MITCHELL LAW, PLLC

2917 39TH STREET NORTHWEST
WASHINGTON, D.C. 20016

OFFICE: (202) 570-6986

JEFFERY A. MITCHELL
JEFF@MITCHLAWDC.COM

March 4, 2022

VIA ELECTRONIC MAIL

To: Jen Leasure, The Quilt

From: Jeff Mitchell

Re: **Monthly Broadband Policy Update (early March 2022)**

Capitol Hill

On March 3, 2022, President Biden's nomination of net neutrality advocate Gigi Sohn as Federal Communications Commissioner passed out of committee on a 14-14 tie vote – with Kristen Sinema (D-AZ) voting to confirm. The full senate will now have to vote to confirm her. However, with the Senate tied at 50-50, confirmation is still uncertain.

Before delving into individual programs below, US Ignite provides an excellent overview of the different programs Congress has enacted over the last two years and how they touch broadband and digital equity.

National Telecommunications and Information Administration (NTIA)

In preparation for NTIA issuing rules implementing the new Infrastructure Investment and Jobs Act (IIJA) broadband programs, NTIA in January 2021 requested public comments. In response, 560 comments were ultimately filed: you can search for specific comments at the Regulations.gov link above. The Quilt and Internet2 jointly filed comments as did the California Emerging Technology Fund. Also see this curated list of comments from Washington Watch (from the National Exchange Carriers Association) available here. Blair Levin's advice to NTIA is here.

NTIA recently signaled that the Notice of Funding Opportunity (NOFA) for the IIJA programs may be delayed until June 2022 (by statute they are due in May). As states prepare to receive their last-mile BEAD allocations, it is important to know whether your state has an established office, group, or agency that will be responsible for sub-granting these funds. Pew is maintaining a list that identifies the broadband office or other group responsible for broadband grants in each state (last updated November 2021). NTIA also provides a list of state-specific broadband resources. Doug Dawson at POTs & PANs blog discusses how states may handle potential conflicts between federal and state grant rules.

While we await the new NTIA broadband programs, we continue to follow these existing programs:

- Broadband Infrastructure Program (BIP) ($288 million): NTIA announced that it received more than 230 applications representing over $2.5 billion in funding requests across 49 states and U.S. territories. Proposed service areas for BIP projects were most recently posted In December 2021. There is a high rate of incumbent service area challenges in BIP in some areas. See also this article looking at this issue from the perspective of a small island community in Maine. On February 25, 2022, NTIA announced $277 million in awards (leaving $11 million still unawarded).

- Tribal Broadband Connectivity Grants Program ($980 million initially; $2 billion additional under IIJA): In September 2021, NTIA announced it received more than 280 Applications representing over $5 Billion in funding requests. The NTIA website features an interactive map showing where each of the awarded projects is located. $4.8 million has been awarded so far (latest press release).

- Connecting Minority Communities Pilot Program ($285 million): In December 2021, NTIA announced it had received over 200 applications requested $833 million in funding.

Treasury Department – American Rescue Plan Act (ARPA) Broadband Funding

Pew Charitable Trusts writes about how different states are using ARPA broadband funding here; the Institute for Self-Reliance is maintaining a continuously updated list.

Application guidance for the $10 billion Capital Projects Fund (CPF), which provides non-competitive grants to states, territories, and Tribal Governments for "critical" broadband connectivity infrastructure projects is available here. Among other things, the program is not necessarily limited to unserved areas and requires installed infrastructure to be upgradable to 100 Mbps symmetrical, effectively favoring fiber deployments (see Section 5 of the program FAQ linked below). State-specific funding allocations are available here. There was a September 2021 webinar for states (slides here; webinar recording); a Tribal Governments webinar was held in October 2021. The CPF program FAQ was last updated in January 2022.

Treasury is also administering the Coronavirus State and Local Fiscal Recovery Funds (CSLFR), a $350 billion program to aid states ($195.3 billion) and localities ($154.7 billion) recovering fiscally from COVID-19. CSLFR funds can be used to invest in broadband infrastructure. The CSLFR Final Rule was issued in late December 2021 and will be effective April 1, 2022 (Final Rule Quick Reference Guide). The CSLFR program FAQ was last updated in January 2022; compliance and reporting guidance was updated February 28, 2022.

