

FCC Narrowbanding Mandate

“What You Need to Do”

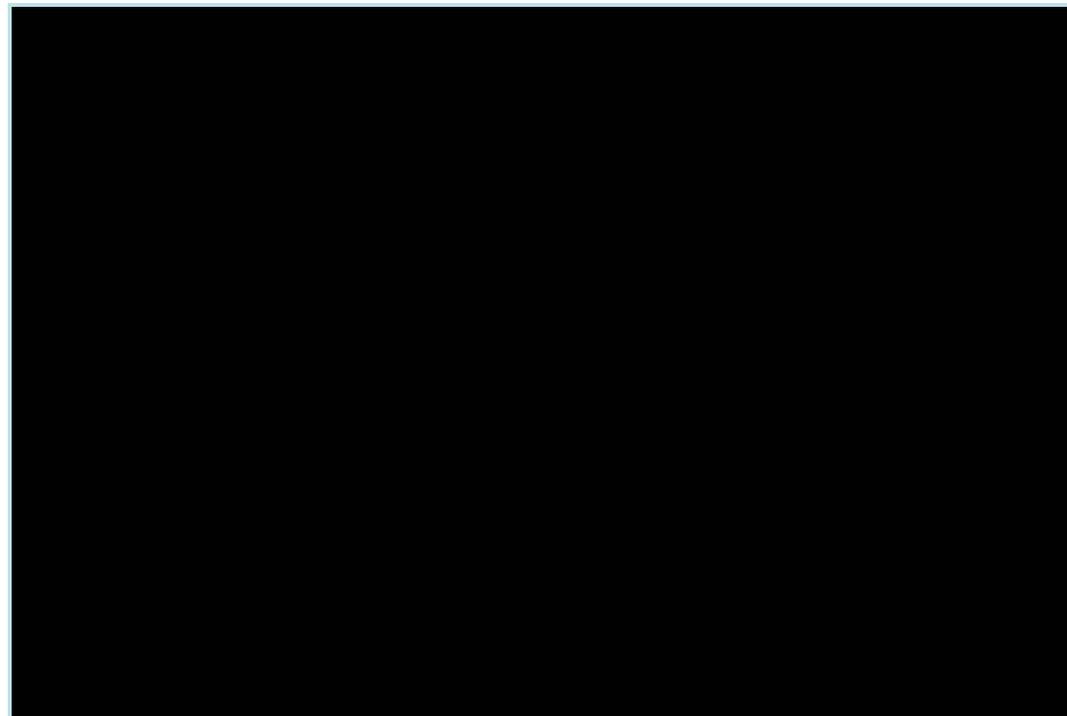
Presented by

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Disclaimer

- This presentation is intended to provide basic informational assistance to public officials about the impact of the FCC mandate to narrowband specific public safety radio frequencies.
- *In must be understood that every radio system license holder is solely responsible for compliance with all FCC license requirements.*

