WIRE CALIFORNIA
Universal Access to Middle-Mile Fiber for Wired Broadband

June 30, 2023 AB-965 Opposition Letter

Appendix A: AB-965 Amendments

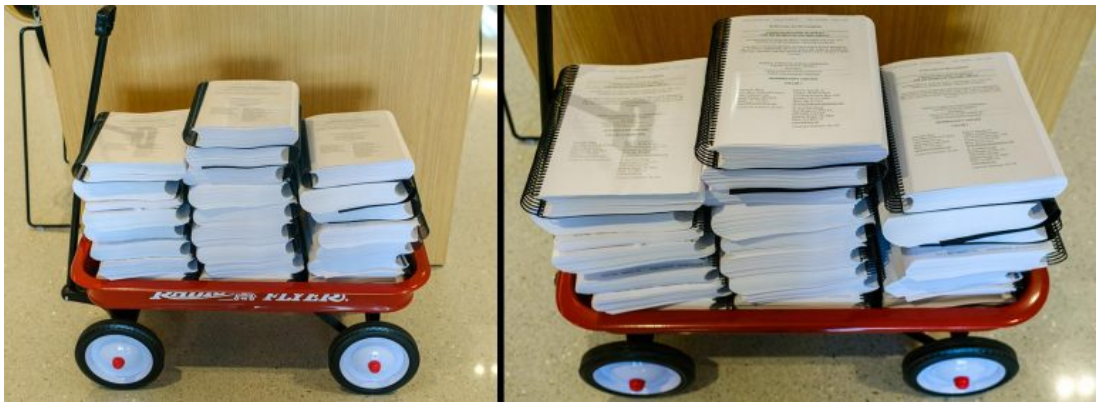
To fix AB-965, Assembly Member Carrillo could revert to the original bill text from Feb 14, 2023, returning the bill to its micro-trenching, fiber optic roots and then add the following additional provisions to address the Digital Divide in an effective way:

1. **Grant last-mile wired-broadband providers universal access to fiber-optic lines** that were installed using Californians' ratepayer funds or that are installed in the public rights-of-way. Since 1994, the (CA Public Utilities Commission (CPUC) has allowed telecom incumbents to add fees to telephone bills for the express purpose of replacing legacy copper lines with fiber-optic lines. Californians have been forced to pay those fees under the promise of receiving public fiber-optic lines. This is a prepaid utility contract that cannot lawfully be broken.
2. **Direct the CPUC to set and enforce reasonable, regulated prices** for last-mile wired broadband providers to universally access fiber optics that were installed using Californians' ratepayer funds or that are installed in the public rights-of-way. The CPUC has the authority to set prices here because this is wired telecommunications on ratepayer-financed lines, which can be regulated by the State, per the Oct 2019 DC Cir. ruling in Mozilla Corp. v. Fed. Commc'ns Comm'n, 940 F.3d 1 (D.C. Cir. 2019).
3. **Make any permit batch requirements apply only to unserved communities** (i.e. any locality in California which does not have both wireline broadband service with at least 100 Mbps symmetric download/upload speeds and wireless telecommunications service with radio signal strength measured as Received Signal Strength Indicator (RSSI) values between -115 dBm and -85 dBm for any licensed or unlicensed radio frequency in outdoor areas accessible to people, per Title 47 U.S. Code §324, Use of Minimum Power.).
4. **Restrict any state and federal funds for addressing the Digital Divide** to be used only in areas of that have no provider able to offer 100 Mbps down and 20 Mbps upload speeds, as confirmed via Microsoft Corp.'s records of data transfer speeds from homes/businesses via Windows 8/10/11 computers connected to the Internet. The reliability of the Microsoft data is discussed in this 2020 video.
5. **Support local control over Wireless Telecommunications Facilities** (WTFs), consistent with the legislative intent of the 1996-TCA, repealing CA state bills AB-57 (from 2015) and AB-537 (from 2021), will remove any deemed-approved ratchets from CA Code, correcting Assemblymember (Asm.) Quirk's past errors and will align CA state code with the 1996-TCA and FCC Orders, which have NO deemed approved ratchets.

Add Definitions to AB-965

- "**Digital Divide**" :: any locality in California which does not have both wireline broadband service with at least 100 Mbps symmetric download/upload speeds and wireless telecommunications service with radio signal strength measured as Received Signal Strength Indicator (RSSI) values between -115 dBm and -85 dBm for any licensed or unlicensed radio frequency in outdoor areas accessible to people, per Title 47 U.S. Code §324, Use of Minimum Power.)
- "**Data-transmission speed**" :: a value data transmission speed, as measured in Megabits per second (Mbps).
- **"Received Signal Strength Indicator" ("RSSI")** :: is a measurement of the power level being received by the receiving radio after the antenna and possible cable loss, as measured in deciBel-milliWatts (dBm). RSSI is the total received power measured over the entire bandwidth of occupied Resource Blocks and over all sub-carriers of the specified bandwidth including reference signals, co-channel serving cells, non-serving cells, adjacent channel interference and thermal noise.

Appendix B: AB-965 Opposition Evidence Uploaded to the Legislative Portal



Only if each SGF Committee member considers the full breadth of this and other evidence that Wire California submitted into the public legislative record of AB-965 can that member make an informed decision on his/her vote. See a listing in **Appendix B** of the evidence that has been uploaded to the legislative portal by Wire California to oppose AB-965. This evidence was carefully compiled by some of the top telecommunications attorneys in the US and is already in the public records of both the Federal Communications Commission (FCC) and the US Court of Appeals (DC Cir.). The evidence was accepted by the US Court of Appeals (DC Cir.) and **served as the basis for the Aug 13, 2021 US Court of Appeals (DC Cir.) ruling** in Case 20-1025, Environmental Health Trust, et al. v FCC.

The DC Circuit judges ruled the following in Case 20-1025:

> *". . . we grant the petitions in part and remand to the Commission to provide a reasoned explanation for its determination that its guidelines adequately protect against harmful effects of exposure to radio-frequency [microwave] radiation. It must, in particular,*

> *(i) provide a reasoned explanation for its decision to retain its testing procedures for determining whether cell phones and other portable electronic devices comply with its guidelines, (ii) address the impacts of RF radiation on children, the health implications of long-term exposure to RF radiation, the ubiquity of wireless devices, and other technological developments that have occurred since the Commission last updated its guidelines, and (iii) address the impacts of RF radiation on the environment."*

Each state and/or locality can regulate the maximum power output of radio signal strength from wireless infrastructure antennas that reaches any areas that are accessible to human beings and other living organisms, consistent with **Title 47 U.S. Code §324 – Use of Minimum Power** and the 12,000+ pages of peer-reviewed, scientific evidence that Environmental Health Trust and Children's Health Defense and others plaintiffs placed in the FCC's public record: Vol-1, Vol-2, Vol-3, Vol-4, Vol-5, Vol-6, Vol-7 Vol-8, Vol-9, Vol-10, Vol-11, Vol-12, Vol-13, Vol-14, Vol-15, Vol-16, Vol-17, Vol-18, Vol-19, Vol-20, Vol-21, Vol-22, Vol-23, Vol-24, Vol-25, Vol-26 and Vol-27.

*Note:*The 27 volumes of evidence listed above are included by reference into the public legislative record of AB-965.

1. Link to the U.S. Courts of Appeals ruling in Case No. 18-1129: United Keetoowah Band of Cherokee Indians v. Fed. Commc'ns Comm'n, 933 F.3d 728 (D.C. Cir. 2019)
2. Link to the U.S. Courts of Appeals ruling in Case No. 18-1051: Mozilla Corp. v. Fed. Commc'ns Comm'n, 940 F.3d 1 (D.C. Cir. 2019)
3. Link to the U.S. Courts of Appeals ruling in Case N0. 20-1025: Envtl. Health Tr. v. Fed. Communications Comm'n, 9 F.4th 893 (D.C. Cir. 2021)
4. Link to 2021-1130-EHT-Filing-Re-FCC-Ignoring-20-1025-Ruling.pdf
5. Link to 2023-0424-CHD-Filing-Re-FCC-Ignoring-20-1025-Ruling.pdf

*Note:*These three U.S. Courts of Appeals rulings and two FCC filings are included by reference into the public legislative record of AB-965. California is bound by each of these rulings.