USDA – Rural Utilities Service

USDA in October 2021 announced a third round of the Reconnect Program which will award $1.15 billion in new funding.[1] Similar to prior rounds, there will be a mix of loans and grants, with $200 million in 100% loans, $250 million in projects combining loans and grants, and $350 million in grants only. The maximum grant size is $25 million, and all grants require 25% in match funding. There is also a new 100% grant category which will provide $350 million for tribal governments and "socially vulnerable communities" with no match requirement and a $35 million maximum award amount. Reconnect application workshop and webinars materials are available here. On February 17, 2022, USDA extended the ReConnect application deadline until March 9, 2022.

Precision Agriculture

The FCC on February 17, 2022, announced new members for the four Precision Agriculture Connectivity Task Force working groups. The Task Force approved its most recent report in November 2021. The Benton Institute has background and a summary of the recommendations from that report here. Background and links to prior Precision Agriculture Task For meetings are available here; the next meeting is scheduled for March 21, 2022.

John Deere in December 2021 provided a presentation on precision agriculture to FCC Commissioner Simington. The Benton Institute in September 2021 released its report on precision agriculture: The Future of American Farming: Broadband Solutions for the Farm Office, Field, and Community. Purdue University is collaborating with the National Science Foundation-funded Engineering Research Center to develop the Internet of Things for precision agriculture. Note also this recent article on connected cows.

Federal Communications Commission

The Commission's next open meeting will be March 16, 2022. The agenda includes a Second Further Notice of Proposed Rulemaking (FNPRM) addressing Pole Attachment disputes (pre-meeting draft), as well as an announcement on the final round of Connect Care Pilot Program awards. The February 18, 2022, meeting adopted an FNPRM in the Rural Health Care program (addressed further below). Full details on the February meeting are here.

[1] Previously proposed Reconnect projects can be viewed here (create free log-in to access); 2019 awardees are identified here; 2020 awardees are here; proposed and funded projects are depicted on an interactive map here.

E-rate

The E-rate competitive bidding NPRM was published in the Federal Register on January 27, 2022, thereby setting the following comment schedule: *Initial comments due on or before Monday, March 28, 2022; replies due on or before Wednesday, April 27, 2022*. The NPRM seeks comment on, among other things:

- Establishing a bidding portal for competitive bidding documentation and require service providers to submit bids to USAC through the portal rather than directly to applicants.
- Requiring applicants to provide other competitive bidding documentation that is not captured in the bidding portal (*e.g.*, bid evaluation matrices, questions from bidders, etc.), as well as contract documents, at the time they submit their FCC Form 471 funding applications to USAC.

These changes are in response to a September 2020 Government Accountability Office (GAO) report regarding fraud risk in the E-rate program. SHLB and other groups are expected to oppose centralization of the program's bidding processes.

Emergency Connectivity Fund (for E-rate)

Application windows for the $7 billion Emergency Connectivity Fund (ECF) closed with over $5.1 billion in initial funding requests. Since then, the FCC has committed over $4.62 billion in ECF funding (as of February 23, 2022). The FCC FAQ for the program is here. A map of amounts requested by state is available here; a current list of commitments is available here: https://www.fcc.gov/ecf-current-funding-commitments.

The FCC on February 22, 2022, mostly granted a petition filed by the Schools, Health & Libraries Broadband (SHLB) Coalition, American Library Association and others requesting the FCC extend the June 30, 2022, ECF service delivery deadline to June 30, 2023 (among other requests).

Rural Health Care

As noted above, the FCC voted to approve an FNPRM in the Rural Health Care program seeking comment on a variety of important issues in both the Telecom Program and the Healthcare Connect Fund (HCF). The final FNPRM was released February 22, 2022, incorporating language requested by SHLB and other parties which expanded the scope slightly from the pre-meeting draft. Among other things, the final FNPRM asked additional questions about the overall RHC program funding cap, the HCF sub-cap, as well as how rural rates should be established in the Telecom Program. The FCC, in any final rulemaking, cannot take actions that were not

contemplated in the request for public comment, so these language additions were very important. Comment deadlines will be announced once the FNPRM is published in the Federal Register.

Meanwhile, New England Telehealth Consortium and Connections Telehealth Consortium have requested the FCC extend the 2022 RHC filing window from April 1 to June 1, 2022, due principally to the continuing impacts of COVID-19. SHLB supported the request and the FCC granted it on March 3, 2022.

