Region 10 - State of Georgia
700MHz Regional Planning Committee (RPC)

Public Safety 700MHz Regional Communications Plan

October 20, 2015

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Signed LOC & Dispute Resolution

This document is the 700 MHz Regional Plan for Region 10 (Georgia) describing how the 769 -775 / 799 -805 MHz General Use frequencies will be allocated and implemented in Region 10.

1.0 General Information

INTRODUCTION

The Regional Committee is established under section 90.527 of the FCC's rules and regulations. Region 10 is an independent Committee apart from the Federal Communications Commission with authority to evaluate application for public safety uses of the spectrum allocated under FCC Docket 96-86. Twenty-four (24) MHz of the spectrum is allocated to Public Safety. The Public Safety spectrum consists of TV broadcast channel 63 & 64 paired with channels 68 & 69. This Plan deals with the 12.5 MHz of General Use spectrum for Public Safety.

1.1 Georgia Region 10 Officer Positions

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1.2 Georgia Region 10 Committee Memberships

Membership in the State of Georgia Regional Planning Committee is open to any interested party as defined by FCC Part 90.20a. Committee Officer requirements, voting procedures and membership attendance requirements are listed in the Region 10 Planning Committee by-laws. Appendix A contains the Region 10 By-laws. Voting and operating procedures are described in Section 2.2 of this Plan.

Subcommittees:

Technical – Ralph Bevan

Outreach - Howell McKinnon

Plan Development – Jim Mollohan

1.3 Region 10 Description

Georgia is comprised of 159 counties, which are documented in Appendix C.

The State of Georgia's population for 2005 was approximately 9 Million people.
The population percent change from April 1, 2000 to July 1, 2005 was 10.8%.

With the largest land area of any state east of the Mississippi River, the Georgia landscape runs from the mountains in the north and northeast to the coastal plain in the southeast. The most southerly of the Blue Ridge Mountains enter Georgia in the north and northeast. The central piedmont extends south and southeast from the mountains and levels to a coastal plain and coastal flatlands.

Georgia can be divided into six main land regions; the Appalachian Plateau, the Appalachian Ridge and Valley Region, the Blue Ridge, the Piedmont, the Atlantic Coastal

Plain, and the East Gulf Coastal Plain. They are presented below, beginning in the southeast along the Atlantic Ocean and moving northwest towards the Appalachian Mountains

Atlantic Coastal Plain: The Atlantic Coastal Plain is part of the Atlantic Plain that stretches from Massachusetts to the Florida peninsula and around the Gulf of Mexico. The Atlantic Coastal Plain lies in southeast Georgia along the state's Atlantic Ocean shoreline. Occupying about 1/4 of Georgia, the Atlantic Coastal Plain is characterized by a flat landscape. The Okefenokee Swamp lies in the southern part of the Atlantic Plain and in part of the East Gulf Coastal Plain. The rivers in the Atlantic Coastal Plain drain into the Atlantic Ocean.

East Gulf Coastal Plain: The East Gulf Coastal Plain covers almost 1/4 of Georgia in the southwest. Similar to the flat landscape of the Atlantic Coastal Plain, the flat East Gulf Coastal Plain's soil is less sandy. Part of the Okefenokee Swamp lies in the East Gulf Coastal Plain. The great Suwannee River, like all rivers in this land region, flows south into the Gulf of Mexico.

Piedmont: Northwest of the Atlantic Coastal Plain and the East Gulf Coastal Plain, the Georgia Piedmont cuts across the state. The Piedmont is marked by a hilly landscape in the north where it abuts the Appalachian regions at around 1,500 feet above sea level. The land loses elevation to the southeast, where the hills become more gently rolling and the land is only about 400 feet above sea level. The clear difference in landscape where the southeastern edge of the Piedmont meets the Atlantic Coastal Plain and the Gulf Coastal Plain is called the Fall Line. It is along this line that the rivers flowing from the higher elevations of the Piedmont fall to the lower Coastal Plains forming waterfalls and rapids.

Blue Ridge: A small section of the Blue Ridge is found in northeastern Georgia north of the Piedmont. The mountain peaks in the Blue Ridge area rise 2,000 to almost 5,000 feet above sea level; more than 20 above 4,000 feet. These mountains are forested with hardwoods and pine softwoods. The rushing rivers in the Blue Ridge provide hydro-electric power to Georgia. Georgia's highest mountains are found in the Blue Ridge area, including Brasstown Bald, or Mount Etonah, which rises 4,784 feet above sea level.

Appalachian Ridge and Valley Region: The Appalachian Ridge and Valley Region in northwestern Georgia consist of a series of broad, fertile valleys separated by parallel ridges of sandstone.

Appalachian Plateau: Isolated to a small piece of Georgia in the extreme northwestern corner of the state, the Appalachian Plateau stands about 1,800 to 2,000 feet above sea level and consists of narrow valleys and wooded ridges. Lookout Mountain and Sand Mountain are found in this region.

2.0 Notification and Operation

2.1 Notification Process

Eligible entities and interested parties were given 60 days advance notice of the first meeting of the Region 10, 700MHz Regional Planning Committee.

The 700MHz Region 10 Chairperson, Wray Hall set a meeting at the Georgia Public Safety Training Center, Forsyth, GA on January 24, 2002. Notification to interested parties began ninety (90) days prior to the first meeting as well as follow-up reminder announcements were issued. Announcements indicating the date, time and location of the first meeting were sent by mail to the FCC Wireless Telecommunications Bureau andposted in the following industry periodicals: *The Atlanta Journal Constitution*, *FCC Daily Digest*, and the Association of Public Safety Communications Officials, Inc. magazine. GMAG (Georgia Mutual Aid Group), NENA (National Emergency Number Association, GA Chapter), counties in Georgia as well as all known Public Safety and Public Service Associations were mailed or emailed an announcement of the meeting.

2.2 Operations of the Regional Planning Committee

This committee will use Simplified Parliamentary Procedures to conduct meetings. This method allows for all members to have their voice heard. All decisions will be by clear consensus vote with each Public Safety Agency in attendance having one (1) vote. Additional voting member considerations are listed in the Region 10 Bylaws, Appendix A. The meetings are open to all interested persons and public input time is provided for anyone to express a viewpoint or to have input to the Regional Planning process.

Subcommittees have been formed as needed to work on specific issues. For the initial planning of Region 10, three subcommittees were formed.

A minimum of one (1) full committee meeting will be held per year. The Region 10 Chairperson has the authority to call an additional meeting at a time when he/she deems necessary or when he/she deems it in the best interest of the Region to convene. In an attempt to offer as many people as possible the opportunity to contribute to the Regional 700 MHz Planning Committee, a central location was chosen to host the meeting – The Georgia Public Safety Training Center (GPSTC) in Forsyth, GA.

Beginning two years after Federal Communications Commission's approval of this Regional Plan, the Chairperson shall call a meeting of the Regional Planning Committee to elect a Chair, Vice Chair and Secretary to serve for a two-year term. There is no limit to the number of terms that may be served by officers of the 700 MHz Regional Planning Committee.

If the Chair is unable to serve a complete term, the Vice Chair will serve as Chair until the next 700 MHz Regional meeting. If both the Chair and Vice Chair are unable to serve their full terms, one or the other should make an effort to call a special meeting of the Committee to elect replacements. If for some reason, neither the Chair nor the Vice Chair can call the special meeting; the State or any County within the Region may call for a special meeting, giving at least 5 days notice, to elect replacements.

A chronological list of meetings, minutes, meeting announcements and table outlining The State of Georgia's progress in 700 MHz developments is located in Appendix D of this document.

2.3 Major Elements of the Plan

The major elements of this Plan follow the National Coordination Committee (NCC) guidelines.

The major elements of this Plan are (1) the declaration that this is the Region 10 Plan, (2)

that Region 10 encompasses the entire State of Georgia, (3) the administration and operation of the committee, (4) 700 MHz interoperability, (5) General Use spectrum management and (6) allocation requests, (7) dispute resolution, (8) adjacent Region coordination and (9) the appendices with the channel allotment being Appendix G.

3. Regional Plan Administration

3.1 Procedure for Requesting Spectrum Allotments

A. General Information

Upon FCC approval of this Plan, Region 10 will announce to the Region that 700 MHz public safety channels are available in the Region and that channels have been assigned in pool allotments to counties within the Region for usage by Public Safety entities. The general usage spectrum may be used by all Local government entities and State agencies only if the State Channels have been depleted or not available in that county.

All available methods will be used to notify public safety entities of channel availability in the Region (see Section 2.1). All spectrum requests will be considered on a first come, first served basis. Region 10 supports the National Coordination Committee Pre-Assignment Rules and Recommendations listed in Appendix ~~F~~ D, and will use these guidelines as a template to determine if an application submitted to the Regional Planning Committee meets Regional Planning standards. It is recommended that applicants familiarize themselves with these recommendations prior to submitting applications for Region 10, 700 MHz public safety system implementation. In order to maintain accurate records in the CAPRAD database, applicants will provide Region 10 with physical copies of their application along with associated documentation for Regional Planning Committee (RPC) review. The ~~RPC~~ applicant will enter the FCC 601 Form into the CAPRAD database before the application is forwarded to the FCC certified coordinators specified by the applicant.

In general and unless otherwise noted, the Region 10 Regional Planning Committee will adhere to the published National Coordination Committee Implementation Guidelines for 700 MHz Public Safety Regional Planning Committees.

B. Region 10 Technical Subcommittee

The primary responsibility of the Region 10, Technical Subcommittee is to review and assess FCC 601 application packages that are submitted from agencies within Region 10 for conformance to the RPC's 700MHz Plan requirements. The Technical Subcommittee will also provide guidance to applicants in fulfilling those requirements. The Computer Assisted Pre-coordination and Resource Database System (CAPRAD) pre-coordination database system is primary tool used by the Technical Subcommittee to receive and evaluate application packages. Applicant packages requesting modification of an existing license must be submitted through SpectrumWatch. Applications approved by the RPC will be forwarded to the selected certified Public Safety coordinator, then to the FCC by the Public Safety Coordinator for licensure.

The membership of this subcommittee will consist of the Technical Subcommittee Chairperson and at least three other members of the RPC selected by the RPC chairperson or vice-chairperson. Vendors or consultants may be a member but will not have any voting rights. Membership of the Technical Subcommittee will be determined at the annual or the monthly Technical Subcommittee meeting, and with the approval of the RPC Chairperson or Technical Subcommittee Chairperson. A majority of Technical Subcommittee members must be present in order to conduct business and all decisions will be made by a majority of the voting members. The RPC Chairperson would cast a vote in case of a tie.

The Technical Subcommittee will meet the fourth Thursday of every month to review applications for compliance to the Region 10 700MHz Plan. New applicant packages must be submitted through the CAPRAD system to the RPC Chairperson five business days prior to the Technical Subcommittee Thursday meeting date. Application packages received afterwards will not be reviewed until the next monthly Technical Subcommittee meeting.

The Technical Subcommittee duties are as follows:

1. Meet the fourth Thursday of every month to review applications for compliance to the Region 10 700MHz Plan
2. Review appeals, applicant clarifications and applicant presentations
3. Recommend approval or denial to the RPC Chairperson
4. Maintain coordination with FCC certified frequency coordinators and advisers
5. Insure applicants submit new application packages through the CAPRAD system.

C. Spectrum Re-Usage

Region 10 utilized the CAPRAD pre-coordination database system to maximize channel re-usage in the 700 MHz band. Since the spectrum is reused, it is hoped that each system will use the minimum power necessary to meet their needs. If power and ERP seems excessive to the committee, a reduction in power or antenna gain may be requested to minimize interference and increase spectrum efficiency to other co-channel and adjacent channel users.

D. Application Submission

To request channels from Region 10, a full application package must be submitted to the CAPRAD database at http://caprad.teqservices.com/cp/index.jsp. The application must include: the current FCC Form (currently the 601); a short description of the proposed system; a justification for the additional spectrum; a coverage prediction map using the current version of TIA/EIA TSB 88 guidelines; maps showing all interference predicted in the proposed system; documents indicating agency-funding commitments sufficient to fund the development of the proposed system(s); a list of 'give-back' channels, if applicable and the Region 10 supplemental form. Exceptions in accepting applications from qualified applicants will be made by the Region if applicants have demonstrated a need for 700 MHz channels and cannot access the CAPRAD database.

E. Application Distribution / Coordination

The Chair will distribute the application request to ~~all other necessary agencies with allotments in the Plan~~ the Technical Subcommittee for review. ~~and approval~~. Absent a protest, the ~~Regional Planning Committee will approve the~~ Technical Subcommittee will

either approval or recommended changes to the application and (if applicable), submit it, through the CAPRAD database, to the applicant's preferred FCC-certified frequency coordinator for processing. This process meets the requirements of FCC Rule 90.176 (c). The CAPRAD database will reflect the approved application and place the channels for the proposed system in "pre-license" status.

F. Allocation Disputes

An agency may protest a proposed system within 30 calendar days of the original distribution. Protests will only be considered if the allocation does not conform to Plan criteria or objecting agency or the Chairperson can show harmful interference is likely based on the information submitted by the agency requesting the new allocation. If an agency with pre-licensed/Region approved co-channel or adjacent channel allocations objects to a proposed allocation due to concerns about potential interference, the objecting agency may request field tests be done to confirm or refute interference potential. The completion of these field tests and the results will be required for Regional application approval. Coverage area service/interference contours of the proposed system(s) should meet values designated in Section ~~6.1~~ 7.0 of this document. Any costs associated with field tests or any other requirements to obtain Region 10 Plan approval are the responsibility of the agency submitting application to Region 10.

The parties involved must resolve the allocation dispute and notify the Region Chair within 30 calendar days. If the parties involved cannot resolve the allocation dispute within that timeframe, then a special full Committee meeting will be scheduled to consider and vote on the protest. *The burden of proof will be on the protesting party.* If approved, the application will be submitted through the CAPRAD database to the applicant's chosen FCC-certified frequency coordinator for processing.

G. Relinquishing Spectrum

When applying for new 700 MHz channels, the Regional Planning Committee encourages applicants to relinquish some amount of currently licensed spectrum ("give back channels") and make that spectrum again available for use within the Region. This is meant to be similar to the 800 megahertz spectrum which requires submission of a plan for the abandonment of their currently licensed frequencies in the lower bands (512 MHz and below). Entities with existing licensed 800 MHz systems that are requesting 700 MHz channels for system expansion will not fall under this requirement.

When an applicant submits a request for 700 MHz spectrum, a "Give Back Plan" (or abandonment plan) should accompany the application. This Plan should show what frequencies would be vacated, a time line for the transition and what channels are being retained. If an existing channel is being retained for interoperability purposes, please identify that channel in the "Give Back Plan" (or abandonment plan).

Frequencies which are to be "given back" or abandoned by an agency shall not be handed down to another within the respective jurisdiction. It is recommended that any jurisdiction wishing to "hand down" frequencies to another agency submit the proper coordination and application forms with the document of release.

The time frame allowed for phasing into 700 MHz and out of the lower currently licensed bands will be considered on a case by case basis by the regional planning committee. Generally one year will be considered acceptable in most cases, with two years as a general maximum. Any agency requiring more than one year shall provide documents stating the reasons for the delay, and give the estimated time of completion.

Frequency “give back” requirements shall hold true for regional systems where system constituents maintain discrete licenses for their own internal operations. In this case, constituent political subdivisions or agencies are required to participate in the “give back” plan. Should a political subdivision or agency act as host of a regional system, both the host agency and the constituent agencies should participate in the “give back” Plan.

Frequencies used for non-voice critical infrastructure support functions [Supervisory Control and Data Acquisition (SCADA) systems] as well as frequencies that are used for interoperability with other regional, state or national agencies that rely on one certain frequency band for emergency operations, such as, but not limited to "**Georgia Intrastate Coordination Channels (ICC) Mutual Aid" (154.905/154.935 MHz / Intercity Police Channel (ICP) base-to-base 155.370 MHz), the “National Law Enforcement Emergency Channel” (155.475 MHz), “Georgia Fire Mutual Aid” (154.280) or “Georgia EMS Mutual Aid” (155.280 and 155.340 MHz),** as well as other mutual aid or interoperable channels may be exempted by the Committee as candidates for “give back” (abandonment). Frequencies used by an applicant for such purposes, as well as the specific use and a network/ system diagram, must be specified in supportive documentation supplied with the application to enable the Regional Planning Committee to consider any possible exemption.

In cases of hardship or failure to implement, the Regional Planning Committee will consider, on a case-by-case basis, extensions not to exceed five years from date of license issuance, of the “give back” timetable. The dispute arbitration process in Section 3.6 of this document shall apply should there be protest.

H. Lower Power "Campus Eligible" Digital General Use Channels:

With the implementation of 700 MHz public safety spectrum throughout Region 10, there may be opportunities for increased channel reuse when developing radio systems for "campus" type operations. Examples of those who may capitalize on this opportunity include hospitals, stadiums, parks or places of public gathering, public universities, transit systems, correctional facilities and mental health facilities. While these channels have been designated in county pool allotments with proper designation, they do not enjoy the benefits of countywide channels in that they are not cleared for usage over a wide area. In many instances, facilities require a smaller or more specific geographical coverage area than assumed in the initial channel packing plan and may be able to be reused more efficiently. These "campus" type systems also, in many cases, require in-building or confined space/ tunnel radio coverage or communications along a linear pathway, such as a maintenance or right of way. These channels may also be used for “vehicular repeater” (MO3) operation. Public safety channels can be allotted to this type operation in a Region and can lead to effective system development, along with increased spectral efficiency, if power levels and Area of Protection (AOP) of the area are taken into account in system planning. These parameters must be established appropriate to the area of coverage. These channels are NOT eligible to be utilized throughout the county they are licensed in but to a specific geographic area, unless otherwise licensed. The Low Power channel will be licensed on an as need or first come, first serve basis. The following criteria must be

adhered to when requesting channels from Region 10 for operations of this type:

The 40dBu service contour of the proposed system must not exceed an area more than 5 miles or 8 Km from the proposed service area. When this 5-mile distance extends to an adjacent Region, the applicant must obtain concurrence from the adjacent Region. Reduced external antenna heights, along with reduced ERP, directional antenna, distributed antenna systems, down tilt, radiating “leaky coax,” are all tools that should be utilized in the development of these type systems. Region 10 will ensure the development of these types of systems will in no way interfere with co-channel or adjacent channel users within Region 10 or Region 10's adjacent Regions. The Chairperson, or a majority of the members of the Region, has the authority to request and require engineering studies from the applicant that indicate no harmful interference will be introduced to any co-channel or adjacent channel existing user prior to application approval. For 25 kHz co-channel assignments, the 50dBu service contour of the proposed stations will be allowed to extend beyond the defined service area for a distance no greater than 2 miles. An adjacent/alternate 25 kHz channel shall be allowed to have its 60 dB (50,50) contour touch, but not overlap the 40dB service (50,50) contour of an adjacent/alternate system being protected. Evaluations should be made in both directions to ensure compliance. The approval of systems utilizing county allotment channels labeled “Campus”, are subject to approval of the Regional planning committee. They are the final authority on parameters associated with “campus” type operations.

When Region 10 receives an application for low power fixed use and the proposed service contour encroaches onto an adjacent Region prior to the channel allotted to the Region being implemented in a specific system, the application must be modified so the service contour does not encroach into the adjacent Region or the applicant must supply the Region 10 700 MHz Regional Planning Committee with written concurrence from the adjacent Region permitting the original design.

3.2 Procedure for Frequency Coordination

The Region 10 Planning Committee will adhere to the 700 MHz General Use channel sort as shown on the CAPRAD database for narrowband General Use channels. (See Appendix G). Region 10 will participate in the CAPRAD database and keep the Regional Plan and current frequency allotment/allocation information on the database. The Region 10 Regional Planning Committee has both the ability to accept recommendations from the committee and, if approved, the authority to change the original frequency allotment. In order to keep the most effective frequency allotments within Region 10, an annual review of the allotments will be made at one of the scheduled meetings by the full committee and recommended changes to the Plan will be voted on. The majority of members in attendance at a meeting of the full Regional Planning Committee must approve any changes to the Regional allotments. If at any time a system is allocated channels within Region 10 and the system cannot be developed within the agreed upon guidelines (slow growth), the channels will be returned to the county pool allotments they originated from and again be available to other agencies in the Region. If Plan modifications are approved, the Chairperson will, if necessary, obtain adjacent Region approval and file a Plan amendment indicating the approved changes with the Federal Communications Commission.

3.3 Allocation of Narrowband “General Use” Spectrum

The Region 10 Technical & Implementation Subcommittee recommends that allotments

be made on the basis of one 25 KHz channel for every two (2) voice channel requests and one 12.5 KHz channel for each narrowband data channel request. This recommendation is approved by the full Committee and is part of this Plan. Allotments will be made in 25 KHz groups to allow for various digital technologies to be implemented. All agencies requesting spectrum during the initial filing window (see Section 3.1) will be allocated channels if Plan requirements are met. Agencies using Frequency Division Multiplexing (FDMA) will be expected to maintain 12.5 KHz equivalency when developing systems and will be required to utilize BOTH 12.5 KHz portions of the 25 KHz block. In most cases, this will require the geographic separation of each 12.5 KHz adjacent channel. ~~In order to promote spectrum efficiency~~, Region 10 Region 10 encourages the use of 6.25 technologies in place of 12.5 KHz as advances in communications technology allow for best spectrum operational efficiencies. Region 10 also advocates the usage digital modulation such as Time Domain Multiple Access, Frequency Domain Multiple Access and other digital modulations technologies for the best spectrum efficiency. ~~will encourage that systems allocated 25 KHz channel blocks will utilize the entire channel and not "orphan" any portions of a system designated channel. See section 7.3 Orphaned Channels~~.

3.4 Low Power Analog Eligible Channels

The FCC in the 700 MHz band plan set aside channels 1 - 8 paired with 961 – 968 and 949 – 958 paired with 909 – 1918 for low power use for on-scene incident response purposes using mobiles and portables subject to Commission-approved Regional Planning Committee Regional Plans. Transmitter power must not exceed 2 watts (ERP).

Channels 9 –12 paired with 969 – 972 and 959 – 960 paired with 1919 – 1920 are licensed nationwide for itinerant operation. Transmitter power must not exceed 2 watts (ERP). These channels may operate using analog operation. To facilitate analog modulation, this Plan will allow aggregation of two 6.25 KHz channels for 12.5 kHz bandwidth.

On scene temporary base and mobile relay stations are allowed (to the extent FCC rules allow) antenna height limit of 6.1 meter (20 feet) AGL (Above Ground Level). Vehicular repeater operation (MO3) is also allowed.

However, users are encouraged to operate in simplex mode with the least practical amount of power to reliably maintain communications whenever possible. This Plan does not limit use to analog only operations and channels are intended for use in a wide variety of applications that may require digital modulation types as well. The use of EIA/ TIA-102, Project 25 Common Air Interface is required when using a digital mode of operation.