Appendix C: AB-965 Problems and Solutions

AB-965 Fatal Problems	AB-965 Solutions
(1) **AB-965 unnecessarily forces** onerous Wireless Telecommunications Facility (WTF) application batching requirements on **100% of CA counties and localities**, despite the fact that 90%+ of CA localities **are already served with wired broadband** at symmetric 100-200 Mbps speeds	(1) ***Implement batching recommendations (not requirements) only in areas of need:*** any locality in California which does not have both wireline broadband service with at least 100 Mbps symmetric download/upload speeds and wireless telecommunications service with radio signal strength measured as Received Signal Strength Indicator (RSSI) values between -115 dBm and -85 dBm for any licensed or unlicensed radio frequency in outdoor areas accessible to people,

AB-965 Fatal Problems	AB-965 Solutions
	per Title 47 U.S. Code §324, Use of Minimum Power.)
(2) Even though AB-965 says that it aims "to help bridge the digital divide and more quickly connect communities to high-speed internet", **AB-965 DOES NOTHING** to force any entity to provide broadband service to those in unserved/underserved areas. Any legislator voting for AB-965, as currently written, is merely playing a starring role in the another episode of "Digital Divide" theater — willing to talk about the problem but **not willing to make the bold moves** to actually end the Digital Divide once and for all.	(2) First, do (1), above, and then amend AB-965 to ***direct the CPUC to set and enforce universal access for all wireline broadband providers*** to the switched legacy copper phone lines **and** the fiber-optic lines that were installed with ratepayer funds. The CPUC can also set reasonable, regulated rates for this access. Doing so overcomes the false premise that fiber-optic lines installed with ratepayer funds are being treated as private assets by incumbent Big Telecom holding companies. **In AB-965, institute universal, open-access to all ratepayer-funded fiber-optic lines in California.**
(3) AB-965's WTF application batching requirements, unbelievably, apply to **WTFs of ANY SIZE and ANY POWER OUTPUT without reasonable radio signal strength output limits**.	(3) The State of California, its counties and its localities have the **legal obligation to provide actual public safety and privacy to Californians**, both of which are compromised by the batching requirements of AB-965. To address this, ***add to AB-965, reasonable, frequency-specific, radio signal-strength limits*** (-115 dBm to -85 dBm in all areas accessible to people) for all Wireless Telecommunications Facilities (WTFs) operating in California, consistent with the requirement of **U.S. Code Title 47 §324 Use of Minimum Power**: "In all circumstances . . . all radio stations. . . shall use the minimum amount of power necessary to carry out the communication desired."
(4) AB-965 is **not consistent** with the legislative intent of the 1996-TCA and its Conference Report, **not consistent** with multiple other Federal Acts (NEPA, NHPA, FHAA and ADA) and **not consistent** with at least three recent rulings in the US Courts of Appeals DC Cir. (2019 rulings in Case No. 18-1129 and Case No. 18-1051; 2021 ruling Case N0. 20-1025; see details below). Based on this evidence, AB-965, as currently written, is ripe for a veto or a court challenge.	(4) ***Changing any WTF application batching from a requirement to a recommendation, has the additional benefit of preserving local control*** over the placement, construction, and operations of WTFs and preserving the core principle of ***case-by-case WTF application processing***, consistent with the legislative intent of the 1996-TCA. A US Supreme Court ruling in 2005 recognized the 1996-TCA Conference Report as a key source of the legislative intent of the 1996-TCA. That conference report states: "The conferees intend that the phrase 'unreasonably discriminate among providers of functionally equivalent services' will **provide localities with the flexibility to treat facilities that create different visual, aesthetic, or safety concerns**'" ***on a case-by-case basis***. The

AB-965 Fatal Problems	AB-965 Solutions
	proposed WTF application batching provisions in AB-965 would be antithetical to the scheme of cooperative federalism established by the 1996-TCA and upheld by the US Supreme Court: "**It is the intent** . . . that decisions be made on a **case-by-case basis** . . . **It is not the intent** of this provision **to give preferential treatment to the personal wireless service industry** in the processing of requests, or to subject their requests to any but the generally applicable time frames for zoning decision".
(5) **AB-965 is not strategic:** *Oft-repeated Wayne Gretzky quote applies here:* > *"Skate to where the puck is going, not where it has been."* Voting for AB-965 is skating California to where the puck has been (inferior, energy-inefficient, hazardous, heavily-polluting wireless broadband), and **not to where the puck is going** (superior, energy-efficient, non-polluting wireline broadband) — exactly where the NTIA FFA funds and CPUC rules are skating.	(5) ***Another reasonable fix for AB-965 is to revert the bill language to the*** Feb 14, 2023 version ***of the bill***, returning it to its micro-trenching roots. **AB-965 was highjacked** by bill-sponsor Crown Castle and changed from a reasonable micro-trenching bill to an overreaching bill that grants clear "preferential treatment to the personal wireless service industry" including to Crown Castle. Crown Castle is in active ligation in LA County because the firm (with Bill Gates' recent $Billion investment) is recklessly attempting to grab cheap real estate in the public rights-of-ways in **areas already served with 100 Mbps symmetric broadband service**, without respecting title deeds and without securing permission of the rightful landowners. If Crown Castle or any other provider compels a **change of use** for any structure that sets on the land in front of someone's home or business, ***Crown Castle and the localities wrongfully issuing the permits*** would be subject to similar litigation. **The litigation burden and costs for California localities and residents could be massive.**

Appendix D: AB-965 is a Large Step Backward — Adds to the Trillion Dollar Broadband Scandal

For the past 30 years, Big Telecom has ignored its universal service and universal access obligations and **misappropriated** **$16+ Billion in ratepayer funds** expressly-purposed to upgrade **public** legacy

copper lines to **public** fiber-optic lines. Instead, Big Telecom illegally used these ratepayer funds to construct **private** 3G/4G/5G wireless networks and now falsely "claim" that the **public** fiber optics in the ground is their **private** asset. That **false claim** is a key element of the well-documented trillion-dollar broadband scandal — a scandal that the SGF Committee can fix by amending AB-965.

One can see the result of such false claims in the March 7, 2023 CA Senate Energy Utilities and Communications (SEUC) Committee hearing video. California Department of Technology (CDT) Deputy Director Mark Monroe answered questions from Sen. Caballero and Sen. Dahle in the video. The discussion shows a ***key misunderstanding*** about **a 4,000-mile overlap** of the State's 10,000 mile middle-mile fiber optics construction plan and any existing fiber-optic infrastructure. Monroe and the Senators did not understand that the **4,000-miles of existing fiber optics is a public asset — *NOT* a private asset** — since the fiber optics were constructed with ratepayer funds by a State Public Telecommunications Utility (SPTU). Therefore, the lease rates to access this public fiber-optic asset does not need to be negotiated. Instead, the California Public Utilities Commission **(CPUC) can simply set and enforce affordable lease rates to access all of these fiber optics at just and reasonable regulated pricing**. Full stop.

Sen. Caballero, will you please add language to AB-965 to direct the CPUC to do that to save the taxpayers from paying for an unnecessary, redundant 4,000-mile fiber-optic overbuild? Doing so would stretch the state's $3.8 Billion construction budget, enabling last-mile wireline broadband providers to install fiber optics to each premise by overlashing fiber optic cables on electric lines strung on existing wooden utility poles — **the most cost-effective means to deliver 100-200 Mbps symmetric broadband**.

