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4.9 GHz Public Safety Band: Competing Views on Use

During the terrorist attacks on September 11, 2001, public safety agencies could not communicate effectively with one another, partly because high call volumes exceeded the capacity of local public safety radio systems. The 9/11 Commission, which investigated the attacks, called for additional spectrum for public safety use. In 2002, the Federal Communications Commission (FCC), the agency that manages nonfederal spectrum use, allocated the 4.9 gigahertz (GHz) band for state and local public safety use and granted licenses to agencies to use the band.

In 2018, the FCC found that the 4.9 GHz band was underused. In 2020, the FCC adopted rules to expand use in the band, including for non-public safety purposes. Three public safety organizations asked the FCC to stay, reconsider, and vacate the rules; in 2021, the FCC stayed and reconsidered the rules. In 2024, the FCC adopted final rules for the band that would preserve local public safety use and select a Band Manager to (1) enter into an agreement with the First Responder Network Authority (FirstNet Authority) to utilize the unassigned frequencies and (2) coordinate band use. The FirstNet Authority, an independent authority in the National Telecommunications and Information Administration, operates, with AT&T, the FirstNet Network, a nationwide network for public safety users. A coalition of public safety entities supported the rules, stating they could spur innovation in the band. Others opposed the rules, including some incumbent public safety users, who contended that the rules would limit local control of frequencies; critical infrastructure industry (CII) operators seeking access to spectrum; and wireless service providers (e.g., Verizon, T-Mobile) that asserted the rules would yield a windfall to AT&T and stymie competition.

Under P.L. 112-96, the statutory authority for the FirstNet Authority ends on February 22, 2027. As Congress considers potential reauthorization (e.g., H.R. 7386) and future spectrum auctions, it could preserve the band for local public safety use, auction unassigned frequencies in the band, or defer to the FCC on use, among other options.

Background

Typically, the FCC grants licenses to public safety agencies to transmit on certain frequencies from specified locations. Licenses in the 4.9 GHz band give state and local public safety agencies (1) blanket authority to operate base stations and mobile (handheld) units and temporary stations anywhere in their jurisdiction to support ad hoc networks during emergencies and (2) the ability to license fixed stations on specified channels to support broadband uses, such as high-speed data and mobile use, access to public safety databases from vehicle-mounted laptops, video use, and backhaul (i.e., use of wireless links to transport data).

Prior to 2018, the FCC granted licenses to state and local public safety agencies to use the 4.9 GHz band. Secondary users—transit agencies, utilities, CII operators, and federal agencies assisting public safety and homeland security missions—could enter into sharing agreements with licensees to use the spectrum. This approach has allowed some state and local public safety agencies to establish communication systems for emergency response, when and where needed, and to meet unique state and local needs.

In 2018, the FCC reported that of the 90,000 public safety agencies eligible for 4.9 GHz licenses, 3,174 were using them. The FCC also found that band use was fragmented, meaning entities were using the band in different ways, preventing economies of scale, leading to high equipment costs, limited choices of equipment, and limited band use.

2020: 4.9 GHz Band Rules Adopted

On September 8, 2020, the FCC froze any new or modified applications in the 4.9 GHz band. On September 30, 2020, the FCC adopted final rules for the 4.9 GHz band, granting states the right to lease the unassigned spectrum in the band to state and local entities and to non-public safety entities, with protections for incumbent public safety users.

2020: Petitions Filed

In December 2020, three public safety organizations filed petitions with the FCC to stay, reconsider**,** and vacate the rules. The Public Safety Spectrum Alliance (PSSA), a coalition of public safety officials and organizations, opposed state control and commercial leasing and urged the FCC to preserve the band for public safety. The Association of Public-Safety Communications Officials (APCO) argued against state control, where each state could adopt different rules; APCO supported a national-level framework and consistent rules to create economies of scale, spur vendor investment, and yield new technologies in the band. The National Public Safety Telecommunications Council, a federation of 16 public safety groups, argued that state control of the band could affect local, flexible use and cause interference in the band, and the freeze could limit the rights of local licensees to expand systems and coverage, an issue the September 2020 final rules intended to fix.

2021: FCC Reconsiders the Rules

On September 30, 2021, the FCC granted the petitions to stay and reconsider the 2020 rules. It found that the rules were not in the public interest and also partially lifted the freeze on new or modified applications.

2023: New 4.9 GHz Rules

On January 18, 2023, the FCC adopted rules that would allow local public safety agencies to retain control of spectrum, appoint a Band Manager to develop a nationwide plan for the unassigned frequencies, and empower the Band Manager to coordinate public safety and non-public safety band use, with preemptions for public safety. The FCC also sought input on Band Manager roles and responsibilities.

2023-2024 Comments on FCC Rules

The FCC received an array of comments on the January 18, 2023, proceeding. Selected positions are discussed below.

