

Background

AT&T, Verizon, with Sprint and T-Mobile say: "We're in a big hurry to lower the costs of deployment of advanced wireless systems, nicknamed 5G; because "they want to: stop cities from constraining uses of their public rights-of-way, to save money (for them) because if they saved money by getting these pesky localities out of the way, they'd be freed up to invest more in high-speed internet access, including to rural areas."

This is the misleading argument that Ca State legislators fell for and passed SB649 in 2018 which was vetoed by Gov Brown (a former City Mayor) who realized that it was about the ability of a city to control its own data destiny! Most of the state legislators who voted not to override his veto had formerly been local elected on City Councils or County Boards of Supervisors. The League of Cities opposed the legislation and the attempt to override the Governor's veto.

While CA was not hoodwinked (thanks, Governor Brown) 21 other states have passed legislation to alter or remove local control for the placement and rent for cell towers on public utility poles and in rights of way. Those bills were/are designed to lock in monopolies. Yes, 5G is likely to be adopted in 2020, with its short high frequency wobbly wave lengths that do not reach very far will require at least 1,000 more "personal wireless facilities" aka small cell facilities, to be installed in our city on streetlights and the sides of buildings in our parks.

San Francisco Supervisors, City Attorney and Mayor were misled into believing that the FCC Order required them to totally streamline the installation of "personal wireless facilities" by eliminating public input in to the drafting of the legislation which was disguised a "personal wireless facility" amendments not: 4&5G cell towers! The telecom industry fooled us all and in July 190-19 was introduced and sped through the Board of Supervisors. The legislation and subsequent amendments to DPW article 25 governing wireless technology may well have been written explicitly by Verizon or AT&T.

What's really going on is that some carriers (mostly AT&T) are aiming to ensure that single carriers can control entire "small cell" pole systems in individual cities, avoid any requirement of neutral rights-of-way infrastructure, and distract all of us by suggesting that — somehow — **preempting local authority** over wireless installations will lead to increased investment in genuinely high-bandwidth systems generally and, in particular, in rural areas.

Taking Points

1. The "objective standards" Public Works is proposing are impossible not to obstruct views and will be everywhere

- **Each 4 & 5G cell antenna as close as 6 feet from your home**
- **Up to four cell phone towers per pole**
- **4G antennas: 48" long 16" wide**
- **5G ancillary cabinets** must be arranged to appear to no more than 5 distinct components per pole. No one piece may exceed 36" long & 16" wide & 9 inches deep with a **total volume of 28 cubic feet per box times 5 boxes!! 140 cubic feet LARGER THAN FIVE (5) REFRIGERATORS!**

On steel and concrete poles

- **4G shroud required 48" by 16" (length/diameter) on top of pole**

- **5G no more than (!) FOUR** to a pole, shroud 24"x25" (radio antenna up to 28")
- Maximum volume **PER** antenna: **SIX** cubic feet Four antennas would be **24 cubic feet**
- So FOUR 5G antennas = 24 cubic feet + FOUR 4G antennas = **112 cubic feet**

2. **Don't rush to implement 5G. Here is a laundry list of reasons:** Loss of local governmental oversight, control and income; decreased property values, loss of transparency, Emergency communications in fires, consolidation of the telecommunications industry, massive unsolvable privacy and security issues, mounting E Waste dilemma, increased energy consumption, technology addiction, over-dependence on technology; and direct health and environmental impacts of this expanding blanket of wireless radiation.

Electro-sensitivity often leaves some people homeless because symptoms caused by the wireless radiation in their homes/apartments and in our radiation dense environment can present in a way that causes severe anxiety, and depression. Of course, mental health disorders are not caused by one thing, but many people have fled cities to get away from the electromagnetic radiation and many people can only flee to the streets.