Connected Care Pilot Program

The Commission in June 2021 released additional rules and guidance for the Connected Care Pilot Program. In July 2021 the Commission announced program deadlines, including a January 17, 2022, deadline to post an initial request for services (Form 461). The Form 462 deadline was recently extended to April 27, 2022. About $69 million of the $100 million in funding has been awarded so far (new projects were most recently announced in October 2021) – with the remaining awardees to be announced at the March 16, 2022 open meeting. The full list of approved projects is here. The FCC's Connected Care Pilot webpage has more background.

COVID-19 Telehealth Program

Congress in December 2020 authorized $249.95 million for Round 2 of COVID-19 Telehealth Program awards. Round 2 program rules were released in March 2021. On December 21 and December 26, 2021, respectively, the FCC released the fifth and sixth groups of Round 2 COVID-19 Telehealth applicants. The sixth group is the final group, bringing total funding commitments to $256,378,567 (slightly more than the $250 million available due to unused funding from Round 1 being de-obligated and re-committed, and one Round 2 applicant that relinquished its funding). USAC has additional COVID-19 Telehealth program information here.

Emergency Broadband Benefit Program/Affordable Connectivity Program

The FCC on January 21, 2022, released implementing rules for the new Affordable Connectivity Program (ACP) which Congress authorized through the recently enacted bi-partisan infrastructure bill. General information on ACP is available here. ACP replaces the $3.2 billion Emergency Broadband Benefit (EBB) which effectively ended on December 31, 2021. Education

Superhighway has a handy table comparing the two programs. Benton Institute published a report on the future of the Lifeline Program on February 22, 2022.

Mapping

On February 24, 2022, GAO denied the bid protest filed by LightBox against the FCC's selection of a third-party mapping vendor. The FCC announced on February 22, 2022, that carrier broadband availability data (as June 30, 2022), which will build the next generation of official broadband maps, is due September 1, 2022. The FCC broadband maps are a necessary component of NTIA's BEAD per-state funding calculations.

NTIA has an interactive national broadband mapping tool intended to identify "Indicators of Broadband Need" in specific regions or localities. This tool is separate from NTIA's National Broadband Availability Map (NBAM) (scroll down). NTIA announced in December 2021 that NBAM (which is not public) now includes 40 states.[2] For more information about NBAM, email nbam@ntia.gov.

LightBox provides a "geospatial mapping service" using "two billion Wi-Fi access points with billions of real-time cell phone GPS observations" (company announcement from December 2021). More states are reportedly interested in doing their own mapping and have approached LightBox. LightBox has previously helped Georgia and Alabama, and is now helping Montana.

Universal Service/Digital Divide

Doug Dawson from POTs and PANs blog offers a concise history of how our current urban-rural digital divide developed. The Center for Rural Affairs has released a white paper offering ideas and solutions for improving broadband access in rural areas. The University of Missouri has released a study (Broadband Adoption and Availability: Impacts on Rural Employment During COVID-19) measuring the correlation between employment and rural broadband availability and adoption. The Electronic Frontier Foundation in October 2021, released a report showing that open access networks are the most efficient way to solve the digital divide: Wholesale Fiber is the Key to Broad US Fiber to the Premises Coverage.

[2] "The NBAM is a geographic information system platform which allows for the visualization and analysis of federal, state, and commercially available data sets. This includes data from the Federal Communications Commission, U.S. Census Bureau, Universal Service Administrative Company, USDA, Ookla, Measurement Lab, BroadbandNow, White Star, and the state governments. The mapping platform provides users, including administrators from the 40 participating states and territories, with access to the NBAM and its data to better inform broadband projects and funding decisions in their states."

SHLB in September 2021 released its report on the future of the Universal Service Fund (USF). The report pegs the major decline in the revenue base in recent years to the shift away from voice to data within the mobile service revenue category. In February 2022, SHLB formally filed the report with the FCC, along with a "Call to Action" letter urging the FCC to reform the USF contribution base.