> ***Mr. Monroe at 43:25:*** *"Most of the [middle-mile broadband construction projects] will be under contract in this fiscal year and we'll get the projects done by 2026 . . . and then we will look at what other infrastructure is available for lease."*
>
> ***Sen. Dahle at 44:25:*** *"I was intrigued by your comment about leasing . . . in many of these middle-mile areas there are already **private** companies that have [fiber-optic] infrastructure, but we can't tap into it . . . If there is not an ability to make a profit then these [private] companies will not go into these underserved areas . . . can you touch on availability of whatever infrastructure is out there, that we know about, and the ability to either lease or get on that [fiber] without having to go in and trench a line right next to an existing private line or a line that is already setting there?"*
>
> ***Mr. Monroe at 45:30:*** *"We have worked with the CPUC and a third party administrator to **identify roughly 4,000 miles of overlap** between existing infrastructure that might be leasable. That doesn't mean that they will lease it to us at an affordable rate . . . how do we get the full 10,000 miles within the $3.8 Billion funding level in the timeframe that we have? . . . The reality is that businesses are really good at math. Sometimes they are not willing to lease to us at the right price. **Then we will have to do some over build there [because] we can't lease what is there within the $3.8 Billion**."*

> ***Sen. Dahle at 47:10:*** *"They're good at math; they're also good at understanding that when there is no competition, they can take advantage of a situation. We passed CA Advanced Services Funds through this Legislature [years ago] and they never tapped into those funds and they said 'well, we can't' . . . there is always a reason. So* ***when we did the Middle-mile bill [SB-156], this is true competition. It opens it up for another company to come in and buy up space on that middle mile and go after that profitable area and, at the same time, they have to serve the underserved areas****. This legislature is focused on the underserved areas for people that don't have access . . . the big dogs, AT&T, Comcast and those folks say that we can't do it. They have lines going through my community that I can't tap into because that is supposedly not profitable.* ***So now we are going to put a [fiber-optic] line right next to their [fiber-optic] line . . . at a really high cost to the taxpayer . . . the Utilities have really not stepped up to the plate*** *. . . they have a true monopoly because they take all the good places to make money and they don't take care of the underserved."*
>
> ***Sen. Caballero at 50:05*** *"For me, it's really very simple. I am looking for broadband access for underserved communities, a robust middle-mile infrastructure so that we don't get kicked off [the fiber] once we have expended those resources if those middle-mile leases are not long enough to provide reliable access. I want to make sure that we can use all the federal funds . . . in the Central Valley, internet access is very slow, if at all and missing in huge areas . . . how we hook in the last-mile [service] is really important . . . I am also concerned about the CPUC maps because the Internet companies give the data to the FCC . . . where they are providing access . . . the maps that [the FCC] gives to the CPUC are from cable companies. It's not [from] the internet companies and those maps we know to be in error because they claim the entire census tract is served, even if they are only meeting the needs of one business or one house within that census tract. That means that you have huge areas that the companies say they are providing access to, but they are not. If we use that inaccurate data we are going to end up with CPUC maps that do not include all the disadvantaged communities."*

The $16 Billion question is . . . on what data did the CPUC base its revised maps, published in April, 2023? Sen. Caballero heard an excellent suggestion from Wire California at the June 20, 2023 SEUC Hearing: the state can get accurate by-household upload and download speeds from Microsoft telemetry data for every Windows 8/10/11 computer that connects to the Internet from California. This is the best independent broadband speed data available anywhere. Microsoft Corp. has already published at least

one independent study and could give accurate, current by-household upload/download speeds to the State of California instantly. See Microsoft broadband usage data by California county here.

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> ***Wire California:*** *"There is really good broadband usage data available from Microsoft corporation because every Windows 8, 10 and 11 computer phones home to Microsoft for updates, giving reliable information on what are households' download and upload speeds. You can get that data tomorrow from Microsoft with a phone call to request the data. They have already published one independent study. That will solve many of your Broadband mapping problems. I suggest you look into it. Thank you."*

Appendix E: AB-965 Next Steps Forward

1. Please consider **NOT hearing AB-965** at all in 2023 at the Senate Governance and Finance (SGF) Committee for the reasons presented in this letter and then fix the bill to make it consistent with Gov. Newsom's SB-156 plan and bring AB-965 back in 2024. Wire California's recommended amendments and definitions are in **Appendix A**.

2. If the SGF Chair chooses to send AB-965 forward to a SGF Committee vote in 2023, then please consider voting on a motion to **make AB-965 a two-year bill** to give the Committee members the time needed to read, analyze and understand the **volumes of evidence** placed into the public legislative record of AB-965 by Wire California and other opponents before deliberating on the bill. A list of evidence that Wire California uploaded into the CA Legisilatures's portal is in **Appendix B**.

3. If the SGF Chair and Committee members choose to make no changes to AB-965, then please **VOTE NO on AB-965** so it does not siphon off focus, efforts and funds from verified, unserved areas in California.

4. Please do **NOT DEPEND** solely on the Committees' bill analyses for AB-965. No 8-10 page summary could accurately communicate the depth of evidence that Wire California entered in the public legislative record in opposition to AB-965. Please see the photo in **Appendix B** that shows the evidence that was wheeled into every SGF member office in June 2023. The evidence was discussed with various Senators' legislative staff members in the brief time allotted.

Appendix F: To Bridge the Digital Divide, in AB-965, Direct the CPUC to Regulate and the Attorney General to Enforce Existing Laws

In AB-965, Direct the CPUC to Regulate Wireline Broadband

The Oct 2019 ruling DC Cir. ruling in Mozilla Corp. v. Fed. Commc'ns Comm'n, 940 F.3d 1 (D.C. Cir. 2019) upheld the FCC's switch to no longer regulate broadband Internet (no longer impose common-carrier regulation) which **removed FCC preemption over state regulation of broadband Internet**:

> *The DC Circuit judges "vacate the portion of the 2018 Order that expressly preempts "any state or local requirements that are inconsistent with [its] deregulatory approach." 2018 Order ¶ 194; see id. ¶¶ 194–204 ("Preemption Directive"). The Commission ignored binding precedent by failing to ground its sweeping Preemption Directive — which goes far beyond conflict preemption — in a lawful source of statutory authority.* ***That failure is fatal*** *. . . [the] petitioners challenge the Preemption Directive on the ground that it exceeds the Commission's statutory authority.* ***They are right*** *. . . Regulation of broadband Internet has been the subject of protracted litigation, with broadband providers subjected to and then released from common carrier regulation over the previous decade. We decline to yet again flick the on-off switch of common-carrier regulation under these circumstances."*

In AB-965, direct the Attorney General to Enforce the Laws on the Books

As currently written, AB-965 is a substantial gift to incumbent Big Telecom companies and their wireless subsidiaries/agents — entities that deserve no such gifts. Such gifts are not deserved because of the many well-documented violations of federal law by these very companies via redlining and not serving certain urban and rural communities with wireline broadband and wireless telecommunications service that is reasonably comparable in speeds and price to that offered in all other areas.

U.S. Code Title 47 § 254. **(b) Universal Service Principles mandate the FCC and service providers to establish parity between urban and rural broadband**. There has been no change of law that has softened this mandate, so it's still something that the FCC and wireless telecommunications facility companies must do. §254 says:

> *"The Joint Board and the Commission shall base policies for the preservation and advancement of universal service on the following principles:*

> - *(1) **Quality and Rates** — Quality services should be available at just, reasonable, and affordable rates.*
> - *(2) **Access to Advanced Services** — Access to advanced telecommunications and information services should be provided in all regions of the Nation.*
> - *(3) **Access in Rural and High Cost Areas** — **Consumers in all regions** of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have **access to telecommunications and information services**, including interexchange services and advanced telecommunications and information services, that are **reasonably comparable** to those services provided in urban areas and that are available at **rates that are reasonably comparable** to rates charged for similar services in urban areas."*

Such illegal redlining actions taken by telecom incumbents and their wireless subsidiaries/agents are added to other federal law violations, including, but not limited to evidence documenting that, in California, a misappropriation of $16+ Billion of **public** ratepayer funds — funds that were illegally used to cross-subsidize the construction of the telecom incumbents' **private** 3G/4G wireless networks. See US Code Title 47 Section 254(k) **Subsidy of competitive services prohibited:**

> *"A telecommunications carrier may **not** use services that are not competitive to subsidize services that are subject to competition . . ."*

. . . yet that is exactly what happened throughout California. The SGF Committee can change the language of AB-965 to recover these misappropriated ratepayer funds, to direct the CPUC to enforce the contracts that telecom incumbents signed to replace legacy copper, switched telephone lines to fiber optics to 80% of California homes and to establish open access to all fiber-optic lines that were installed in California with ratepayer funds.