3. **We are not saying no to 5G. We are saying, implement it safely and aesthetically. There is a way to do that--we do not have to give up speed.** Fiber optic wiring, the **same wiring that is needed between antennas/facilities for 4&5G can go to homes and businesses.** This is a safer alternative. *carriers could fix this themselves by feeding a fiber cable to every existing cell tower.* And all cell connections could be shared with all other subscribers to your carrier who are nearby, meaning that you and the local Internet of Things will be in competition for “small cell” transmissions. *No one is seriously suggesting that 5G will be the answer for rural America. All of these facilities will have to be fed by fiber wires* — which is yet another argument for why we do need for fiber everywhere in the country.
4. San Francisco Supervisors, City Attorney and Mayor were misled into believing that the FCC Order required them to totally streamline the installation of “personal wireless facilities” by eliminating public input in to the drafting of the legislation which was disguised a “personal wireless facility” amendments not: 4&5G cell towers! The telecom industry fooled us all and in July 190-19 was introduced and sped through the Board of Supervisors. The legislation and subsequent amendments to DPW article 25 governing wireless technology may well have been written explicitly by Verizon or AT&T.
5. What's really going on is that some carriers (mostly AT&T) are aiming to ensure that single carriers can control entire “small cell” pole systems in individual cities, avoid any requirement of neutral rights-of-way infrastructure, and distract all of us by suggesting that — somehow — **preempting local authority** over wireless installations will lead to increased investment in genuinely high-bandwidth systems generally and, in particular, in rural areas.
6. Telecom is calling the cell phone towers “small cells,” but they’re small because their transmissions don’t travel very far, not because the facilities themselves are small. As a matter of fact, a “small cell” could be very big — and very tall — indeed.

San Francisco's guidelines to be adopted on Oct 23 allow street light poles and other poles to hold four antennas, plus “ancillary” boxes or other attachments for conveying power, grounding that power, cables, meters, battery systems, et cetera that will take a lot of space in addition to the wireless “base station” itself. **Up to 28 cubic feet per antenna in fact! Imagine the size of 2 small refrigerators, times 4!**

The carriers have made sure that cities can't impose “pole taxes” for access to their rights of way by including in the FCC Order a limit on the fee's cities can charge for the right of way. Private companies making money on PUBLIC space with a permanent cap set on the amount that can be charged.

7. The Precautionary Principle requires our city officials to not knowingly put the residents in harms way. San Francisco has flagrantly failed to enforce its officially enacted 2003 Precautionary Principle Environmental Code ordinance by permitting scientifically unsafe and untested wireless antennas, cell towers, and networks long after becoming well aware of thousands of peer reviewed scientific studies overwhelmingly revealing their serious and irreversible EMF health and safety dangers to vulnerable citizens, especially children.

Recognizing that “There is a duty . . . to prevent harm”, San Francisco's precautionary principle ordinance explicitly states:

Where threats of serious or irreversible damage to people or nature exist, lack of full scientific certainty about cause and effect shall not be viewed as sufficient reason for the City to . . . prevent the degradation of the environment or protect the health of its citizens.

8. **San Francisco should be leading. They should be demanding** neutral wireless infrastructure be shared by all industry players, at a reasonable, neutral cost to any requestor. We should ensure that they have ample dark fiber available at a reasonable cost for all of those wireless interconnection points and for all wired competitors. We can be a leader in the CA League of Cities to work with the Governor and rural areas to incentivize private investment in fiber systems in less-thickly-populated areas; we can provide leadership for substantial public backing in order to create that collateral, which may take the form of bonds.

In 2011, we WERE a leader. San Francisco was **one of the first cities in 2011** to pass legislation requiring warnings by vendors of cell phones warning of the danger of radiation. The industry sued SF and we never implemented it. Berkeley did not back off and the courts have ruled in their favor and the Telecom industry is requesting a hearing by the Supreme Court.

San Francisco banned JUUL because it was dangerous. We banned indoor smoking. We are not suggesting a ban, we are suggestion legislation that protects San Franciscans while complying with the FCC order until it's overturned in the courts.

San Francisco's Department of the Environment produced a Cell phone information sheet which is on the website currently it gives info about how to protect yourself from wireless radiation.