In its dialog leading up to CFR §90.531 allocating the twenty-four low power 6.25 kHz frequency pairs (of which eighteen fall under RPC jurisdiction) ~~1~~, the Federal Communications Commission (FCC) suggested that there is a potential for multiple low power applications, and absent a compelling showing, a sharing approach be employed rather than making exclusive assignments for each specific application as low power operations can co-exist [in relatively close proximity] on the same frequencies with minimal potential for interference due to the 2 watt power restriction.

Whereas advantages exist in not making assignments, the reverse is also true. If, for example, firefighters operate on a specific frequency or set of frequencies in one area, there is some logic in replicating that template throughout the Region for firefighter

equipment. If there are no assignments, such a replication is unlikely. In seeking the middle ground with positive attributes showing up both for assignments and no assignments, we recommend the following regarding assignments associated with the eighteen (18) low power channels for which the Regional Planning Committee has responsibility:

Generic - Channel #'s 1-4 and 949-952 are set aside as generic base channels for use by public safety agencies operating within Region 10, and the complementary mobile channels # 961-964 and 1909-1912 are set aside as generic mobile channels also for use by public safety agencies likewise operating within Region 10.

Fire/ EMS/ Consequence Management - Channel #'s 5-8 are designated as Fire Protection/ Emergency Medical and Consequence Management base channels for licensing and exclusive use by the Fire/Emergency Medical disciplines, and the complementary mobile channel #'s 965-968 are set aside as Fire/Emergency Medical and Consequence Management mobile channels also for licensing and exclusive use by the Fire/Emergency Medical disciplines.

Law Enforcement/ Crisis Management - Channel #'s 953-956 are set aside as Law Enforcement/Crisis Management base channels for licensing and exclusive use by the Law Enforcement discipline, and the complementary mobile channel #'s 1913-1916 are set aside as Law Enforcement/Crisis Management mobile channels also for licensing and exclusive use by the Law Enforcement discipline.

Multidisciplinary Joint Public Safety Operations - Channel #'s 957-958 are set aside as Multidisciplinary Joint Public Safety Operations base channels for licensing and the complementary mobile channel #'s 1917-1918 are also set aside as Multidisciplinary Joint Public Safety Operations Channels for use by political subdivisions and public safety agencies operating under a unified command at a common incident for the express mission of safety of life, property or environment.

Simplex operations may occur on either the base or mobile channels. Users are cautioned to coordinate on scene use among all agencies involved, particularly when the use of repeater modes is possible at or in proximity to a common incident. Users should license multiple channels and be prepared to operate on alternate channels at any given operational area. Again, Region 10 Regional Planning Committee will require all 700 MHz users to have the capability to access ALL of the NCC approved interoperability channels in both duplex and simplex modes.

~~3.5 Wideband Waiver Review~~

~~The Second Report and Order provides for wideband operations on a waiver basis. Wideband operations may be permitted in the consolidated narrowband portion or the internal public safety guard band portion of the public safety broadband spectrum. Under certain circustances public safety entities may request a waiver to operate in the upper 1.25 megahertz of the public safety broadband spectrum. All wideband operations shall be secondary to the primary narrowband or broadband operations, as applicable. Wideband licensees operating under a secondary status pursuant to a waiver shall be required to resolve any harmful interference caused to primary operations including modifying or terminating wideband operations.~~

~~3.5.1 Wideband Application Procedures~~

~~Requests for a waiver for wideband operations shall be considered by the RPC on a case by case basis. Unless prohibited by FCC rules, any frequencies within the consolidated narrowband portion or the internal public safety guard band portion may be utilized for secondary wideband operations.~~

~~Counties and adjacent regions that are alocated specific narrowband general use channels that are impacted by secondary wideband waivers will be notified of the secondary application. The Sheriff or the County Administrator of the impacted county will be requested to provide the RPC an update of any implementation plans for construction of facilities on the specified frequencies.~~

~~The RPC will approve all waiver requests that do not disrupt plans that are underway to utilize the requested frequencies for other purposes within five years.~~

~~Upon determination that the requested frequencies are not included in an implementation plan for other purposes within five years, a letter from the RPC or state licensee, as applicable, confirming that the proposed wideband deployment will not disrupt any regional or state planning efforts that are underway will be issued.~~

~~3.5.2 Applicable FCC Rules~~

~~The following FCC Rules pertaining to wideband waiver operation were adopted in the Second Report and Order.~~

> ~~*§ 90.1432 Conditions for waiver to allow limited and temporary wideband operations in the 700 MHz Public Safety spectrum.*~~
>
> > ~~*(a) Wideband operations in the 700 MHz Public Safety spectrum. Wideband operations are prohibited in the public safety allocation of the 700 MHz band public safety spectrum except where the Commission has granted a waiver pursuant to §§ 1.3 and 1.925 of this chapter and subject to the additional conditions and requirements specified below. Grants of waiver are restricted to the deployment of a wideband system in the consolidated narrowband portion or the internal public safety guard band portion of the public safety broadband spectrum. Where spectrum in the narrowband segment or internal guard band segment is unavailable for wideband operations, public safety entities may request a waiver to operate in the upper 1.25 megahertz of the public safety broadband spectrum.*~~
> >
> > ~~*(b) Any public safety entity seeking to conduct wideband operations within the public safety allocation must file a request for waiver that is accompanied by an application for authorization and includes the following information:*~~
> > ~~*(1) a letter from the Public Safety Broadband Licensee, confirming that the proposed wideband deployment is not inconsistent with the broadband deployment plan for the affected or adjacent service areas; and*~~
> >
> > ~~*(2) a description of the conditions or transition requirements, if any, agreed to between the applicant and the Public Safety Broadband Licensee.*~~
> >
> > ~~*(c) Additional requirement for wideband operations in the narrowband*~~

~~*segment and Internal Guard Band. If an applicant seeks permission to deploy wideband systems in the narrowband segment, its waiver request must also include a letter from the appropriate regional planning committee or state licensee confirming that the proposed wideband deployment will not disrupt any regional or state planning efforts that are underway.*~~

~~*(d) Additional requirements and conditions for wideband operations in the broadband segment. Permission to conduct wideband operations in the broadband segment will be granted only where spectrum in the narrowband segment or the internal guard band is unavailable for wideband operations. In no event will permission be granted to conduct wideband operations in geographic areas scheduled for broadband deployment within the first three years of the build-out plan for the Shared Wireless Broadband Network.*~~

~~*(1) An applicant seeking permission to deploy wideband systems in the broadband segment must have first issued a request for proposal (RFP) that permitted interested parties to submit broadband proposals that are technically consistent with the Shared Wireless Broadband Network.*~~

~~*(2) A request for waiver that seeks permission to deploy wideband systems in the broadband segment must include the following information:*~~

> ~~*(i) a substantially supported, detailed technical showing demonstrating that insufficient spectrum in the narrowband segment or the internal guard band is available to support the desired wideband operations;*~~
>
> ~~*(ii) a showing that rejected responses to the required broadband network RFP were more costly, provided less coverage as measured by throughput at the network edge, or were otherwise inferior to the accepted wideband proposal; and*~~
>
> ~~*(iii) a detailed plan for integration of such wideband system into the Shared Wireless Broadband Network. This plan must specify how and by what date the wideband applicant will integrate its proposed wideband system into Shared Wireless Broadband Network and must include a certification that the public safety entity will not seek*~~
>
> ~~*reimbursement for any costs involved in converting the wideband system to Shared Wireless Broadband Network upon completion of that network in the applicant's geographic area.*~~

~~*(3) Authority to conduct wideband operations in the broadband segment of the public safety spectrum will be subject to the following conditions:*~~

> ~~*(i) All devices operating on the wideband system must be designed to interoperate with Shared Wireless Broadband Network;*~~
>
> ~~*(ii) All waivers will expire automatically upon the Upper 700 MHz D Block licensee's initiation of service in the service area covered by such waiver.*~~

~~*(e) Secondary status of wideband operations. All wideband operations permitted under this section shall be secondary to the authorized narrowband or broadband applications, as applicable.*~~

~~*(f) License terms for wideband operations. Any secondary license to conduct wideband operations in the public safety spectrum shall have a term of no more than five years.*~~

~~*(g) Renewal of wideband authorization. Any request for renewal of an initial authorization to conduct wideband operations shall be filed not less than 180 days prior to expiration of the license. All renewal requests must include a showing that continued operation of the wideband system is in the public interest and must be accompanied by a letter from the Public Safety Broadband Licensee confirming that continuing wideband operations are not inconsistent with the broadband deployment plan for the affected or adjacent service areas. The license term for any renewal of a license granted under the waiver provisions herein shall not exceed three years. No more than one license renewal will be granted.*~~

~~*(h) Grandfathered wideband STA operations. Upon request, the Public Safety and Homeland Security Bureau may grant a public safety entity that has constructed, deployed, and was operating a wideband system as of July 31, 2007 pursuant to STA to extend the STA grant for periods of no more than 180 days until, but not later than, six months following the selection of the Public Safety Broadband Licensee.*~~

3.5 Intra-Regional Dispute Resolution

In the event an agency disputes the implementation of this Plan or the Federal Communications Committee approval of this Plan or parts of this Plan, the agency must notify the Chair of the dispute in writing. This section does not apply to protests over new spectrum allocations (see Section 3.1). The Chair will attempt to resolve the dispute on an informal basis. If a party to the dispute employs the Chair, then the Vice Chair will attempt resolution. In such cases, the Chair shall be deemed to have a conflict of interest and will be precluded from voting on such matters. If after 30 days the dispute is not resolved, the Chair (or Vice Chair) will appoint a Dispute Resolution Committee consisting of two members from the State of Georgia governmental agencies and at least five members from different counties in Region 10. That committee will select a Chair to head the committee and a secretary to document the proceedings.

The Regional Plan Chair (or Vice Chair) will represent the Region in presentations to the Dispute Resolution Committee. The Committee will hear input from the disputing agency, any effected agencies and the Region Chair. The Committee will then meet in executive session to prepare a recommendation to resolve the dispute. Should this recommendation not be acceptable to the disputing agency/agencies, the dispute and all written documentation from the dispute will be forwarded to the National Regional Planning Oversight Committee, a subcommittee of the National Public Safety Telecommunications Committee (NPSTC) for review. As a last resort, the dispute will be forwarded to the Federal Communications Commission for final resolution.

4.0 Priority Matrix

In the event that spectrum allocation requests conflict and cannot all be accommodated, the following matrix will be used to determine priority for allotment. This matrix will only be used if two requests are received in the same time frame for the same number of channels. Otherwise, the first come first served procedure of Section 3.1 will be used.

• Service (Maximum score 250 points)
Priority is given to users fundamentally involved with the protection of Life and Property Police, fire, EMS, Rescue, EMA, combined systems, multi-jurisdictional systems, etc.

• Inter-system & Intra-system interoperability (Maximum score 100 points)
How well the proposed system will be able to communicate with other levels of government and services during an emergency on "regular" channels, not the I/O channels. Interoperability must exist among many agencies to successfully accomplish the highest level of service delivery to the public during a major incident, accident, natural disaster or terrorist attack. Applicants requesting 700 MHz spectrum shall inform the Region of how and with whom they have been achieving interoperability in their present system.

The applicant shall stipulate how they will accomplish interoperability in their proposed system (gateway, switch, cross-band repeater, console cross patch, software defined radio, or other means) for each of the priorities listed below:

1. Disaster and extreme emergency operation for mutual aid and interagency communications.
2. Emergency or urgent operation involving imminent danger to life or property.
3. Special event control, generally of a preplanned nature (including task force operations).
4. Single agency secondary communications.
5. Routine day-to-day non-emergency operations.

• Loading (Maximum score 100 points)
Is the system part of a cooperative, multi-organization system? Is the application an expansion of an existing 800 MHz system? Have all NPSPAC channels been assigned (where technically feasible)? A showing of maximum efficiency or a demonstration of the system's mobile usage pattern could be required in additional to loading information. Based on population, number of units (if number of units, are they take home, how many per officer), what are the talk groups?

• Spectrum Efficient Technology (Maximum score 200 points)
How spectrally efficient is the system's technology? Trunked systems are considered efficient "as well as any technological systems feature, which is designed to enhance the efficiency of the system and provide for the efficient use of the spectrum."

• Systems Implementation Factors (Maximum score 200 points)
Applicants should submit some form of proof of financial commitment, accompanied by a RFP (Request for Proposal) outlining the design of the proposed system and detailing the development of the requested channels will be required to be submitted to the Regional Planning Committee prior to approval.

• Geographic Efficient (Maximum Score 50 points)
The ratio of subscriber units to area covered and the channel reuse potential are two subcategories. "The higher the ratio (mobiles divided by square miles of coverage) the

more efficient the use of the frequencies. Those systems which cover large geographic areas will have a greater potential for channel reuse and will therefore receive a high score in this subcategory."

• Givebacks (Maximum score 100 points)
Consider the number of channels given back
Consider the extent of availability and usability of those channels to others.

If there are more applicants than frequencies available for a given area, the above criteria will be used to grade each application before the committee.

This process, if required, will be treated as a dispute and the procedures outlined in Section 3.6 using the above criteria will be used to allocate the frequencies.

5. Process for Handling Uninformed Regions

There are no uninformed adjacent Regions to Region10 and Letters of Concurrence have been received from all five adjacent Regions.

6. Coordination with Adjacent Regions

The Regions that are adjacent to or within seventy (70) miles of Region 10 are listed below:

Region 1	State of Alabama	Border
Region 9	State of Florida	Border
Region 31	State of North Carolina	Border
Region 37	State of South Carolina	Border
Region 39	State of Tennessee	Border

Region 10 has coordinated channel allocations and received concurrence with all its bordering Regions by providing copies of the Region 10 Plan (including channel allotments) to each adjacent Region using the CAPRAD database and by mailing hard copies of the Plan to the adjacent Region's Chairperson.

In seeking Regional concurrence, the Chairperson has given copies of this Plan to the Chairperson of Region 1, 9, 31, 37, 39. The Region 10 Plan will also be available for viewing by all Regions via the CAPRAD 700 MHz database. The CAPRAD pre-coordination database shows those channels available that will not interfere with Region 10 allotments or systems.

The CAPRAD database and its associated packing Plan provides minimum channel allotments for all of Region 10's bordering Regions. This method was recommended by the NCC Implementation Subcommittee as a way to assure that adjacent Regions, which did not enter the Regional Planning process immediately, would not find all frequencies assigned in their borders.

Therefore, adjacent Regions 1, 9, 31, 37, 39 should all be able to satisfy voice and narrowband data requests along their border areas with Region 10. However, if an adjacent Region has difficulties satisfying intra-regional requests due to channel allocation within Georgia, this committee pledges to work with that adjacent Region to resolve any issues that might hinder interoperability or reduce any benefit to public safety

communications.

7. System Design/Efficiency Requirements

7.1 Interference Protection

The frequency allotment list will be based on an assumption that systems will be engineered on an interference-limited basis, not a noise floor-limited basis. Agencies are expected to design their systems for maximum signal levels within their coverage area and minimum levels in the coverage area of other co-channel users. Coverage area is normally the geographical boundaries of the Agency(s) served plus five miles area beyond.

Systems should be designed for minimum signal strength of 40 dBµ in the system coverage area while minimizing signal power out of the coverage area. TIA/EIA TSB88-A (or latest version) will be used to determine harmful interference assuming 40 dBµ, or greater, signal in all systems coverage areas. This may require patterned antennas and extra sites compared to a design that assumes noise limited coverage. Region 10 complies with National Coordination Committee recommendations listed in Appendix ~~K~~ D of the Regional Planning Committee Guidelines published by the National Coordination Committee (NCC).

7.2 Spectrum Efficiency Standards

Initial allotments will be made on the basis of 25 kHz channels. To maximize spectrum utilization, prudent engineering practices and receivers of the highest quality must be used in all systems. Given a choice of radios to choose from in a given technology family, agencies should use the units with the best specifications. This Plan will not protect agencies from interference if their systems are under-constructed (i.e.; areas with the established service area having minimum signal strength below 40 dBu), or the systems utilize low quality receivers. The applicant's implementation of best engineering practices will be encouraged by the Regional Planning Committee at all times.

It is the eventual goal of the FCC and the public safety community for radio equipment to meet the requirement of one voice channel per 6.25 KHz of spectrum. Region 10 encourages the use of 6.25 KHz technologies when it is available for general use ~~*When applying for channels within Region 10, the applicants should acknowledge the deadline for converting all equipment to 6.25 kHz or 6.25 kHz equivalent technology is January 31, 2017 as set forth in 90.535(d)(3).*~~ For narrowband mobile data requests, one mobile data channel will consist of two (2) 6.25 KHz channels/one (1) 12.5 KHz channel. Narrowband 6.25 KHz channels can be aggregated for data use to a maximum bandwidth of 25 KHz. As 6.25 KHz migration evolves, an agency that creates any "orphaned" 6.25 KHz channels should realize that these channels could be allocated to nearby agencies requesting channels to maintain consistent grouping and utilization of 25 KHz blocks within the Region.

Region 10 encourages small agencies to partner with other agencies in multi-agency or regional systems as they promote spectrum efficiency and both small and large agency capacity needs can be met. Loading criteria can also be achieved in multi-agency systems that will allow greater throughput for all agencies involved than that which could be achieved individually.

7.3 Orphaned Channels

The narrowband pool allotments with Region 10 will have a channel bandwidth of 25 kHz. These 25 kHz allotments have been characterized as “Technology Neutral” and flexible enough to accommodate multiple technologies utilizing multiple bandwidths. If agencies choose a technology that requires less than 25 kHz channel bandwidth for their system, there is the potential for residual, “orphaned channels” of 6.25 kHz or 12.5 kHz bandwidth immediately adjacent to the assigned channel within a given county area.

An orphan channel may (if possible) be used at another location within the county area where it was originally approved, if it meets co- and adjacent channel interference criteria. Region 10 will utilize “county areas” as guidelines for channel implementation with the area of Region 10. The definition of “county area” in this Plan is the geographical/political boundaries of a given county, plus a distance of up to 5 miles outside of the county or jurisdictional boundary.

If the channel, or a portion of a channel, is being moved into a “county area” that is within 30 miles of an adjacent Region, Region 10 will receive concurrence from the affected Region. By extending the “county area” by a designated distance, it is anticipated this will increase the possibility that orphaned channel remainders will still be able to be utilized within the “county area”, and reduce the potential for channel remainders to be forced to lay dormant and used with a county channel allotment. These movements will be documented on the CAPRAD database.

If the “orphaned channel” remainder does not meet co-channel and adjacent channel interference criteria by moving it within the “county area” as listed above, and it is determined by the Region that the “orphaned channel” cannot be utilized in the Region without exceeding the distance described in the “county area” listed above, Region 10 will submit a Plan amendment to the FCC to repack the channel to a location where its potential use will maintain maximum spectral efficiency. This FCC Plan amendment will require affected Region concurrence.

When in the best interest of public safety communications and efficient spectrum use within the Region, the Region 10 Regional Planning Committee shall have the authority to move orphan channel allotments, and/or co-/adjacent-channel allotments affected by the movement of orphan channels, within its “county areas”, which are defined above. This is to retain spectrum efficiency and/or minimize co-channel or adjacent channel interference between existing allotments within the Region utilizing disparate bandwidths and technologies.

7.4 System Implementation

This section addresses incumbent high power and low power broadcast or translator TV stations in the state, along with the “DTV” transition. Agencies deploying 700MHz systems prior to the February 17, 2009 TV transition deadline must protect incumbent full power TV stations as outlined in 90.545 and 90.309. See Appendix I for a list of TV stations that impact Region 10.

7.5 Channel Loading

7.5.1 Loading Tables Voice Channels

Emergency		Non-Emergency	
Channels	**Units/Channel**	**Channels**	**Units/Channel**
1-5	**70**	**1-5**	**80**
6-10	**75**	**6-10**	**90**
11-15	**80**	**11-15**	**105**
16-20	**85**	**16-20**	**120**

Agencies requesting additional frequencies must show loading of 100 percent or greater on their existing system. Should a demand for frequencies become exhausted, any system having frequencies assigned under this Plan for four or more years previously and not loaded to at least seventy percent will lose operating authority on several frequencies to bring the system into compliance with the 70 percent loading standard. Frequencies lost in this manner will be reallocated to other agencies to help satisfy the demand for additional frequencies.

7.5.2 Traffic Loading Study for Narrowband Systems

Justification for adding frequencies, or retaining existing frequencies, may be provided by a traffic loading study instead of loading by number of transmitters per channel. It will be the responsibility of the requesting agency to provider a verifiable study showing sufficient airtime usage to merit additional frequencies. A showing of airtime usage, excluding telephone interconnect air time, during the peak busy hour greater than 70 percent per channel on three consecutive days will be required to satisfy loading criteria.

7.5.3 Expansion of Existing 800 MHz Systems

Existing 800MHz systems that are to be expanded to include the 700MHz frequency spectrum will have to meet the requirements of the FCC and both Region 10's 800 MHz NPSPAC and 700 MHz Plans. If the two Region 10 Plans are in conflict, the Plan that gives the applicant the greater flexibility will govern.

8. Interoperability Channels

8.1 Introduction

The FCC definition of interoperability is taken from ~~98.191 paragraph 76~~ §90.7:

"Interoperability. An essential communications link within pubic safety and public service wireless communications systems which permits units from two or more different entities to interact with one another and to exchange information according to a prescribed method in order to achieve predictable results."

The ability for agencies to effectively respond to mutual aid requests directly depends on their ability to communicate with each other. Mutual aid should be encouraged among agencies. This Plan seeks to facilitate the communications necessary for effective mutual aid.

The Region 10, 700 MHz RPC will administer the 700MHz interoperability channels via the State Interoperability Executive Committee (SIEC) under the National Coordination Committee's (NCC) guidelines. The Region 10, 700 MHz Regional Planning Committee will work with the State of Georgia's SIEC.

8.2 Tactical Channels

Channels are available by virtue of statewide license call sign WPTZ768 (State of Georgia.) All mobile and portable units operating under this Plan and utilizing 700 MHz channels must be programmed with the minimum number of channels called for either in NCC guidelines or as the State of Georgia's SIEC specifies. The channel display in these radios will be in accordance with the NCC and SIEC guidelines that have common alphanumeric nomenclature to avoid any misinterpretation of use within Region 10.

8.3 Deployable Systems

Region 10 supports the use of conventional and trunked deployable systems capable of using FCC designated / NCC recommended interoperability tactical channels. State of Georgia's SIEC will develop details for deploying these systems.

8.4 Monitoring of Calling Channels

700MHz licensees will monitor interoperable calling channels in accordance with guidelines developed by the SIEC.

8.5 Incident Command System Standard

Our region supports FCC and NCC recommendations for the National Incident Management System.

9. Re-designation of Secondary Trunking and Reserve Channels

~~9.1 Database Maintenance~~

~~The CAPRAD pre-coordination database has developed channel allotments in each county within Georgia utilizing the U.S. Census Date, 2000, height above terrain(HAAT) and public safety use curves generated by the Public Safety Wireless Advisory Committee(PSWAC) to provide spectrally efficient frequency allotments. Region 10 will continue to use the CAPRAD pre-coordination database for other 700MHz spectrum as it becomes available.~~

9.1 Introduction

On October 17, 2014, the FCC adopted a Report and Order (FCC 14-172) revising the rules governing the 700MHz public safety narrowband channels. Specifically, the Commission released the narrowband reserve channels(twenty-four 12.5 KHz channels) to General Use under the administration of the Regional Planning Committees(RPC) for the benefit of state and local public safety users.