In addition, current FCC data proves that AT&T, Dish, T-Mobile and Verizon all have sufficient FCC wireless licenses in every California county to provide wireless signal strength — as measured by Received Signal Strength Indicator (RSSI) levels between -125 and -85 dBm — for wireless telecommunications service (the ability to make outdoor wireless phone calls, along major roadways). **If there any areas with a significant gap in wireless telecommunications service in 2023, California's Attorney General can enforce the terms of the FCC license to compel wireless carriers to install sufficient infrastructure in order to close that significant gap in wireless telecommunications service.**

To bridge the "Digital Divide", Californians need **both** FTTP wireline information service (broadband) and wireless telecommunications service (wireless phone calls). The former is already being addressed, but the latter can be addressed by the CA Attorney General enforcing the laws on the books for all currently unserved areas in California because FCC license terms require that providers serve the areas covered by the licenses. The FCC licenses currently in place require wireless carriers to ensure that all major roadways in these areas have wireless telecommunications service. **In short, no more expensive, taxpayer-funded carrots are needed — just one effective stick.**

Finally, state law requiring batching of Wireless Telecommunications Facility (WTF) applications violates the legislative intent of the federal 1996 Telecommunications Act (1996-TCA) and would result in violations of other federal acts, including but not limited to:

1. The 1996 Telecommunications Act (1996-TCA) and its Conference Report
    - **Note:** *Title 47 U.S. Code §324 – Use of Minimum Power* states "In all circumstances . . . all radio stations. . . shall use the minimum amount of power necessary to carry out the communication desired."
2. The National Environmental Policy Act (NEPA) — NEPA review is required for every single WTF application†
3. The National Historic Preservation Act (NHPA) — NHPA review is required for every single WTF application†
4. The Fair Housing Amendments Act — there can be no housing discrimination caused by placement, construction, modification, or operations of WTFs
5. The American Disabilities Act requires reasonable accommodation for Americans with Electromagnetic Sensitivity, an environmentally-induced condition caused by radio signal strength beyond the "minimum amount of power necessary to carry out the communication desired."

Note: All of the federal acts listed above are included by reference into the public legislative record of AB-965.

†Oct 19, 2020 comment by Ms. Garnet Hanly, Division Chief of the Competition & Infrastructure Policy Division, FCC Wireless Telecommunications Bureau:

> *"The FCC when it modified its rules [Title 47, C.F.R. § 1.1312(e) by its October 2019 Order that became effective on Dec 5, 2019], after the DC Circuit issued its mandate [in its Ruling of Case No. 18-1129 Keetoowah v FCC] we* ***[the FCC] took the position that we were reviewing Small Wireless Facilities as [Federal] undertakings and major Federal actions****, pursuant to the DC Circuit decision and that is what we've been doing."*

Appendix G: AB-965 is a Deceptive 90%–10% Bill

The Digital Divide affects about **3% to 10% of Californians**, based on a conservative reading of latest FCC data and maps. Over 90% of the state is already served with wireline broadband symmetric service (with 100-200 Mbps download/upload speeds) and wireless telecommunications service (the ability to place outdoor wireless phone calls along major roadways). California's unserved areas often lack both sufficient wireline broadband and wireless telecommunications service.

Instead of just voting AB-965 to the Senate floor, the **SGF committee has the opportunity to first change AB-965 to do the following:**

1. Focus the bill on **solving the problems that exist solely in the unserved areas — 10% of the state —** by forcing open access to all fiber optics installed with ratepayer funds, encouraging the lashing of fiber optic cables on existing electrical wires strung on wooden utility poles and adding language to AB-965 saying the CA Attorney General should enforce wireless telecommunications service providers **to transmit federally-required wireless telecommunications service** along the major roadways in California's unserved areas, by enforcing the terms of the FCC wireless spectrum licenses which are already sufficient for every county in California (see the evidence here).

2. Preserve and restore (by repealing AB-57 and AB-537) full local control in the already served areas — **90% of the state** — over the placement, construction, modification, and operations of WTFs on a case-by-case basis, as intended by the 1996-TCA.

Bill sponsor Crown Castle highjacked AB-965; We Need to Safely Land the Bill on a Fiber-Optic Runway

AB-965 started out in February 2023 as a fiber-optic micro-trenching bill with no mention of any wireless shot clocks or deemed approved ratchets. Enter Crown Castle with its billion dollar investment from Bill Gates and his agenda to build a 24/7 wireless surveillance grid for the WHO's Digital ID track/trace initiative . . . and the bill morphed into another misguided wireless bill, while pretending to be a "bridge the Digital Divide" bill. The people of California reject such changes in direction and need our elected representatives to protect our constitutional rights to privacy in California. The SGF Committee can fix AB-965 by reverting it back to its February 2023 fiber-optic foundation and by adding the amendments listed in **Appendix A** of this letter.

*May 2023: California PUC's Caleb Jones, defines **Future Proof Broadband**:*

> *"On a **single strand of fiber**, you can carry **more information than you can send over the entire spectrum of wireless frequencies**. Those fiber-optic*

> *strands are then bundled together into fiber-optic cables, which can carry dozens, hundreds or even thousands of strands."*

The problem with AB-965 is that it is swimming upstream against the rushing river flowing towards last-mile Fiber Optics to the Premises (FTTP) already envisioned by Gov. Newsom's $6 billion Open Access Middle-mile fiber-optic Network (AB-156), the federal $42.5 billion Broadband Equity Access and Deployment (BEAD) program and the CPUC decision 22-04-055, which follows federal rules by requiring 100 Mbps download/upload speeds, that **wireless has not and cannot reliably achieve, at scale** (see evidence here and here).

Appendix H: Verified Wireless Harms Throughout California

It is important to understand the following terms/acronyms and the facts regarding a 2019 verified incident of wireless harm in Sacramento, which establishes the **need for AB-965 to be fixed before it is heard by the SGF Committee**.

Evidence of verified wireless harm in Sacramento appears in the legislative record for 2021's SB-565 and also for 2023's AB-965. This evidence was one reason why Gov. Newsom vetoed SB-565, an unnecessary streamline Wireless Telecommunications Facilities (WTFs) deployment bill. A very similar bill, SB-649, was vetoed by Gov. Brown in 2017. Both vetoes preserved local control over the placement construction and operations of WTFs.

Will AB-965 face a similar fate? That seems likely, unless AB-965 is significantly amended. See Wire California's suggested amendments in **Appendix A**.

First, please consider these important acronyms:

- **SPTU** = State Public Telecommunications Utility†.
- **WTF** = Wireless Telecommunications Facility of any size or any Generation (G)
- **FTTP** = Fiber optics to the premises
- **Mbps** = Megabits per second
- **RSSI** = Radio Signal Strength Indicator, measured in dBm
- **dBm** = deciBel-milliwatt; a logarithmic scale, in which zero is set to 1 milliwatt (1/1000th of a Watt); and in which every ten units is a power of 10‡
- **MRP** = Minimum Radio Power; per U.S. Code Title 47 §324 "In all circumstances . . . all radio stations. . . **shall use the minimum amount of power** necessary to carry out the communication desired."
- **ERP** = Excessive Radio Power . . . radio signal strength power higher than -85 dBm (which provides "5 Bars" on a cell phone) in areas accessible to people

† In California, the largest SPTU is AT&T California, a subsidiary of the AT&T Corporation, a holding company that owns hundreds of subsidiaries.

‡ For example, comparing –15 dBm to –85 dBm shows that –15 dBm is **10^7 or 10,000,000 times** higher radio signal strength power than –85 dBm.

Next, consider a well-documented wireless child endangerment incident in Sacramento, CA in 2019.