9. Our federal representatives Anna Eshoo, Jackie Speier, Senator Diane Feinstein have bills for Local Control, not Telecom

Congresswoman Anna Eshoo (Palo Alto) was joined by Congresswoman Jackie Speier (SF San Mateo) on January 14, 2019 introducing HR 530 the “PRESERVATION OF RIGHTS OF STATE AND LOCAL GOVERNMENTS: Actions by the Federal Communications Commission in “Accelerating Wireless and Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment” it invalidated the Federal Communications Commission’s (FCC) September 26, 2018 order in the Third Report to accelerate the deployment of 5G small cells throughout cities. HR 530 “Order and Declaratory Ruling FCC 18-111 shall have no effect! **SF is listed as supporting this legislation. There are 52 co-sponsors of the bill including all the bay area members of Congress.**

On June 27, 2019 Senator Dianne Feinstein introduced S2012 “Restoring Local Control Over Public Infrastructure Act of 2019”, a Senate companion bill to HR530. It would similarly repeal FCC rules that limit state and local government control over telecom infrastructure. The bill is cosponsored by Charles Schumer (N.Y.), Kamala D. Harris (Calif.), and many others. Like HR530, S2012 is supported by the U.S. Conference of Mayors, National Association of Telecommunications Officers and Advisors, American Public Power Association, Communications Workers of America, National Association of Counties, League of California Cities and American Public Works Association.

10. Republicans, meanwhile, have pending bills for the Telecom Industry and there are many PRO 5G bills that have passed, all sponsored by Republicans.

Pro 5G bills pending in US Congress Senate Commerce, Science and Transportation Committee:

S1968 Wicker (R-MS), Shatz (D-HI), Moran(R-KS) The Spectrum NOW Act.

S 2018 Collins(R-ME), Jones(D-AL) American Broadband Buildout Act of 2019.

S 1822 Wicker (R-MS) Capito (R-WV), Rosen(D-NV) The Broadband DATA Act.

SR259 Johnson (R-WI) A resolution expressing the sense of the Senate that United States leadership in 5G wireless is a national priority.

As you can see, all the pro 5G bills have Republicans as primary sponsors. And Republicans have 2 of the cosponsors. Democrats from Hawaii, Alabama and Nevada (all rural states) are on as cosponsors.

11. League of Cities arguments for LOCAL control:

- ✓ Forcing a one-size-fits-all preemption will harm local negotiations and policy work, slowing the deployment of new infrastructure.
- ✓ Cities have traditionally negotiated with providers on issues such as the location, appearance, and size of wireless infrastructure.
- ✓ These bills severely limit the ability of cities to ensure that infrastructure suits the neighborhood around it.
- ✓ These bills also limit the ability of cities to act in a proprietary capacity – to decide whether or not to allow private use of public property at all.
- ✓ The **FCC’s Order requiring fixed rental rates** which cities can charge for use of public property such as the right-of-way and municipally-owned poles, is in direct violation of the 5th and 10th Amendments. It forces **taxpayers to subsidize private, commercial development.**

- ✓ The FCC's **Order requiring new timelines** (shot clocks) for cities to review applications for small cells on public property are substantially shorter than the timelines the federal government allowed itself in the MOBILE NOW Act, yet cities have fewer resources than federal agencies. These harsh timelines **limit the resources cities have for other public needs**, such as road maintenance and public safety. While small cell sites are smaller than macrotowers, they do not require an equivalently smaller amount of review and oversight.
- ✓ The FCC's **required punishment** for failing to meet these new, more stringent timelines is also unreasonable – automatically deeming granted any application which runs out the shot clock.

12. Many Northern California local cities have taken this issue and protected their residents

Berkeley
 San Anselmo
 Piedmont
 Marin
 Monterey City
 Monterey County
 Hillsborough
 Palo Alto
 Los Altos
 Davis
 Sebastopol
 Sonoma City
 Palos Verdes
 Newark
 Mill Valley
 Belvedere
 Nassau County
 Mill Valley
 Palos Verdes
 Susuin
 Partial list

13. School Districts are passing policy to protect their students.

Los Angeles School District (the largest in the nation) has passed policy based on the Precautionary Principle to Limit cell phones in schools and Cell towers near schools

Los Angeles County Board of Supervisors opposes Cell Towers in or near Schools
 Maine, New Hampshire, Oregon, New Mexico have all passed legislation to study the effects of Non-Ionizing radiation before implantation.

