

## **Narrow Banding**

### **Why**

The FCC made the decision to narrowband this part of the spectrum to promote more efficient use of the highly congested VHF and UHF land mobile bands. There is often not enough spectrum available for licensees to expand their existing systems or implement new systems. The FCC expects that as licensees convert to equipment that operates on the narrower channel bandwidths, new channels will become available, and that the narrowband conversion will encourage the development and use of new more spectrum-efficient technologies.

### **Basics**

- Affects all frequencies below 512 MHz.
- Will require all channels licensed to be relicensed as a narrowband channel.
- Center channel frequencies will stay the same.
- Will not create twice the number of channels because interference properties still apply.
- Will create some possibilities of additional spectrum when looking at a region-wide picture.
- If additional narrowband channels are issued prior to everyone converting, it may create issues with legacy systems.
- Most paging systems will also be affected. Two channels can remain wideband, 152.0075 and 157.450.
- So far FCC has taken a hard-line on narrowbanding and timelines.

### **Timelines**

- January 1, 2011 FCC will no longer accept any applications exceeding the 12.5KHz bandwidth.
- January 1, 2011 FCC will not accept a modification of coverage area if not narrowbanded as well.
- January 1, 2013 be completed. Any system operating outside of the narrowbanding requirements will be in violation of FCC regulations.
- Undetermined. FCC is planning long-term to reduce bandwidth to 6.25KHz.

### **What Needs to be Done?**

- Inventory all systems and systems (including paging systems, siren alerting systems & pagers) equipment not part of the statewide network.
- Work with dealers or do research on what equipment is capable of operating at 12.5KHz (Most after 1997 is compliant).
- Determine if narrowbanding will affect coverage & decide if additional sites required.
- Develop a migration plan & budget accordingly (not an option if commissioners ask!!).
- Modify FCC license by adding narrowband emission designator.
- Notify FCC when wideband can be dropped from license.

The South Dakota Public Safety Communications Council strongly encourages the local counties, and cities do not wait until the last minute to apply and plan for Narrowband cut over. State will use the proposed timeline to narrowband all state held frequencies such as EMS and suggest that all local government follow the same time line with a narrowband programming/install window of July-Oct 2012

With that being said we are suggesting the following guide lines:

March 15<sup>th</sup> 2010 complete an inventory of all radios and licenses that are to be considered for applying for Narrowbanding, including radio systems,(handhelds. mobiles, base stations, repeaters, etc), paging systems, siren systems, remote monitoring systems, alert systems, etc

June 15<sup>th</sup> 2010 submit to FCC license request for Narrowband emission designator.

August 1<sup>st</sup> 2010 develop a plan, with cost estimates for replacing equipment and start the budget process.

November 1<sup>st</sup> 2010 – March 1<sup>st</sup> 2012 purchase equipment and prepare for cutover.

October 1<sup>st</sup> 2012 **Completed installation of all equipment.**

December 1<sup>st</sup> 2012 – January 1<sup>st</sup> 2013 release all wideband frequency emission licenses.

The State will use the proposed timeline to narrowband all state held frequencies such as EMS and then suggest that all local government follow the same time line with a narrowband programming/install window of July-Oct 2012.

Be aware of the additional cost associated with having a vendor program their radios multiple times and potential interoperability issues between radios that are narrowband vs wideband.

Lowband is not affected, all with frequencies: 150 and 174 MHz and 421 and 512 MHz