

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Amendment of Part 90 of the Commission's	)	WP Docket No. 16-261
Rules to Improve Access to Private Land	)	
Mobile Radio Spectrum	)	
	)	
Land Mobile Communications Council	)	RM-11719
Petition for Rulemaking Regarding Interim	)	
Eligibility for 800 MHz Expansion Band and	)	
Guard Band Frequencies	)	
	)	
Petition for Rulemaking Regarding	)	RM-11722
Conditional Licensing Authority Above 470	)	
MHz	)	
	)	

**COMMENTS OF THE  
NATIONAL ASSOCIATION OF BROADCASTERS**

The National Association of Broadcasters (NAB)<sup>1</sup> submits these comments in response to the Commission's Notice of Proposed Rulemaking seeking comment on various proposals to expand access to private land mobile radio (PLMR) spectrum.<sup>2</sup> NAB's comments are limited to the Commission's proposal to amend Section 90.35 of its rules to make available for PLMR use frequencies that are on the band edge between spectrum designated for primary use by

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<sup>1</sup> The National Association of Broadcasters is a nonprofit trade association that advocates on behalf of free local radio and television stations and broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the courts.

<sup>2</sup> *Amendment of Part 90 of the Commission's Rules to Improve Access to Private Land Mobile Radio Spectrum; Land Mobile Communications Council Petition for Rulemaking Regarding Interim Eligibility for Rulemaking Regarding Interim Eligibility for 800 MHz Expansion Band and Guard Band Frequencies; Petition for Rulemaking Regarding Conditional Licensing Authority Above 470 MHz*, WP Docket no. 16-261, RM-11719, RM-11722, FCC 16-110 (Aug. 18, 2016) (NPRM).

Industrial/Business (I/B) Pool and spectrum designated for primary use by the Broadcast Auxiliary Service (BAS). The Commission should not adopt this proposal, as it creates an unacceptable risk of harmful interference.

**I. THE COMMISSION SHOULD REFRAIN FROM AUTHORIZING SPECTRUM AT BAND EDGES BETWEEN TWO SERVICES WITHOUT COORDINATION**

Broadcast Auxiliary Services spectrum is used both at permanent, fixed installations and to cover breaking news events at different locations, as permitted under Section 74.24 of the rules.<sup>3</sup> BAS operations are primary in the 450-451 and 455-456 MHz bands, while PLMR operations are primary in the 451-455 and 456-460 MHz bands. In contrast with the channelized PLMR spectrum, BAS stations are authorized to use the entire 450-451 and 455-456 MHz bands so long as emissions are confined within those bands.

The Commission's proposal to make frequencies on the band edge between the I/B Pool and BAS spectrum will pose an unacceptable risk of harmful interference. It is well known that to prevent interference conventional radio transmissions must be adequately separated by some combination of frequency, time or distance.<sup>4</sup> This is because even properly designed receivers use filters that reject emissions falling outside the desired frequency band but cannot reject emissions within it. Unless there is a "guard band" between two services or other measures are taken, a transmitter at the band edge between two services will unavoidably radiate emissions within the spectrum used by both services. Operation by one

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<sup>3</sup> 47 CFR §74.24

<sup>4</sup> William C.Y. Lee, "Interference Problems," in Mobile Communications Engineering, Chapter 4 (New York: McGraw-Hill, 1998).

service at the band edge thus reduces the amount of spectrum available to the other service.

This is contrary to both ITU and FCC rules.<sup>5</sup>

The Commission previously determined that assigning a channel for PLMR operations that “would overlap BAS low power auxiliary station spectrum” would not serve the purpose of the rules.<sup>6</sup> This determination is consistent with Section 90.173(j) of the Commission’s rules, which states that frequencies other than those listed for I/B use may be used provided the authorized bandwidth does not overlap spectrum available in other rule parts unless that spectrum is also allocated in part 90.<sup>7</sup> Sections 74.402 and 74.802 of the rules identify 450-451 and 455-456 MHz for use by BAS, but those bands are not identified for use by PLMR in Part 90. PLMR use of the band edge frequencies 451 and 456 MHz would unavoidably overlap BAS spectrum and be contrary to the Commission’s previous decisions and the intent of the rules. The NPRM provides no analysis to show how such BAS and IB uses can co-exist without interference occurring and no explanation as to why the Commission’s previous decisions were in error and should be changed. Abruptly reversing course with no justification would be arbitrary and capricious and contrary to law as well as poor spectrum policy.

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<sup>5</sup> ITU Radio Regulations, Article 4.5 (2016) (“The frequency assigned to a station of a given service shall be separated from the limits of the band allocated to this service in such a way that, taking account of the frequency band assigned to a station, no harmful interference is caused to services to which frequency bands immediately adjoining are allocated.”); 47 CFR §2.102(f) (“The stations of a service shall use frequencies so separated from the limits of a band allocated to that service as not to cause harmful interference to allocated services in immediately adjoining frequency bands.”)

<sup>6</sup> *Mobile Relay Associates; Fisher Wireless Services, Inc.; Day Management Corporation; Specialized Mobile Radio, Inc.; P&R Communications Service, Inc.; Self Radio Inc.; Wiztronics, Inc.; Comtronics Corporate; Requests for Waivers to Permit Part 90 Use of Channels Between Part 90 and Part 74 Spectrum, Order, 29 FCC Rcd 7292, ¶ 6 (2014).*

<sup>7</sup> 47 CFR §90.173(j).

## **II. THE COMMISSION SHOULD NOT FURTHER REDUCE THE AMOUNT OF AVAILABLE BAS SPECTRUM**

BAS spectrum is heavily used for a variety of purposes including wireless microphones, monitoring and cueing to on-air personnel and telemetry. BAS spectrum is already heavily utilized in many urban areas and at many special events.<sup>8</sup> Many of those uses have been concentrated in the UHF television spectrum, 470–698 MHz, where BAS is permitted as a secondary use. However, the ongoing broadcast spectrum incentive auction will, if successful, reduce the amount of spectrum allocated for television broadcasting and thus reduce the amount of UHF BAS spectrum available.

The Commission should not compound this problem by further reducing the amount of BAS spectrum available by allowing PLMR operations on the band edge. While the Commission's proposal would severely impair current BAS operations, adding two narrowband UHF channels to the large number of channels already available for I/B service use would do almost nothing to increase the usable capacity of PLMR spectrum.

## **III. CONCLUSION**

BAS operations are critical to the operation of broadcast stations, and BAS spectrum is already severely constrained in many markets and at many news events. The proposal to expand I/B spectrum at 450 MHz would compound the reduction in BAS spectrum that will already occur as a result of the incentive auction. This would be contrary to FCC and ITU regulations and would significantly impact broadcasters' ability to provide news coverage with negligible benefit to PLMR users. NAB urges the Commission to reject this proposal.

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<sup>8</sup> Phil Kurz, "TV Heading Toward Wireless Spectrum Crisis," TV News Check, November 12, 2015, available at: <http://www.tvnewscheck.com/article/89989/tv-heading-toward-wireless-spectrum-crisis>.

Respectfully submitted,

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