New Hampshire passed a moratorium on 5G

MA has introduced several bills related to wireless radiation and children

14. Countries have passed legislation limited or banning 5G:

The US has not passed any policies to protect its residents from known RFR that is a known carcinogen and known to break DNA and disrupt replication unlike: Romania, Chile, Ireland, Denmark, Tasmania, Namibia, Turkey, Ghana, Greece, UK, Cyprus, Argentina,

Taiwan, Euro Environmental Agency, Poland, Singapore, Slovenia, Russia, Austria, India, French Polynesia, France, Belgium, Spain, Canada, EU resolution 1815, Australia, New Zealand, Italy, Korea, China (in schools), Sri Lanka, Finland, Israel, Switzerland and Germany,

15. Law Suits (someone should get up and read this list. San Francisco is on more than one suit challenging the FCC's order)

After the September 26, 2018 Ruling was passed by the FCC, more than a dozen cities including Los Angeles, Seattle and San Jose, challenged the FCC over these restrictions. The wireless industry states they will lose \$2 Billion, but the cities consider that it is instead a giveaway to industry.

The Ninth Circuit Court was asked to review the rules and give an opinion. On November 6, 2018, these lawsuits were consolidated with several other lawsuits in the western States including Las Vegas and Portland, and through a lottery, sent to the 10th Circuit Court of Appeals.

The list of cities involved in the lawsuits are below: some are in many suits that have been combined
City of San Francisco, City of Seattle, City of Tacoma, King County, League of California Cities, League of Arizona Cities and Towns, League of Oregon Cities and Intervenors City of Bakersfield, City of Coconut Creek, Florida, City of Lacey, City of Olympia, City of Rancho Palos Verdes, City of Tumwater, Colorado Communications and Utility Alliance, Rainier Communications

Commission and County of Thurston, Monterey County and Montgomery County, City of Arcadia, City of Bellevue, City of Burien, City of Burlingame, City of Gig Harbor, City of Issaquah, City of Kirkland, City of Las Vegas, City of Los Angeles, City of Monterey, City of Ontario, City of Piedmont, City of Portland, City of San Jacinto, City of San Jose, City of Shafter, City of Yuma, County of Los Angeles, Culver City and Town of Fairfax in 19-70144, Intervenors City of Arcadia, City of Bellevue, City of Burien, City of Burlingame, City of Gig Harbor, City of Issaquah, City of Kirkland, City of Las Vegas, City of Los Angeles, City of Monterey, City of Ontario, City of Piedmont, City of Portland, City of San Jacinto, City of San Jose, City of Shafter, City of Yuma, County of Los Angeles, Culver City and Town of Fairfax, City of Bakersfield, City of Bellevue, City of Burien, City of Burlingame, City of Gig Harbor, City of Issaquah, City of Kirkland, City of Las Vegas, City of Los Angeles, City of Monterey, City of Ontario, City of Piedmont, City of Portland, City of San Jose, City of Shafter, City of Yuma, County of Los Angeles, Culver City and Town of Fairfax, City of Bakersfield, City of Bellevue, City of Burien, City of Burlingame, City of Gig Harbor, City of Issaquah, City of Kirkland, City of Las Vegas, City of Los Angeles, City of Monterey, City of Ontario, City of Piedmont, City of Portland, City of San Jose, City of Shafter, City of Yuma, County of Los Angeles, Culver City and Town of Fairfax in 19-70123, Intervenors City of Arcadia, City of Bellevue, City of Burien, City of Burlingame, City of Gig Harbor, City of Issaquah, City of Kirkland, City of Las Vegas, City of Los Angeles, City of Monterey, City of New York, City of Ontario, City of Piedmont, City of Portland, City of San Jacinto, City of San Jose, City of Shafter, City of Yuma, County of Los Angeles, Culver City and Town of Fairfax in 19-70124, Intervenors

