

BACKGROUND

Public safety licensees in many of the nation's largest metropolitan areas operating in the T-Band face an impending deadline by the FCC. By 2023, they must vacate their land mobile radio systems from the T-Band, two years after the FCC reallocates the spectrum in an auction. Considerable challenges exist for agencies facing the deadline. This whitepaper discusses how agencies should begin planning for the upcoming deadline.

Relocation of UHF T-Band Public Safety Licensees in Top Metropolitan Areas

Problem Statement

To meet the need for additional mobile communications capacity in the largest metropolitan areas, the FCC in 1971 opened television channels in the lower UHF band—channels 14-20; 470-512 megahertz (MHz)—that had not been licensed to broadcasters. This spectrum—known as the T-Band—is shared by: public safety; business, industrial and land transportation (BILT) entities; and public (common carrier) entities.

Enactment of the Middle Class Tax Relief and Job Creation Act of 2012 (“the Act”) allocated 700 MHz of broadband spectrum—Band 14—for the Nationwide Public Safety Broadband Network (NPSBN) being implemented under the auspices of the First Responder Network Authority (FirstNet). This allocation of spectrum was accompanied by a “give-back” requirement that public safety would abandon the T-Band so that the spectrum could be auctioned for other purposes.

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Timeline for Spectrum Auction

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- The FCC was directed to conduct the auction nine years from enactment of the Act—or approximately February 2021.
- Public safety licensees are required to vacate the channels within two years from the conclusion of the auction, or about 2023.
- Public safety licensees will be eligible to receive grants from the Department of Commerce's National Telecommunications and Information Administration (NTIA) to cover the relocation costs.
- No additional spectrum was allocated to accommodate public safety or BILT licensees in the T-Band. Studies by the National Public Safety Telecommunications Council (NPSTC) indicate that a substantial shortfall in available public safety spectrum exists in the 700/800 MHz bands in the top metropolitan areas, compared with the amount of spectrum needed to accommodate the relocation.

T-Band Relocation Challenges and Risks

It might be assumed that relocation of public safety from the T-Band was ill conceived and presents unacceptable risks. Potential responses to this realization include deferral of deadlines or abandonment of the concept. Such responses would result in maintenance of the status quo. However, another event has increased the risk to public safety agencies that choose to continue operation in T-Band.

In 2017, the “Incentive Auction” of the 600 MHz band resulted in the elimination of TV channels above channel 36. This auction created revenues to compensate television broadcasters for abandonment of their spectrum, or for the costs associated with relocation to other lower channels. This relocation required the FCC to “repack” the remaining broadcasters into fewer channels, including channels 14-20. Repacking adds more television stations on channels shared by public safety, BILT and common carrier entities, and thus may increase interference and noise that will degrade public safety system performance.

TV Channel	Impacts Public Safety Users In	Increase in TV Stations
14	Boston, Chicago, Los Angeles, Miami, New York, Pittsburgh	22
15	Chicago, Los Angeles, New York	22
16	Boston, Dallas-Fort Worth, Los Angeles, New York, San Francisco	23
17	Houston	23
18	Pittsburgh, Washington D.C.	19
19	Philadelphia	19
20	Los Angeles, Pittsburgh	22

Even though it is anticipated that grant funding will be made available for costs associated with migrating off the T-band, public safety agencies currently utilizing the band would be well advised to start planning efforts now. The most critical piece of planning involves the identification of a migration path. Given the potential lack of sufficient alternate spectrum, as well as other agencies on the T-Band acquiring unused spectrum first, conducting a planning effort now to identify alternate spectrum would provide an advantage in terms of achieving a seamless migration and obtaining new spectrum. Other planning factors include evaluation of current infrastructure, interoperability needs, migration cost estimates to name a few. The deadline for migration is 2023, but most public safety systems require a 3- to 5-year window for planning and implementation. Starting the process sooner, rather than later, will put such agencies in much better position to ensure migration is accomplished with the least amount of potential interruption to public safety communications needs.

No additional spectrum was allocated to accommodate public safety or BILT licensees in T-Band. Studies by NPSTC indicate there is a substantial shortfall in the public safety spectrum available in the 700/800 MHz bands in the top metropolitan areas versus the amount needed to accommodate the relocation.

- Tom Wheeler, former Chairman, Federal Communications Commission, July 12, 2016

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