



**Federal Communications Commission  
Public Safety and Homeland Security Bureau**



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# **VHF/UHF Narrowbanding Information for Public Safety Licensees**

**December 2010**



# Outline



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- **Narrowbanding Basics**
  - Narrowbanding Deadlines
  - How to Prepare for Narrowbanding
  - Modifying Licenses to Reflect Narrowbanding
  - Additional Information Resources



# Narrowbanding Basics



- Who is required to narrowband?
  - All Public Safety and Industrial/Business licensees in the 150-174 MHz (VHF) and 421-512 MHz (UHF) bands
- What is required?
  - By January 1, 2013, licensees must migrate their systems from 25 kHz (wideband) to 12.5 kHz (narrowband) channel bandwidth or a technology that achieves equivalent efficiency



# Benefits of Narrowbanding



- Narrowbanding ensures more efficient use of the spectrum and greater spectrum access for public safety and non-public safety users
- Will relieve congestion in and result in increased channel availability for public safety VHF/UHF systems
- Narrowbanding has been consistently supported by the public safety community, including APCO, NPSTC, and other organizations



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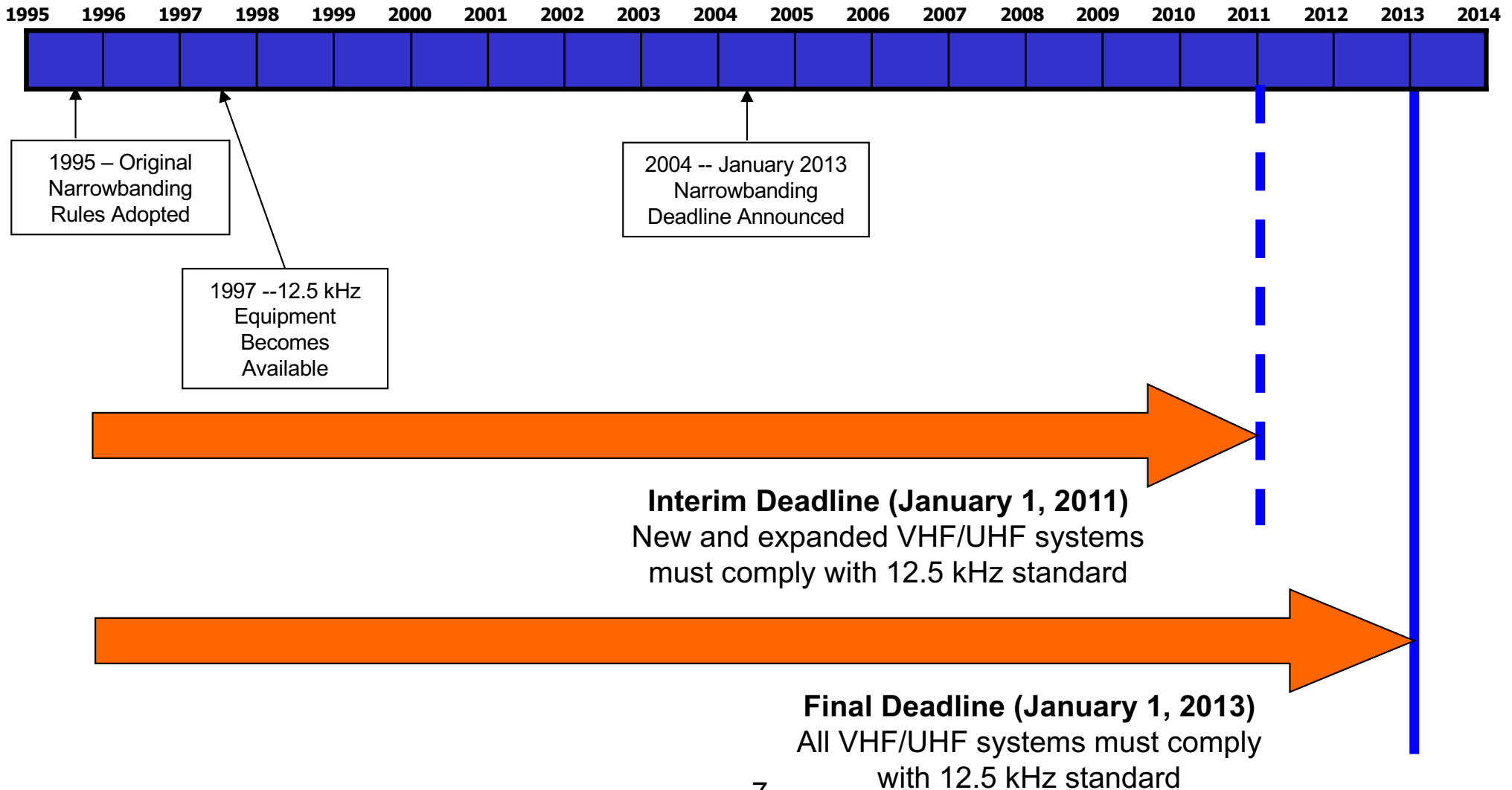
# Narrowbanding Deadlines