700 MHz Reserve Channels (12.5 KHz)			
Item	FCC Channel Number	Base Frequency Center	Mobile Frequency Center
1	37-38	769.231250	799.231250
2	61-62	769.381250	799.381250
3	77-78	769.481250	799.481250
4	117-118	769.731250	799.731250
5	141-142	769.881250	799.881250
6	157-158	769.981250	799.981250
7	197-198	770.231250	800.231250
8	221-222	770.381250	800.381250
9	237-238	770.481250	800.481250
10	277-278	770.731250	800.731250
11	301-302	770.881250	800.881250
12	317-318	770.981250	800.981250
13	643-644	773.018750	803.018750
14	683-684	773.268750	803.268750
15	699-700	773.368750	803.368750
16	723-724	773.518750	803.518750
17	763-764	773.768750	803.768750
18	779-780	773.868750	803.868750
19	803-804	774.018750	804.018750
20	843-844	774.268750	804.268750
21	859-860	774.368750	804.368750
22	883-884	774.518750	804.518750
23	923-924	774.768750	804.768750
24	939-940	774.868750	804.868750

IAW FCC 14-172, Region 10 has repurposed the above 700 MHz Reserve Channels for the following uses: six (6) ea Deployable Use, four (4) ea MO3 Use and fourteen (14) flexible General Use. The following tables identifies the new channel assignments.

700 MHz Reserve/Deployable Channels (12.5 KHz)			
Item	FCC Channel Number	Base Frequency Center	Mobile Frequency Center
1	37-38	769.231250	799.231250
2	61-62	769.381250	799.381250
3	117-118	769.731250	799.731250
4	141-142	769.881250	799.881250
5	883-884	774.518750	804.518750
6	939-940	774.868750	804.868750

700 MHz Reserve/MO3 Channels (12.5 KHz)			
Item	FCC Channel Number	Base Frequency Center	Mobile Frequency Center
1	77-78	769.481250	799.481250
2	157-158	769.981250	799.981250
3	859-860	774.368750	804.368750
4	923-924	774.768750	804.768750

700 MHz Reserve/General Use Channels (12.5 KHz)			
Item	FCC Channel Number	Base Frequency Center	Mobile Frequency Center
1	197-198	770.231250	800.231250
2	221-222	770.381250	800.381250
3	237-238	770.481250	800.481250
4	277-278	770.731250	800.731250
5	301-302	770.881250	800.881250
6	317-318	770.981250	800.981250
7	643-644	773.018750	803.018750
8	683-684	773.268750	803.268750
9	699-700	773.368750	803.368750
10	723-724	773.518750	803.518750
11	763-764	773.768750	803.768750
12	779-780	773.868750	803.868750
13	803-804	774.018750	804.018750
14	843-844	774.268750	804.268750

FCC 14-172 also re-designated the 700 MHz Secondary Trunking Channels and reserved them for air-to-ground communication between low-altitude aircraft and associated ground stations, e.g., between medevac helicopters and first responders. The following table identifies the 12.5 KHz channel assignment of the new Air-to-Ground channels.

New Air-to-Ground Channels (12.5 KHz)			
Item	FCC Channel Number	Base Frequency Center	Mobile Frequency Center
1	21-22	769.13125	799.13125 MHz
2	101-102	769.63125	799.63125 MHz
3	181-182	770.13125	800.13125 MHz
4	261-262	770.63125	800.63125 MHz
5	659-660	773.11875	803.11875 MHz
6	739-740	773.61875	803.61875 MHz
7	819-820	774.11875	804.11875 MHz
8	899-900	774.61875	804.61875 MHz

The FCC assigned responsibility for coordinating and administrating these channels to the state and permit aircraft to use either the mobile transmit or base transmit side of the channel pair. States are responsible for administration of the adjacent interoperability channels. But the FCC also has encouraged the states to coordinate operations on the newly designated air-to-ground channels with the Regional Planning Committees (RPCs). The Georgia Emergency Management/Homeland Security Office with the concurrence of the Region 10, RPC has requested the FCC to re-assign their coordinating and administrating responsibilities over to the Region 10, 700 MHz RPC.

The FCC has directed the ERP limit of two watts for portable units and restricts aircraft use to attitudes at or below 457 meters (1500 feet) above ground level.

Applicants seeking a license for the newly re-designated Reserve Channels or the new Air-to-Ground channels must file a Form 601 and receive the approval of the Region 10, 700MHz RPC. Applications will be subject to the same Intra-Region and Inter-Region coordination protocol currently used in Region 10

~~**9.2 Database Maintenance**~~

10.0 Database Maintenance

The CAPRAD pre-coordination database has developed channel allotments in each county within Georgia utilizing the U.S. Census Date, 2000, height above terrain(HAAT) and public safety use curves generated by the Public Safety Wireless Advisory Committee(PSWAC) to provide spectrally efficient frequency allotments. Region 10 will continue to use the CAPRAD pre-coordination database for other 700MHz spectrum as it becomes available.

~~**9.3 Inter-Regional Dispute Resolution Process**~~

11.0 Inter-Regional Dispute Resolution Process

In the event that a dispute between Region 10 and an adjacent Region or Regions, regarding spectrum allocations or implementation, which cannot be resolved within 60 days , the parties to the dispute will request a hearing by the National Regional Planning

Oversight Committee.

~~**9.4 Amendment Process**~~

12.0 Amendment Process

Amendments to the Region 10 Plan will be made at Region 10 RPC meetings. All amendments will be voted on and passed or rejected by a simple majority vote. The Chairman or his designee will make the appropriate changes to the Plan and notify the adjacent Regions for their concurrence. Once the concurrences are received from the adjacent Regions, the Plan will be certified and filed, by the Chairperson, with the FCC for approval. Electronic filing will be the preferred method.

~~**9.5 Meeting Announcements**~~

13.0 Meeting Announcements

Meeting announcements will be made per the Region 10 By-Laws. Region 10 will utilize the list servers, Public Notices issued by the FCC, fax notification, email to individuals, association, agencies and vendors, verbal announcements at meetings and/or appropriate publications.

~~**10.0 Certification**~~

14.0 Certification

I hereby certify that all planning committee meetings, including subcommittee or executive committee meetings were open to the public. A summary of the deliberations of the Committee pursuant to adopting this Plan can be found in Appendix D, meeting attendance, agendas and other events.

Jim Mollohan
Chairman, 700 MHz Region 10 RPC
March 10, 2008

Appendix A REGION

10 BYLAWS

THE BYLAWS OF REGION 10 – GEORGIA
700 MHz REGIONAL PLANNING COMMITTEE April 10, 2003

ARTICLE 1

NAME & PURPOSE

1.1 Name and purpose. The name of this Region shall be Region 10 – Georgia. Its primary purpose is to foster cooperation, planning, development of regional plans and the implementation of these plans in the 700 MHz Public Safety Band.

ARTICLE II MEMBERS

For purposes of this Article, the term "member," unless otherwise specified, refers to both voting and non-voting members.

2.1 Number, Election and Qualification. The Regional Committee shall have two classes of members, "voting members" and "non-voting members." New members may be added at annual, special, or regular meetings.
Voting Members. Voting members shall consist of one representative from any single agency engaged in public safety eligible to hold a license under 47 CFR §90.20, 47 CFR §90.523 or 47 CFR 2.103. Except that a single agency shall be allowed no more than one vote for each distinct eligibility category (e.g. police, fire, EMS, highway) within the agency's organization or political jurisdiction. In voting on any issue the individual must identify himself/herself and the agency and eligibility category which he or she represents. Voting members may not vote on issues involving their entity.
Non-Voting Members. Non-voting members are all others interested in furthering the goals of public safety communications. *Non-voting members are considered crucial and important, as they may have direct knowledge of new developments in technology.*

2.2 Tenure. In general, each member shall hold MEMBERSHIP from the date of acceptance until resignation or removal.

2.3 Powers and Rights. In addition to such powers and rights as are vested in them by law, or these bylaws, the members shall have such other powers and rights as the membership may determine.

2.4 Suspension and Removal. A representative may be suspended or removed with cause by vote of a majority of members after reasonable notice and opportunity to be heard. Failure to attend 50% of meetings held in a calendar year shall be a specific cause for removal from the membership.

2.5 Resignation. A member may resign by delivering written resignation to the chairman, vice-chairman, treasurer or secretary of the Regional Committee or to a meeting of the members.

2.6 Annual Meetings. The annual meeting of the members shall be held at the Georgia Public Safety Training Center (GPSTC) in Forsyth, Georgia, (or another pre-designated location) *before or after Georgia General Assembly period*. .

If an annual meeting is not held as herein provided, a special meeting of the members may be held in place thereof with the same force and effect as the annual meeting, and in such case all references in these bylaws, except in this Section 2.6, to the annual meeting of the members shall be deemed to refer to such special meeting. Any such special meeting shall be called and notice shall be given as provided in Section 2.7 and 2.8.

2.7 Special Meetings. Special meetings of the members may be held at any time and at any place within the Regional Committee area. Special meetings of the members may be called by the chairman or by the vice-chairman, or in case of death, absence, incapacity, by any other officer or, upon written application of two or more members.

2.8 Call and Notice.

A. Annual Meetings. Reasonable notice of the time and place of scheduled meetings of the members, not being less than 30 days, shall be given to each member.Such notice may specific the purpose(s) of meeting, unless otherwise required by law or these bylaws or unless there is to be considered at the meeting (i) amendments to these bylaws, (ii) an increase or decrease in the number of members, or (iii) removal or suspension of a member who is an officer. Announcements of meetings, stating the time and place where the meetings to be held, may be published in newspapers, land mobile radio(LMR) periodicals and disseminated via e-mail and other electronic form.

B. Reasonable and sufficient notice. Except as otherwise expressly provided, it shall be reasonable and sufficient notice to a member to send notice by mail at least five days or by e-mail/facsimile at least three days before any <u>special</u> <u>meetings</u>, addressed to such member at his or her usual or last known business address, or, to give notice to such member in person or by telephone at least three days before the meeting.

2.9 Quorum. At any meeting of the members, a majority of the officers and {either a minimum number of members or a minimum percentage of members} of the voting members shall constitute a quorum. Any meeting may be adjourned to such date or dates not more than ninety days after the first session of the meeting by a majority of the votes cast upon the question, whether or not a quorum is present, and the meeting may be held as adjourned without further notice.

2.10Action by Vote. Each voting member, representing a particular agency (one vote per agency) shall have one vote; non-voting members have no right to vote. When a quorum is present at any meeting, a majority of the votes properly cast by voting members present shall decide any question, including election to any office, unless otherwise provided by law or these bylaws.

2.11Action by Writing. Any action required or permitted to be taken at any meeting of the members may be taken without a meeting if all members entitled to vote on the matter consent to the action in writing and the written consents are filed with the records of the meetings of the members. Such consents shall be treated for all purposes as a vote at a meeting.

2.12Proxies. Voting members may vote either in person or by written proxy dated not more than one month before the meeting named therein, which proxies shall be filed before being noted with the secretary or other person responsible for recording the proceedings of the meeting. Unless otherwise specifically limited by their terms, such proxies shall entitle the holders thereof to vote at any adjournment of the meeting by the proxy shall terminate after the final adjournment of such meeting.

2.12.1Voting on One's Own Application. At no time can a voting member vote on his/her application.

2.12.2Special Interest Voting. A voting member can**not** have a commercial interest in any of his/her region and/or adjacent regions application(s) on which he/she is reviewing, approving and/or voting.

ARTICLE III OFFICERS AND AGENTS

3.1 Number and qualification. The officers of the Regional Committee shall be a chairman, vice-chairman, treasurer, secretary, at large and such other officers, if any, as the voting members may determine. All officers must be voting members of the Regional Committee.

3.2 Election. The officers shall be elected by the voting members at their first meeting and, thereafter, at the annual meeting of the members.

3.3 Tenure. The officers shall each hold office until the annual meeting of the members held within one year from the adoption of these bylaws, or until their successor, if any, is chosen, or in each case until he or she sooner dies, resigns, is removed or becomes disqualified.

3.4 Chairman and Vice Chairman. The chairman shall be the chief executive officer of the Regional Committee and, subject to the control of the voting members, shall have general charge and supervision of the affairs of the Regional Committee. The chairman shall preside at all meetings of the Regional Committee. The Vice Chairman, if any, shall have such duties and powers as the voting members shall determine. The vice-chairman shall have and may exercise all the powers and duties of the chairman during the absence of the chairman or in the event of his or her inability to act.

3.5 Treasurer. The treasurer shall be the chief financial officer and the chief accounting officer of the Regional Committee. The treasurer shall be in charge of its financial affairs, funds, and valuable papers and shall keep full and accurate records thereof.

3.6 Secretary. The secretary shall record and maintain records of all proceedings of the members in a file or series of files kept for that purpose, which file or files shall be kept within the Region and shall be open at all reasonable times to the inspection of any member. Such file or files shall also contain records of all meetings and the original, or attested copies, of bylaws and names of all members and the address (including e- mail address, if available) of each. If the secretary is absent from any meeting of members, a temporary secretary chosen at the meeting shall exercise the duties of the secretary at the meeting.

3.7 At Large. The At Large position would in the temporary absence of the Vice Chairman, Treasurer or Secretary officer fulfil their duties and responsibilities. This position would also insure a majority(more than 50%) of the executive officers are present and to cast a vote in the event of a tie.

3.8 Suspension or Removal. An officer may be suspended with cause by vote of a majority of the voting members.

3.9 Resignation. An officer may resign by delivering his or her written resignation to the chairman, vice-chairman, treasurer, or secretary of the Regional Committee. Such resignation shall be effective upon receipt (unless specified to be effective at some other time), and acceptance thereof shall not be necessary to make it effective unless it so states.

3.10 Vacancies. If the office of any officer becomes vacant, the voting members may elect a successor. Each such successor shall hold office for the remainder terms, and in the case of the chairman, vice chairman, treasurer and secretary until his or her successor is elected and qualified, or in each case until he or she sooner dies, resigns, is removed or become disqualified.

ARTICLE IV AMENDMENTS

These bylaws may be altered, amended or repealed in whole or in part by vote. The voting members may by a two-thirds vote, alter, amend, or repeal any bylaws adopted by the Regional Committee members or otherwise adopt, alter, amend or repeal any provision which FCC regulation or these bylaws requires action by the voting members.

ARTICLE V DISSOLUTION

This Regional Committee may be dissolved by the consent of two-thirds plus one of the members in good standing at a special meeting called for such purpose. The FCC shall be notified.

ARTICLE VI

RULES OF PROCEDURES

The Conduct of Regional Meetings including without limitation, debate and voting, shall be governed by Robert's Rules of Order: Newly Revised, ten edition, Sarah Corbin Robert, Henry M. Robert III, William J. Evans and Daniel H. Honemann.

~~Appendix B~~

~~Region 10 Members, Agencies, Contact Information and Voting Status~~

Appendix B

State of Georgia Counties and Population Data

County Name	County Seat	Square Miles	Population 1990	Population 2000
Appling	Baxley	512	15,744	17,419
Athens-Clarke	Athens	122	87,594	101,489
Atkinson	Pearson	338.1	6,213	7,609
Bacon	Alma	285	9,566	10,103
Baker	Newton	343.2	3,615	4,074
Baldwin	Milledgeville	258.5	39,530	44,700
Banks	Homer	233.7	10,308	14,422
Barrow	Winder	162.2	29,721	46,144
Bartow	Cartersville	459.9	55,915	76,019
Ben Hill	Fitzgerald	251.8	16,245	17,484
Berrien	Nashville	452.5	14,153	16,235
Bibb	Macon	250	150,137	153,887
Bleckley	Cochran	217.4	10,430	11,666
Brantley	Nahunta	444.4	11,077	14,629
Brooks	Quitman	493.7	15,398	16,450
Bryan	Pembroke	441.8	15,438	23,417
Bulloch	Statesboro	682.6	43,125	55,983
Burke	Waynesboro	830.6	20,579	22,243
Butts	Jackson	186.6	15,326	19,522
Calhoun	Morgan	280.2	5,013	6,320
Camden	Woodbine	629.9	30,167	43,664
Candler	Metter	247	7,744	9,577
Carroll	Carrollton	499.3	71,422	87,268
Catoosa	Ringgold	162.2	42,464	53,282
Charlton	Folkston	780.8	8,496	10,282
Chatham	Savannah	440.4	216,774	232,048
Chattooga	Summerville	313.8	22,242	25,470
Cherokee	Canton	423.7	90,204	141,903
Clay	Fort Gaines	195.2	3,364	3,357
Clayton	Jonesboro	142.6	181,436	236,517
Clinch	Homerville	809.4	6,160	6,878
Cobb	Marietta	340.2	447,745	607,751
Coffee	Douglas	599.1	29,592	37,413
Colquitt	Moultrie	552.3	36,645	42,053
Columbia	Appling	290	66,031	89,288
Cook	Adel	229.1	13,456	15,771
Coweta	Newnan	443.1	53,853	89,215
Crawford	Roberta	325.1	8,991	12,495
Crisp	Cordele	273.8	20,011	21,996
Chattahoochee	Cusseta	248.8	10,107	1,196
Dade	Trenton	173.9	13,147	15,154
Dawson	Dawsonville	211	9,429	15,999
Decatur	Bainbridge	596.8	25,517	28,240
Dekalb	Decatur	268.3	546,171	665,865
Dodge	Eastman	500.6	17,607	19,171
Dooley	Vienna	393	9,901	11,525
Dougherty	Albany	329.7	96,321	96,065

County Name	County Seat	Square Miles	Population 1990	Population 2000
Douglas	Douglasville	199.3	71,120	92,174
Early	Blakely	511.3	11,854	12,354
Echols	Statenville	404.2	2,334	3,754
Effingham	Springfield	479.5	25,687	37,535
Elbert	Elberton	368.8	18,949	20,511
Emanuel	Swainsboro	686	20,546	21,837
Evans	Claxton	185	8,724	10,495
Fannin	Blue Ridge	385.8	15,992	19,798
Fayette	Fayetteville	197.4	62,415	91,263
Floyd	Rome	513.3	81,251	90,565
Forsyth	Cumming	225.8	44,083	98,407
Franklin	Carnesville	263.3	16,650	20,285
Fulton	Atlanta	528.7	648,779	816,006
Gilmer	Ellijay	426.7	13,368	23,456
Glascock	Gibson	144.2	2,357	2,556
Glynn	Brunswick	422.4	62,496	67,568
Gordon	Calhoun	355.2	35,067	44,104
Grady	Cairo	458.2	20,279	23,659
Greene	Greensboro	388.4	11,793	14,406
Gwinnett	Lawrenceville	432.9	352,910	588,448
Habersham	Clarkesville	278.2	27,622	35,902
Hall	Gainesville	393.7	95,434	139,277
Hancock	Sparta	473.3	8,908	10,076
Haralson	Buchanan	282.2	21,966	25,690
Harris	Hamilton	463.8	17,788	23,695
Hart	Hartwell	232.2	19,712	22,997
Heard	Franklin	296.1	8,628	11,012
Henry	McDonough	322.7	58,741	119,341
Houston	Perry	376.8	89,208	110,765
Irwin	Ocilla	356.8	8,649	9,931
Jackson	Jefferson	342.4	30,005	41,589
Jasper	Monticello	370.5	8,453	11,426
Jeff Davis	Hazlehurst	333.4	12,032	12,684
Jefferson	Louisville	527.7	17,408	17,266
Jenkins	Millen	349.8	8,247	8,575
Johnson	Wrightsville	304.4	8,329	8,560
Jones	Gray	393.8	20,739	23,639
Lamar	Barnesville	184.8	13,038	15,912
Lanier	Lakeland	186.8	5,531	7,241
Laurens	Dublin	812.6	39,988	44,874
Lee	Leesburg	355.8	16,250	24,757
Liberty	Hinesville	519.1	52,745	61,610
Lincoln	Lincolnton	211.1	7,442	8,348
Long	Ludowici	401	6,202	10,304
Lowndes	Valdosta	504.3	75,981	92,115
Lumpkin	Dahlonega	284.5	14,573	21,016
Macon	Oglethorpe	403.3	13,114	14,074

County Name	County Seat	Square Miles	Population 1990	Population 2000
Madison	Danielsville	284.4	21,050	25,730
Marion	Buena Vista	367.1	5,590	7,144
McDuffie	Thomson	259.8	20,119	21,231
McIntosh	Darien	433.5	8,634	10,847
Meriwether	Greenville	503.4	22,411	22,534
Miller	Colquitt	283.1	6,280	6,383
Mitchell	Camilla	512	20,275	23,932
Monroe	Forsyth	395.7	17,113	21,757
Montgomery	Mount Vernon	245.3	7,319	8,270
Morgan	Madison	349.7	12,883	15,457
Murray	Chatsworth	344.4	26,147	36,506
Muscogee	Columbus	216.3	179,280	186,291
Newton	Covington	276.4	41,808	62,001
Oconee	Watkinsville	185.8	17,618	26,225
Oglethorpe	Lexington	441.1	9,763	12,635
Paulding	Dallas	313.6	41,611	81,678
Peach	Fort Valley	151.1	21,189	23,668
Pickens	Jasper	232.1	14,432	22,983
Pierce	Blackshear	343	13,328	15,636
Pike	Zebulon	218.4	10,224	13,688
Polk	Cedartown	311.2	33,815	38,127
Pulaski	Hawkinsville	247.4	8,108	9,588
Putnam	Eatonton	344.5	14,137	18,812
Quitman	Georgetown	151.6	2,210	2,598
Rabun	Clayton	371.1	11,648	15,050
Randolph	Cuthbert	429.3	8,023	7,791
Richmond	Augusta	329	189,719	199,775
Rockdale	Conyers	130.7	54,091	70,111
Schley	Ellaville	167.6	3,590	3,766
Screven	Sylvania	648.5	13,842	15,374
Seminole	Donalsonville	238.1	9,010	9,369
Spalding	Griffin	198	54,457	58,417
Stephens	Toccoa	179.3	23,436	25,435
Stewart	Lumpkin	458.7	5,654	5,252
Sumter	Americus	485.3	30,232	33,200
Talbot	Talbotton	393.2	6,524	6,498
Taliaferro	Crawfordville	195.4	1,915	2,077
Tattnall	Reidsville	483.7	17,722	22,305
Taylor	Butler	377.5	7,642	8,815
Telfair	McRae	441.2	11,000	11,794
Terrell	Dawson	335.5	10,653	10,970
Thomas	Thomasville	548.4	38,943	42,737
Tift	Tifton	265.1	34,998	38,407
Toombs	Lyons	366.7	24,072	26,067
Towns	Hiawassee	166.5	6,754	9,319
Treutlen	Soperton	200.7	5,994	6,854
Troup	LaGrange	413.9	55,532	58,779

County Name	County Seat	Square Miles	Population 1990	Population 2000
Turner	Ashburn	286.1	8,703	9,504
Twiggs	Jeffersonville	360.4	9,806	10,590
Union	Blairsville	322.7	11,993	17,289
Upson	Thomaston	325.5	26,300	27,597
Walker	LaFayette	446.3	58,340	61,053
Walton	Monroe	329.3	38,586	60,687
Ware	Waycross	902.6	35,471	35,483
Warren	Warrenton	285.5	6,078	6,336
Washington	Sandersville	680.5	19,112	21,176
Wayne	Jesup	644.7	22,356	26,565
Webster	Preston	209.6	2,263	2,390
Wheeler	Alamo	297.7	4,903	6,179
White	Cleveland	241.6	13,006	19,944
Whitfield	Dalton	290	72,462	83,525
Wilcox	Abbeville	380.4	7,008	8,577
Wilkes	Washington	471.4	10,597	10,687
Wilkinson	Irwinton	446.6	10,228	10,220
Worth	Sylvester	569.8	19,744	21,967

~~Appendix D~~

~~List of Meetings, Summaries of Minutes, Agendas~~

Appendix D

NCC 700MHz Pre-Assignment Rules And Recommendations

Simplified 700 MHz Pre-assignment Rules

Introduction

This attachment describes a process for coordinating the initial block assignments of 700 MHz channels before details of actual system deployments is available. In this initial phase, there is little actual knowledge of the specific equipment to be deployed and the exact antenna sites locations. As a result, a simple, high-level method is proposed to establish guidelines for frequency coordination. When actual systems are deployed, additional details will be known and the system designers will be required to select specific sites and supporting hardware to control interference.