City of Arcadia, City of Bellevue, City of Burien, City of Burlingame, City of Gig Harbor, City of Issaquah, City of Kirkland, City of Las Vegas, City of Los Angeles, City of Monterey, City of Ontario, City of Piedmont, City of Portland, City of San Jacinto, City of San Jose, City of Shafter, City of Yuma, County of Los Angeles, Culver City and Town of Fairfax in 19-70125, 19-70136, 19-70146 Motion for miscellaneous relief Joint Motion for Case Management Conference including parties City Of Bakersfield, California; City Of Rancho Palos Verdes, California; City Of Coconut

Creek, Florida; King County, Washington; City Of Lacey Washington; City Of Olympia, Washington; City of Bowie, Maryland, City of Eugene, Oregon, City of Huntsville, Alabama, City of Westminister, Maryland and County of Marin in 19-70123, Petitioner **City and County of San Francisco**

16. The main suit is now in the 9th Circuit Court of Appeals—this is the suit that says the FCC can't force cities to give permits to telecom within a certain time frame with a “shot clock” approach. It also contests the ceiling that cities are forced to put on the cell phone tower installations. Yet, our “objective standards” from Public Works have put both a shot clock that is 30 days LESS time than the one we are fighting at the 9th Circuit of Appeals right now and fees that are a slap in the face—a total giveaway to telecom of \$270 a utility pole.
17. **San Francisco WON an important case at the Supreme Court in April 2019 CA—aesthetics matter**
T-Mobile West LLC v. City & County of San Francisco affirmed that you CAN use affects on the beauty of our City to stop permits of cell phone tower installations. This was a HUGE win for people for Local Control, and San Francisco should use it liberally to make sure our gorgeous views are not destroyed as 1,000 additional spots for cell phone towers are planned to be installed with four cell phone installations one on utility pole as close as six feet from your window.
18. **Recent peer-reviewed** health study from Kaiser—A **study of real-world exposure to non-ionizing radiation from magnetic fields in pregnant women** found a 3X higher rate of miscarriage, providing new evidence regarding their potential health risks.

19. Studies on Brain Memory and Learning:

- **Mother's Exposure to Electromagnetic Fields before and during Pregnancy is Associated with Risk of Speech Problems in Offspring.** (2019) Zarei, S., et al. Journal of Biomedical Physics and Engineering 9(1):61-68. <https://www.ncbi.nlm.nih.gov/pubmed/30881935>
- **A Prospective Cohort Study of Adolescents' Memory Performance and Individual Brain Dose of Microwave Radiation from Wireless Communication.** (2018) Forster M et al. Environ Health Perspect. 2018 Jul 23;126(7):077007. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6108834/>
- **2.45 GHz microwave radiation impairs learning, memory, and hippocampal synaptic plasticity in the rat.** (2018) Karimi N et al. Toxicology and Industrial Health 34(12): 873-883 (2018). <https://www.ncbi.nlm.nih.gov/pubmed/30345889>
- **2.45-GHz Microwave Radiation Impairs Hippocampal Learning and Spatial Memory: Involvement of Local Stress Mechanism-Induced Suppression of iGluR/ERK/CREB Signaling.** (2018) Shahain S et al. Toxicol Sci. 2018 Feb 1;161(2):349-374. <https://www.ncbi.nlm.nih.gov/pubmed/29069439>
- **Prevalence of problematic cell phone use in an adult population in Spain as assessed by the Mobile Phone Problem Use Scale (MPPUS).** (2017) de-Sola J. . doi: 10.1371/journal.pone.0181184. eCollection 2017. <https://www.ncbi.nlm.nih.gov/pubmed/28771626>