All across the US and throughout California, professional engineers and certified Building Biologists have measured frequency-specific Radio Signal Strength Indicator (RSSI) values of around **-15 dBm or higher** at bedroom windows that are located about 60 feet from so-called "small" Wireless Telecommunications Facilities (sWTFs), including at this home in Sacramento.

- **-15 dBm is excessive radio power**: about ***10,000,000 times higher than needed*** for "5 bars" on a cellphone
- This excessive radio power sickened two little girls sleeping in that Sacramento bedroom in just a few weeks; the children were diagnosed by a licensed physician. Their diagnosis was Electromagnetic Sensitivity (EMS), also known as microwave radiation illness. This has happened all over California.
- The operations of this sWTF in Sacramento resulted in **child endangerment and proven harm.**

As established by tens of thousands of wireless industry publications and reports, **frequency-specific Radio Signal Strength of -115 dBm to -85 dBm RSSI is the power** "necessary to carry out the communication desired" (wireless telecommunications service). This is well-explained in this June 2020 expert comment submitted to the FCC re: FCC Order 19-126, an order vacated in part and remanded back to the FCC on Aug 13, 2021 in the US Court of Appeals (DC Cir.) ruling in Case 20-1025, *Environmental Health Trust, et al. v FCC*. This Aug 2021 ruling **irrevocably changed the wireless world**.

Prof. Trevor Marshall, PhD wrote:

> *"Fundamentally, the FCC is asking the wrong question. Rather than asking . . . 'How much power is it safe to radiate from a Wireless Telecommunications Facility (WTF),' the FCC should be asking . . 'How much power is needed to get the job done?'"*

Conclusion: By codifying a statewide requirement for the installation of substantially similar sWTFs in groups of 25, 50 or more applications — **without effective radio signal strength power limits** — AB-965 would create an ***unmitigable disaster.*** Even worse, such sWTFs are **NOT NEEDED for broadband in over 90% of California** which already has wired broadband capable of at least 100 Mbps download and 20 Mbps upload speeds, based on latest FCC National Broadband Map:

- The June 2023 version of the National Broadband Map that will be used by the NTIA to allocate $42.5 billion in the Broadband Equity, Access, and Deployment (BEAD) program likely understates the unserved/underserved numbers.
- **Nationwide**, as of December 31, 2022, there are 114,537,044 Broadband Serviceable Locations (BSLs) in the country.

- 7.6% of the BSLs are Unserved, or 8.3 million nationally.
- 3.1% of the BSLs are Underserved, or 3.5 million nationally.

- **In California**, as of December 31, 2022, there are 10,139,429 BSLs in the state
  - **3.2%** of the BSLs are Unserved, or **317,702** statewide
  - **1.5%** of the BSLs are Underserved, or **152,091** statewide

Appendix I: ADA Accommodation Precedent from 2017 Applies Equally in 2023

The evidence of an **ADA accommodation precedent** occurred in 2017 when **both the CA Senate and CA Assembly accommodated EMS Californians** in the deliberations of SB-649.

In the most recent California Senate Daily file, Americans With Disabilities Act notices which were in force continually from 2017-2023, enabled Californians with the disabling characteristic of Electromagnetic Sensitivity (EMS) to successfully request and be granted a reasonable accommodation, giving them an equal opportunity to participate in California Senate and Assembly hearings. Specifically, up to six EMS Californians were offered a "time certain" start for testimony at two minutes each (for a total of 12 minutes of testimony) at each of the following hearings:

1. May 15, 2017 Senate Appropriations Committee
2. June 28, 2017 Assembly Local Government Committee
3. July 12, 2017 Assembly Communications and Conveyance Committee

Consistent with this precedent from 2017, Wire California, on behalf of EMS Californians (which comprise up to 10% of all Californians, about 4 million people) is requesting the Senate Governance and Finance Committee Chair and the Senate ADA Coordinator to grant a similar reasonable accommodation for the July 12, 2023 Senate Governance and Finance committee hearing, at which AB-965 will be heard. **EMS Californians are seeking a similar time-certain start for six speakers for a total of 12 minutes of testimony at the July 12, 2023 SGF hearing.**

Notice in the California Senate Daily File

> *"Pursuant to the Americans With Disabilities Act, qualified individuals with disabilities may request **reasonable modifications to Senate policies**, or appropriate auxiliary aids and services, to **ensure an equal opportunity to participate in Senate services, programs, and activities**. Requests should be submitted as soon as possible, but no later than three (3) business days before a scheduled event, to the ADA Coordinator at: ada.coordinator@sen.ca.gov. 1020 N Street, Room 255, Sacramento, Ca 95814, (916) 651-1504"*

Notice in the California Assembly Daily File

> *"In accordance with the Americans with Disabilities Act, qualified individuals with disabilities may request **reasonable modifications to Assembly policies**, or appropriate auxiliary aids and services, to **ensure an equal opportunity to participate in Assembly services, programs, and activities**. Requests should be submitted as soon as possible, but no later than three (3) business days before a scheduled event, to the ADA Coordinator at: Assembly Committee on Rules, 1021 O Street, Suite 6250, Sacramento, CA 95814, (916) 319-2800, ADA.Coordinator@asm.ca.gov".*

1. The May 15, 2017 Senate Appropriations Committee allowed 17 minutes of testimony in Opposition to SB-649; 8.5 minutes as part of a "Special Order of Business" as an accommodation for over 175 Electromagnetically Sensitive or Disabled Californians who called into the agreed-to Committee conference call number, the evidence of which is shown here → https://youtu.be/9q5icSeNyyA?t=95.

2. On June 28, 2017 Cecilia Aguiar-Curry, Chair of Assembly Local Government Committee made the following comments at start of the SB-649 Hearing:

> *"We will also have a Special Order of Business to hear SB-649 (Hueso), which we will start in just a few minutes. I would like to go over a few rules of this Special Order of Business so we can all be clear on the Committee's expectations any my expectations as Chair.:"*
>
> *First, I requested that we hear this Bill as a Special Order with a dedicated time-certain so that all stakeholders can be present, listen and participate in the hearing. It is my hope that all of the Committee members can ask the questions they need to and we can have a full discussion in the Committee.*
>
> *. . . Here are my expectations for the Special Order of Business. No more than two minutes per speaker . . . No more than 30 minutes per side. We'll have 30 minutes for the Opposition and 30 minutes for the Support . . . I also have a request from the Electromagnetic Sensitivity-sufferers, to turn wireless on your phone off and put phones in airplane mode."*

View the evidence of some of that June 28, 2017 testimony → https://youtu.be/OgNLR9fQOX4 and https://youtu.be/hyfRE_zGF9I

3. The July 12, 2017 Assembly Communications and Conveyance Committee allowed 30 minutes of opposition testimony, including 12 minutes from EMS Californians. Please view the evidence of some of that June 28, 2017 testimony → https://youtu.be/yW4jfyv2Fuw and https://youtu.be/0khwAdjYAOE.

Appendix J: AB-965's Likely Fate: Veto by Gov. Newsom

Veto is the Likely Fate for AB-965 Because it WORKS AGAINST California's Current Policy to Bridge the Digital Divide. If AB-965 is not significantly changed and is voted through by the CA Legislature, then it seems likely that AB-965 ***would be vetoed by Gov Newsom***, because **AB-965 — as currently written — is inconsistent with all of the following**:

- Gov Newsom SB-556 veto letter: "There is a role for local government in advancing broadband efforts. Part of our achievements laid out in the Broadband budget bill SB-156 (Chapter 112. Statutes of 2020) enables and encourages local governments to take an active role in the last mile deployment and, in doing so, drive competition and increase access."
- CPUC Code Section 281 (b)(1)(A) : "The goal of the Broadband Infrastructure Grant Account is, no later than December 31, 2032, to approve funding for infrastructure projects that will provide broadband access to no less than 98 percent of California households in each consortia region, as identified by the commission. The commission shall be responsible for achieving the goals of the program . . . **consistent with the standards established by FCC Order 20-5: Rural Digital Opportunity Fund**"
- Please view the rules that the CPUC adopted for the Federal Funding Account: At the top of Page 8, the CPUC defines an eligible project for grants from the Federal Funding Account as the following: "Eligible Project" is capable of offering wireline broadband service at or above **100/100 Mbps**, or 100/20 Mbps if symmetrical service is not practicable."