Overview

Assignments will be based on a defined service area for each applicant. This will normally be an area defined by geographical or political boundaries such as city, county or by a data file consisting of line segments creating a polygon that encloses the defined area. The service contour is normally allowed to extend slightly beyond the geo/political boundaries such that systems can be designed for maximum signal levels within the boundaries, or coverage area. Systems must also be designed to minimize signal levels outside their geo/political boundaries to avoid interference into the coverage area of other co-channel users.

For co-channel assignments, the 40 dBμ service contour will be allowed to extend beyond the defined service area by 3 to 5 miles, depending on the type of environment: urban, suburban or rural. The co-channel 5 dBμ interfering contour will be allowed to touch but not overlap the 40 dBμ service contour of the system being evaluated. All contours are (50,50).

For adjacent and alternate channels, the 60 dBμ interfering contour will be allowed to touch but not overlap the 40 dBμ service contour of the system being evaluated. All contours are (50,50).

Discussion

Based upon the ERP/HAAT limitations referenced in 47CFR ¶ 90.541(a), the maximum field strength will be limited to 40 dB relative to 1μV/m (customarily denoted as 40 dBμ). It is assumed that this limitation will be applied similar to the way it is applied in the 821-824/866-869 MHz band. That is, a 40 dBμ field strength can be deployed up to a defined distance beyond the edge of the service area, based on the size of the service area or type of applicant, i.e. city, county or statewide system. This is important that public safety systems have adequate margins for reliability within their service area in the presence of interference, including the potential for interference from CMRS infrastructure in adjacent bands.

The value of 40 dBμ in the 700 MHz band corresponds to a signal of -92.7 dBm, received by a half-wavelength dipole (λ/2) antenna. The thermal noise floor for a 6.25 kHz bandwidth receiver would be in the range of -126 dBm, so there is a margin of approximately 33 dB available for "noise limited" reliability. Figure 1 shows show the various interfering sources and how they accumulate to form a composite noise floor that can be used to determine the "reliability" or probability of achieving the desired performance in the presence of various interfering sources with differing characteristics.

If CMRS out-of-band emissions (OOBE) noise is allowed to be equal to the original thermal noise floor, there is a 3 dB reduction[1] in the available margin. This lowers the reliability and/or the channel performance of Public Safety systems. The left side of Figure 1 shows that the original 33 dB margin is reduced by 3 dB to only 30 dB available to determine "noise + CMRS OOBE limited" performance and reliability.

There are also different technologies with various channel bandwidths and different performance criteria. C/N in the range of 17 – 20 dB is required to achieve channel performance.

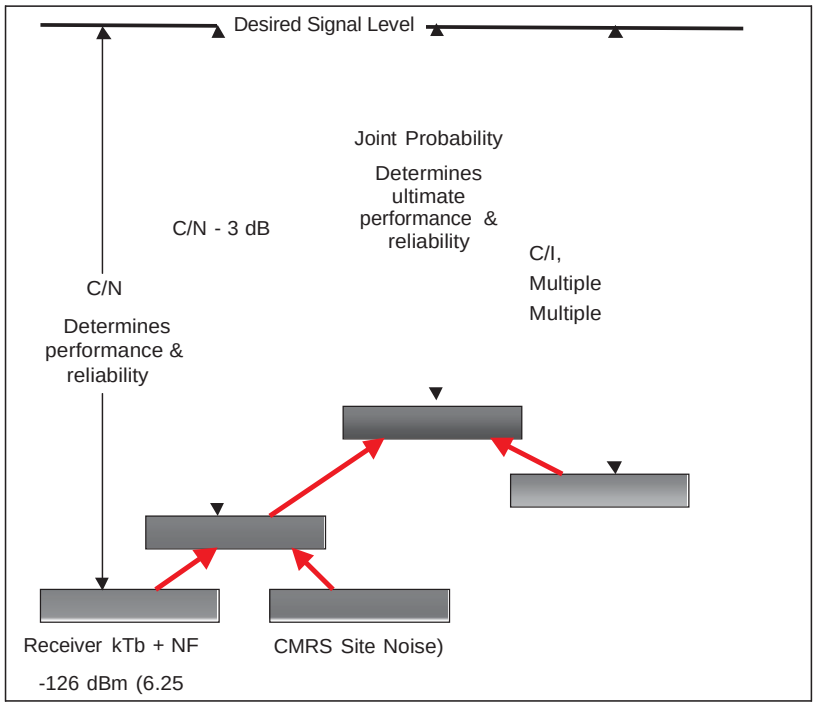


Figure 1 - Interfering Sources Create A "Noise" Level Influencing Reliability

In addition, unknown adjacent and alternate channel assignments need to be accounted for. The co-channel and adjacent/alternate sources are shown in the right hand side of Figure 1. At the edge of the service area, there would normally be only a single co-channel source, but there could potentially be several adjacent or alternate channel sources involved. It is recommended that co-channel assignments limit interference to

[1] TIA TR8 made this 3 dB allowance for CMRS OOBE noise during the meetings in Mesa, AZ, January 2001.

<1% at the edge of the service area (worst case mile). A C/I ratio of 26.4 dB plus the required capture value (~10 dB) is required to achieve this goal.[2].

The ultimate performance and reliability has to take into consideration both the noise sources (thermal & CMRS OOBE) and all the interference sources. The center of Figure 1 shows that the joint probability that the both performance criteria and interference criteria are met must be determined.

Table 1 shows estimated performance considering the 3 dB rise in the noise floor at the 40 dBµ signal level. Performance varies due to the different Cf/N requirements and noise floors of the different modulations and channel bandwidths.

Note that since little is known about the affects of terrain, an initial lognormal standard deviation of 8 dB is used.

Comparison of Joint Reliability for various				
Channel Bandwidth	6.25 kHz	12.5 kHz	12.5 kHz	25.0 kHz
Receiver ENBW (kHz) Noise	6	6	9	18
Figure(10 dB) Receiver Noise	10	10	10	10
Floor (dBm) Rise in Noise Floor	-126.22	-126.22	-124.46	-121.45
(dB)	3.00	3.00	3.00	3.00
New Receiver Noise Floor (dB)	-123.22	-123.22	-121.46	-118.45
40 dBu = -92.7 dBm Receiver	-92.7	-92.7	-92.7	-92.7
Capture (dB) Noise Margin (dB)	10.0	10.0	10.0	10.0
C/N Required for DAQ = 3	30.52	30.52	28.76	25.75
C/N Margin (dB) Standard	17.0	17.0	18.0	20.0
deviation (8 dB) Z	**13.52**	**13.52**	**10.76**	**5.75**
Noise Reliability (%)	8.0	8.0	8.0	8.0
C/I for <1% prob of capture	1.690	1.690	1.345	0.718
I (dBu) I (dBm)	**95.45%**	**95.45%**	**91.06%**	**76.37%**
Joint Probability (C & I)	36.4	36.4	36.4	36.4
	3.7	3.7	3.7	3.7
	-129.0	-129.0	-129.0	-129.0
	94.7%	**94.7%**	**90.4%**	**76.1%**
40 dBu = -92.7 dBm @ 770 MHz				

Table 1 Joint Probability For Project 25, 700 MHz Equipment Configurations.

These values are appropriate for a mobile on the street, but are considerably short to provide reliable communications to portables inside buildings.

Portable In-Building Coverage

Most Public Safety communications systems, today, are designed for portable in-building[3] coverage and the requirement for >95 % reliable coverage. To analyze the impact of

[2] See Appendix A for an explanation of how the 1% interference value is defined and derived.
[3] Building penetration losses typically required for urban = 20 dB, suburban = 15 dB, rural = 10 dB.

requiring portable in building coverage and designing to a 40 dBµ service contour, several cenarios are presented. The different scenarios involve a given separation from the desired sites. Whether simulcast or multi-cast is used in wide-area systems, the antenna sites must be placed near the service area boundary and directional antennas, directed into the service area, must be used. The impact of simulcast is included to show that the 40 dBµ service contour must be able to fall outside the edge of the service area in order to meet coverage requirements at the edge of the service area. From the analysis, recommendations are made on how far the 40 dBµ service contour should extend beyond the service area.

Table 2 estimates urban coverage where simulcast is required to achieve the desired portable in building coverage. Several assumptions are required to use this estimate.

- Distance from the location to each site. Equal distance is assumed.
- CMRS noise is reduced when entering buildings. This is not a guarantee as the type of deployments is unknown. It is possible that CMRS units may have transmitters inside buildings. This could be potentially a large contributor unless the CMRS OOBE is suppressed to TIA's most recent recommendation and the "site isolation" is maintained at 65 dB minimum.
- The 40 dBµ service contour is allowed to extend beyond the edge of the service area boundary.
- Other configurations may be deployed utilizing additional sites, lower tower heights, lower ERP and shorter site separations.

Estimated Performance at 2.5 miles from each site				
Channel Bandwidth	6.25 kHz	12.5 kHz	12.5 kHz	25.0 kHz
Receiver Noise Floor (dBm)	-126.20	-126.20	-124.50	-118.50
Signal at 2.5 miles (dBm)	-72.7	-72.7	-72.7	-72.7
Margin (dB)	53.50	53.50	51.80	45.80
C/N Required for DAQ = 3	17.0	17.0	18.0	20.0
Building Loss (dB)	20	20	20	20
Antenna Loss (dBd)	8	8	8	8
Reliability Margin	8.50	8.50	5.80	-2.20
Z	1.0625	1.0625	0.725	-0.275
Single Site Noise Reliability (%)	**85.60%**	**85.60%**	**76.58%**	**39.17%**
Simulcast with 2 sites	97.93%	97.93%	94.51%	62.99%
Simulcast with 3 sites	99.70%	99.70%	98.71%	77.49%
Simulcast with 4 sites	99.96%	99.96%	99.70%	86.30%

Table 2, Estimated Performance From Site(s) 2.5 Miles From Typical Urban Buildings.

Table 2 shows for the example case of 2.5 miles a single site cannot provide >95% reliability. Either more sites must be used to reduce the distance or other system design techniques must be used to improve the reliability. For example, the table shows that simulcast can be used to achieve public safety levels of reliability at this distance. Table 2 also shows that the difference in performance margin requirements for wider bandwidth channels requires more sites and closer site-to-site separation.

Figures 2 and 3 show how the configurations would potentially be deployed for a typical site with 240 Watts ERP. This is based on:

• 75 Watt transmitter,	18.75 dBW
• 200 foot tower	
• 10 dBd 180 degree sector antenna	+10.0 dBd
• 5 dB of cable/filter loss.	- 5.0 dB
	23.75 dBW = 240 Watts (ERPd)

Site A

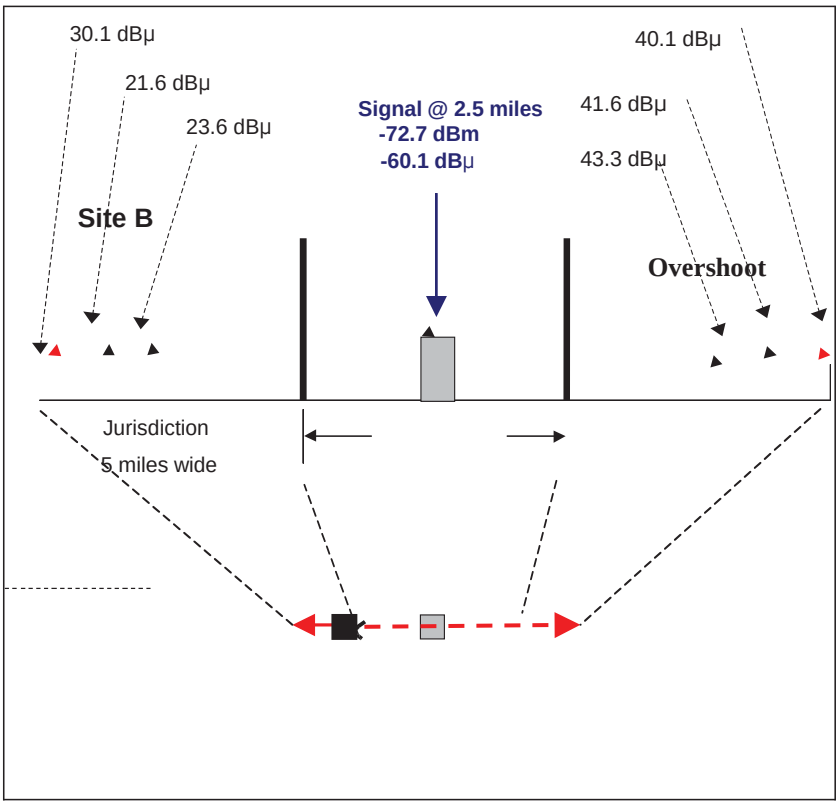


Figure 2 - Field Strength From Left Most Site.

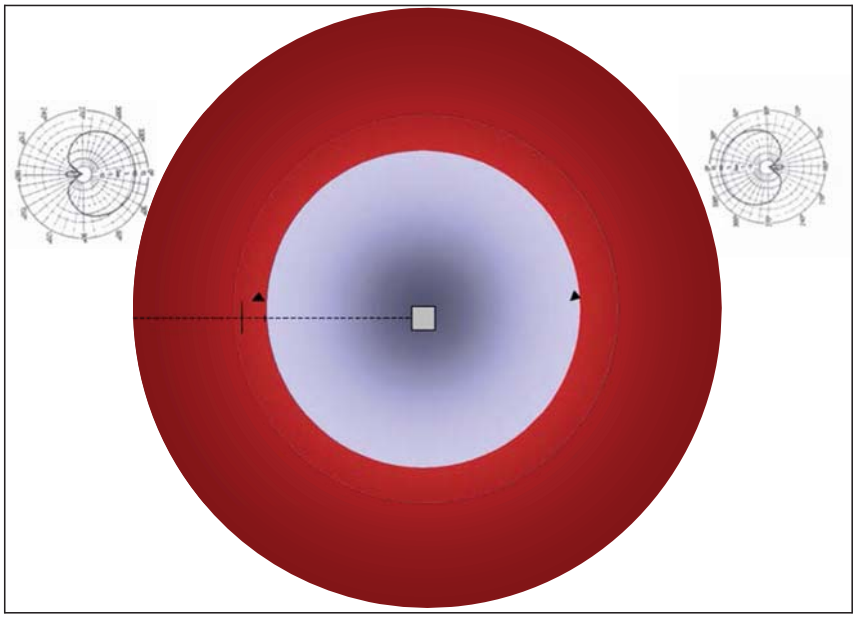


Figure 3 - Antenna Configuration Required To Limit Field Strength Off “Backside”

Figure 2 is for an urbanized area with a jurisdiction defined as a 5 mile circle. To provide the necessary coverage to portables in buildings at the center of the jurisdiction requires that the sites be placed along the edge of the service area and utilize directional antennas oriented toward the center of the service area (Figure 3). In this case, at 5 miles beyond the edge of the service area, the sites would produce a composite field strength of approximately 40 dBµ. Since one site is over 10 dB dominant, the contribution from the other site is not considered. The control of the field strength behind the site relies on a 20 dB antenna with a Front to Back Ratio (F/B) specification as shown in Figure 3. This performance may be optimistic due to back scatter off local obstructions in urbanized areas. However, use of antennas on the sides of buildings can assist in achieving better F/B ratios and the initial planning is not precise enough to prohibit using the full 20 dB.

The use of a single site at the center of the service area is not normally practical. To provide the necessary signal strength at the edge of the service area would produce a field strength 5 miles beyond in excess of 44 dBµ. However, if the high loss buildings were concentrated at the service area’s center, then potentially a single site could be deployed, assuming that the building loss sufficiently decreases near the edge of the service area allowing a reduction in ERP to achieve the desired reliability.

Downtilting of antennas, instead of directional antennas, to control the 40 dBu is not practical, in this scenario. For a 200 foot tall tower, the center of radiation from a 3 dBu down-tilt antenna hits the ground at ~ 0.75 miles[4]. The difference in angular discrimination from a 200 foot tall tower at service area boundary at 5 miles and service contour at 10 miles is approximately 0.6 degrees, so ERP is basically the same ERP toward the horizon. It would not be possible to achieve necessary signal strength at service boundary area and have 40 dBu service contour be less than 5 miles away

[4] Use of high gain antennas with down-tilt on low-level sites is one of the causes of far-near interference experienced in the 800 MHz band.

Tables 3 and 4 represent the same configuration, but for less dense buildings. In these cases, the distance to extend the 40 dBµ service contour can be determined from Table 5.

Estimated Performance at 3.5 miles from each site				
Channel Bandwidth	6.25 kHz	12.5 kHz	12.5 kHz	25.0 kHz
Receiver Noise Floor (dBm)	-126.20	-126.20	-124.50	-118.50
Signal at 3.5 miles (dBm)	-77.7	-77.7	-77.7	-77.7
Margin (dB)	48.50	48.50	46.80	40.80
C/N Required for DAQ = 3	17.0	17.0	18.0	20.0
Building Loss (dB)	15	15	15	15
Antenna Loss (dBd)	8	8	8	8
Reliability Margin	8.50	8.50	5.80	-2.20
Z	1.0625	1.0625	0.725	-0.275
Single Site Noise Reliability (%)	**85.60%**	**85.60%**	**76.58%**	**39.17%**
Simulcast with 2 sites	97.93%	97.93%	94.51%	62.99%
Simulcast with 3 sites	99.70%	99.70%	98.71%	77.49%
Simulcast with 4 sites	99.96%	99.96%	99.70%	86.30%

Table 3 - Lower Loss Buildings, 3.5 Mile From Site(s)

Estimated Performance at 5.0 miles from each site				
Channel Bandwidth	6.25 kHz	12.5 kHz	12.5 kHz	25.0 kHz
Receiver Noise Floor (dBm)	-126.20	-126.20	-124.50	-118.50
Signal at 5.0 miles (dBm)	-82.7	-82.7	-82.7	-82.7
Margin (dB)	43.50	43.50	41.80	35.80
C/N Required for DAQ = 3	17.0	17.0	18.0	20.0
Building Loss (dB)	10	10	10	10
Antenna Loss (dBd)	8	8	8	8
Reliability Margin	8.50	8.50	5.80	-2.20
Z	1.0625	1.0625	0.725	-0.275
Single Site Noise Reliability (%)	**85.60%**	**85.60%**	**76.58%**	**39.17%**
Simulcast with 2 sites	97.93%	97.93%	94.51%	62.99%
Simulcast with 3 sites	99.70%	99.70%	98.71%	77.49%
Simulcast with 4 sites	99.96%	99.96%	99.70%	86.30%

Table 4 - Low Loss Buildings, 5.0 Miles From Site(s)

Note that the receive signals were adjusted to offset the lowered building penetration loss. This produces the same numerical reliability results, but allows increasing the site to building separation and this in turn lowers the magnitude of the “overshoot” across the service area.

Table 5 shows the field strength for a direct path and for a path reduced by a 20 dB F/B antenna. This allows the analysis to be simplified for the specific example being discussed.

	Site A Direct Path	Site B Back Side of 20 dB F/B Antenna
Overshoot Distance (mi)	Field Strength (dBμ)	Field Strength (dBμ)
1	73.3	53.3
2	63.3	43.3
2.5	60.1	40.1
3	57.5	37.5
4	53.3	**33.5**
5	50.1	30.1
...	**...**	
10	40.1	
11	**38.4**	
12	37.5	
13	36.0	
14	34.5	
15	33.0	

Table 5 - Field Strength Vs. Distance From Site

For the scenarios above, the composite level at the Service Contour is the sum of the signals from the two sites. The sum cannot exceed 40 dBμ. Table 5 allows you to calculate the distance to Service Contour given the distance from one of the sites.

Scenario 1: Refer to Figure 3a. Site B is just inside the Service Area boundary and Service Contour must be <5 Miles outside Service Area boundary. Signal level at Service Contour from Site B is 30.1 dBμ. Signal level for Site A can be up to 40 dBμ, since when summing two signals with >10 dB delta, the lower signal level has little effect (less than 0.4 dB in this case). Therefore, Site A can be 10 miles from the Service Contour, or 5 miles inside the Service Area boundary. The coverage performance for this scenario is shown in Table 2, above, for 20 dB building loss typical of urban areas.

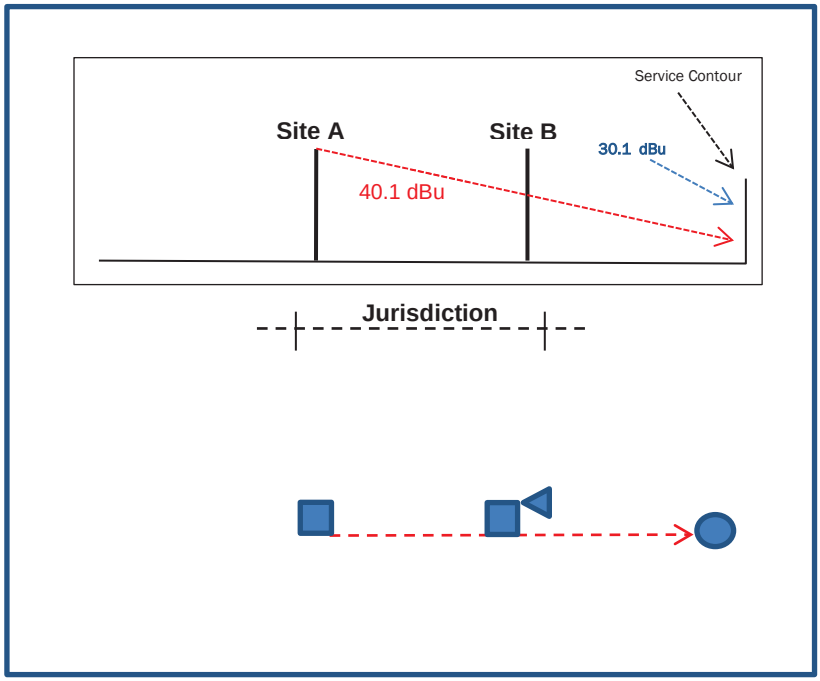


Figure 3a. Scenario 1 on of Use of Table 5

Scenario 2: Refer to bold data in Table 5. Site B is just inside the Service Area boundary and Service Contour must be <4 Miles outside Service Area boundary. Signal level at Service Contour from Site B is 33.5 dBµ. Signal level for Site A can be up to 38.4 dBµ. (See Appendix B for simple method to sum the powers of signals expressed in decibels.) The composite power level is 39.7 dBµ. Therefore, Site A can be slightly less than 11 miles from the Service Contour, or ~7 miles inside the Service Area boundary. The coverage perfomance for this example is shown in Table 3, above, for 15 dB building loss typical of suburban areas.