In the meantime, Congress as part of the recent infrastructure law mandated the FCC perform a "Report on the Future of the Universal Service Fund" which caused the FCC to approve a Notice of Inquiry (NOI) in December 2021 seeking comment on such a report. (An NOI is a prelude to an NPRM.) Initial comments were due February 17, 2022; replies are due March 17. Benton Institute has more on this item. Telecompetitor highlights some of the different positions on USF taken by initial commenters. While many wish to a see a larger USF, Daniel Lyons from Boston College Law, writing at the American Enterprise Institute, previews arguments for a smaller, more targeted USF based on appropriations rather than contributions. Benton Institute's comments are here.

Spectrum

In this section of the monthly broadband policy update, we are maintaining short summaries of selected FCC spectrum proceedings that are active and which are expected to impact the public availability of broadband. Because each of these items are often quite complex, we are focused on broad summaries and major developments only.[3]

We did not track the recently concluded 900 MHz reform proceeding as it was focused primarily on private LTE networks for public utilities. However, here is an article about the Connected Infrastructure for Education, Demonstration and Applied Research (CIEDAR) consortium and Texas State University, which are testing next generation Private LTE/5G applications for smart cities and utilities.

[3] Here is a short but helpful backgrounder on the relative importance of the different bands in the 5G era (courtesy Jeremy Horowitz at venturebeat.com):

> The . . . low band tier covers a lot of space, slowly, while the . . . mid band covers less space at faster speeds, and the . . . high band covers the least space at super-fast speeds. . . . One low band (600-700MHz) tower can cover hundreds of square miles with 5G service that ranges in speed from 30 to 250 megabits per second (Mbps). A mid band (2.5/3.5GHz) tower covers a several-mile radius with 5G that currently ranges from 100 to 900Mbps. Lastly, a high band (millimeter wave/24-39GHz) tower covers a one-mile or lower radius while delivering roughly 1-3Gbps speeds. Each of these tiers will improve in performance over time.

2.5 GHz (formerly EBS)

The FCC in 2019 decided to auction remaining unlicensed Educational Broadband Spectrum (EBS) (2.5 GHz band) to commercial users. This spectrum is suitable for mobile and fixed point-to-point wireless services and will support 5G deployments. Tribal entities in rural areas were given a limited pre-auction opportunity to license available 2.5 GHz spectrum in their areas through a Rural Tribal Window which closed in September 2020. Tribal license grants so far are listed here (click the "Releases" tab) – the most recent license grants occurred in October 2021. FCC Chairwoman Rosenworcel announced March 1, 2022, that the anticipated 2.5 GHz auction would take place in July 2022. The Commission in January 2021 released a Public Notice seeking comment on proposed auction procedures. It is believed current EBS license holders will continue to be able to use or lease out their existing licenses however, here is a good look at the difficulties ahead for 2.5 GHz and the future of current licensees.

3.45-3.55 GHz

The DOD in August 2020 agreed to vacate a 100 MHz band from 3.45 to 3.55 GHz to allow for 5G use, clearing the way for an auction of this valuable spectrum for 5G deployment. The auction finally closed in January 2022, netting $22.5 billion and making it the third largest spectrum auction in FCC history. AT&T and Dish were the top winners; Sasha Javid has a good overview and analysis.

Citizens Broadband Radio Service (CBRS) (3.55-3.65 GHz)

The FCC's CBRS auction of Priority Access Licenses (PALs) closed in 2020 netting over $4.5 billion, with all three major wireless carriers bidding. General Authorized Access (GAA) allow unlicensed access to available channels managed by a frequency coordinator called a Spectrum Access System (SAS). Information about SAS functionality – which is critical to all future spectrum sharing applications – is available here and here. A good general non-legal web resource for CBRS is available here. Here is a recent article about K-12 schools in Fort Worth, TX using CBRS to bridge the homework gap.

C-Band (3.7-4.2 GHz)

The C-Band auction commenced December 2020 and wrapped up January 2021. Up for grabs was 280 megahertz of spectrum in the 3.7–3.98 GHz well-suited for 5G. All 5,685 available spectrum blocks were auctioned with gross proceeds exceeding $80.9 billion – far more than the $60 billion estimated. Complete auction results are available here and here. We have not been

closely tracking the C-Band Federal Aviation Administration (FAA) fiasco, but here is a recent analysis of the topic.

4.9 GHz Band

Since the September 2020 4.9 GHz reform order was passed on a party-line vote, taking a state-by-state approach to repurposing 50 MHz of the 4.9 GHz spectrum, public safety interests were opposed. They ultimately circulated a petition to have the spectrum allocated instead to FirstNet. The Commission in September 2021 voted to vacate the 2020 decision, instead launching a new rulemaking that will explore options for a unified national approach.