So why is there any mention at all of any "shot clock" or "deemed approved" remedy in AB-965 as such things apply only to Wireless Telecommunications Facility (WTF) installations, and NOT to wireline (fiber optic or coaxial) installations, at all.

SB-965, as currently written, is inconsistent with California's already implemented policy which is focused on speeds that can only be delivered reliably by wireline. **AB-965 *WORKS AGAINST* California's current policy to bridge the Digital Divide**.

Don't Get Fooled Again; Please Fix the Problems with AB-965 Before Voting in the SGF Committee

- Despite the bill stating "Processing groups of substantially similar broadband permits at the same time will be more efficient on the workload of local government staff. . . more easily process routine, high-volume broadband permits as a group instead of individually *to help bridge the digital divide*." — **nothing in the bill forces providers to serve California's unserved areas — please fix that.**
- As currently written, AB-965 unnecessarily forces onerous Wireless Telecommunications Facility (WTF) application batching requirements on **100% of California counties and localities**, despite the fact that 90%+ of CA localities are already served with wireline broadband service at symmetric speeds: 100-200+ Mbps download/upload speeds.
- Any rational person can understand that **there is no need for or real benefit from such batching requirements** in 90% of the already-served areas of California; legislators are not fooling informed Californians by just talking about the "Digital Divide" and not including language in AB-965 to actually force wireline broadband and wireless telecommunications

service into the unserved areas. The bill, as currently written creates a huge loophole for telecom incumbents and their wireless subsidiaries/agents to guild their bottom lines by **continuing to overserve higher income communities** which are already served with sufficient wireline broadband and wireless telecommunications service.

- One approach with AB-965 would be to simply implement batching **recommendations** (not requirements) and **only in areas of need**, as specifically defined with language like the following:

> ***Unserved Area:*** *"any locality in California which does not have both wireline broadband service with at least 100 Mbps symmetric download/upload speeds and wireless telecommunications service with radio signal strength measured as Received Signal Strength Indicator (RSSI) values between -115 dBm and -85 dBm for any licensed or unlicensed radio frequency in outdoor areas accessible to people, per Title 47 U.S. Code §324, Use of Minimum Power.)"*

Please Correct the SGF Deliberations Process

According to Legiscan, in the California Legislature 2023-2024 regular session, so far, 2,982 bills have been introduced and 217 bills have been completed. That's a lot of bills and reflects only the first year of a two-year session. Each bill requires a careful reading, an understanding of the evidence that substantiates proponents' and opponents' positions on the bill, deliberation, discussion, Q&A and, finally, a decision of which way to a vote. That's a lot of work for each bill.

As stated at the start of this letter, similar to 2015's AB-57, 2017's SB-649, 2021's SB-556 and 2021's AB-537, AB-965 is another industry-sponsored bill designed to grant *"preferential treatment for the personal wireless service industry,"* which would violate the the legislative intent of the 1996-TCA, which says:

> *"It is* ***not the intent*** *of this provision* ***to give preferential treatment to the personal wireless service industry*** *in the processing of requests, or to subject their requests to any but the generally applicable time frames for zoning decisions."*

It is important to repeal both AB-57 and AB-537 because former Assemblymember Bill Quirk, the sponsor these bills, introduced "deemed approved" ratchets, when **there are no such deemed approved ratchets in the 1996-TCA or in any FCC Orders** — making these two bills inconsistent with federal laws. There is no basis for "deemed approved" in the scheme of cooperative federalism which governs the placement, construction, modification, and operations of Wireless Telecommunications Facilities (WTFs).

Batching of WTF applications **violates this federal principle of case-by-case decision-making** for individual WTF applications, cited above, because **each siting location is unique** which creates unique, location-specific hazards that must be mitigated because every single WTF application must undergo federally-required NEPA review and NHPA review — reviews that are specific to that individual application and proposed location.

In addition, the operations of any single WTF must not impair one or more life activities of any person living, working or traveling near the WTF because Electromagnetic Sensitivity (EMS) is recognized by the Federal Access Board as a disabling characteristic. **People with EMS must be reasonably accommodated under the Americans with Disabilities Act**. Such accommodations cannot be reasonably administered if batching of WTF applications and deemed approved remedies are required of all California counties and localities. The evidence of just such an **ADA accommodation precedent** occurred in 2017 when **both the CA Senate and CA Assembly accommodated EMS Californians** in the deliberations of SB-649. See video evidence of this precedent in **Appendix I**.

Wireline broadband and wireless broadband are **NOT** functionally equivalent services, per 1996-TCA, the 1996-TCA Conference report, and a 2005 US Supreme Court ruling. There is no federal preemption of local laws for wireless broadband.

In addition, all federal shot clocks for Wireless Telecommunications Facilities (WTFs) are merely presumptive overreaches by the FCC **for outdoor wireless phone call service, only**. The FCC has no authority over local zoning laws. The 1996 TCA lists only few narrow preemptions in US Code Title 47 Sect. 332(c)(7)(B) — again, only for outdoor wireless phone call service.

As discussed at the March 7 Senate Energy, Utilities & Communications Committee hearing, please view this link to the rules that the CPUC adopted for the Federal Funding Account:

At the top of Page 8, the CPUC defines an eligible project for grants from the Federal Funding Account as the following:

> *"Eligible Project" is capable of offering wireline broadband service at or above 100/100 Mbps, or 100/20 Mbps if symmetrical service is not practicable."*

So why in AB-965 is there any mention of "shot clock" or "deemed approved" ratchets, which apply only to WTFs? SB-965, as currently written, is inconsistent with California's already implemented SB-156 broadband policies, which are focused on speeds that can only be delivered reliably by wireline. **In summary, AB-965 WORKS AGAINST California's current policy to bridge the Digital Divide in California.**

Add to AB-965: PUC Regulation to Grant Universal, Open-Access to Fiber Optics Installed with Ratepayer Funds

Californians already paid $16+ billion on their CA landline phone bills to upgrade their legacy copper phone lines to fiber optic cables to the home, but AT&T, Verizon and other Big Telecom companies never carried through on their contractual agreements to do so in many areas, creating the "Digital Divide", by design. The state can recover these misappropriated funds, the back taxes that were avoided via illegal cross-subsidies benefitting wireless and pass effective state regulation to finally stand up to these Big Telecom companies and make them accountable for their past actions.

Specifically, AB-965 needs amendments (see specific language in **Appendix A**) to:

- acknowledge the legislative purposes of the federal 1996 Telecommunications Act, which Amended the 1934 Communications Act, is "to make available . . . a rapid, efficient, Nation-wide . . . wire and radio . . . service with adequate facilities at reasonable charges . . . for the purpose of promoting safety of life and property;"
- define minimum upload and download speeds for adequate wired broadband service (information service) and the acceptable range of RF signal strength (measured as RSSI in dBm) in outdoor areas for wireless telecommunication service, consistent with *Title 47 U.S. Code §324, Use of Minimum Power*;
- preserve expressly for localities their federally-established authority to determine their preference for how best to deliver broadband to their residents; and
- Make AB-965 consistent with Gov. Newsom's 2021 Broadband Budget Bill, SB-156 (Chapter 112. Statutes of 2020) to encourage competition in wired broadband service.

By vetoing Big Telecom wireless deployment bills SB-649 in 2017 and SB-556 in 2021, California Governors have been very clear in supporting local control over the placement, construction, and operations of Wireless Telecommunications Facilities (WTFs) of any size or any "G." Localities are to maintain control over placement, construction, and operations of industrial equipment that support wireless telecommunications service (the ability to make outdoor wireless phone calls) and wired information service (internet, video/audio streaming and gaming) in order to deliver actual public safety to the locality's residents.