- All licensees must complete narrowbanding to 12.5 kHz by January 1, 2013
  - FCC will also no longer allow manufacture or importation of equipment that includes a 25 kHz mode
- Some interim requirements take effect on January 1, 2011:
  - 12.5 kHz operation required for all new VHF/UHF systems or expansion of existing systems
  - FCC will not certify new equipment that includes a 25 KHz mode



# Narrowbanding Timeline





# Why Meeting the Deadline Is Important



- After January 1, 2013, FCC interference rules will not protect non-compliant wideband systems from harmful interference
- Systems that fail to narrowband by the deadline could create interference or interoperability problems for systems that have narrowbanded
- Wideband equipment will not be available after January 1, 2013





# The Deadline Will Not Be Extended



- The Commission has recently reaffirmed the January 1, 2013 deadline
- Licensees facing unique circumstances may request waivers, but waiver requests must meet a high standard and are not routinely granted
- Licensees concerned about meeting the deadline should focus on planning and preparation
- Informal contact with the Bureau is encouraged prior to any filing



# Future Narrowbanding to 6.25 kHz Technology



- Narrowbanding rules provide for eventual migration from 12.5 kHz to 6.25 kHz bandwidth
  - Intended to further increase efficiency and channel availability
- The FCC has not set a deadline for 6.25 kHz implementation
  - No deadline will be established without further notice and comment
- Licensees may narrowband to 6.25 kHz voluntarily
  - All 150-174 MHz and 421-512 MHz equipment certified after January 1, 2013 must include 6.25 kHz capability



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# Preparing for Narrowbanding



- Prepare NOW – January 1, 2013 is approaching fast!
- Determine how narrowbanding will affect your system
  - Will existing equipment need replacement/retuning?
  - Will additional sites be needed to maintain coverage?
  - Is coordination with neighboring systems required?
- Develop a compliance plan
  - Timeline
  - Funding requirements
- Contact the Public Safety and Homeland Security Bureau with questions/concerns



# Availability of Narrowband Equipment



- All VHF/UHF equipment certified since 1997 has 12.5 kHz capability
  - Many systems have equipment with dual 25 kHz/12.5 kHz capability, making the narrowbanding transition easier
- Check with your vendor to determine whether your existing system equipment is narrowband-capable or needs modification/replacement



# Funding Considerations

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- Cost of narrowbanding will vary depending on the nature of each licensee's existing system
  - Narrowbanding generally does not require a system upgrade, though licensees may combine narrowbanding with other scheduled upgrades or modifications
  - Narrowbanding costs may be more substantial for older systems that require replacement of existing equipment
- Funding to support narrowbanding may be available through federal grant programs (agency contact information provided in "Additional Information Resources" section)



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# Licensing Modifications



- Licensees should modify their licenses to add a narrowband emission designator prior to commencing narrowband operations
  - Licensees may maintain both narrowband and wideband designators on their licenses while they are transitioning their systems
- Once the narrowband transition is complete, licensees should modify their licenses by removing the wideband emission designator
- These actions can be completed online using ULS





# Frequency Coordination



- Frequency coordination is not required for addition of narrowband emissions designator or removal of wideband emissions designator, provided no other changes are being made
  - For licensees north of Line A or west of Line C, reduction in bandwidth does not require Canadian coordination
- Frequency coordination is required when narrowbanding is combined with other modifications that alter a station's footprint
  - E.g., changes in location, antenna height, ERP, as well as when switching from analog to digital emissions



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# PSHSB Website and Contacts



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Bureau Website:

<http://www.fcc.gov/pshs/public-safety-spectrum/narrowbanding.html>



# Other Resources



- [http://www.aaacomm.com/fcc\\_licensing.htm](http://www.aaacomm.com/fcc_licensing.htm)
- <http://www.mrfac.com/Mandatory-Narrowbanding.html>
- <http://www.npstc.org/narrowbanding.jsp>
- <http://www.IMSAsafety.org>



# Federal Resources



- DHS
  - Office of Emergency Communications ([oechq@hq.dhs.gov](mailto:oechq@hq.dhs.gov))
  - SAFECOM
    - <http://www.safecomprogram.gov/SAFECOM/grant/default.htm>
- FEMA
  - [www.fema.gov/grants](http://www.fema.gov/grants)
  - <http://www.fema.gov/government/grant/iecgp/index.shtm>
    - Interoperable Emergency Communications Grant Program
- DOJ National Institute of Justice
  - <http://www.ojp.usdoj.gov/nij/topics/technology/communication/radios/fcc-narrowbanding.htm>