Scenario 3: Site B is just inside the Service Area boundary and Service Contour must be <3 Miles outside Service Area boundary. Signal level at Service Contour from Site B is 37.5 dBµ. Signal level for Site A can be up to 36.4 dBµ. (See Appendix B simple method to sum signals expressed in decibels.) The composite power level is 40.0 dBµ. Therefore, Site A can be ~13 miles from the Service Contour, or ~10 miles inside the Service Area boundary. The coverage perfomance for this example is shown in Table 4, above, for 10 dB building loss typical of rural areas.

Service Contour Extension Recommendation

The resulting recommendation for extending the 40 dBµ service contour beyond the service area boundary is:

Type of Area	Extension (mi.)
Urban (20 dB Buildings)	5
Suburban (15 dB Buildings)	4
Rural (10 dB Buildings)	3

Table 6 - Recommended Extension Distance of 40 dBµ Field Strength

Using this recommendation the 40 dBµ service contour can then be constructed based on the defined service area without having to perform an actual prediction.

Interfering Contour

Table 1 above shows that 36.4 dB of margin is required to provide 10 dB of co-channel capture and <1% probability of interference. Since the 40 dBµ service contour is beyond the edge of the service area, some relaxation in the level of interference is reasonable. Therefore, a 35 dB co-channel C/I ratio is recommended and is consistent with what is currently being licensed in the 821-824/866-869 MHz Public Safety band.

Co-Channel Interfering Contour Recommendation

- Allow the constructed 40 dBµ (50,50) service contour to extend beyond the edge of the defined service area by the distance indicated in Table 6.
- Allow the 5 dBµ (50,50) interfering contour to intercept but not overlap the 40 dBµ service contour.

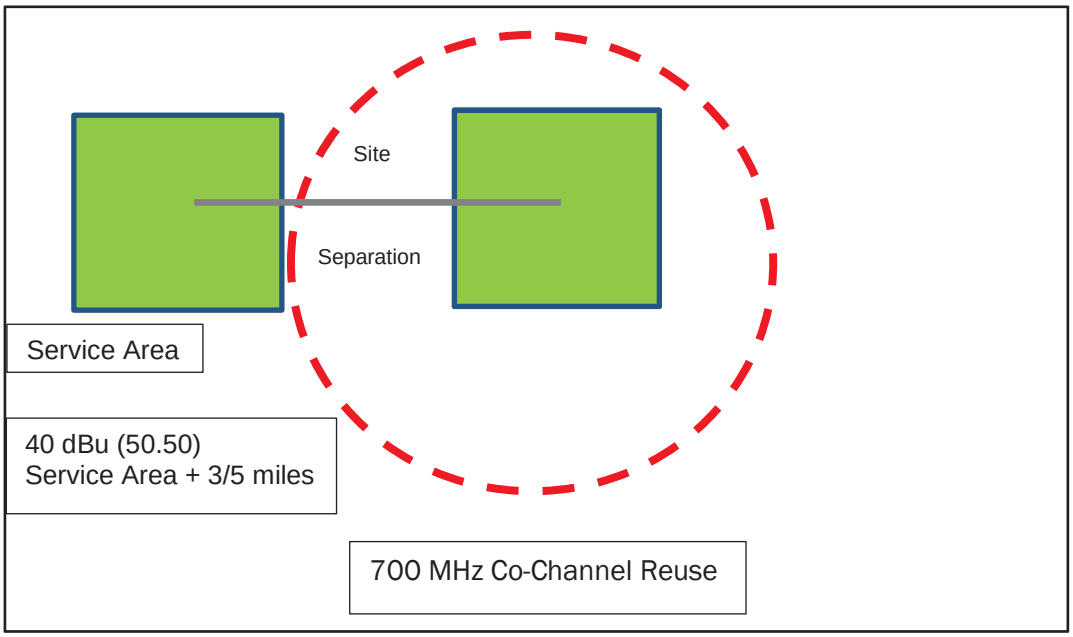


Figure 4 - Co-Channel Reuse Criterion

Adjacent and Alternate Channel Considerations

Adjacent and alternate channels are treated as being noise sources that alter the composite noise floor of a victim receiver. Using the 47 CFR § 90.543 values of ACCP can facilitate the coordination of adjacent and alternate channels. The C/I requirements for <1% interference can be reduced by the value of ACCPR. For example to achieve an X dB C/I for the adjacent channel that is -40 dBc a C/I of [X-40] dB is required. Where the alternate channel ACP value is -60 dBc, then the C/I = [X-60] dB is the goal for assignment(s). There is a compounding of interference energy, as there are numerous sources, i.e. co channel, adjacent channels and alternate channels plus the noise from CMRS OOBE.

There is insufficient information in 47 CFR § 90.543 to include the actual receiver performance. Receivers typically have “skirts” that allow energy outside the bandwidth of interest to be received. In addition, the FCC defines ACCP differently than does the TIA. The term used by the FCC is the same as the TIA definition of ACP. The subtle difference is that ACCP defines the energy intercepted by a defined receiver filter (e.g., 6 kHz ENBW). ACP defines the energy in a measured bandwidth that is typically wider than the receiver (e.g., 6.25 kHz channel bandwidth). As a result, the FCC values are optimistic at very close spacing and somewhat pessimistic at wider spacings, as the typical receiver filter is less than the channel bandwidth.

In addition, as channel bandwidth is increased, the total amount of noise intercepted rises compared to the level initially defined in a 6.25 kHz channel bandwidth. However, the effect is diminished at very close spacings as the slope of the noise curve falls off rapidly. At greater spacings, the slope of the noise curve is essentially flat and the receiver’s filter limits the noise to a rise in the thermal noise floor.

Digital receivers tend to be less tolerant to interference than analog. Therefore, a 3 dB reduction in the C/(I+N) can reduce a DAQ = 3 to a DAQ = 2, which is threshold to complete muting in digital receivers. Therefore to maintain a DAQ = 3, at least 17 dB of fading margin plus the 26.4 dB margin for keeping the interference below 1% probability is required, for a total margin of 43.4 dB. However, this margin would be at the edge of the service area and the 40 dBμ service contour is allowed to extend past the edge of the service area.

Frequency drift is controlled by the FCC requirement for 0.4-ppm stability when locked. This equates to approximately a 1 dB standard deviation, which is negligible when associated with the recommended initial lognormal standard deviation of 8 dB and can be ignored.

Project 25 requires that a transceiver receiver have an ACIPR of 60 dB. This implies that an ACCPR ≥ 65 dB will exist for a “companion receiver”. A companion receiver is one that is designed for the specific modulation. At this time the highest likelihood is that receivers will be deploying the following receiver bandwidths at the following channel bandwidths.

Estimated Receiver Parameters	
Channel Bandwidth	Receiver Bandwidth
6.25 kHz	5.5 kHz
12.5 kHz	5.5 or 9 kHz
25 kHz	18.0 kHz

Table 7 - Estimated Receiver Parameters

Based on 47 CFR ¶ 90.543 and the P25 requirement for an ACCPR ≥ 65 dB into a 6.0 kHz channel bandwidth and leaving room for a migration from Phase 1 to Phase 2, allows for making the simplifying assumption that 65 dB ACCPR is available for both adjacent 25 kHz spectrum blocks.

The assumption is that initial spectrum coordination sorts are based on 25 kHz bandwidth channels. This provides the maximum flexibility by using 65 dB ACCPR for all but one possible combination of 6.25 kHz channels within the 25 kHz allotment.

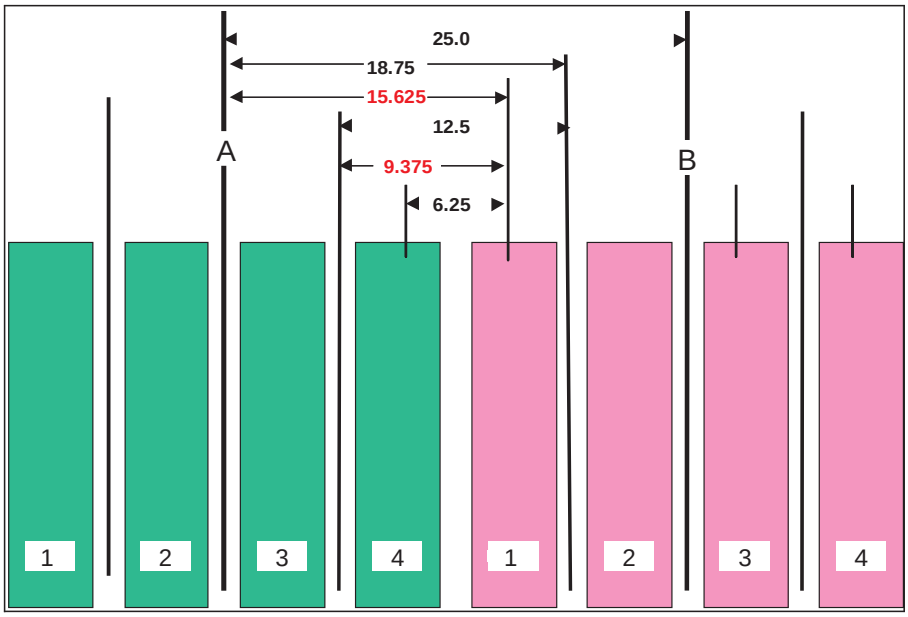


Figure 5, Potential Frequency Separations

Case	Spacing	ACCPR
25 kHz to 25 kHz	25 kHz	65 dB
25 kHz to 12.5 kHz	18.750 kHz	65 dB
25 kHz to 6.25 kHz	15.625 kHz	>40 dB
12.5 kHz to 12.5 kHz	12.5 kHz	65 dB
12.5 kHz to 6.25 kHz	9.375 kHz	>40 dB
6.25 kHz to 6.25 kHz	6.25 kHz	65 dB

Table 8 - ACCPR Values For Potential Frequency Separations

All cases meet or exceed the FCC requirement. The most troublesome cases occur where the wider bandwidths are working against a Project 25 Phase 2 narrowband 6.25 kHz channel. This pre-coordination based upon 25 kHz spectrum blocks still works if system designers and frequency coordinators keep this consideration in mind and move the edge 6.25 kHz channels inward away from the edge of the system. This approach allows a constant value of 65 dB ACCPR to be applied across all 25 kHz spectrum blocks regardless of what channel bandwidth is eventually deployed. There will also be additional coordination adjustments when exact system design details and antenna sites are known.

For spectrum blocks spaced farther away, it must be assumed that transmitter filtering, in addition to transmitter performance improvements due to greater frequency separation, will further reduce the ACCPR.

Therefore it is recommended that a consistent value of 65 dB ACCPR be used for the initial coordination of adjacent 25 kHz channel blocks. Rounding to be conservative due to the possibility of multiple sources allows the Adjacent Channel Interfering Contour to be approximately 20 dB above the 40 dBμ service contour, at 60 dBμ.

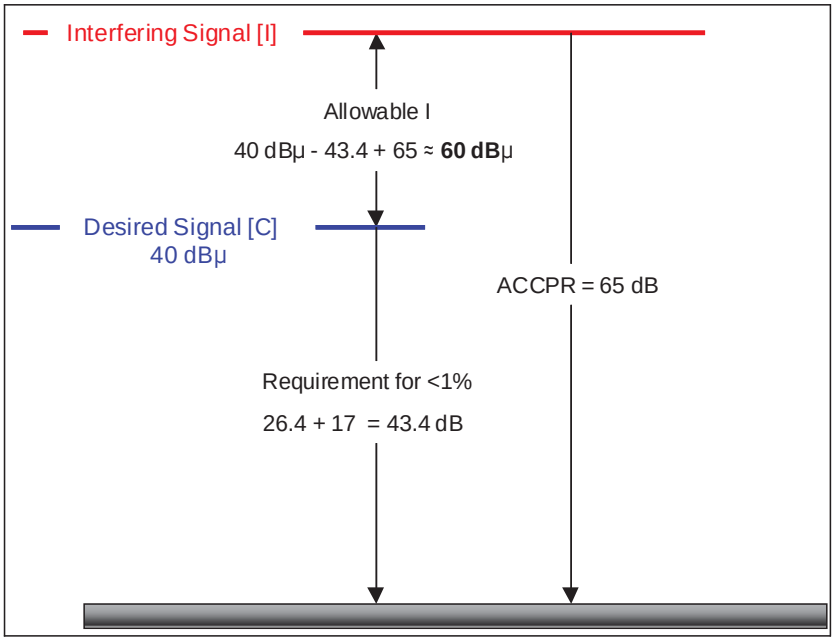
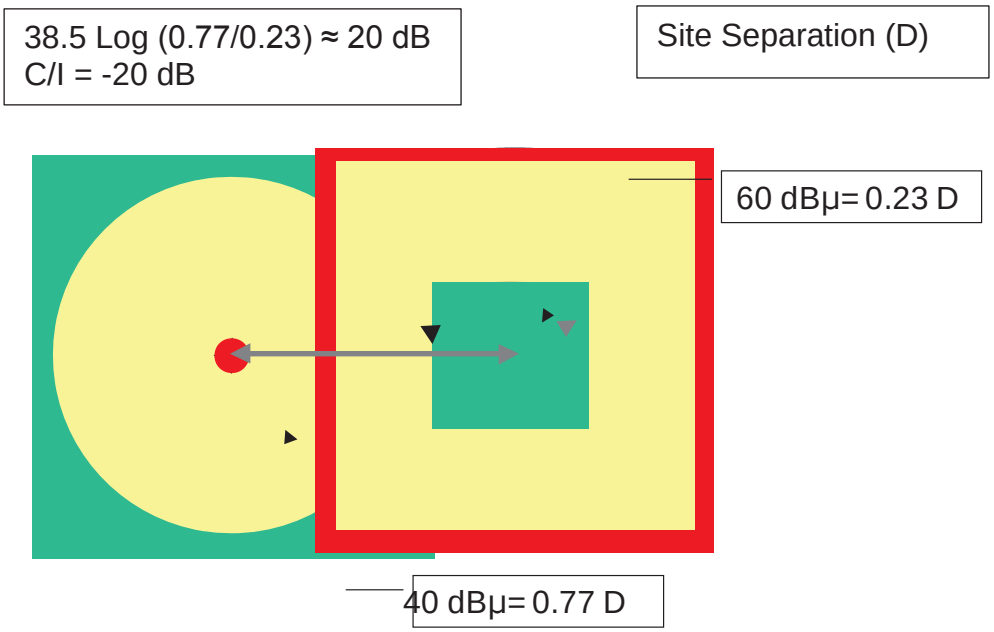


Figure 6 - Adjusted Adjacent 25 kHz Channel Interfering Contour Value



65 dB ACCPR, Based on P25 Requirements of 60 dB ACIPR

Figure 7 - Example Of Adjacent/Alternate Overlap Criterion

Adjacent Channel Interfering Contour Recommendation

An adjacent (25 kHz) channel shall be allowed to have its 60 dBμ (50,50) interfering contour touch but not overlap the 40 dBμ (50,50) service contour of a system being evaluated. Evaluations should be made in both directions.

Final Detailed Coordination

This simple method is only adequate for presorting large blocks of spectrum to potential entities. A more detailed analysis should be executed in the actual design phase to take all the issues into consideration.

Additional factors that should be considered include:

- Degree of Service Area Overlap
- Different size of Service Areas
- Different ERPs and HAATs
- Actual Terrain and Land Usage
- Differing User Reliability Requirements
- Migration from Project 25 Phase 1 to Phase 2
- Actual ACCP
- Balanced Systems
- Mobiles vs. Portables
- Use of voting
- Use of simulcast
- Radio specifications
- Simplex Operation
- Future unidentified requirements.

Special attention needs to be paid to the use of simplex operation. In this case, an interferer can be on an offset adjacent channel and in extremely close proximity to the victim receiver. This is especially critical in public safety where simplex operations are frequently used at a fire scene or during police operation. This type operation is also quite common in the lower frequency bands. In those cases, evaluation of base-to-base as well as mobile-to-mobile interference should be considered and evaluated.

Appendix A

Carrier to Interference Requirements

There are two different ways that Interference is considered.

- Co-channel
- Adjacent and Alternate Channels

Both involve using a C/I ratio. The C/I ratio requires a probability be assigned. For example, if 10% Interference is specified, the C/I implies 90% probability of successfully achieving the desired ratio. 1% interference means that there is a 99% probability of achieving the desired C/I.

$$\frac{C}{I}\% = \frac{1}{2} \cdot erfc\left(\frac{\left(\frac{C}{I}\right)_{margin}}{2\sigma}\right) \qquad (1)$$

This can also be written in a form using the standard deviate unit (*Z*). In this case the *Z* for the desired probability of achieving the C/I is entered. For example, for a 90% probability of achieving the necessary C/I, *Z* = 1.28.

$$\frac{C}{I}\% = Z \cdot \frac{\quad}{2 \cdot \sigma} \qquad (2)$$

The most common requirements for several typical lognormal standard deviations ( ) are included in the following table based on Equation (2).

Location Standard Deviation ( ) dB	5.6	6.5	8	10
Probability %				
10%	10.14 dB	11.77 dB	14.48 dB	18.10 dB
5%	13.07 dB	15.17 dB	18.67 dB	23.33 dB
4%	13.86 dB	16.09 dB	19.81 dB	24.76 dB
3%	14.90 dB	17.29 dB	21.28 dB	26.20 dB
2%	16.27 dB	18.88 dB	23.24 dB	29.04 dB
1%	18.45 dB	21.42 dB	**26.36 dB**	32.95 dB

Table A1 - Probability Of Not Achieving C/I For Various Location Lognormal Standard Deviations

These various relationships are shown in Figure A1, a continuous plot of equation(s) 1 and 2.

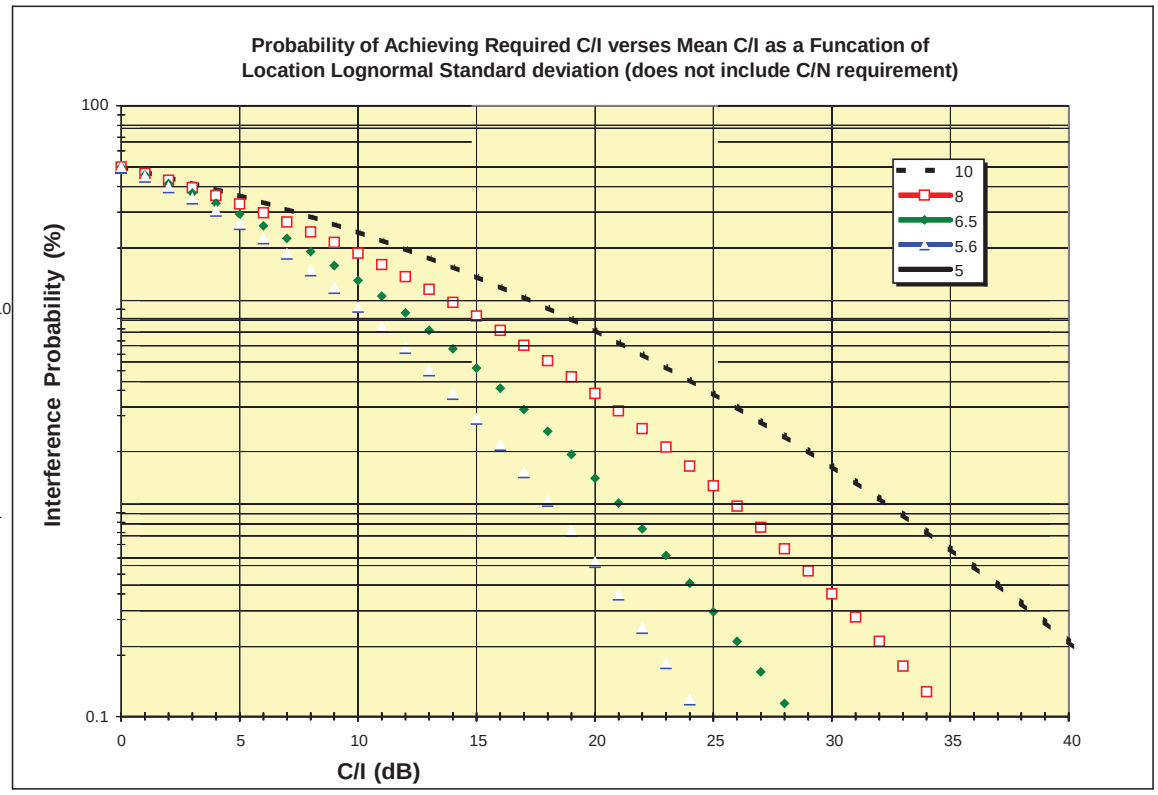


Figure A1, Probability of Achieving Required C/I As A Function Of Location Standard Deviation

For co-channel the margin needs to include the "capture" requirement. When this is done, then a 1% probability of co channel interference can be rephrased to mean, there is a 99% probability that the "capture ratio" will be achieved. The capture ratio varies with the type of modulation. Older analog equipment has a capture ratio of approximately 7 dB. Project 25 FDMA is specified at 9 dB. Figure A1 shows the C/I requirement without including the capture requirement.

The 8 dB value for lognormal location standard deviation is reasonable when little information is available. Later when a detailed design is required, additional details and high-resolution terrain and land usage databases will allow a lower value to be used. The TIA recommended value is 5.6 dB. Using 8 dB initially and changing to 5.6 dB provides additional flexibility necessary to complete the final system design.

To determine the desired probability that both the C/N and C/I will be achieved requires that a joint probability be determined. Figure A2 shows the effects of a family of various levels of C/N reliability and the joint probability (Y-axis) in the presence of various probabilities of Interference. Note that at 99% reliability with 1% interference (X-axis) that the reduction is nearly the difference. This is because the very high noise reliability is degraded by the interference, as there is little probability that the noise criterion will not be satisfied. At 90%, the 1% interference has a greater likelihood that it will occur simultaneously when the noise criterion not being met, resulting in less degradation of the 90%.