5.9 GHz Band

The Commission in late 2020 approved rules to reorganize spectrum previously reserved for the transportation sector ("Dedicated Short-Range Communications" or DSRC) making 30 MHz available in the upper band to support development of next generation "Cellular Vehicle to Everything" (C-V2X) technology, while freeing up the lower 45 MHz of the 5850-5925 MHz band. The reorganization increased spectrum available for unlicensed Wi-Fi utilization – strongly supported by Qualcomm and silicon valley interests – but was opposed on safety grounds by transportation interests including state departments of transportation for all 50 states. In June 2021, transportation and other interests filed suit in the D.C. Circuit Court of Appeals (DC Circuit). More background here; recent developments in the proceeding are discussed here; in October 2021, Public Knowledge filed an *amici curiae* brief in support of the FCC. Oral arguments took place in January 2022.

6 GHz Band

In 2020 the FCC authorized 1200 MHz of spectrum to be available for two kinds of unlicensed use of the 6 GHz band: unrestricted low-power indoor usage (so-called "Wi-Fi 6") and standard power usage anywhere subject to an automatic frequency coordination (AFC) system. Some claimed this was the most important decision the FCC has made on unlicensed spectrum use in 25 years. Parties opposing the order included AT&T and incumbent utilities who warned of interference to microwave backhaul links needed for 5G – which led to a legal challenge at the D.C. Circuit. The D.C. Circuit on December 28, 2021, decided mostly in the FCC's favor. Meanwhile, on December 7, 2021, a large group of utilities and other interested parties sought an immediate stay from the FCC of the low-power indoor (LPI) device licensing process, pending a new rulemaking addressing whether LPI devices should be subject to AFC. Yet another dimension is the potential for AT&T and others to provide 5G services using the *unlicensed* spectrum in the band.

12 GHz

The Commission in January 2021 adopted an NPRM to explore whether the FCC should re-auction portions of the 12 GHz spectrum band (12.2-12.7 GHz), currently used exclusively used by satellite providers – including non-geostationary satellite providers such as SpaceX – for use on a shared basis by 5G providers. Comments were filed over the summer, but the docket remains active with SpaceX dueling with a coalition supporting sharing led by the following groups: INCOMPAS, Public Knowledge, DISH, Computer & Communications Industry Association (CCIA), RS Access, and the Open Technology Institute at New America (OTI) (among others). You can view the latest docket filings here.

Non-Geostationary Low-Earth Orbit (LEO) Satellite

MIT Technology Review in September 2021 offered a review of SpaceX's Starlink service and plans. But is Starlink broadband service slowing down as it gains subscribers? Starlink competitor Viasat has sued the FCC in federal court arguing the FCC failed to conduct a sufficient environmental impact review when it granted Starlink's license. Oral arguments were in December 2021 and a decision is pending. Meanwhile, attacks on Starlink continue at the FCC and at the FAA, with even NASA getting involved. Amazon's competing LEO project called Kuiper (named after the Kuiper Belt and pronounced Ky-per) plans over 3200 satellites but has yet to launch its first. The project got a boost in October 2021 when Verizon announced it would partner with Amazon in order to use the Kuiper satellites for cellular-backhaul. Kuiper's first launch is scheduled for Q4 2022. Amazon's FCC license gives it until July 2026 to deploy half of the planned number of Kuiper satellites. Meanwhile, what will all these new LEO satellites mean to Astronomers?

Net Neutrality

On January 28, 2022, a three-judge panel in the U.S. Ninth Circuit Court of Appeals upheld California's state net neutrality law. This obviously a significant development and opens the door to the possibility of other states moving forward with their laws. As expected, however, carriers and other groups have asked the court to reconsider, seeking review of the panel's decision by the full court (*en banc*). (The other pending state case in Vermont was stayed pending the outcome in California.) While we wait on the fate of net neutrality proponent Gigi Sohn's nomination to the FCC, here is some speculation on where net neutrality is headed in 2022.

The National Conference of State Legislators (NCSL) features a summary of net neutrality efforts by state for 2021 here. The NCSL page now also provides a narrative summarizing the status of previously passed net neutrality laws or resolutions.