State Of Virginia Narrowbanding Video



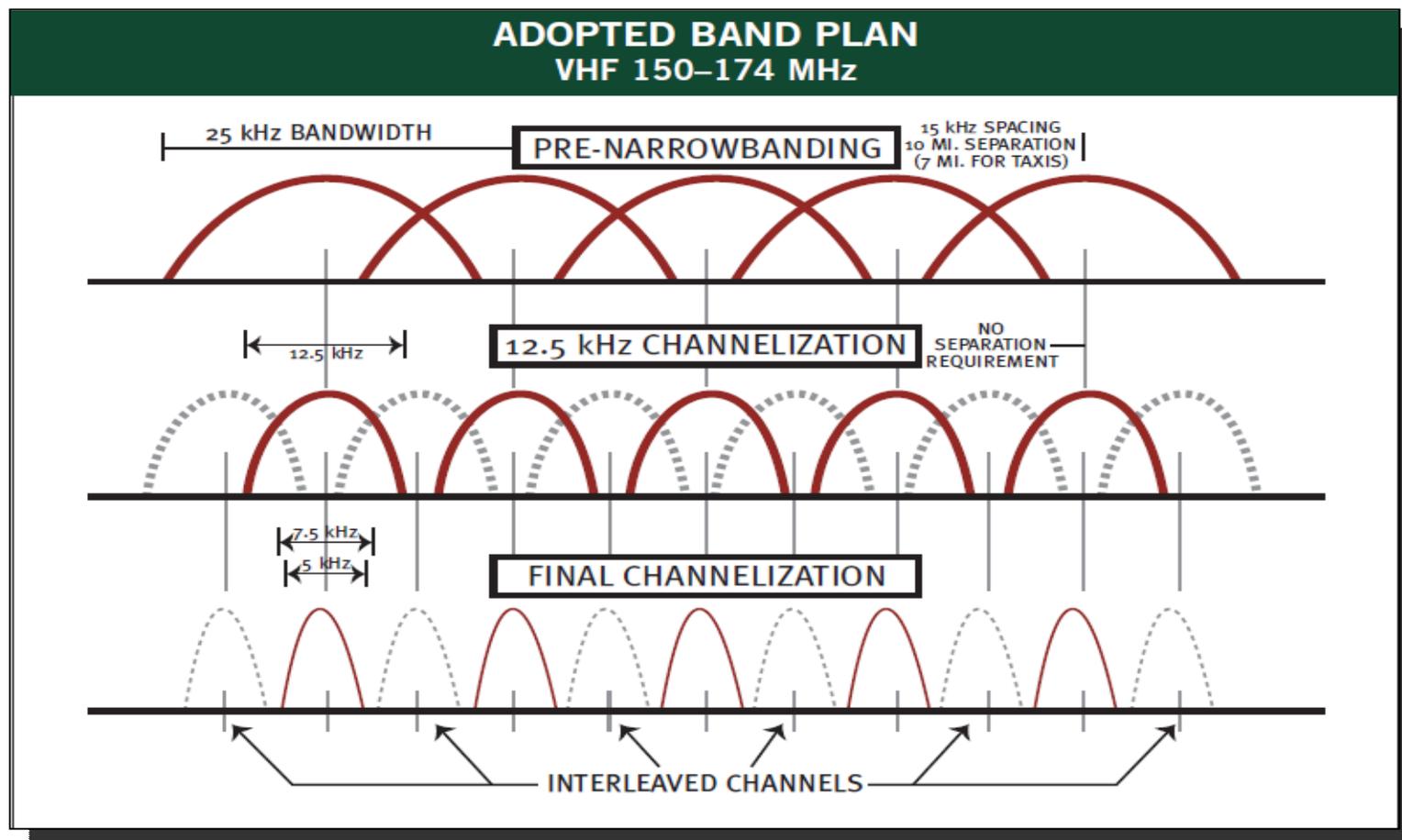
Background on Narrowbanding

- Federal Communications Commission (FCC) narrowbanding requirements adopted in 1992 during a process known as “refarming.”
- Purpose - enhance spectrum efficiency in the VHF (150 – 174 MHz) and UHF (421-512 MHz) land mobile radio (LMR) bands.
- Refarming - not just narrowbanding, but also the consolidation of twenty separate radio service pools into two; **Public Safety Pool and Industrial/Business Pool.**

