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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 with one another because of the high volume of calls that overwhelmed radio systems and the lack of interoperability among agencies. The 9/11 Commission, tasked with investigating the attacks, called for additional spectrum for public safety use, among many things. In 2002, the Federal Communications Commission (FCC)—the agency responsible for managing nonfederal spectrum use—allocated the 4.9 gigahertz (GHz) band for state and local public safety agencies and began granting licenses to agencies to use it.

In 2024, the FCC adopted new rules for the band that would preserve existing public safety use and also open the band to the First Responder Network Authority (FirstNet)—an agency in the Department of Commerce that manages the nationwide public safety broadband network (NPSBN) with its partner, AT&T. Some public safety agencies support the new rules and the potential to increase innovation and use. Other groups, such as incumbent public safety users, critical infrastructure industry (CII) operators, and private wireless service providers, oppose the rules. Opponents contend that the rules could inhibit flexible and future use in the band, result in a windfall to AT&T, and stymie competition.

As wireless technology use increases, so does demand for spectrum. The FCC tries to promote the efficient use of spectrum, enable access to new users, and protect existing users. In some cases, the FCC has identified spectrum for new uses. In other cases, Congress has passed legislation (e.g., P.L. 112-96, Title VI) directing the FCC to make spectrum available for new uses through reallocation or auction. This report provides background on the 4.9 GHz band and options for Congress.

Background

Typically, the FCC grants licenses to public safety agencies to transmit on certain frequencies from specified locations. Licenses for the 4.9 GHz band, which includes frequencies from 4940-4990 megahertz (MHz), authorize agencies to use any channel in the band and give them (1) blanket authority to operate base stations and mobile units (e.g., handheld units) and temporary stations anywhere within their jurisdiction for use during emergencies and (2) ability to license fixed stations on specified channels to support broadband uses, such as high-speed data and mobile use, accessing public safety databases from vehicle-mounted laptops, video use, and backhaul (i.e., wireless links that transport data between networks).

From 2003 to 2018, FCC granted licenses to state and local public safety agencies. Secondary users—transit agencies, utilities, CII operators, and federal agencies assisting public safety and homeland security missions—could enter into agreements with licensees to use the band. Agencies assert

that this approach gave them flexibility to respond quickly to emergencies and to meet unique state and local needs.

In 2018, the FCC found that the band was underused; in the 90,000 public safety agencies eligible for 4.9 GHz licenses, 3,174 licenses were in use. The FCC also found that entities were using the band in different ways, preventing equipment makers from realizing economies of scale and leading to high equipment costs and limited availability of equipment in the band.

2020—4.9 GHz Band Rules Adopted

On September 30, 2020, the FCC adopted an order setting rules for the 4.9 GHz band, granting *states* the right to lease the spectrum in the band to state and local entities and to non-public safety entities, with protections for incumbent public safety users. While these rules would have opened the band for new use, they altered the initial designation of the band for exclusive public safety use. The FCC also froze any new or modified applications in the band.

2020—Petitions Filed

In December 2020, several public safety organizations filed petitions with the FCC to stay, reconsider, and/or vacate the rules. The Public Safety Spectrum Alliance (PSSA), a coalition of public safety officials and organizations, opposed state control and commercial use and urged the FCC to preserve the band for public safety. The Association of Public-Safety Communications Officials (APCO) argued against state control because each state could adopt different rules for the band, causing fragmentation and hindering economies of scale. APCO argued for a national-level framework and consistent rules to create economies of scale, spur vendor investment, and yield new technologies in the band to further public safety interests. The National Public Safety Telecommunications Council (NPSTC), a federation of 16 public safety organizations, argued that state management of the band could affect public safety access, flexible use, and protection from interference in the band, and that the application freeze would affect licensee rights to expand use, an issue the order 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 the rules were not in the public interest and partially lifted the freeze.

2023—New 4.9 GHz Rules

In January 2023, the FCC adopted an order setting rules that would allow public safety agencies to retain local control of spectrum use for public safety purposes; appoint a Band Manager to develop a nationwide plan for 4.9 GHz band use, to create economies of scale and spur investment in the band; and empower the Band Manager to coordinate public safety and secondary, non-public safety use in the band, preemptible by public safety operations. The FCC sought

input on Band Manager selection and roles—including coordinating operations, facilitating leasing to non-public safety users, mitigating harmful interference, and enabling preemption for public safety use—and on integration of 4.9 GHz operations with public safety broadband networks.