Support for FirstNet as a Nationwide Licensee

PSSA urged the FCC to create a single licensee to manage the 4.9 GHz band, create consistent nationwide rules for the band, coordinate use, and lease spectrum to secondary users. PSSA suggested that the FCC adopt an approach similar to that used for FirstNet. The FirstNet Authority is the licensee for a segment of the 700 MHz band that it can use on a nationwide basis to operate the FirstNet Network. Supporters say this approach spurred development of an ecosystem of equipment that could operate in the 700 MHz band, be used nationwide, and support advanced, interoperable communications. The FirstNet Authority said it could develop new technologies and services for public safety use in the 4.9 GHz band, as it did in the 700 MHz band, and protect local public safety use. PSSA and others urged the FCC to grant the FirstNet Authority a license for the 4.9 GHz band or appoint a Band Manager that could lease spectrum to the FirstNet Authority.

Opposition to FirstNet as a Nationwide Licensee

The Coalition for Emergency Response and Critical Infrastructure (CERCI), representing several public safety associations; industry and utilities groups; and wireless service providers, including Verizon (a competing public safety service provider); opposed PSSA's proposal. CERCI argued for local control on band use and leasing decisions and opposed proposals to grant a nationwide license to the FirstNet Authority. The American Association of State Highway and Transportation Officials and the 4.9 GHz Coalition, which includes the American Petroleum Institute, the Utilities Technology Council, and the National Sheriffs' Association (NSA), joined CERCI in opposing licensing or leasing of the band to the FirstNet Authority; it advocated for CII use. Verizon argued that granting 50 megahertz of spectrum with an estimated value of $14 billion would yield a windfall for AT&T and disrupt the public safety market; it called for an auction of the band. CERCI argued that P.L. 112-96 gave the FCC authority to grant the FirstNet Authority a license to use a segment of 700 MHz band and that the FCC does not have authority to grant the FirstNet Authority a license for the 4.9 GHz band.

Some state and local public safety agencies (e.g., Michigan, Florida, Boston, Illinois) opposed the PSSA plan, raising concerns over loss of local control during emergencies and ability to expand services in their areas. One state agency noted that coverage varies across areas, and agencies may use networks other than the FirstNet Network, raising questions as to whether granting spectrum to AT&T would benefit all or affect competition. NSA expressed concern about loss of local control and "a nationalized process controlled by a central authority that can only provide a limited set of basic, [vendor-specific] products to choose from." CERCI voiced concerns about consolidating services under one network.

Some CII operators asked the FCC to limit secondary use to CII use, prioritize CII use over non-public safety use, and permit new technologies (e.g., unmanned aerial vehicles, or UAS) in the band. Some also questioned whether the FirstNet Authority needs more spectrum.

2024: Final Rules and Response

On October 18, 2024, the FCC adopted rules specifying the Band Manager's role. The rules authorize the Band Manager to apply for a nationwide license for the unassigned 4.9 GHz spectrum, enter into a sharing agreement with the FirstNet Authority so it can use the 4.9 GHz band for the FirstNet Network and develop new technologies for use in the band, and coordinate incumbent and new uses. The FCC required public safety licensees to provide data on their current sites and operations by June 9, 2025, or risk license cancellation. The data are to aid the Band Manager in identifying available spectrum, coordinating spectrum use, promoting new uses in the band, and protecting incumbent users from interference.

Some licensees assert that the rules turn their wide-area licenses into site-specific licenses, limiting flexible and future use. PSSA also raised issues with license changes and petitioned the D.C. Circuit to remand the rules to the FCC. CERCI, with NSA, California Sheriffs' Association, and Bay Area Rapid Transit, petitioned the U.S. Court of Appeals for the D.C. Circuit to vacate the rules, which consolidated these challenges into one proceeding, which is ongoing (Case No. 24-1363). On March 19, 2025, the D.C. Circuit denied a request to stay the rules. On November 24, 2025, the D.C. Circuit heard oral arguments in the case.

In February 2025, APCO filed a petition with the FCC, asking it to modify its rules (e.g., increase power levels) to enable 5G use in the 4.9 GHz band. AT&T, Ericsson, and some public safety entities support the change in rules. CERCI raised issues of potential interference from high-powered 5G use to public safety systems and recommended that the FCC conclude the data collection from licensees, establish criteria for protecting incumbent public safety licensees prior to introducing 5G services, and adopt rules for whether and how a Band Manager should mediate disputes between public-safety users and FirstNet users.

Issues for Congress

The 4.9 GHz debate is about competing priorities, such as maximizing spectrum use, preserving public safety use, opening spectrum for new technologies, and promoting competition. As Congress considers reauthorizing FirstNet and future spectrum auctions, it may reexamine 4.9 GHz band use. Following are selected options for Congress:

- Codify FCC's 2024 rules, maintaining state and local public safety use and granting the FirstNet Authority access to the band. This may spur innovation but may restrict future use by other providers and technologies.
- Override the FCC's 2024 rules, directing the FCC to return control to local public safety agencies; this could enable flexible use but may result in underutilization.
- Modify the FCC rules to support sharing in the band, which could open the band for new uses, such as UAS or CII, but may also infringe on public safety use.
- Auction the unassigned spectrum, which could spur innovation and yield proceeds; however, auctions take time, which could limit spectrum use in the meantime.

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