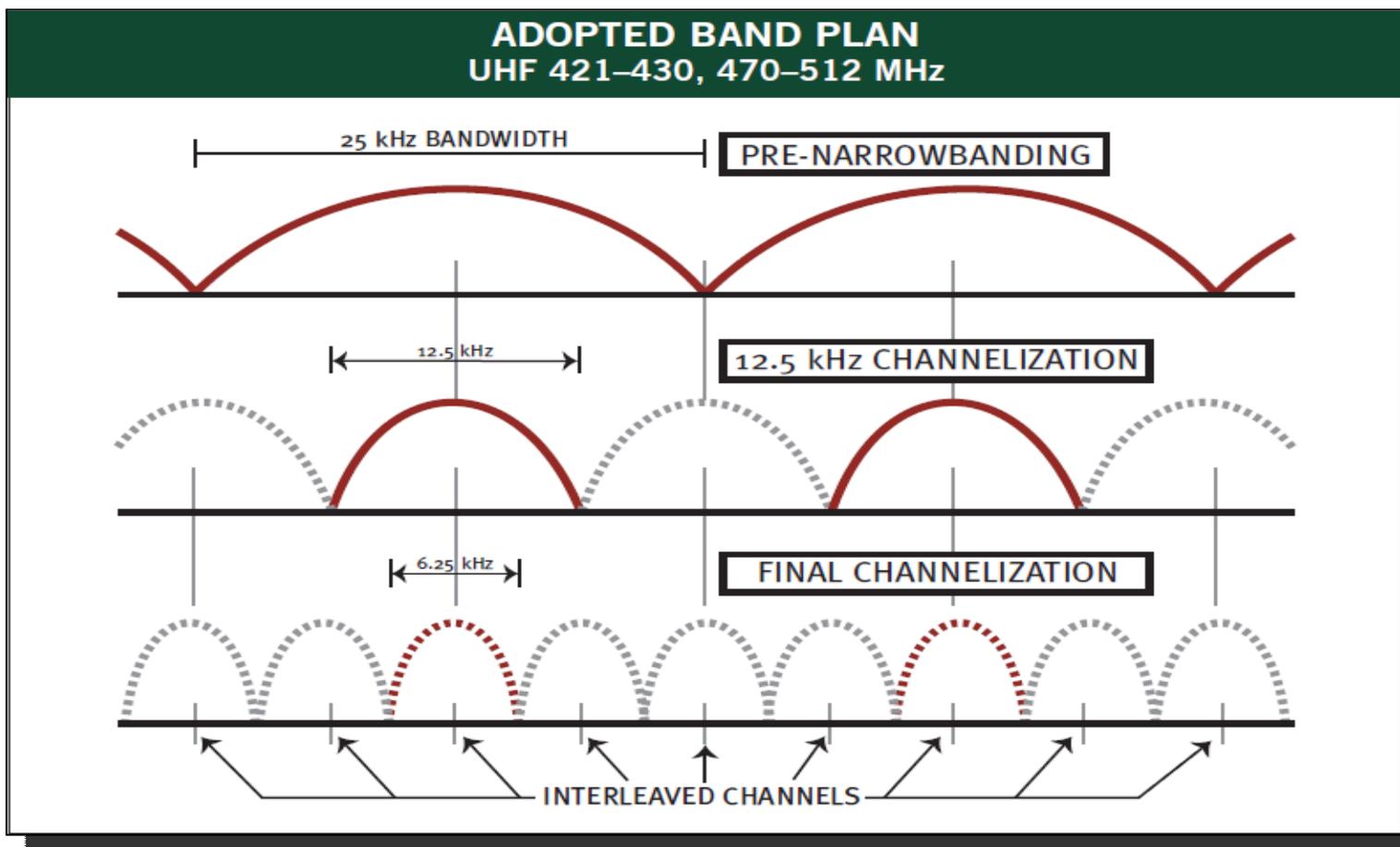
What is Mandatory Narrowbanding?

- FCC mandated radios in the VHF and UHF radio bands reduce their transmission signal from 25 kHz (wideband) to 12.5 kHz (narrowband) before December 31, 2012.
- Radios may not be legally operated after January 1, 2013 unless narrow banded.
- FCC may levy large daily fines.

Channelization Plans for VHF



Channelization Plans for UHF



Narrowbanding Basics

- Narrowbanding is not the same as “rebanding”.
 - Narrowbanding reduces bandwidth
 - Rebanding means moving to another frequency
- Narrowbanding is not optional.
- You will NOT automatically receive any additional channels.
- You do not have to convert to digital.