- **Mobile Phone Overuse Among Elementary School Students in Korea: Factors Associated With Mobile Phone Use as a Behavior Addiction.** (2015) Kim R et al. J Addict Nurs. 2015 Apr-Jun;26(2):81-5. <https://www.ncbi.nlm.nih.gov/pubmed/26053080>
- **Working memory performance in typically developing children and adolescents: behavioral evidence of protracted frontal lobe development.** (2007) Conklin HM. Dev Neuropsychol. 2007;31(1):103-28. <https://www.ncbi.nlm.nih.gov/pubmed/17305440>
- **The development of nonverbal working memory and executive control processes in adolescents.** Luciana M et al. Child Dev. 2005 May-Jun;76(3):697-712. <https://www.ncbi.nlm.nih.gov/pubmed/15892787/>
- **Mobile phone use and exposures in children.** (2005) Schüz J. Bioelectromagnetics. 2005;Suppl 7:S45-50. <https://www.ncbi.nlm.nih.gov/pubmed/16142783/>
- **[Symptoms experienced by people in vicinity of base stations: II/ Incidences of age, duration of exposure, location of subjects in relation to the antennas and other electromagnetic factors].** (2003) Santini R et al. *Pathol Biol (Paris)*. 2003 Sep;51(7): 412-5. <http://www.ncbi.nlm.nih.gov/pubmed/12948762>
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- **Partial list**

The American Academy of Pediatrics published a special Pediatrics Supplement Nov 2017. Volume 140. http://pediatrics.aappublications.org/content/140/Supplement_2

20. Biological effects

Most important is the US National Toxicology Program Study, ordered by the FDA and conducted in the most stringent experimental conditions by the NTP under the NIH. Longitudinal study on rats and mice. **Results released in 2018 reported clear evidence of cancerous schwarm (neurological) tumors of the heart, likely evidence of gliomas (brain tumors), degenerative renal disease as well as other biologic effects. This study was replicated** in Italy by the Razmini Institute with much lower levels of radiation and had the same findings. The current FDA has refuted the study.

One serious biologic effect is:

– oxidative stress

Scientists have found that oxidative stress plays a major part in the development of chronic, degenerative and inflammatory illnesses such as cancer, autoimmune disorders, aging, cataracts, rheumatoid arthritis, cardiovascular and neurodegenerative diseases, as well as some acute pathologies (trauma, stroke). Some recent studies are:

- **Oxidative stress response in SH-SY5Y cells exposed to short-term 1800 MHz radiofrequency radiation.** (2018) Cermak M et al. J Environ Sci Health A Tox Hazard Subst Environ Eng 2018;53:132-138. <https://www.ncbi.nlm.nih.gov/pubmed/29148897>
- **Role of Mitochondria in the Oxidative Stress Induced by Electromagnetic Fields: Focus on Reproductive Systems.** (2018) Santini SJ et al. . Oxid Med Cell Longev. 2018 Nov 8;2018. <https://www.ncbi.nlm.nih.gov/pubmed/30533171>
 - **Mechanism of Harm from Wireless Non-ionizing Radiation is Oxidative Stress**
 - Yakymenko in 2016 looked at 100 currently available peer-reviewed studies on oxidative effects of low-intensity microwave radio frequencies. He found that 93 of the 100 studies

confirmed that these wireless radio frequencies induced oxidative effects in biological systems.

- **Synergistic Toxic Exposures Increase Oxidative Stress**
- The concern for exposure to radio frequency radiation is magnified by the fact that we are exposed to numerous pollutants in our environment on a regular basis and these toxicants can act synergistically via reactive oxygen species and other mechanisms to promote a variety of diseases.
- Too many more to list: go to: <https://mdsafetech.org/cellular-mechanisms-oxidation/>

In order to meet the streamlined FCC Order to speed the approval process, public hearings and protests have been eliminated. If the “shot clock” or approval process takes longer than 60 or 90 days the application is approved automatically

Property values will go down. The National Association of Realtors studied this in 2014 (before 5G towers every 500 feet). Imagine how valuable your property will be when there are 5 refrigerator sized antennas putting out radiation 6 feet away from your home

21. The effects of 4 cell phone towers on one pole for fires. Recent fires on cell phone towers (just like the one I have across the street from my house) in **Clovis and Fresno. Last years Malibu fires were blamed on overloaded poles.**

Cellphone tower catches fire



by: John Farmer

Posted: Oct 16, 2019 / 12:23 PM PDT / Updated: Oct 16, 2019 / 12:46 PM PDT

Up to FOUR cell phone towers on ONE utility pole as close as SIX feet from your window

**RESCIND Article
25 changes!**



This is what a TELECOM LAND GRAB looks like.