The key problem is with wireless broadband. Wireless broadband is an unnecessary, hazardous, energy-inefficient, fire prone, slower and less secure means of delivering broadband compared to Fiber Optics to the premises (FTTP). Gov Newsom wrote in his SB-556 veto letter in October 2021 (See Newsom's full letter here).

> *"There is a role for local government in advancing broadband efforts. Part of our achievements laid out in the Broadband budget bill SB 156 (Chapter 112. Statutes of 2020) enables and encourages local governments to take an active role in the last mile deployment and, in doing so, drive competition and increase access."*

In short, the decision to choose wired broadband via FTTP or coaxial cables or to choose wireless broadband via densified deployment of many WTFs in residential neighborhoods **is a local one and NOT a statewide matter**. Such a decision is fundamental to local zoning discretion and local residential values, so please amend AB-965, accordingly.

Appendix K: Helpful Telecommunications Background

The federal definitions of telecommunications service (phone calls) and information service (broadband/streaming) are foundational to all state laws:

Title 47 § 332 (C) Definitions.

> *(i) the term '**personal wireless services**' means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services;*
>
> *(ii) the term '**personal wireless service facilities**' means facilities for the provision of personal wireless services; and*
>
> *(iii) the term '**unlicensed wireless** service' means the offering of telecommunications services using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services (as defined in section 303(v)).*

Title 47 U.S. Code §153 Definitions.

> *(50) The term '**telecommunications**' means the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received.*
>
> *(53) The term '**telecommunications service**' means the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used."*
>
> *(24) The term '**information service**' means the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service.*

Legacy Copper & Fiber-Optic Lines are Regulated Public Assets

In the 20th century, AT&T and its subsidiaries held a landline telephone monopoly, authorized in 1913 by government authorities. This monopoly, known as the Bell System, operated a network of switched legacy copper phone lines and sold separate local-call and long-distance plans.

After a ten-year anti-trust lawsuit (United States v. AT&T), U.S. regulators broke up the AT&T monopoly. On Jan 1, 1984, US regulators forced AT&T to divest its local subsidiaries into separate Regional Bell Operating Companies (RBOCs). These RBOCS did not remain separate for long. From 1984 to 2000, rapid mergers reduced competition in the telecommunications industry:

1. Southwestern Bell Corp. (SBC) renamed itself to **AT&T** and merged with four other RBOCS
    - Ameritech
    - BellSouth
    - Pacific Telesis
    - Southern New England Telephone (SNET)

2. Bell Atlantic merged with GTE (non-RBOC), renamed itself to **Verizon** and merged with NYNEX
3. US West merged with Quest (non-RBOC) and renamed itself to **CenturyLink**
4. **Cincinnati Bell** is the only RBOC that remained independent; the co. changed its name to **altafiber, Inc.** about a year ago: web page | press release | news article. The name change came less than six months after Cincinnati Bell was acquired by Macquarie Infrastructure Holdings, which took the company private in a cash-and-debt deal valued at more than $2.9 billion

In 2023, the four main companies, listed above, are each holding companies and each has hundreds of separate susbsidiaries, including

- **Regulated subsidiaries:** State Public Telecommunications Utilities (SPTUs), which are subject to federal Title II regulation and State PUC regulation. The SPTUs operate and maintain the wireline switched legacy copper phone lines ***and all fiber-optic lines*** to benefit the public.
- **Unregulated subsidiaries:** many different lines of business, including wireless telecommunications companies that **depend on the SPTU-maintained fiber-optic lines**

It is extremely important to realize that the switched legacy copper phone lines **and** the fiber-optic lines were built and are maintained with ratepayer funds. This makes these lines **regulated public assets**. The SPTUs are required to provide connections to the legacy copper phone lines **and** the fiber-optic lines at reasonable, regulated rates to all competitors.

That means the switched legacy copper phone lines **and** the fiber-optic lines are **NOT** private assets of the holding companies and **NOT** private assets of the unregulated subsidiaries. If legacy copper phone lines or the fiber-optic lines are in the public rights-of-way, **they are regulated public assets**.

Conclusion: The CA state legislature can direct the CPUC to set and enforce full access for all competitors to the switched legacy copper phone lines **and** the fiber-optic lines that were installed with ratepayer funds. The CPUC can also set reasonable, regulated rates for this access. **Not doing so in AB-965 right now would be a huge and costly strategic error.**

Appendix L: California Wireline Broadband Usage & FCC Wireless Spectrum Licenses

Sources: Jan 15, 2023 data scraped from FCC's wireless license database; area/population numbers from Wikipedia; compiled/mapped by https://specmap.sequence-omega.net/ and tabled below by https://wirecalifornia.org/

Conclusion

California doesn't need any more telecom-focused state bills, such as AB-965 or AB-1065. To close the Wireless digital divide, the CA Attorney General just needs to enforce the laws on the books for all currently unserved areas in California because FCC license terms require that providers serve the areas covered by the licenses. The FCC licenses currently in place require wireless carriers to ensure that all major roadways in these areas have wireless telecommunications service. **In short, no more expensive, taxpayer-funded carrots are needed — just one effective stick**.

Current FCC data proves that AT&T, Dish, T-Mobile and Verizon all have **sufficient FCC wireless licenses in every California county** to provide wireless signal strength — as measured by Received Signal Strength Indicator (RSSI) levels between -125 and -85 dBm — for wireless telecommunications service (the ability to make outdoor wireless phone calls, along major roadways). If there any areas with a significant gap in wireless telecommunications service in 2023, California's Attorney General can enforce the terms of the FCC license to compel wireless carriers to install sufficient infrastructure in order to close that significant gap in wireless telecommunications service.

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Source: Microsoft October 2022 Broadband Usage Data

The Microsoft Broadband datasets consist of data derived from anonymized data that Microsoft collects as part of its ongoing work to improve the performance and security of Microsoft's software and services. The data does not include any personal identifying information including IP Address. Other than the aggregated data shared in this data table, no other data is stored during this process. Microsoft estimated broadband usage by combining data from multiple Microsoft services. The data from these services are combined with the number of households per county and zip code.

Every time a device receives an update or connects to a Microsoft service, Microsoft can estimate the throughput speed of a machine. **Microsoft knows the size of the package sent to the computer, and knows the total time of the download**. Microsoft also determines zip code level location data via reverse IP.

Therefore, Microsoft can count the number of devices that have connected to the internet at broadband speed per each zip code based on the FCC's definition of broadband that is 25mbps per download. Using this method, **Microsoft estimates that 120.4 million people in the United States are not using the internet at broadband speeds.**

Getting Broadband numbers right is vitally important. Such data is used by federal, state, and local agencies to decide where to target public funds dedicated to closing this broadband gap. Because the ISP-self-reported data on FCC Form 477 is so gamed and unreliable, **millions of Americans already lacking access to broadband have been made invisible, substantially decreasing the likelihood of additional broadband funding or much needed broadband service**. Microsoft is publishing Broadband Usage data to allow others to use it to develop solutions to improve broadband access or address problems with broadband access.

- **FCC Broadband Availability** = % of people per county with access to fixed terrestrial broadband at speeds of **25 Mbps down/3 Mbps up** as of the **end of 2019** per FCC data.
- **Microsoft Actual Broadband Usage** = % of people per county that use the internet at broadband speeds based on the methodology explained above. Data is from **October 2020**.
- The initial dataset released from April 2020 provided broadband usage percentages at a US county-level.
- In December 2020, Microsoft added a zip code-level view of the same information
- The Broadband Usage Percentages Dataset (percentages by households) is derived from aggregated and anonymized data that Microsoft collects as part of its ongoing work to improve software and service performance and security.