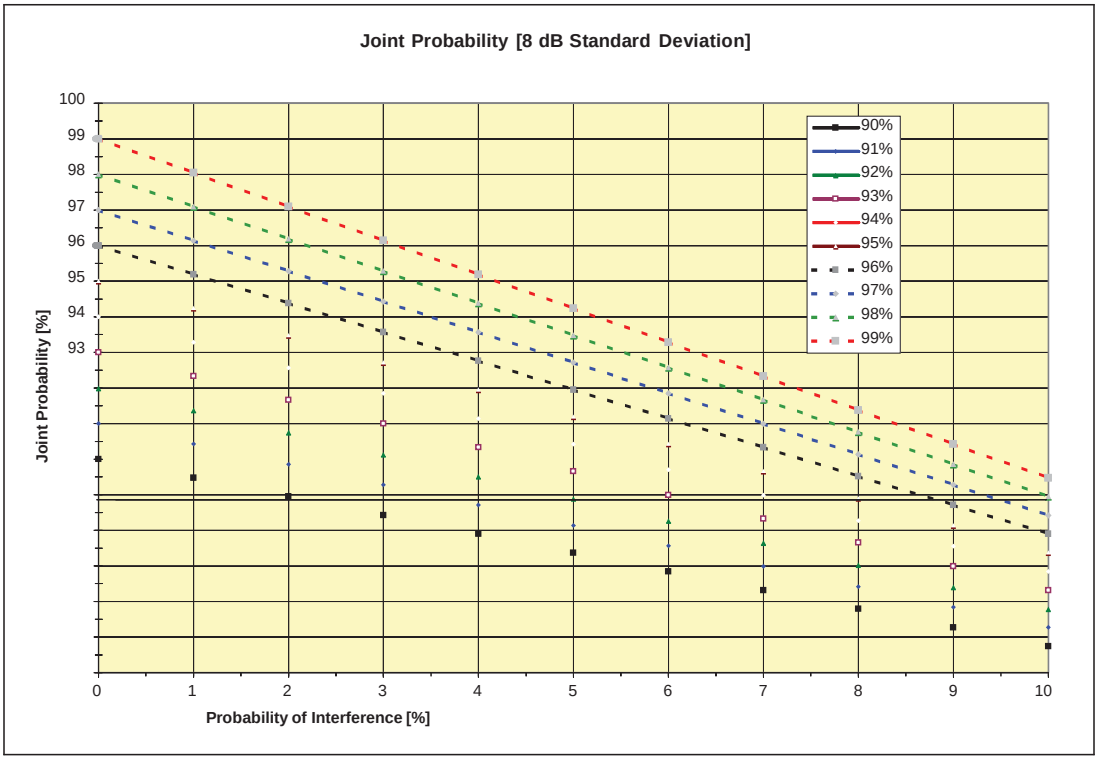
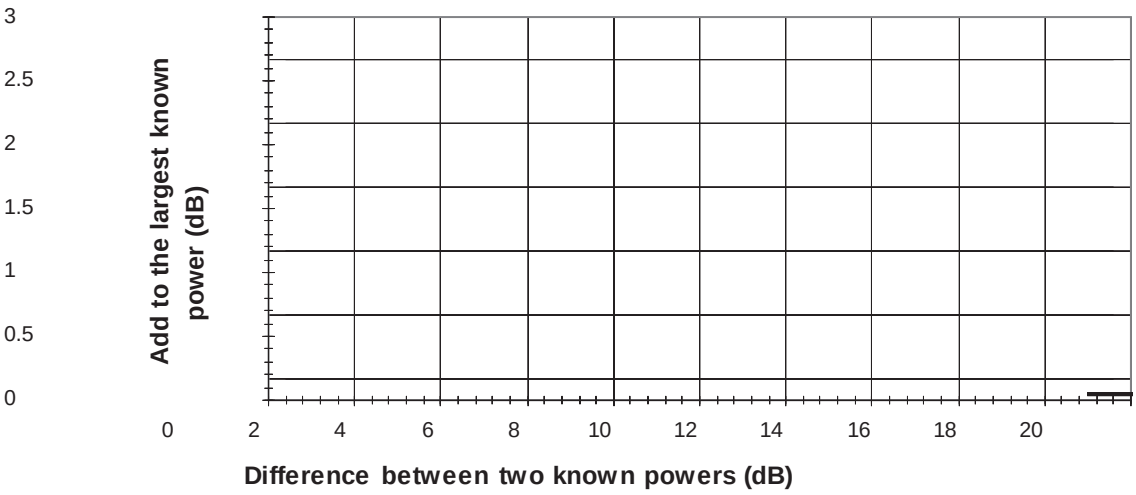


Figure A2 - Effect Of Joint Probability On The Composite Probability

For adjacent and alternate channels, the channel performance requirement must be added to the C/I ratio. When this is applied, then a 1% probability of adjacent/alternate channel interference can be rephrased to mean, there is a 99% probability that the "channel performance ratio" will be achieved.

Appendix B

Adding Two Known Non-Coherent Powers



In order to sum the power of two or more signals expressed in dBm or dBµ, they level should be converted to a voltage level or a power level, summed (root of the sum of the squares), and then converted back to dBm or dBu.

The chart above provides simple method to sum two power levels expressed in dBm or dBµ. First find the difference between the two signals on the horizontal axis. Go up to the curve and across to the vertical axis to find the power delta. Add the power delta to the larger of the two original signal levels.

Example 1: Signal A is 36.4 dBµ. Signal B is 37.5 dBµ. Difference is 1.1 dB. Power delta is about 2.5 dB. Composite signal level is 37.5 dBµ + 2.5 dB = 40 dBµ.

Example 2: Signal is –96.3 dBm. Signal B is –95.2 dBm. Difference is 1.1 dB. Power delta is about 2.5 dB. Composite signal level is –95.2 dBm + 2.5 dB = -92.7 dB

Appendix C

700MHz Interoperability - Channel Nomenclature

Standard Channel Nomenture for Public Safety 700 MHz Interoperbility Channels
APCO/NPSTC ANSI 1.104.1-2010

	FCC Channel	Mobile (MHz)	Base(MHz)	Primary Use	Original NCC Name	New NCC Name
1	039-040	769.243750	799.243750	I/O Nationwide Call Channel	7CAL59	7CALL50
2	681-682	773.256250	803.256250	I/O Nationwide Call Channel	7CAL75	7CALL70
3	279-280	770.743750	800.743750	Mobile Data	7DAT71	7DATA69
4	921-922	774.756250	804.756250	Mobile Data	7DAT87	7DATA89
5	143-144	769.893750	799.893750	Fire Service	7FIR64	7FIRE63
6	159-160	769.993750	799.993750	Fire Service	7FIR65	7FIRE64
7	721-722	773.506250	803.506250	Fire Service	7FIR80	7FIRE83
8	777-778	773.856250	803.856250	Fire Service	7FIR81	7FIRE84
9	319-320	770.993750	800.993750	Other Public Service	7TAC73	7GTAC57
10	937-938	774.856250	804.856250	Other Public Service	7TAC89	7GTAC77
11	223-224	770.393750	800.393750	Law Enforcement Service	7LAW68	7LAW61
12	239-240	770.493750	800.493750	Law Enforcement Service	7LAW69	7LAW62
13	801-802	774.006250	804.006250	Law Enforcement Service	7LAW84	7LAW81
14	857-858	774.356250	804.356250	Law Enforcement Service	7LAW85	7LAW82
15	063-064	769.393750	799.393750	Emergency Medical Service	7MED60	7MED65
16	079-080	769.493750	799.493750	Emergency Medical Service	7EMS61	7MED66
17	697-698	773.356250	803.356250	Emergency Medical Service	7EMS77	7MED77
18	641-642	773.006250	803.006250	Emergency Medical Service	7EMS76	7MED86
19	303-304	770.893750	800.893750	Mobile Repeater(MO3 Use Primary)	7MOB72	7MOB59
20	881-882	774.506250	804.506250	Mobile Repeater(MO3 Use Primary)	7MOB88	7MOB79
21	023-024	769.143750	799.143750	General Public Safety Services (secondary trunked)	7TAC58	7TAC51
22	103-104	769.643750	799.643750	General Public Safety Services (secondary trunked)	7TAC56	7TAC52
23	183-184	770.143750	800.143750	General Public Safety Services (secondary trunked)	7TAC66	7TAC53
24	263-264	770.643750	800.643750	General Public Safety Services (secondary trunked)	7TAC70	7TAC54
25	119-120	769.743750	799.743750	General Public Safety Service	7TAC63	7TAC55
26	199-200	770.243750	800.243750	General Public Safety Service	7TAC67	7TAC56
27	657-658	773.106250	803.106250	General Public Safety Services (secondary trunked)	7TAC74	7TAC71
28	737-738	773.606250	803.606250	General Public Safety Services (secondary trunked)	7TAC78	7TAC72
29	817-818	774.106250	804.106250	General Public Safety Services (secondary trunked)	7TAC82	7TAC72
30	897-898	774.606250	804.606250	General Public Safety Services (secondary trunked)	7TAC86	7TAC74
31	761-762	773.756250	803.756250	General Public Safety Service	7TAC79	7TAC75
32	841-842	774.256250	804.256250	General Public Safety Service	7TAC83	7TAC76

Appendix E

Region 10

700MHz Spectrum Allocations

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
Appling	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	349-352	771.1875	801.1875
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	669-672	773.1875	803.1875
	Voice 25KHz	717-720	773.4875	803.4875
	Voice 25KHz	821-824	774.1375	804.1375
Atkinson	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	477-480	771.9875	801.9875
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	781-784	773.8875	803.8875
	Voice 25KHz	825-828	774.1625	804.1625
Bacon	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	633-636	772.9625	802.9625
Baker	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	789-792	773.9375	803.9375
	Voice 25KHz	829-832	774.1875	804.1875
Baldwin	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	573-576	772.5875	802.5875
	Voice 25KHz	637-640	772.9875	802.9875
	Voice 25KHz	781-784	773.8875	803.8875
	Voice 25KHz	861-864	774.3875	804.3875
	Voice 25KHz	909-912	774.6875	804.6875
Banks	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	821-824	774.1375	804.1375
Barrow	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	497-500	772.1125	802.1125
	Voice 25KHz	573-576	772.5875	802.5875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	917-920	774.7375	804.7375
Bartow	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	753-756	773.7125	803.7125
	Voice 25KHz	821-824	774.1375	804.1375
	Voice 25KHz	941-944	774.8875	804.8875
Ben Hill	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	549-552	772.4375	802.4375
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	709-712	773.4375	803.4375
	Voice 25KHz	829-832	774.1875	804.1875
Berrien	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	877-880	774.4875	804.4875
Bibb	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	293-296	770.8375	800.8375
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	545-548	772.4125	802.4125
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	705-708	773.4125	803.4125
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	865-868	774.4125	804.4125
	Voice 25KHz	905-908	774.6625	804.6625
	Voice 25KHz	945-948	774.9125	804.9125
Bleckley	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	481-484	772.0125	802.0125
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	941-944	774.8875	804.8875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
Brantley	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	705-708	773.4125	803.4125
Brooks	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	701-704	773.3875	803.3875
Bryan	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	553-556	772.4625	802.4625
	Voice 25KHz	789-792	773.9375	803.9375
Bulloch	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	361-364	771.2625	801.2625
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	633-636	772.9625	802.9625
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	753-756	773.7125	803.7125
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	861-864	774.3875	804.3875
	Voice 25KHz	913-916	774.7125	804.7125
Burke	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	637-640	772.9875	802.9875
Butts	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	505-508	772.1625	802.1625
	Voice 25KHz	553-556	772.4625	802.4625

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	745-748	773.6625	803.6625
	Voice 25KHz	793-796	773.9625	803.9625
Calhoun	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	877-880	774.4875	804.4875
Camden	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	553-556	772.4625	802.4625
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	745-748	773.6625	803.6625
	Voice 25KHz	789-792	773.9375	803.9375
	Voice 25KHz	873-876	774.4625	804.4625
	Voice 25KHz	945-948	774.9125	804.9125
Candler	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	745-748	773.6625	803.6625
	Voice 25KHz	833-836	774.2125	804.2125
Carroll	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	573-576	772.5875	802.5875
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	825-828	774.1625	804.1625
	Voice 25KHz	865-868	774.4125	804.4125
Catoosa	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	529-532	772.3125	802.3125
Charlton	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	417-420	771.6125	801.6125

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	665-668	773.1625	803.1625
Chatham	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	125-128	769.7875	799.7875
	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	437-440	771.7375	801.7375
	Voice 25KHz	477-480	771.9875	801.9875
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	717-720	773.4875	803.4875
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	825-828	774.1625	804.1625
	Voice 25KHz	865-868	774.4125	804.4125
	Voice 25KHz	905-908	774.6625	804.6625
	Voice 25KHz	945-948	774.9125	804.9125
Chattahoochee	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	481-484	772.0125	802.0125
	Voice 25KHz	561-564	772.5125	802.5125
Chattooga	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	901-904	774.6375	804.6375
Cherokee	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	621-624	772.8875	802.8875
Clarke	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	289-292	770.8125	800.8125

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	753-756	773.7125	803.7125
Clay	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	213-216	770.3375	800.3375
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	497-500	772.1125	802.1125
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	665-668	773.1625	803.1625
Clayton	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	577-580	772.6125	802.6125
	Voice 25KHz	701-704	773.3875	803.3875
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	861-864	774.3875	804.3875
Clinch	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	361-364	771.2625	801.2625
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	637-640	772.9875	802.9875
Cobb	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	213-216	770.3375	800.3375
	Voice 25KHz	289-292	770.8125	800.8125
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	717-720	773.4875	803.4875
	Voice 25KHz	789-792	773.9375	803.9375
	Voice 25KHz	869-872	774.4375	804.4375
	Voice 25KHz	913-916	774.7125	804.7125
Coffee	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	165-168	770.0375	800.0375

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	421-424	771.6375	801.6375
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	573-576	772.5875	802.5875
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	745-748	773.6625	803.6625
	Voice 25KHz	865-868	774.4125	804.4125
	Voice 25KHz	905-908	774.6625	804.6625
	Voice 25KHz	945-948	774.9125	804.9125
Colquitt	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	293-296	770.8375	800.8375
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	577-580	772.6125	802.6125
	Voice 25KHz	633-636	772.9625	802.9625
	Voice 25KHz	673-676	773.2125	803.2125
	Voice 25KHz	917-920	774.7375	804.7375
Columbia	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	345-348	771.1625	801.1625
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	545-548	772.4125	802.4125
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	861-864	774.3875	804.3875
Cook	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	485-488	772.0375	802.0375
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	869-872	774.4375	804.4375
Coweta	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	421-424	771.6375	801.6375

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	545-548	772.4125	802.4125
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	873-876	774.4625	804.4625
	Voice 25KHz	917-920	774.7375	804.7375
Crawford	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	717-720	773.4875	803.4875
Crisp	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	125-128	769.7875	799.7875
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	497-500	772.1125	802.1125
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	637-640	772.9875	802.9875
	Voice 25KHz	833-836	774.2125	804.2125
Dade	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	633-636	772.9625	802.9625
	Voice 25KHz	877-880	774.4875	804.4875
Dawson	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	673-676	773.2125	803.2125
DeKalb	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	549-552	772.4375	802.4375
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	781-784	773.8875	803.8875
	Voice 25KHz	877-880	774.4875	804.4875
Decatur	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	349-352	771.1875	801.1875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	561-564	772.5125	802.5125
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	837-840	774.2375	804.2375
Dodge	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	561-564	772.5125	802.5125
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	913-916	774.7125	804.7125
Dooly	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	421-424	771.6375	801.6375
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	701-704	773.3875	803.3875
Dougherty	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	289-292	770.8125	800.8125
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	573-576	772.5875	802.5875
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	717-720	773.4875	803.4875
	Voice 25KHz	781-784	773.8875	803.8875
	Voice 25KHz	821-824	774.1375	804.1375
	Voice 25KHz	861-864	774.3875	804.3875
	Voice 25KHz	901-904	774.6375	804.6375
	Voice 25KHz	941-944	774.8875	804.8875
Douglas	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	553-556	772.4625	802.4625

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	745-748	773.6625	803.6625
Early	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	549-552	772.4375	802.4375
	Voice 25KHz	637-640	772.9875	802.9875
Echols	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	561-564	772.5125	802.5125
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	669-672	773.1875	803.1875
Effingham	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	577-580	772.6125	802.6125
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	669-672	773.1875	803.1875
Elbert	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	793-796	773.9625	803.9625
	Voice 25KHz	865-868	774.4125	804.4125
Emanuel	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	213-216	770.3375	800.3375
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	437-440	771.7375	801.7375
	Voice 25KHz	505-508	772.1625	802.1625
	Voice 25KHz	573-576	772.5875	802.5875
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	869-872	774.4375	804.4375
Evans	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	345-348	771.1625	801.1625
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	481-484	772.0125	802.0125
	Voice 25KHz	665-668	773.1625	803.1625

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
Fannin	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	785-788	773.9125	803.9125
Fayette	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	293-296	770.8375	800.8375
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	617-620	772.8625	802.8625
Floyd	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	701-704	773.3875	803.3875
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	781-784	773.8875	803.8875
	Voice 25KHz	861-864	774.3875	804.3875
	Voice 25KHz	917-920	774.7375	804.7375
Forsyth	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	505-508	772.1625	802.1625
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	793-796	773.9625	803.9625
	Voice 25KHz	865-868	774.4125	804.4125
Franklin	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	665-668	773.1625	803.1625
	Voice 25KHz	909-912	774.6875	804.6875
Fulton	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	345-348	771.1625	801.1625
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	437-440	771.7375	801.7375
	Voice 25KHz	477-480	771.9875	801.9875
	Voice 25KHz	561-564	772.5125	802.5125
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	669-672	773.1875	803.1875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	833-836	774.2125	804.2125
	Voice 25KHz	905-908	774.6625	804.6625
	Voice 25KHz	945-948	774.9125	804.9125
Gilmer	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	665-668	773.1625	803.1625
	Voice 25KHz	837-840	774.2375	804.2375
Glascock	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	865-868	774.4125	804.4125
Glynn	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	673-676	773.2125	803.2125
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	753-756	773.7125	803.7125
	Voice 25KHz	829-832	774.1875	804.1875
	Voice 25KHz	909-912	774.6875	804.6875
Gordon	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	573-576	772.5875	802.5875
Grady	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	361-364	771.2625	801.2625
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	609-612	772.8125	802.8125

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	825-828	774.1625	804.1625
Greene	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	717-720	773.4875	803.4875
Gwinnett	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	361-364	771.2625	801.2625
	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	485-488	772.0375	802.0375
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	705-708	773.4125	803.4125
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	825-828	774.1625	804.1625
Habersham	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	577-580	772.6125	802.6125
	Voice 25KHz	789-792	773.9375	803.9375
Hall	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	637-640	772.9875	802.9875
	Voice 25KHz	873-876	774.4625	804.4625
Hancock	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	549-552	772.4375	802.4375
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	829-832	774.1875	804.1875
	Voice 25KHz	917-920	774.7375	804.7375
Haralson	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	909-912	774.6875	804.6875
Harris	Voice 25KHz	53-56	769.3375	799.3375

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	405-408	771.5375	801.5375
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	789-792	773.9375	803.9375
Hart	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	785-788	773.9125	803.9125
Heard	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	837-840	774.2375	804.2375
Henry	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	821-824	774.1375	804.1375
Houston	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	577-580	772.6125	802.6125
	Voice 25KHz	633-636	772.9625	802.9625
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	745-748	773.6625	803.6625
	Voice 25KHz	789-792	773.9375	803.9375
	Voice 25KHz	837-840	774.2375	804.2375
	Voice 25KHz	877-880	774.4875	804.4875
	Voice 25KHz	917-920	774.7375	804.7375
Irwin	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	665-668	773.1625	803.1625
Jackson	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	457-460	771.8625	801.8625

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	861-864	774.3875	804.3875
Jasper	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	713-716	773.4625	803.4625
Jeff Davis	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	545-548	772.4125	802.4125
	Voice 25KHz	789-792	773.9375	803.9375
Jefferson	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	665-668	773.1625	803.1625
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	821-824	774.1375	804.1375
	Voice 25KHz	945-948	774.9125	804.9125
Jenkins	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	905-908	774.6625	804.6625
Johnson	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	717-720	773.4875	803.4875
	Voice 25KHz	877-880	774.4875	804.4875
Jones	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	477-480	771.9875	801.9875
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	833-836	774.2125	804.2125
Lamar	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	709-712	773.4375	803.4375

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
Lanier	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	861-864	774.3875	804.3875
	Voice 25KHz	909-912	774.6875	804.6875
Laurens	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	289-292	770.8125	800.8125
	Voice 25KHz	345-348	771.1625	801.1625
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	553-556	772.4625	802.4625
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	673-676	773.2125	803.2125
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	785-788	773.9125	803.9125
	Voice 25KHz	825-828	774.1625	804.1625
Lee	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	913-916	774.7125	804.7125
Liberty	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	497-500	772.1125	802.1125
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	701-704	773.3875	803.3875
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	781-784	773.8875	803.8875
	Voice 25KHz	837-840	774.2375	804.2375

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	877-880	774.4875	804.4875
Lincoln	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	553-556	772.4625	802.4625
	Voice 25KHz	781-784	773.8875	803.8875
Long	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	637-640	772.9875	802.9875
	Voice 25KHz	793-796	773.9625	803.9625
Lowndes	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	349-352	771.1875	801.1875
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	549-552	772.4375	802.4375
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	709-712	773.4375	803.4375
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	789-792	773.9375	803.9375
	Voice 25KHz	829-832	774.1875	804.1875
	Voice 25KHz	901-904	774.6375	804.6375
	Voice 25KHz	941-944	774.8875	804.8875
Lumpkin	Voice 25KHz	125-128	769.7875	799.7875
	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	745-748	773.6625	803.6625
Macon	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	437-440	771.7375	801.7375
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	781-784	773.8875	803.8875
Madison	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	477-480	771.9875	801.9875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	833-836	774.2125	804.2125
	Voice 25KHz	945-948	774.9125	804.9125
Marion	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	349-352	771.1875	801.1875
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	713-716	773.4625	803.4625
McDuffie	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	293-296	770.8375	800.8375
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	481-484	772.0125	802.0125
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	741-744	773.6375	803.6375
McIntosh	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	505-508	772.1625	802.1625
Meriwether	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	901-904	774.6375	804.6375
	Voice 25KHz	941-944	774.8875	804.8875
Miller	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	625-628	772.9125	802.9125
Mitchell	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	705-708	773.4125	803.4125
	Voice 25KHz	873-876	774.4625	804.4625
Monroe	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	213-216	770.3375	800.3375
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	685-688	773.2875	803.2875
Montgomery	Voice 25KHz	13-16	769.0875	799.0875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	125-128	769.7875	799.7875
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	405-408	771.5375	801.5375
	Voice 25KHz	613-616	772.8375	802.8375
Morgan	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	785-788	773.9125	803.9125
	Voice 25KHz	913-916	774.7125	804.7125
Murray	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	609-612	772.8125	802.8125
Muscogee	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	701-704	773.3875	803.3875
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	837-840	774.2375	804.2375
	Voice 25KHz	877-880	774.4875	804.4875
	Voice 25KHz	917-920	774.7375	804.7375
Newton	Voice 25KHz	125-128	769.7875	799.7875
	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	673-676	773.2125	803.2125
	Voice 25KHz	837-840	774.2375	804.2375
Oconee	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	213-216	770.3375	800.3375
	Voice 25KHz	349-352	771.1875	801.1875
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	481-484	772.0125	802.0125