Narrowbanding Basics – Part 2

- Assess public safety radio equipment to determine what can be converted to 12.5 KHz and what will need to be replaced.
- Equipment that can be operated on both wideband and narrowband frequencies must be programmed to operate in the narrowband mode.
- Equipment that is not capable of narrowband operation must be replaced.

Narrowbanding Basics - Part 3

- Your radio coverage may change.
 - Only a thorough analysis of your coverage requirements can tell for sure.
- Audio level mismatch between narrow and wideband radios may occur during the transition.
- Your transition to narrowbanding will take time.
- You will need to modify your FCC license

Roadmap to Successful Narrowbanding

- Inventory of all radios in your system
 - portable (hand-carried)
 - mobile (in-vehicle) radios
 - dispatcher-used radios
 - all on or off-site base or repeater radios.
- Determine which radios can be reprogrammed or replaced
 - LMR radios manufactured after 1997 should be "narrowband" ready

Roadmap to Successful Narrowbanding

- Budget and procure as necessary
 - Operating in "mixed mode" - i.e. using both "wideband" and "narrowband" radios on the same system frequency - is *not* recommended.
 - If possible, any new narrowband radios procured should continue to operate in the "wideband" mode until the actual switch from "wideband" to "narrowband" operation is made.
 - New radios could be programmed for both narrow and wideband at the same time depending upon your transition plans.

Roadmap to Successful Narrowbanding

- Develop a "wideband"-to-"narrowband" system conversion plan
 - First replace and/or install any new narrowband capable base or repeater radio(s).
 - Next, reprogram all radios as close to simultaneously as possible to assure minimal disruption to normal radio communication operations.
 - Public safety agencies that utilize interoperable radio communications need to coordinate their conversion activities and plans to insure that interoperability capabilities are factored into any narrowbanding conversion plan.

Roadmap to Successful Narrowbanding

- Coordinate with your radio service vendor
 - Set dates and times for the actual system conversion (or cutover),
 - Ensure all radio users are aware of the process.
 - All hand-held and mobile radios are available for reprogramming at scheduled times.
- Modify your FCC radio license for "narrowband" emission designators. If unfamiliar with licensing process, seek help:
 - reputable and qualified FCC licensing assistance firm
 - FCC certified frequency coordinator
 - professional two way radio communications service company

Do *not* wait until the last minute to begin or complete the "narrowbanding" process - by doing so, you will be risking not only the use of your current radio frequency(s), Non-compliance may result in the cancellation of your license(s) by the FCC.

State of Wisconsin Mutual Aid Channel Licenses

- Statewide mutual aid channels will be narrowbanded between April and November 2011.
- Channels affected EMS A, EMS B, EMS C, FG BLUE, FG RED, FG WHITE, IFERN, MARC1, MARC2, MARC3, MARC4, NATSAR, POINT, WEM CAR and WISPERN(renamed VLAW31).
- Agencies using local VHF or UHF system for both mutual aid and day-to-day operations need to carefully coordinate the conversion to narrowband with neighboring jurisdictions to minimize disruptions to local operations and regional mutual aid communications.

