San Diego County – Imperial County
**Regional Communications System**
5555 Overland Avenue, Bldg. 12, MS-O56, San Diego, California 92123
Phone (858) 694-3663 Fax (858) 694-3433
Web Page Address: http://www.co.san-diego.ca.us/rcs

May 6, 2002

William F. Caton
Office of the Secretary
Federal Communications Commission
445 12th St., S.W., Room TW-A325
Washington, DC 20554

**Subject: Comments to WT Docket No. 02-55, Improving Public Safety Communications in the 800 MHz Band**

Dear Mr. Caton:

**RCS Summary:**

The San Diego County – Imperial County Regional Communications System (RCS) operates as a non-profit, 800 MHz wireless carrier in Southern California, serving over 180 public safety and public service agencies with more than 15,000 subscribers in the 9,000 square mile system. The system footprint includes approximately 185 miles of border between the U.S. and Mexico. The RCS is owned by the County of San Diego and is administered by a Board of Directors consisting of public safety and public service administrators from a variety of agencies. The RCS has been operational since May 1998 and currently uses over 150, 800 MHz frequencies.

The public safety founders of the RCS began their effort to achieve same-system, full interoperability with local, county, state and federal agencies in 1992. To date, we have achieved that goal with a majority of the local, county and state agencies, but only a few of the 50 plus federal public safety agencies operating in this region. RCS participating agencies have an investment of over $40 million in network infrastructure and approximately $57 million in subscriber equipment. Due to increasing demand to join the RCS, we are currently planning over $22 million in system enhancements.

**Harmful Interference:**

Thus far, we have experienced minimal, localized, harmful interference from commercial transmitters. The interference source to date has been Nextel, Inc. When interference has been identified and brought to Nextel's attention, they have worked cooperatively and without delay to resolve the issues. However, we have also experienced licensing difficulties with "phantom" sites where Nextel has licensed over 200 frequencies, although there are no improvements; i.e., no pad, no tower, no building and no preparation for construction.

Following are other comments and issues relative to the Nextel use of 800 MHz frequencies in this geographic area:

1. We have noted that Nextel has used filters that are capable of remote adjustment to reduce their maintenance time by limiting the need to visit the sites. In reducing interference, Nextel typically just lowers the transmitting power and/or changes a few of the most impacting radio frequencies. Transmitter combiners generally used by Nextel are a wideband type without cavity filters. These combiners are inferior and have resulted in emissions that cause harmful interference on some of our channels. The RCS uses only cavity type combiners and we are of the belief that Nextel's use of cavity combiners would help reduce harmful interference.

2. On some sites where we experienced harmful Nextel interference, upon notification Nextel has voluntarily reduced their signal strength, resulting in a reduction of interference. We have identified three localized and uncorrected areas of harmful interference from Nextel on our system, which we attribute to having sufficient signal strength to capture our receivers in spite of other in-band emissions.

3. We have experienced difficulties with some inferior receiver front end rejection and have modified our acceptable equipment list to delete the Motorola LCS/LTS series radios and have complained to Motorola about the rejection specifications on the VRM660 and PRM660 RF data modem radios.

**NPRM Proposals:**

1. The NAM proposal only gives us .5 MHz additional spectrum. The concept of SMR and commercial being more compatible with public safety has not proven effective in the past as a protection against interference. The reallocation of spectrum next to the 700MHz public safety spectrum is a good idea.

2. The Nextel proposal gives us nearly double the amount of spectrum in the 800MHz band. The concept of a guard band is of questionable effectiveness as a protection against interference. If a guard band is utilized, then the licenses issued in this segment should be for low power uplink or simplex use only. The proposal seems to suggest that reducing the number of users within the spectrum would reduce congestion and further separate dissimilar services, which seems logical and appropriate. Additional spectrum is necessary in the border regions to compensate for Mexican and Canadian treaties that give 50% of the existing bandwidth to those countries.