2023-2024 Comments on FCC Rules

The FCC received over 200 comments on the January 2023 order. Selected positions are discussed below.

FirstNet as a Nationwide Licensee

PSSA urged the FCC to establish a single nationwide licensee to create consistent rules for the unassigned spectrum, coordinate use, and lease spectrum to secondary users. PSSA suggested an approach similar to that used for FirstNet. FirstNet and AT&T developed the NPSBN with federal funds, adopting a nationwide approach with consistent technical rules for the 700 MHz band. Supporters say this approach created economies of scale, attracted interest and investment in the band, and spurred development of an ecosystem of equipment for public safety use. FirstNet commented that it could develop broadband technologies and services for public safety use in the 4.9 GHz band while also protecting incumbent public safety use. PSSA urged the FCC to grant FirstNet a license to use the band or to appoint a Band Manager that could lease spectrum to FirstNet; several public safety associations support this approach.

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 dominant provider of public safety services—opposed PSSA’s proposal. CERCI argued to retain local public safety control of spectrum use and decisions on leasing to secondary users, and opposed proposals to grant a nationwide license to FirstNet. The American Association of State Highway and Transportation Officials and 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 the band to FirstNet and advocated for increased CII use. Verizon argued that such a grant—a 50 megahertz swathe 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 authorized the FCC to grant a license to FirstNet for only the 700 MHz band and that the FCC lacks authority to grant FirstNet a license or sharing agreement 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 about loss of local control and flexibility during emergencies, and ability to expand services in their areas. One state agency noted that coverage varies across areas, and agencies may use providers other than FirstNet, raising questions as to whether such a grant would benefit all or affect competition. NSA said the band has been “available for us to use as we need and see fit, and not part of 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 outages, consolidating services under one provider’s network, and the need for redundancies.

Requests from Critical Infrastructure Industry

Some CII operators asked the FCC to limit secondary use to CII users, prioritize CII use over non-public safety uses, or permit unmanned aerial vehicles (UAVs) for CII use. Entities cited increasing demands from new technologies (e.g., UAVs, intelligent transportation systems) and questioned whether FirstNet needs additional spectrum.

2024—Final Rules and Response

On October 18, 2024, the FCC adopted rules authorizing the Band Manager to (1) apply for a nationwide license for the unassigned spectrum in the 4.9 GHz band, (2) enter into a sharing agreement with FirstNet to use the 4.9 GHz band in tandem with the NPSBN and develop new technologies for use in the band, and (3) coordinate existing and new uses. The FCC required public safety licensees to provide granular 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 public safety users from interference. Licensees raised concerns that the rules would reduce local control of the 4.9 GHz band, shift geographic licenses to site-specific licenses, and limit flexible and future use of the band for public safety.

PSSA raised issues with licensing aspects of the rules and petitioned the Court of Appeals for the D.C. Circuit to remand them to the FCC. CERCI, NSA, the California Sheriffs’ Association (CSA), and Bay Area Rapid Transit (BART) petitioned the D.C. Circuit to vacate the rules. NSA, CSA, and BART also asked the D.C. Circuit to stay the rules pending judicial review. On March 19, 2025, the D.C. Circuit denied the stay request. The petitions to review the rules remain pending.

Issues for Congress

The 4.9 GHz debate is about competing priorities—maximizing spectrum use and protecting public safety use. Congress could defer to the FCC to decide on band use or it could decide on band use itself, with a range of options:

- Reverse the FCC order, returning control of the band to state and local public safety agencies. While this could give public safety agencies flexibility and control of the band, it could also result in underutilization.
- Codify the FCC’s 2024 rules that maintain local public safety use and allow FirstNet use. This may increase innovation and band use but may affect future use by existing licensees and others (e.g., Verizon, CII).
- Support new uses in the band, such as for UAVs or CII, as proposed, but not adopted, in the 118th Congress.
- Direct an auction of the band. While auctions can spur competition and generate proceeds for the U.S. government, this would require reinstating the FCC’s auction authority, which expired on March 9, 2023.

In addition, FirstNet's authority is expiring in 2027; this could affect its use of the band if Congress does not extend its authority by that time.

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