

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Improving Public Safety Communications	)	WT Docket No. 02-55
in the 800 MHz Band	)	
	)	
New 800 MHz Band Plan for the U.S. –	)	
Mexico Sharing Zone	)	
	)	

**COMMENTS**

**Orange County Sheriff's Department**

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The Orange County Sheriff's Department (County) submits these comments in response to the proposed 800 MHz band plan for the U.S. – Mexico sharing zone.<sup>1</sup> The County of Orange, through the Orange County Sheriff's Department, operates a \$100 million, countywide 700 MHz/800 MHz public safety communications system by way of a joint powers agreement on behalf of 34 cities and over a 130 federal, state and local partner agencies ranging from the FBI to surrounding counties, school districts and others ("Countywide"). The Countywide system is one of the few truly interoperable voice systems in the United States that began operation in the late 1990s, and is a system utilized by law, fire, lifeguard, paramedics, public works and other governmental services. The Countywide system is comprised of 28 high sites interspersed throughout Orange County, and has over 22,000 mobile and portable subscriber radios. Orange County is the third largest county in the State of California and is the sixth largest county in the U. S., with a population of over 3 million people.

As the Commission is already aware, the County of Orange has continuously suffered harmful interference from commercial cellular and wideband operations.<sup>2</sup> Harmful interference to the Countywide system existed prior to the *800 MHz Reconfiguration Report and Order*<sup>3</sup>, and

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<sup>1</sup> In the Matter of Improving Public Safety Communications in the 800 MHz Band and New 800 MHz Band Plan for the U.S.-Mexico Sharing Zone, *Fourth Further Notice of Proposed Rule Making*, WT Docket 02-55 (August 17, 2012) (*NPRM*).

<sup>2</sup> Petition for Reconsideration and Informal Interference Complaint Regarding AT&T Mobility and Sprint Nextel, filed by the Orange County Sheriff's Department, WT Docket No. 12-64, WT Docket No. 11-110 (July 9, 2012).

<sup>3</sup> Improving Public Safety Communications in the 800 MHz Band; Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels; Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems; Petition for Rule Making of the Wireless Information Networks Forum Concerning the Unlicensed Personal Communications Service; Petition for Rule Making of UT Starcom, Inc., Concerning the Unlicensed Personal Communications Service; Amendment of

the County is currently experiencing two prolonged cases of harmful interference from sources where XTS-3000 portable radios, the bulk of the Countywide fleet, do not communicate near those sites.<sup>4</sup>

The purpose of the *800 MHz Reconfiguration Report and Order* was to reduce cellular interference by providing frequency isolation or spacing between cellular carrier frequencies and frequencies used by traditional two-way radio services.<sup>5</sup> Consequently, the Commission established a guard band in the 861-862 MHz segment of the 800 MHz band to guarantee public safety licensees an additional one megahertz spectral separation from the cellular portion of the band.<sup>6</sup> The *NPRM*, however, proposes to eliminate the guard band in NPSAC Region 5 as the Commission believes this is necessary to accommodate the large number of non-ESMR

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Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for use by the Mobile Satellite Service; WT Docket No.02-55, ET Docket No.00-258, RM-9498, RM-10024, ET DocketNo.95-18, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, 19 FCC Rcd 14969 (2004) (*800 MHz Reconfiguration Report and Order*).

<sup>4</sup> *Id.*

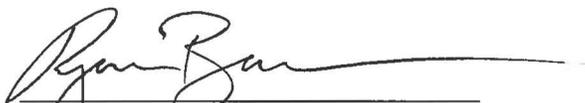
<sup>5</sup> *800 MHz Reconfiguration Report and Order* at ¶ 144 (“Consolidating ESMR systems into one continuous segment in the upper portion of the 800 MHz band will provide ESMR licensees with greater flexibility in selecting channel pairs. The spacing between ESMR channels determines where intermodulation products will fall in the band. With closely spaced ESMR channels, the intermodulation products fall into—or just below—the upper portion of the ESMR segment of the reconfigured band. As the cell channel spacing increases, the intermodulation products become further removed from the ESMR band segment, extending further down into the noncellular channels—including channels used by public safety systems. In the reconfigured band, a careful ESMR channel choice could reduce the potential for intermodulation interference generated between the ESMR channels in a given cell.”). *See also id.* at ¶ 146 (“Consolidation of Nextel channels in the upper portion of the band will give ESMR operators and cellular telephone licensees greater flexibility to make a judicious choice of channel selection and channel spacing, thereby either confining potential ESMR intermodulation interference to a smaller portion of the non-cellular segment of the band, or limiting intermodulation products that fall on given CII or public safety channels.”).

<sup>6</sup> *Id.* at ¶¶ 157-158.

incumbents in Region 5.<sup>7</sup> The County contends that a guard band is necessary, and that receiving reconfigured channels in the 861-862 MHz segment is contrary to the frequency isolation and spacing objectives of *800 MHz Reconfiguration Report and Order* as public safety licensees in that segment will continue to receive new or continued cellular interference.

If the Commission declines to keep the guard band in place, then the County proposes that there be a voluntary relocation to the 861-862 MHz segment, such that a public safety licensee cannot be forced to be reconfigured or licensed in that segment without its prior approval. This approach is consistent with the Commission's prior decision to not involuntarily relocate public safety licensees to the guard band when it was established.<sup>8</sup>

Respectfully submitted,  
**Orange County Sheriff's Department**



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<sup>7</sup> *NPRM* at ¶ 19.

<sup>8</sup> *800 MHz Reconfiguration Report and Order* at ¶ 157 (“We establish a “Guard Band” in the 816-817 MHz/861-862 MHz segment of the 800 MHz band to guarantee public safety licensees an additional one megahertz spectral separation from the cellular portion of the band. Nextel will vacate the Guard Band. No licensee—including public safety and CII—will be involuntarily relocated to the Guard Band.”).