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	869-872	774.4375	804.4375
Oglethorpe	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	669-672	773.1875	803.1875
	Voice 25KHz	905-908	774.6625	804.6625
Paulding	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	637-640	772.9875	802.9875
	Voice 25KHz	709-712	773.4375	803.4375
Peach	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	485-488	772.0375	802.0375
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	665-668	773.1625	803.1625
	Voice 25KHz	821-824	774.1375	804.1375
Pickens	Voice 25KHz	293-296	770.8375	800.8375
	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	829-832	774.1875	804.1875
Pierce	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	869-872	774.4375	804.4375
Pike	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	637-640	772.9875	802.9875
	Voice 25KHz	785-788	773.9125	803.9125
Polk	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	497-500	772.1125	802.1125
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	605-608	772.7875	802.7875
Pulaski	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	349-352	771.1875	801.1875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	669-672	773.1875	803.1875
	Voice 25KHz	901-904	774.6375	804.6375
Putnam	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	437-440	771.7375	801.7375
	Voice 25KHz	561-564	772.5125	802.5125
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	873-876	774.4625	804.4625
Quitman	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	505-508	772.1625	802.1625
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	909-912	774.6875	804.6875
Rabun	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	913-916	774.7125	804.7125
Randolph	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	869-872	774.4375	804.4375
Richmond	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	361-364	771.2625	801.2625
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	673-676	773.2125	803.2125
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	793-796	773.9625	803.9625
	Voice 25KHz	833-836	774.2125	804.2125
	Voice 25KHz	873-876	774.4625	804.4625
	Voice 25KHz	913-916	774.7125	804.7125
Rockdale	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	493-496	772.0875	802.0875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	909-912	774.6875	804.6875
Schley	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	673-676	773.2125	803.2125
Screven	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	289-292	770.8125	800.8125
	Voice 25KHz	349-352	771.1875	801.1875
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	829-832	774.1875	804.1875
Seminole	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	421-424	771.6375	801.6375
	Voice 25KHz	485-488	772.0375	802.0375
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	577-580	772.6125	802.6125
Spalding	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	349-352	771.1875	801.1875
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	665-668	773.1625	803.1625
	Voice 25KHz	753-756	773.7125	803.7125
	Voice 25KHz	829-832	774.1875	804.1875
Stephens	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	421-424	771.6375	801.6375
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	941-944	774.8875	804.8875
Stewart	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	793-796	773.9625	803.9625
	Voice 25KHz	833-836	774.2125	804.2125
Sumter	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	341-344	771.1375	801.1375

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	825-828	774.1625	804.1625
	Voice 25KHz	865-868	774.4125	804.4125
	Voice 25KHz	905-908	774.6625	804.6625
	Voice 25KHz	945-948	774.9125	804.9125
Talbot	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	669-672	773.1875	803.1875
Taliaferro	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	789-792	773.9375	803.9375
Tattnall	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	561-564	772.5125	802.5125
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	901-904	774.6375	804.6375
	Voice 25KHz	941-944	774.8875	804.8875
Taylor	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	573-576	772.5875	802.5875
	Voice 25KHz	861-864	774.3875	804.3875
	Voice 25KHz	909-912	774.6875	804.6875
Telfair	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	589-592	772.6875	802.6875
Terrell	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	669-672	773.1875	803.1875
	Voice 25KHz	709-712	773.4375	803.4375
	Voice 25KHz	749-752	773.6875	803.6875
Thomas	Voice 25KHz	17-20	769.1125	799.1125

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	125-128	769.7875	799.7875
	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	345-348	771.1625	801.1625
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	545-548	772.4125	802.4125
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	665-668	773.1625	803.1625
	Voice 25KHz	745-748	773.6625	803.6625
	Voice 25KHz	833-836	774.2125	804.2125
Tift	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	437-440	771.7375	801.7375
	Voice 25KHz	505-508	772.1625	802.1625
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	785-788	773.9125	803.9125
	Voice 25KHz	837-840	774.2375	804.2375
Toombs	Voice 25KHz	293-296	770.8375	800.8375
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	477-480	771.9875	801.9875
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	705-708	773.4125	803.4125
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	909-912	774.6875	804.6875
Towns	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	717-720	773.4875	803.4875
Treutlen	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	497-500	772.1125	802.1125
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	837-840	774.2375	804.2375
	Voice 25KHz	917-920	774.7375	804.7375
Troup	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	97-100	769.6125	799.6125

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	485-488	772.0375	802.0375
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	705-708	773.4125	803.4125
Turner	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	405-408	771.5375	801.5375
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	909-912	774.6875	804.6875
Twiggs	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	613-616	772.8375	802.8375
Union	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	545-548	772.4125	802.4125
Upson	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	289-292	770.8125	800.8125
	Voice 25KHz	361-364	771.2625	801.2625
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	869-872	774.4375	804.4375
Walker	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	485-488	772.0375	802.0375
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	833-836	774.2125	804.2125
Walton	Voice 25KHz	421-424	771.6375	801.6375
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	633-636	772.9625	802.9625
	Voice 25KHz	901-904	774.6375	804.6375
	Voice 25KHz	941-944	774.8875	804.8875
Ware	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	93-96	769.5875	799.5875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	345-348	771.1625	801.1625
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	793-796	773.9625	803.9625
	Voice 25KHz	833-836	774.2125	804.2125
	Voice 25KHz	913-916	774.7125	804.7125
Warren	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	577-580	772.6125	802.6125
	Voice 25KHz	701-704	773.3875	803.3875
Washington	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	421-424	771.6375	801.6375
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	709-712	773.4375	803.4375
	Voice 25KHz	901-904	774.6375	804.6375
Wayne	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	289-292	770.8125	800.8125
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	549-552	772.4375	802.4375
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	785-788	773.9125	803.9125
	Voice 25KHz	917-920	774.7375	804.7375
Webster	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	545-548	772.4125	802.4125
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	785-788	773.9125	803.9125
Wheeler	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	861-864	774.3875	804.3875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
White	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	553-556	772.4625	802.4625
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	709-712	773.4375	803.4375
	Voice 25KHz	797-800	773.9875	803.9875
Whitfield	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	405-408	771.5375	801.5375
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	873-876	774.4625	804.4625
Wilcox	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	873-876	774.4625	804.4625
Wilkes	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	837-840	774.2375	804.2375
	Voice 25KHz	877-880	774.4875	804.4875
Wilkinson	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	565-568	772.5375	802.5375
Worth	Voice 25KHz	213-216	770.3375	800.3375
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	481-484	772.0125	802.0125
	Voice 25KHz	553-556	772.4625	802.4625
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	753-756	773.7125	803.7125
	Voice 25KHz	793-796	773.9625	803.9625

Appendix F

Inter-Regional Dispute Resolution Agreement

INTER-REGIONAL DISPUTE RESOLUTION AGREEMENT

INTRODUCTION

This is a mutually agreed upon Inter-Regional Coordination Procedures Agreement and Dispute Resolution Agreement between the respective 700 MHz Regional Planning Committees of Region 1 – Alabama; Region 9 – Florida; Region 10 – Georgia; Region 31 – North Carolina; Region 37 – Region 37 – South Carolina; and Region 39 – Tennessee which will be used by the Regions to coordinate with the adjacent Regional Planning Committees.

INTER-REGIONAL COORDINATION PROCEDURES AGREEMENT

The coordination procedure will consist of the following steps:

1. An application-filing window is opened or the Region announces that it is prepared to begin accepting applications on a first-come/first-served basis.

2. Applications by eligible entities are accepted.

3. An application-filing window (if this procedure is being used) is closed after appropriate time interval.

4. Intra-Regional review and coordination takes place, including a technical review resulting in assignment of channels.

5. After Intra-Regional review, a copy of those frequency-specific applications requiring adjacent Region approval, including a definition statement of proposed service area, shall then be forwarded to the adjacent Region(s) for review.[1] This information will be sent to the adjacent Regional chairperson(s) using the CAPRAD database.

6. The adjacent Region reviews the application. If the application is approved, a letter of concurrent shall be sent, via the CAPRAD database, to the initiating Regional chairperson within thirty (30) calendar days.

7. Where adjacent Region concurrence has been secured, and the channel assignment would result in no change to the Region's Commission approval channel assignment matrix. The initiating Region may then advise the applicant(s) that their application may be forwarded to a frequency coordinator for processing and filing with Commission.

---

[1] If an applicant's proposed service area extends into an adjacent Public Safety Region(s), the affected Region(s) must approve the application. Service area shall normally be defined as the area included within the geographical boundary of the applicant, plus three (3) miles. Other definitions of service area shall be justified with an accompanying *Memorandum of Understanding (MOU)* or other application documentation between agencies, i.e. mutual aid agreements.

8. Where adjacent Region concurrence has been secured, and the channel assignment matrix, then the initiating Region shall file with Commission a *Petition to Amend* their current Regional plan's frequency matrix, reflecting the new channel assignments, with a copy of the *Petition* sent to the adjacent Regional chairperson(s).

9. Upon Commission issuance of an *Order* adopting the amended channel assignment matrix, the initiating Regional chairperson will send a courtesy copy of the *Order* to the adjacent Regional chairperson(s) and may then advise the applicant(s) that they may forward their applications to the frequency coordinator for processing and filing with Commission.

DISPUTE RESOLUTION

The procedure will consist of the following steps should a dispute occur:

1. If the adjacent Region(s) cannot approve the request, the adjacent Region shall document the reasons for partial or non-concurrence, and respond within ten (10) calendar days via e-mail. If the applying Region cannot modify the application to satisfy the objections of the adjacent Region then, a working group comprised of representative of the two Regions shall be convened within thirty (30) calendar days to attempt to resolve the dispute. The working group shall then report its findings within thirty (30) calendar days to the Regional chairpersons e-mail, mail or fax. Findings may include, but not limited to:

a. Unconditional concurrence;

b. Conditional concurrence contingent upon modification of Applicant's technical parameters; or

c. Partial or total denial of proposed frequencies due to inability to meet co-channel/adjacent channel interference free protection to existing licenses with the adjacent Region.

2. If the Inter-Regional Working Group cannot resolve the dispute, then the matter shall be forwarded for evaluation to the National Plan Oversight Committee (NPOC), of the National Public Safety Telecommunications Council (NPSTC). Each Region involved in the dispute shall include a detailed explanation of its position, including engineering studies and any other technical information deemed relevant. The NPOC will, within thirty (30) calendar days, report its recommendation(s) to the Regional chairpersons via the CAPRAD database. The NPOC's decision may support either of the disputing Regions or it may develop a proposal that it deems advantageous to each disputing Region.

CONCLUSION

IN AGREEMENT HERETO, Regions 1, 9, 10, 31, 37 and 39 hereunto set their signatures the day and year first above written.

Respectfully,
[all signatories to agreement]

Jim Mollohan
Chairman, Region 10 Georgia

~~John Johnson~~
~~Chairman, Region 39 Tennessee~~

~~Eric Linsley~~
~~Chairman, Region 1 Alabama~~

~~William Winn~~
~~Chairman, Region 37 South Carolina~~

~~Ray Carlson~~
~~Chairman, Region 9 Florida~~

~~Michael T. Hodgson~~
~~Chairman, Region 31 North Carolina~~

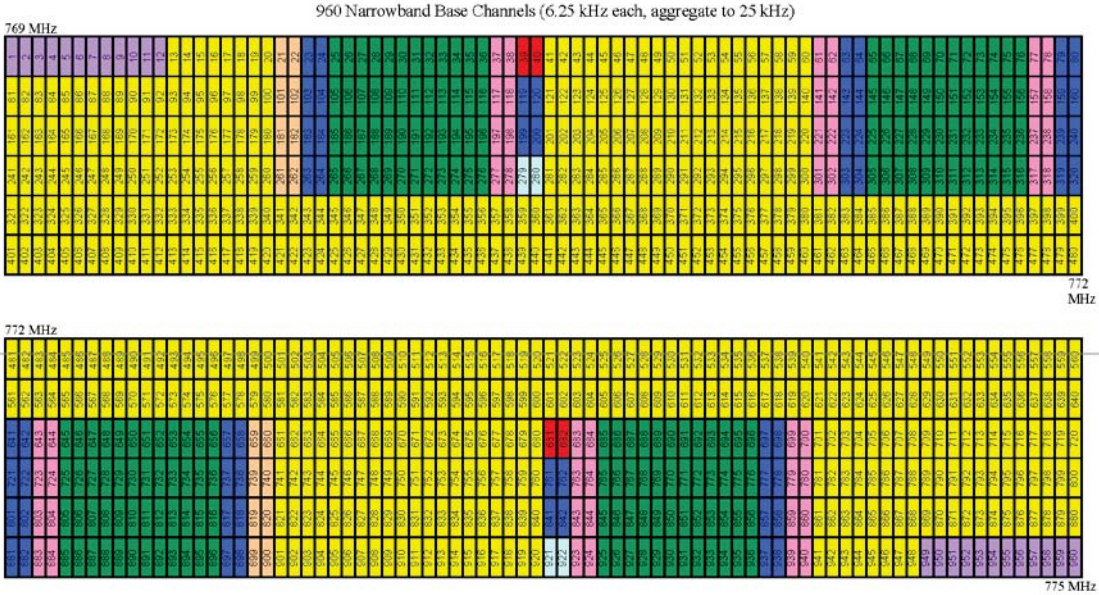
- See Appendix I for signed letters from the respective Regions.

Appendix H

700MHz Band Plan

700 MHz BAND PLAN per Second R&O in PS Docket 06-229

960 Narrowband Base Channels (6.25 kHz each, aggregate to 25 kHz)

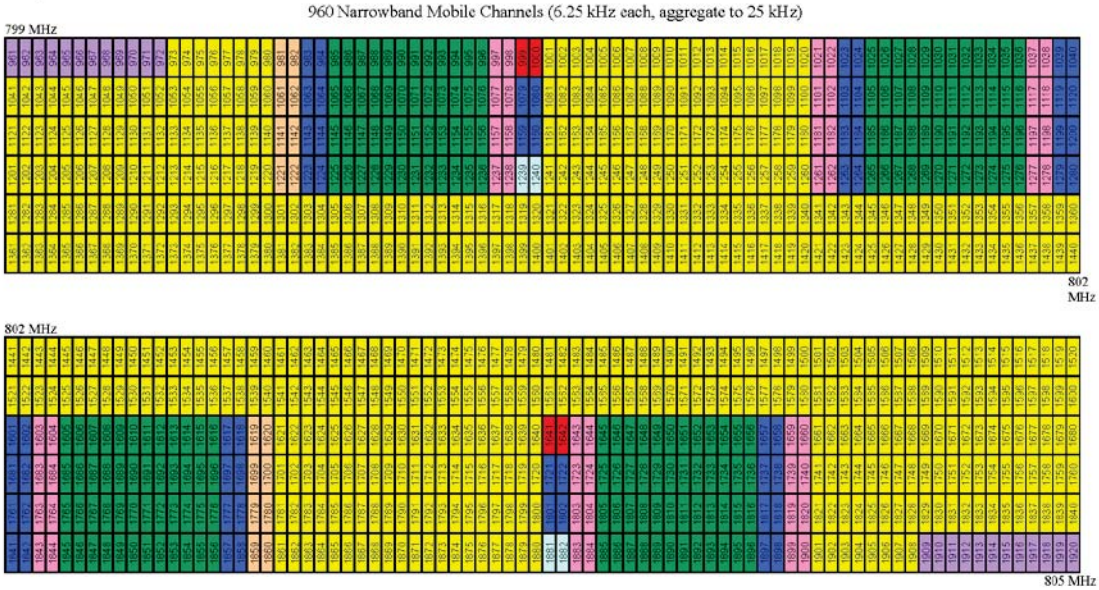


Narrowband Channels

- Two may be combined provided that the lower channel number is odd (*e.g.*, 1, 3, 5)
- Four may be combined provide that the lower channel number is 1 + 4n, n = 0 to 479 (*e.g.*, 1, 5, 1917)
- Channel numbers for combined channels are designated by the lowest and highest channel numbers separated by a hyphen, *e.g.*, "1-2" and "1-4".
- Narrowband channels must maintain a data throughput efficiency of not less than 4.8 kbps for each 6.25 kHz of bandwidth

General Use
Interoperability
Reserve
State License
Low Power
2ndary Trunking
I/O Nationwide Call
I/O Low Speed Data

960 Narrowband Mobile Channels (6.25 kHz each, aggregate to 25 kHz)



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- Narrowband channels must maintain a data throughput efficiency of not less than 4.8 kbps for each 6.25 kHz of bandwidth

General Use
Interoperability
Reserve
State License
Low Power
2ndary Trunking
I/O Nationwide Call
I/O Low Speed Data

Appendix G

DTV Protection and Incumbency Conclusion

Region 10 – Georgia

TV Stations

Search FCC Database TV Code Glossary

County	Channel	Call Sign	Location	Latitude NAD83	Longitude NAD83
Bibb County	64	WGNM	Macon	32°45'51"N	83°33'32"W
Catoosa County	63	WRNG-LP	Ringgold	34°55'30"N	85°5'50"W
Early County	69	W69DO	Colquitt	31°14'35"N	84°44'55"W
Fulton County	69	WUPA	Atlanta	33°45'34"N	84°23'19"W
Muscogee County	62	W62DG	Columbus	32°25'58"N	84°57'2"W
Rockdale County	63	920228KE	Monroe	33°44'38"N	84°0'39"W
Rockdale County	63	WHSG-TV	Monroe	33°44'22"N	84°0'14"W
Tift County	62	W62DE	Tifton	31°26'34"N	83°30'27"W
Washington County	68	940415DL	Sandersville	32°58'23"N	82°48'34"W
Whitfield County	66	DW66BA	Dalton	34°47'21"N	84°58'11"W

INCUMBENT FULL POWER TV LICENSEES ON CHANNELS 59-69 (SE AREA) As of 12/1/99

CALL SIGN	CH	TYPE	CITY	ST	LICENSEE/PERMITTEE	ERP (KW)	HAAT (MTR)	LOCATION OF FACILITY LAT					LONG		
WJEB	59	LIC	JACKSONVILLE	FL	JACKSONVILLE EDUCATORS B/CING., INC.	3310	289	N	30	16	34	W	81	33	53
WTJP	60	LIC	GADSDEN	AL	ALL AMERICAN NETWORK	5000	352	N	33	48	53	W	86	26	55
WFGC	61	CP MOD	PALM BEACH	FL	CHRISTIAN TV OF PALM BEACH CTY, INC.	5000	125	N	26	45	47	W	80	1	19
WLXI	61	LIC	GREENSBORO	NC	RADIANT LIFE MINISTRIES, INC.	501	168	N	36	8	58	W	80	3	21
WDSI	61	LIC	CHATTANOOGA	TN	WDSI LICENSE CORP.	4900	370	N	35	12	34	W	85	16	39
WBSV	62	LIC	VENICE	FL	ENTRAVISION HOLDINGS, LLC	4680	167	N	27	6	1	W	82	22	18
WASV	62	LIC	ASHEVILLE	NC	PAPPAS TELECASTING OF THE CAROLINAS	5000	556	N	35	13	20	W	82	32	58
WFPX	62	LIC	FAYETTEVILLE	NC	PAXSON COMMUNICATIONS LIC. CO., LLC	933	256	N	34	53	5	W	79	4	31
WPPB	63	CP MOD	BOCA RATON	FL	PALMETTO B/CASTERS ASSOC. FOR COMM.	646	159	N	26	9	11	W	80	10	12
WHSG	63	LIC	MONROE	GA	TRINITY BROADCASTING NETWORK	5000	363	N	33	44	22	W	84	0	14
WQHB	63	LIC	SUMTER	SC	MCLAUGHLIN BROADCASTING, INC.	13.2	165	N	33	54	52	W	80	17	38
WGNM	64	LIC	MACON	GA	GOOD NEWS TELEVISION	51.3	185	N	32	44	58	W	83	33	35
WAXN	64	LIC	KANNAPOLIS	NC	KANNAPOLIS TELEVISION COMPANY	1910	300	N	35	15	41	W	80	43	38
WRBW	65	LIC	ORLANDO	FL	UTV OF ORLANDO, INC.	5000	465	N	28	34	51	W	81	4	32
WSWS	66	LIC	OPELIKA	AL	PAPPAS TELECASTING OF OPELIKA	794	207	N	32	38	33	W	85	14	13
WXPX	66	LIC	BRADENTON	FL	PAXSON COMMUNICATIONS LIC. CO., LLC	2240	465	N	27	24	30	W	82	15	0
WJFB	66	LIC	LEBANON	TN	BRYANT COMMUNICATIONS, INC.	2240	161	N	36	9	13	W	86	22	46
WRJM	67	CP MOD	TROY	AL	STAGE DOOR DEVELOPMENT, INC.	1260	592	N	31	58	32	W	86	9	46
WPXP	67	LIC	LAKE WORTH	FL	HISPANIC BROADCASTING, INC.	3980	128	N	26	45	47	W	80	12	19
WABM	68	LIC	BIRMINGHAM	AL	BIRMINGHAM (WABM-TV) LICENSEE, INC.	1450	314	N	33	27	37	W	86	51	7
WBCC	68	LIC	COCOA	FL	BREVARD COMMUNITY COLLEGE	2820	287	N	28	18	26	W	80	54	48
WAMI	69	LIC	HOLLYWOOD	FL	UNIVISION PARTNERSHIP OF HOLLYWOOD, FL	5000	264	N	25	57	59	W	80	12	33
WUPA	69	LIC	ATLANTA	GA	VSC COMMUNICATIONS, INC	2630	299	N	33	45	34	W	84	23	19

Frequency Availability through the DTV Transition

On August 14, 1996, the FCC released a Sixth Further Notice of Proposed Rule Making *in the digital television (DTV) proceeding. A portion of the spectrum recovered from TV channels 60-69 when DTV is fully deployed "could be used to meet public safety needs."*[5] *By Congressional direction in the Balanced Budget Act of 1997, the FCC reallocated 24 MHz of spectrum to Public Safety services in the 764-776 MHz and 794-806 MHz bands. The statute required the FCC to establish service rules, by September 30, 1998, in order to start the process of assigning licenses. The rules that the FCC established by September 30, 1998, "provided the minimum technical framework necessary to standardize operations in this spectrum band, including, but not limited to: (a) establishing interference limits at the boundaries of the spectrum block and service areas; (b) establishing technical restrictions necessary to protect full-service analog and digital television service during the transition to digital television services; (c) permitting public safety licensees the flexibility to aggregate multiple licenses to create larger spectrum blocks and service areas, and to disaggregate or partition licenses to create smaller spectrum blocks or service areas; and (d) ensuring that the new spectrum will not be subject to harmful interference from television broadcast licensees"*[6].