3. The third proposal suggests that modifying channel bandwidth would resolve the spectrum congestion and allow for coexistence within the band. It ignores the recurrent issue with the FCC rulings that government agencies typically are not able to distribute costs of operation to a user population and therefore change out technology in response to the business case presented. Government is slow to change because funding is not available to keep up with technology. Therefore to suggest that conversion of existing

systems to 6.5 KHz spacing in the near term is not practical. The existing 12.5 KHz spacing will be with us for quite some time, so the need for the additional spectrum for public safety will not diminish. At best it will remain constant as new requirements are met with emerging technology, which will also result in the continuation of interoperability issues.

**Border Issues:**

Frequency issues in the 800 MHz band in the sphere of influence of the RCS are further complicated by 800 MHz operations in Mexico. Due to the North American Free Trade Agreement and an increase in maquiladora factories in Mexico, there are business reasons to believe that Nextel and other SMRs should expect to be able to provide their consumers with unfettered operation on either side of the border. However, a commercial SMR operating in Mexico is currently not bound by the same rules promulgated by the FCC, thus increasing the likelihood of U.S. public safety agencies experiencing harmful interference that may have no effective resolution. The border regions have 50% less spectrum to utilize from the outset because of the existing 800 MHz treaty with Mexico. As a result, there is 50% less spectrum to share and therefore a reality of fewer possible systems. A final solution needs to include a resolution to the cross-border issues in Mexico and Canada. Border communities will not be able to fully participate in a resolution to these 800 MHz problems until issues with Mexico and Canada are resolved.

**Frequency Transition Costs:**

For most of the past year, the RCS has been in fact-finding mode with Nextel regarding the potential exchange of frequencies to permanently avoid harmful interference. Due to this NPRM, Nextel has deferred further discussions. However, our discussions did cause us to focus on the effort and cost of transitioning frequencies. It is our belief that the $500 million offered by Nextel in their proposed solution will be woefully inadequate to implement a successful transition to other frequencies for systems throughout the United States. In the RCS, these transition efforts include physically reprogramming radios twice, and the replacement of some system and subscriber equipment. The timeline for such a transition is over two years, and the process is onerous, risky and will entail significant personnel overtime costs from all 180 agencies in our network.

**Source of Funding:**

While we agree that a final solution may require such a frequency transition, we do not believe that it is appropriate to require government agencies or SMRs to pay the expense. The $119 million investment of regional agencies in the RCS is not dissimilar to that of other public systems throughout the U.S. Public systems similar to the RCS pay about $3,500 of public funds to purchase a subscriber radio, while SMRs give their equipment to subscribers as an incentive to contract for service. The SMRs caught in this quandary are operating – for the most part – within FCC rules. Likewise, their investors should not have to pay for this cost.

A funding solution should be directed not only at a resolution to the current issues, but should result in a permanent, renewable source of funding for public safety agencies that ensures law enforcement, fire and EMS can be early adopters of wireless communication technology that will cause them to operate more efficiently and that will ultimately save lives. Various states or localities have applied a 9-1-1 surcharge to phones. While a 9-1-1 surcharge is effective in ensuring that emergency calls are answered in a timely fashion, it causes a false expectation that the surcharge has a direct relationship to actually getting the information out to the first responder. Some agencies have adequate wireless networks and others have poor networks. Every government agency has difficulty obtaining funds to replace an aging or inadequate wireless network, because it is a major, once a decade purchase.

The FCC needs to recommend a permanent, national phone surcharge that will be directed to local public safety agencies for the exclusive purpose of supporting their wireless communication needs and requirements. The *"Public Safety Communications Surcharge"* should be collected by SMRs and provided to a federal agency charged with transferring the funds to local governments according to formulas that can be developed. Through this method, the FCC can encourage local governments to transition to a public safety frequency plan that will have a national benefit and scope.

Sincerely,

**Curt Munro, Manager**
Regional Communications System
Sheriff's Department
County of San Diego