- To read more about how differential privacy has been applied to this data, read the Broadband usage differential privacy paper

County ID	County Name	Population (2022)	Area (sq. miles)	FCC Broadband Availability	Microsoft Actual Broadband Usage	FCC Overstates Broadband By	FCC Wireless Licenses
6001	Alameda County	1,628,997	738	99.9%	73.1%	27%	AT&T, Dish, T-Mobile, Verizon & more
6003	Alpine County	1,190	739	18.3%	7.7%	58%	AT&T, Dish, T-Mobile, Verizon & more
6005	Amador County	41,412	606	97.6%	35.2%	64%	AT&T, Dish, T-Mobile, Verizon & more
6007	Butte County	207,303	1,640	98.7%	63.6%	36%	AT&T, Dish, T-Mobile, Verizon & more
6009	Calaveras County	46,563	1,020	96.3%	44.2%	54%	AT&T, Dish, T-Mobile, Verizon & more
6011	Colusa County	21,914	1,151	83.6%	11.9%	86%	AT&T, Dish, T-Mobile, Verizon & more
6013	Contra Costa County	1,156,966	720	99.2%	77.3%	22%	AT&T, Dish, T-Mobile, Verizon & more
6015	Del Norte County	27,082	1,008	93.6%	79.9%	15%	AT&T, Dish, T-Mobile, Verizon & more
6017	El Dorado County	192,646	1,712	98.3%	54.9%	44%	AT&T, Dish, T-Mobile, Verizon & more
6019	Fresno County	1,015,190	5,963	99.6%	52.2%	48%	AT&T, Dish, T-Mobile, Verizon & more
6021	Glenn County	28,339	1,315	96.8%	16.5%	83%	AT&T, Dish, T-Mobile, Verizon & more
6023	Humboldt County	135,010	3,573	94.7%	56.3%	41%	AT&T, Dish, T-Mobile, Verizon & more
6025	Imperial County	178,713	4,175	85.7%	64.4%	25%	AT&T, Dish, T-Mobile, Verizon & more
6027	Inyo County	18,718	10,192	89.8%	43.5%	52%	AT&T, Dish, T-Mobile, Verizon & more

County ID	County Name	Population (2022)	Area (sq. miles)	FCC Broadband Availability	Microsoft Actual Broadband Usage	FCC Overstates Broadband By	FCC Wireless Licenses
6029	Kern County	916,108	8,142	96.2%	53.7%	44%	AT&T, Dish, T-Mobile, Verizon & more
6031	Kings County	152,981	1,390	99.9%	45.5%	54%	AT&T, Dish, T-Mobile, Verizon & more
6033	Lake County	68,191	1,258	93.4%	35.1%	62%	AT&T, Dish, T-Mobile, Verizon & more
6035	Lassen County	29,904	4,558	91.4%	20.7%	77%	AT&T, Dish, T-Mobile, Verizon & more
6037	Los Angeles County	9,721,138	4,060	99.6%	73.4%	26%	AT&T, Dish, T-Mobile, Verizon & more
6039	Madera County	160,256	2,138	99.7%	36.0%	64%	AT&T, Dish, T-Mobile, Verizon & more
6041	Marin County	256,018	520	98.3%	61.9%	37%	AT&T, Dish, T-Mobile, Verizon & more
6043	Mariposa County	17,020	1,451	82.7%	10.2%	88%	AT&T, Dish, T-Mobile, Verizon & more
6045	Mendocino County	89,783	3,509	89.6%	39.4%	56%	AT&T, Dish, T-Mobile, Verizon & more
6047	Merced County	290,014	3,044	100.0%	47.4%	53%	AT&T, Dish, T-Mobile, Verizon & more
6049	Modoc County	8,511	3,944	45.3%	8.9%	80%	AT&T, Dish, T-Mobile, Verizon & more
6051	Mono County	12,978	3,132	83.8%	65.8%	22%	AT&T, Dish, T-Mobile, Verizon & more
6053	Monterey County	432,858	3,322	98.9%	57.5%	42%	AT&T, Dish, T-Mobile, Verizon & more
6055	Napa County	134,300	754	98.9%	63.7%	36%	AT&T, Dish, T-Mobile, Verizon & more
6057	Nevada County	102,293	958	96.7%	41.9%	57%	AT&T, Dish, T-Mobile, Verizon & more

County ID	County Name	Population (2022)	Area (sq. miles)	FCC Broadband Availability	Microsoft Actual Broadband Usage	FCC Overstates Broadband By	FCC Wireless Licenses
6059	Orange County	3,151,184	948	98.6%	85.4%	13%	AT&T, Dish, T-Mobile, Verizon & more
6061	Placer County	417,772	1,407	98.6%	71.8%	27%	AT&T, Dish, T-Mobile, Verizon & more
6063	Plumas County	19,351	2,554	96.2%	17.9%	81%	AT&T, Dish, T-Mobile, Verizon & more
6065	Riverside County	2,473,902	7,208	97.5%	79.3%	19%	AT&T, Dish, T-Mobile, Verizon & more
6067	Sacramento County	1,584,169	966	98.2%	77.7%	21%	AT&T, Dish, T-Mobile, Verizon & more
6069	San Benito County	67,579	1,389	98.8%	64.3%	35%	AT&T, Dish, T-Mobile, Verizon & more
6071	San Bernardino County	2,193,656	20,062	96.9%	77.1%	20%	AT&T, Dish, T-Mobile, Verizon & more
6073	San Diego County	3,276,208	4,204	98.1%	76.1%	22%	AT&T, Dish, T-Mobile, Verizon & more
6075	San Francisco County	808,437	47	100.0%	58.0%	42%	AT&T, Dish, T-Mobile, Verizon & more
6077	San Joaquin County	793,229	1,399	99.9%	64.8%	35%	AT&T, Dish, T-Mobile, Verizon & more
6079	San Luis Obispo County	282,013	3,304	95.2%	65.8%	31%	AT&T, Dish, T-Mobile, Verizon & more
6081	San Mateo County	729,181	449	100.0%	77.2%	23%	AT&T, Dish, T-Mobile, Verizon & more
6083	Santa Barbara County	443,837	2,738	94.2%	64.7%	31%	AT&T, Dish, T-Mobile, Verizon & more
6085	Santa Clara County	1,870,945	1,291	100.0%	84.9%	15%	AT&T, Dish, T-Mobile, Verizon & more
6087	Santa Cruz County	264,370	446	100.0%	61.5%	39%	AT&T, Dish, T-Mobile, Verizon & more

County ID	County Name	Population (2022)	Area (sq. miles)	FCC Broadband Availability	Microsoft Actual Broadband Usage	FCC Overstates Broadband By	FCC Wireless Licenses
6089	Shasta County	180,930	3,786	93.6%	60.2%	36%	AT&T, Dish, T-Mobile, Verizon & more
6091	Sierra County	3,217	953	66.0%	7.7%	88%	AT&T, Dish, T-Mobile, Verizon & more
6093	Siskiyou County	43,660	6,287	86.1%	22.2%	74%	AT&T, Dish, T-Mobile, Verizon & more
6095	Solano County	448,747	828	94.9%	77.1%	19%	AT&T, Dish, T-Mobile, Verizon & more
6097	Sonoma County	482,650	1,576	96.8%	68.7%	29%	AT&T, Dish, T-Mobile, Verizon & more
6099	Stanislaus County	551,275	1,495	100.0%	58.0%	42%	AT&T, Dish, T-Mobile, Verizon & more
6101	Sutter County	98,503	603	99.3%	75.5%	24%	AT&T, Dish, T-Mobile, Verizon & more
6103	Tehama County	65,245	2,951	98.0%	19.2%	80%	AT&T, Dish, T-Mobile, Verizon & more
6105	Trinity County	15,781	3,179	24.8%	16.8%	32%	AT&T, Dish, T-Mobile, Verizon & more
6107	Tulare County	477,544	4,824	99.5%	46.2%	54%	AT&T, Dish, T-Mobile, Verizon & more
6109	Tuolumne County	54,531	2,236	99.4%	44.3%	55%	AT&T, Dish, T-Mobile, Verizon & more
6111	Ventura County	832,605	1,846	98.6%	82.7%	16%	AT&T, Dish, T-Mobile, Verizon & more
6113	Yolo County	222,115	1,012	94.1%	66.5%	29%	AT&T, Dish, T-Mobile, Verizon & more
6115	Yuba County	84,310	630	99.5%	55.1%	45%	AT&T, Dish, T-Mobile, Verizon & more