Recommendations for Narrowbanding Mutual Aid Channels

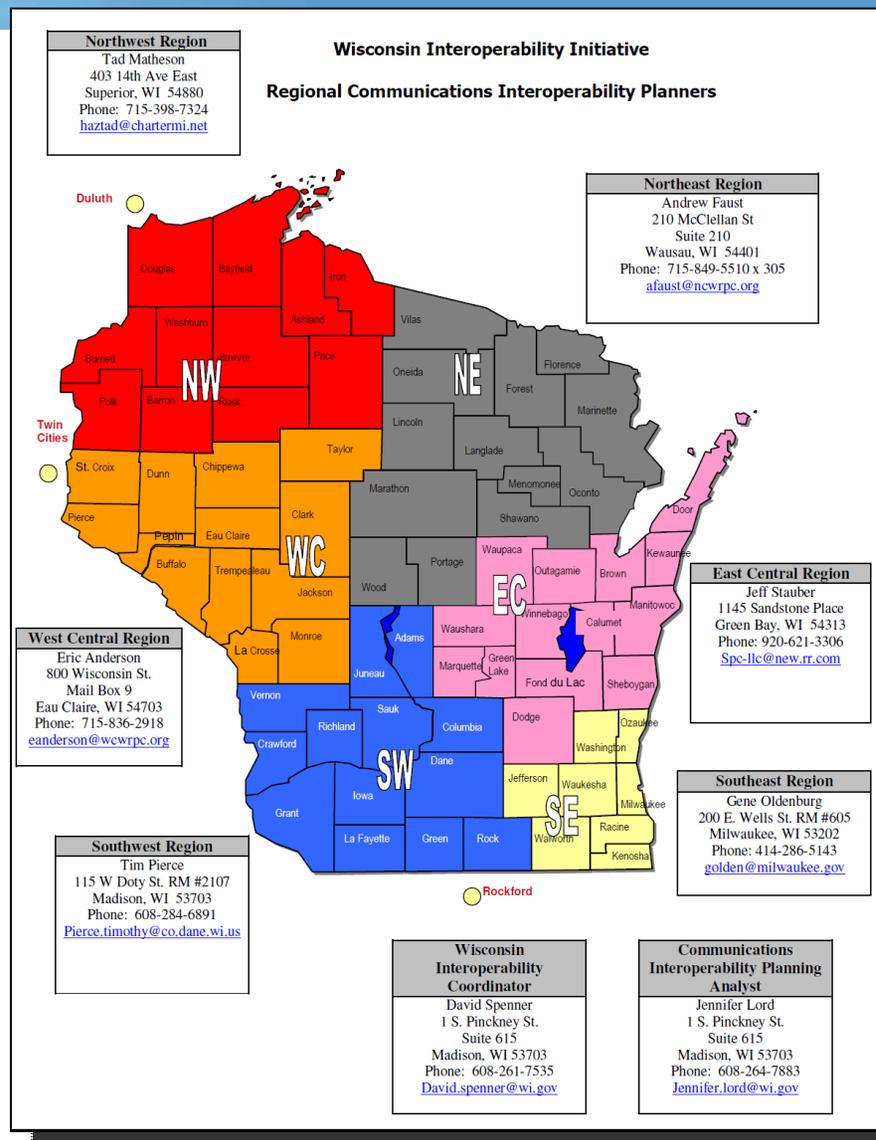
- Coordinate county/regional narrowbanding efforts to limit number of reprogramming “touches” (\$\$\$\$\$\$).
- Possible strategies include:
 - By discipline
 - Law, fire, EMS, other
 - By County
 - As local conditions dictate (i.e. fire season)

Recommendations for Narrowbanding Mutual Aid Channels

- When mutual aid channels are narrowbanded between April – November 2011 agencies may:
 - Want to consider doing local and neighboring channels at same time.
- Is “one-touch” narrowbanding possible? Some planning considerations include:
 - Equipment availability/purchasing
 - Neighbor's schedule
 - Vendor availability
- A lead coordinator should be named/established in each county.

Pagers

- All paging systems operated by public safety agencies must be narrow banded.
- Very limited grant funding is available
 - One possible source is the ‘Assistance to Firefighter Grant’.
 - Prepare application early.
 - Check FEMA website frequently.
 - Application window very small, anticipated sometime in April/May 2011.



Resources/References

- FCC website
 - <http://www.fcc.gov/pshs/>
- Wisconsin Interoperability Initiative
 - <http://interop.wi.gov>
- Assistance to Firefighter Grants
 - www.firefightersupport.com
- FCC Narrowbanding Mandate: A Public Safety Guide for Compliance
 - <http://www.iafc.org/>
- APCO International
 - www.apcointl.com/frequency/documents/NarrowbandOrder