.nash@espartok12.org),
[Bonnie Simas <bonnie.simas@espartok12.org>](mailto:bonnie.simas@espartok12.org),
[Christina Goennier, Supe <cgoennier@eusdk12.org>](mailto:cgoennier@eusdk12.org),

[Leah Smith, Controller <lsmith@eusdk12.org>](mailto:lsmith@eusdk12.org),
[Luke Brooks, Cmptr Specialist <lbrooks@eusdk12.org>](mailto:lbrooks@eusdk12.org),
[Rebecca Spiva, CBO <rspiva@eusdk12.org>](mailto:rspiva@eusdk12.org),
[Susie Hedrick, System Specialist <shedrick@eusdk12.org>](mailto:shedrick@eusdk12.org),
[David Yust <dyust@espartok12.org>](mailto:dyust@espartok12.org),
[Preston Jackson, Pres, W.Sac <pjackson@wusd.k12.ca.us>](mailto:pjackson@wusd.k12.ca.us),
[Coby Pizzotti, VP <cpizzotti@wusd.k12.ca.us>](mailto:cpizzotti@wusd.k12.ca.us),
[Sarah Kirby-Gonzalez, Clerk <SKirby-Gonzalez@wusd.k12.ca.us>](mailto:SKirby-Gonzalez@wusd.k12.ca.us),
[Jackie Thu-Huong Wong <JWong@wusd.k12.ca.us>](mailto:JWong@wusd.k12.ca.us),
[Norma Alcala <nalcala@wusd.k12.ca.us>](mailto:nalcala@wusd.k12.ca.us),
[Linda C. Luna, Supe <lluna@wusd.k12.ca.us>](mailto:lluna@wusd.k12.ca.us),
[Rudolph Muldong, Pres <rmuldong@wintersjUSD.org>](mailto:rmuldong@wintersjUSD.org),
[Robert Warren, Winters Br <robwarren34@gmail.com>](mailto:robwarren34@gmail.com),
[Ralph Anderson, Brd <randerson@wintersjUSD.org>](mailto:randerson@wintersjUSD.org),

Stephanie Chávez, Brd
 <stephaniechavez@wintersjUSD.org>,
 Carrie Green, Winters Brd <carriecgreen@yahoo.com>,
 Anietta Kelley, Asst to Supe <akelley@wintersjUSD.org>,
 Nicole Reyherme, Dir Innvtn&Tech
 <nreyherme@wintersjUSD.org>,
 Roxanne Delfino, School Nurse
 <rdelfino@wintersjUSD.org>,
 Sandra Ayon, Asst Supe <sayon@wintersjUSD.org>,
 Todd Cutler, Supe <tcutler@wintersjUSD.org>
 "Debbie Decker" <Debbie.Decker@wjUSD.org>
 "Morgan Childers, Pres" <Morgan.Childers@wjUSD.org>
 "Karen Rosenkilde-Bayne" <Karen.Bayne@wjUSD.org>
 "Deborah Bautista Zavala" <Deborah.Zavala@wjUSD.org>
 "Rogelio Villagrana" <Rogelio.Villagrana@wjUSD.org>
 "Jake Whitaker" <Jake.Whitaker@wjUSD.org>
 "Teresa Guerrero, Clerk" <Teresa.Guerrero@wjUSD.org>
 "Tom Pritchard, Supe, W. Sac" <Thomas.Pritchard@wjUSD.org>

"Craig Ludtke, Facilities"
 <cludtke@washingtonwaldorf.org>

Cc:

Jim Smith, Editor <news@dailydemocrat.com>,
 Margherita Beale <mbeale@dailydemocrat.com>,
 Sac Bee <tips@sacbee.com>,
 Hannah Wiley, ed'n rptr <hwiley@sacbee.com>,
 Davis Enterprise <newsroom@davisenterprise.net>,
 Davis Vanguard <info@davisvanguard.org>,
 Davisite <roberta.millstein@rlm.net>,
 The Davisite <davisite@rlm.net>,
 Bob Dunning <bdunning@davisenterprise.net>,
 Monica Stark, Editor, W.Sac <editor@news-ledger.com>,
 Taylor Buley, Publisher <taylor@wintersexpress.com>,
 Crystal Apilado, Editor <crystal@wintersexpress.com>,
 Winters Express <news@wintersexpress.com>

Also sent to:

"Oscar Villegas, 1st" <oscar.villegas@yolocounty.org>
 "Don Saylor, Chair, 2nd" <don.saylor@yolocounty.org>
 "Gary Sandy, Vice Chair, 3rd"
 <gary.sandy@yolocounty.org>
 "Jim Provenza, 4th" <jim.provenza@yolocounty.org>
 "Duane Chamberlain, 5th"
 <duane.chamberlain@yolocounty.org>
 "Patrick S. Blacklock, Co Admin'r"
 <patrick.blacklock@yolocounty.org>
 "Brett Lee" <blee@cityofdavis.org>
 "Gloria Partida, Mayor" <gpartida@cityofdavis.org>
 "Will Arnold" <warnold@cityofdavis.org>
 "Dan Carson" <dcarson@cityofdavis.org>
 "Lucas Frerichs" <lucasf@cityofdavis.org>
 "Michael Webb, CEO" <cmoweb@cityofdavis.org>
 "Christopher Cabaldon, Mayor"
 <christopherc@cityofwestsacramento.org>
 "Quirina Orozco" <quirinao@cityofwestsacramento.org>
 "Chris Ledesma" <chrisl@cityofwestsacramento.org>
 "Martha Guerrero"
 <mguerrero@cityofwestsacramento.org>
 "Babs Sandeen" <beverlys@cityofwestsacramento.org>
 "Aaron Laurel, City Mgr"
 <aaronl@cityofwestsacramento.org>

"Bill Biasi" <bill.biasi@cityofwinters.org>
 "Wade Cowan, Mayor" <wade.cowan@cityofwinters.org>
 "Jesse Loren" <jesse.loren@cityofwinters.org>
 "Harold Anderson" <harold.anderson@cityofwinters.org>
 "Pierre Neu" <pierre.neu@cityofwinters.org>
 "John W. Donlevy, Jr, City Mgr"
 <john.donlevy@cityofwinters.org>
 "Xochitl Rodriguez"
 <xochitl.rodriguez@cityofwoodland.org>
 "Rich Lansburgh, Mayor"
 <richard.lansburgh@cityofwoodland.org>
 "Angel Barajas" <angel.barajas@cityofwoodland.org>
 "Enrique Fernandez"
 <enrique.fernandez@cityofwoodland.org>
 "Tom Stallard" <tom.stallard@cityofwoodland.org>
 "Paul Navazio City Mgr"
 <paul.navazio@cityofwoodland.org>



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