In April 1997, the FCC assigned a second 6 MHz block of spectrum to each license (or permit to construct) holders of full power, analog, television broadcast station (NTSC) in order to construct a digital television station (DTV). Secondary low power television stations (LPTV), secondary translators and boosters (TX), mutually exclusive applications for new stations, and application filed after a cut-off date did not receive a second 6 MHz allotment for DTV. The FCC established about a 10 year timeline for those stations with a DTV assignment to construct a DTV station, cease NTSC transmissions, and return one of the two 6 MHz blocks of spectrum to the FCC. Target date for the end of analog television (NTSC) transmission was set for December 31, 2006.

Congress provided several market penetration loopholes (>85% households served, all 4 major networks converted, etc) allowing NTSC operations to continue past the December 31, 2006 date. While there are over 100 NTSC full power stations in this band, there are also about 12 DTV assignments. The DTV assignments might continue operations past the December 31, 2006 date for two reasons. 1) They must find a suitable channel below channel 60 to move to, which may be their own NTSC assignment. They may not be able to find another allocation until other NTSC stations have ceased operations and returned a channel below 60 to the FCC. Or, 2) their license does not expire until after 2006 (most are licensed into 2007 or 2008).

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[5] Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, MM Docket No. 87-268, *Sixth Further Notice of Proposed Rule Making*,11 FCC Rcd 10,968, 10,980 (1996) (*DTV Sixth Notice*).

[6] FCC 98-191, 1st R&O and 3rd NPRM on WT Docket No. 96-86 Operational & Technical Requirements or the 700 MHz Public Safety Band, para.4.

Protection of Public Safety from future TV/DTV Stations

Public safety base and mobile operations must have a safe distance between the co-channel or adjacent TV and DTV systems. This typically means that a co- channel and adjacent channel base and mobile system cannot operate in areas where TV stations already exist. The public safety systems that will operate in the 700 MHz band for some locations in the U.S. and its possessions must wait until the transition period is over and the TV/DTV stations have moved to other channels before beginning operations. In other areas, channels will be available for public safety operations. During the transition period, public safety stations must be acutely aware of the TV allocations for both TV and DTV stations. The FCC wants the number of situations where the public safety licensee has to coordinate its station with the existing TV stations kept to a minimum. The Commission's decisions in the reallocation of spectrum to DTV implemented two requirements which will help public safety systems to protect TV/DTV stations and reduce the number of coordinations. The first requirement is that full power UHF-TV stations can no longer apply for channels 60-69 or modifications in channels 60-69 which would increase the stations' service areas, which creates a known environment for public safety licensees.[7] The second requirement is that since only existing TV station licensees can apply for DTV channels, the applicants and their proposed locations are already known.[8]

[7] *See Reallocation Report and Order*, 12 FCC Rcd 22,969-22,970. Stations with existing channel 60-69 TV construction permits must complete their stations and file for a license by January 2, 2001.

[8] *See DTV Sixth Report and Order*, 12 FCC Rcd 14,739-14,754; *See also* In the Matter of Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, *Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order* in MM Docket No. 87-268, 13 FCC Rcd 7418 (1998). The 11 DTV allotments are:

Also, the low power TV stations and translators already on channels 60-69 are secondary and must cease operations if they cause harmful interference when a primary service, like land mobile, comes into operation. The secondary Low Power TV stations already on channels 60-69 cannot apply for the new Class A protection status.

STATE	CITY	NTSC TV Ch.	DTV Ch.	ERP (kW)	HAAT (m)
California	Stockton	64	62	63.5	874
California	Los Angeles	11	65	688.7	896
California	Riverside	62	68	180.1	723
California	Concord	42	63	61.0	856
Pennsylvania	Allentown	39	62	50.0	302
Pennsylvania	Philadelphia	6	64	1000.0	332
Pennsylvania	Philadelphia	10	67	791.8	354
Puerto Rico	Aguada	50	62	50.0	343
Puerto Rico	Mayaguez	16	63	50.0	347
Puerto Rico	Naranjito	64	65	50.0	142
Puerto Rico	Aguadilla	12	69	691.8	665

Spectrum Overview

700 MHz Public Safety Band - 24 megahertz of spectrum

TV 61	TV 62	TV 63	TV 64	TV 65	TV 66	TV 67	TV 68	TV 69	806-824 LMR Band
		Public Safety 6 MHz	Public Safety 6 MHz				Public Safety 6 MHz	Public Safety 6 MHz	

TV Channel 63 TV Channel 64 TV Channel 68 TV Channel 69

764 MHz 770 776 794 MHz 800 806

NB 3 MHz | WB 6 MHz | NB 3 MHz | NB 3 MHz | WB 6 MHz | NB 3 MHz

NB = narrowband channels WB = wideband channels

The FCC designated 764-776 MHz (TV Channels 63 and 64) for base-to-mobile transmissions and 794-806 MHz (TV Channels 68 and 69) for mobile-to-base communications. In addition, base transmit channels in TV Channel 63 are paired with mobile channels in TV Channel 68 and likewise that base channels in TV Channel 64 are paired with mobile channels in TV Channel 69. This provides 30 MHz separation between base and mobile transmit channel center frequencies. This band plan was suggested because of the close proximity of TV Channels 68 and 69 to the 806-824 MHz band, which already contains the transmit channels for mobile and portable radios (base receive).

Mobile transmissions are allowed on any part of the 700 MHz band, not just the upper 12 MHz. This will facilitate direct mobile-to-mobile communications (*i.e.*, not through a repeater) that are often employed at the site of an incident, where wide area communications facilities are not available or desired. Allowing mobile transmissions on both halves of a paired channel is generally consistent with FCC rules governing use of other public safety bands.

Non-uniform TV Channel Pairing

There are currently geographical areas where, either licensed or otherwise protected full-service analog or new digital, television stations are currently authorized to operate on TV Channels 62, 63, 64, 65, 67, 68, and 69.[9] During the DTV transition period, an incumbent TV station occupying one or more of the four Public Safety channels (63, 64, 68, 69) or the three adjacent channels (62, 65, 67) may preclude pairing of the channels in accordance with the band plan defined above. Therefore, to provide for cases where standard pairing is not practicable during the DTV transition period, the FCC will allow the RPCs to consider pairing base-to-mobile channels in TV Channel 63 with mobile-to-base channels in TV Channel 69 and/or base-to-mobile channels in TV Channel 64 with mobile-to-base channels in TV Channel 68. Because such non-standard channel pairing may

cause problems when the band becomes more fully occupied, the FCC expects the RPCs to permit such non-standard channel pairing only when absolutely necessary, and the FCC may require stations to return to standard channel pairing after the DTV transition period is over. <u>However, the FCC will not permit non-standard channel pairing on the nationwide interoperability channels in the 700 MHz band because of the need for nationwide uniformity of these channels</u>.

At least three issues must be considered before deciding upon non-uniform channel pairing:

1) Preliminary analysis, looking at current incumbent TV stations, shows few geographic areas where non-uniform pairing allows early implementation of 700 MHz systems. As DTV Transition progresses, and TV stations vacate the band, this situation might change.

2) If interoperability channels must be uniform, operation on I/O channels will be blocked until all incumbent TV stations are cleared, even though General Use channels may be implemented earlier.

3) If I/O channels must follow uniform pairing, and general use & reserve channels can be implemented using non-uniform pairing, narrowband voice subscriber equipment must operate on 3 different channel pairings - 39 MHz (764-767 paired with 803-806 MHz), 30 MHz, and 21 MHz (773-776 paired with 794-797 MHz). Likewise, there will be 3 different channel pairing for wideband channels. No vendors have volunteered to build equipment & systems for non-uniform pairing, yet.

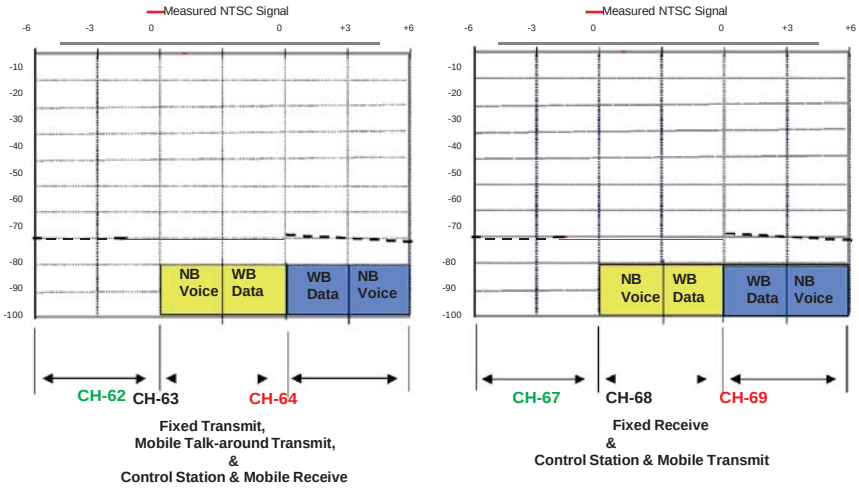
TV/DTV Protection

During the DTV Transition period, public safety must consider all co-channel and adjacent channel TV and DTV stations within about a 160 mile radius.

For public safety channel pair 63/68, public safety must consider six TV/DTV channels - co-channels 63 and 68, as well as, adjacent channels 62, 64, 67, and 69.

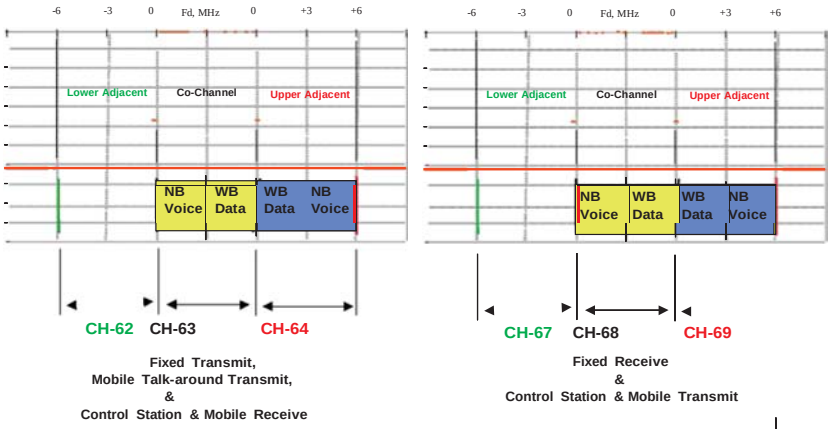
[9] *See Reallocation, Notice of Proposed Rule Making,* 12 FCC Rcd at 14,141, 14,177-78 and 14,182-83.

Measured (off-the-air) Analog TV Signal vs 700 MHz Public Safety Assignments



HAVE 2 CO-CHANNEL AND 4 ADJACENT CHANNELS TO CONSIDER FOR EACH 700 MHz PAIRED BLOCKS OF SPECTRUM

DTV Emission Mask vs 700 MHz Public Safety Assignments



HAVE 2 CO-CHANNEL AND 4 ADJACENT CHANNELS TO CONSIDER FOR EACH 700 MHz PAIRED BLOCKS OF SPECTRUM

For public safety channel pair 64/69, public safety must consider five TV/DTV channels; co-channels 64 and 69, as well as, adjacent channels 63, 65, and 68.

It may only takes one TV/DTV station to block operations on one, the other, or both public safety channel pairs. For a public safety system at 500 watts ERP and 500 ft HAAT, co-channel TV stations can block a 120 mile radius and adjacent channel TV/DTV stations can block a 90 mile radius.

Since base stations transmitters are located only on channels 63 and 64, LMR mobile only TV/DTV protection spacing on channels 68 and 69 may be shorter than LMR base TV/DTV protection on channels 63 & 64.

TV/DTV Protection Criteria

Public safety applicants can select one of three ways to meet the TV/DTV protection requirements:

(1) utilize the geographic separation specified in the 40 dB Tables of 90.309;

(2) submit an engineering study to justify other separations which the Commission approves; or

(3) obtain concurrence from the applicable TV/DTV station(s).

90.309 40 dB D/U Tables

The FCC adopted a 40 dB desired (TV/DTV) to undesired (LMR) signal ratio for co-channel operations and a 0 dB desired/undesired (D/U) signal ratio for adjacent channel operations. The D/U ratio is used to determine the geographic separation needed between public safety base stations and the Grade B service contours of co-channel and adjacent channel TV/DTV stations.[10] The D/U signal ratio is used to determine the level of land mobile signals that can be permitted at protected fringe area TV receiver locations without degrading the TV picture to less than a defined picture quality. In other words, the D/U signal ratio indicates what relative levels of TV and land mobile signals can be tolerated without causing excessive interference to TV reception at the fringe of the TV service area.

Desired and undesired contours are not quite the same thing. Desired analog TV contours are defined as F(50,50), meaning coverage is 50% of the places and 50% of the time. Undesired land mobile or interference contours are defined as F(50,10). For Digital TV, the desired contours are defined as F(50,90), while the undesired land mobile contour are still F(50,10).

[10] *See Second Notice*, 12 FCC Rcd 17,803.

Land mobile and analog TV services have successfully shared the 470-512 MHz band (TV Channels 14-20) within a 50 mile radius of eleven major cities since the early 1970's based upon providing a signal ratio of at least 50 dB[11] between the desired TV signal and undesired co-channel land mobile signal (D/U signal ratio) at a hypothetical 88.5 km (55 mi) Grade B service contour and an adjacent channel D/U signal ratio of 0 dB at the same hypothetical Grade B service contour. These separation distances also protected the land mobile systems from interference from the TV stations. In 1985, recognizing that 50 dB D/U was too conservative, the FCC proposed to expand land mobile/TV sharing to other TV channels and proposed that the geographic separation requirements for co- channel operations be based on a D/U signal ratio of 40 dB rather than 50 dB.[12] That proceeding was put on hold pending completion of the DTV proceeding, which has now been completed. In the 470-512 MHz band, the FCC also relied on minimum separation distances based on the various heights and powers of the land mobile stations (HAAT/ERP separation tables) to prevent harmful interference.

Since this simple, yet conservative, method was successful, the FCC decided to use this same method, the 90.309 HAAT/ERP Separation Tables, to administer LMR to TV/DTV receiver protection criteria for the services in the 700 MHz band.

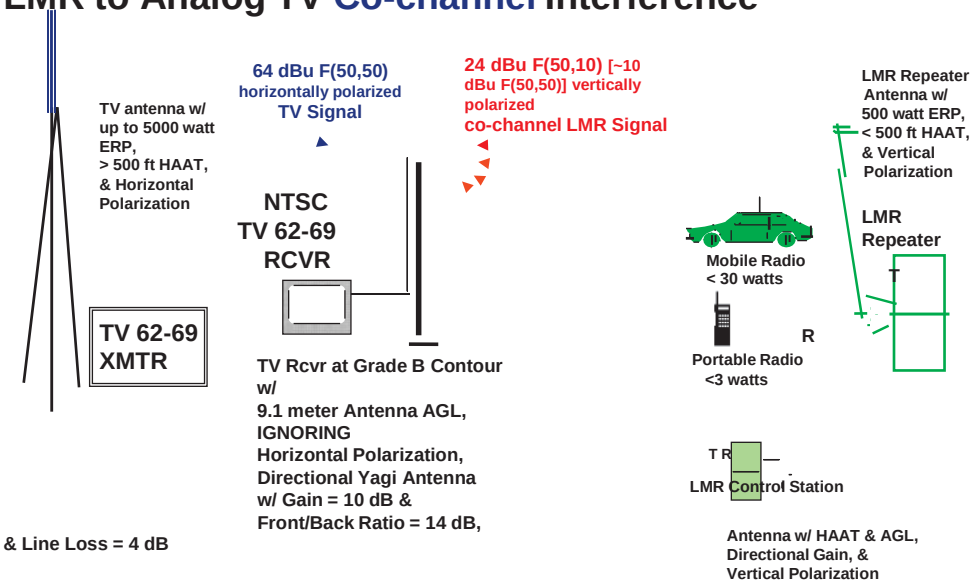
---

[11] For TV Channel 15 in New York City, a 40 dB D/U signal ratio is used. *See* 47 C.F.R. §§ 90.307(b) and 90.309 (Table B). A 50 dB protection ratio means that the amplitude of the desired TV signal is more than 300 times greater than the amplitude of the undesired signal at the Grade B service contour. A 40 dB protection ratio means the desired TV signal is 100 times greater.

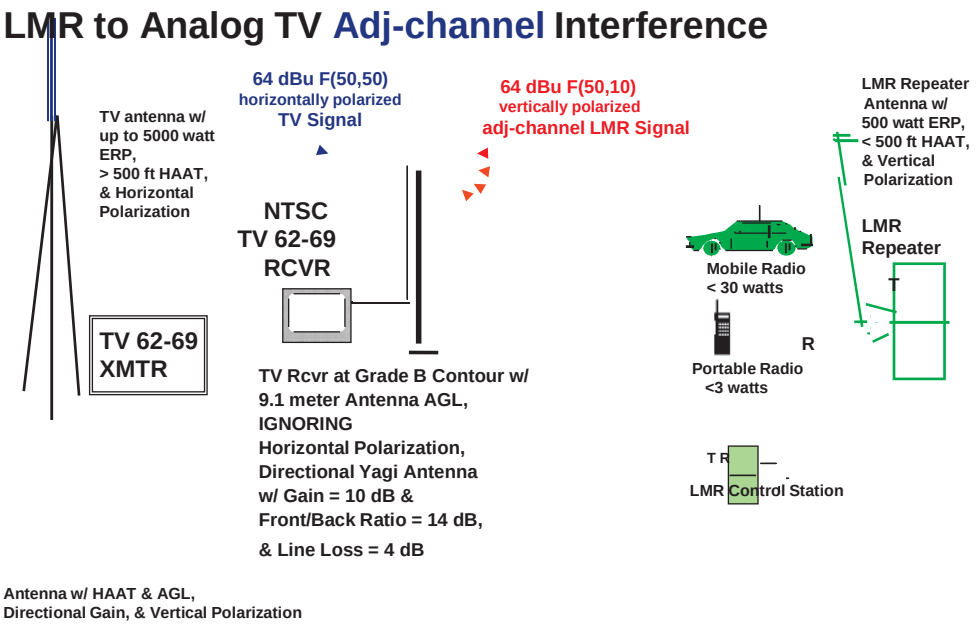
[12] *See* Amendment of the Rules Concerning Further Sharing of the UHF Television Band by Private Land Mobile Radio Services, GEN Docket No. 85-172, *Notice of Proposed Rulemaking*, 101 FCC 2d 852, 861 (1985) (*UHF-TV Sharing NPRM*).

Co-channel land mobile base station transmitters are limited to a maximum signal strength at the hypothetical TV Grade B contour 40 dB D/U below desired 64 dBu F(50,50) analog TV signal level, or 24 dBu F(50,10).[13] The FCC adopted a 0 dB D/U signal ratio for adjacent channel operations. Adjacent channel land mobile transmitters will be limited to a maximum signal of 64 dBu F(50,10) which is 0 dB D/U below the TV Grade B signal of 64 dBu F(50,50) at the TV station Grade B contour of 88.5 km (55 miles). A typical TV receiver's adjacent channel rejection is at least 10-20 dB greater than this level which will further safeguards TV receivers from land mobile interference.

LMR to Analog TV Co-channel Interference



[13] In terms of miles, if everything else is the same, a 40 dB D/U ratio rather than a 50 dB D/U ratio allows base stations to be located approximately 48.3 km (30 mi) closer to a co-channel TV station. *See* 47 C.F.R. § 90.309, Tables A & B.



The equivalent ratios for a DTV station's 41 dB F(50,90) desired field strength contour are land mobile 17 dB F(50,10) contour for co-channel and land mobile - 23 dB F(50,10) contour for adjacent channel.

The Tables to protect TV/DTV stations are found in Section 90.309 of the Commission's rules. These existing Tables cover co-channel protection based on a 40 dB D/U ratio using the separation methods described in Section 73.611 of the Commission's rules for base, control, and mobile stations, and for adjacent channel stations for base stations based on a 0 dB D/U ratio.

However, the original considerations in 470-512 MHz band under Section 90.309 were different in that mobiles were limited in their roaming distance from the base station (less than 30 miles) and mobiles were on the same TV channel as the base station.

Control and mobile stations (including portables) are limited in height (200 ft for control stations, 20 ft for mobiles/portables) and power (200 watts ERP for control stations, 30 watts for mobiles, 3 watts for portables). Mobiles and control stations shall afford protection to co-channel and adjacent channel TV/DTV stations in accordance with the values specified in Table D (co-channel frequencies based on 40 dB protection for TV and 17 dB for DTV) in § 90.309.

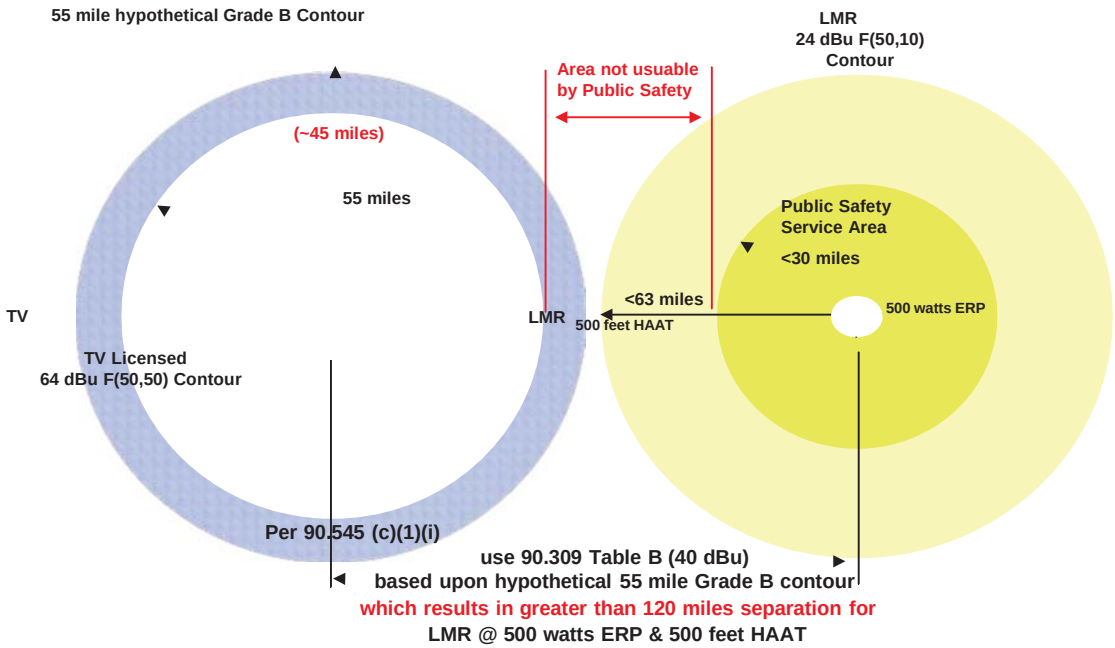
Control stations and mobiles/portables shall keep a minimum distance of 8 kilometers (5 miles) from all adjacent channel TV/DTV station hypothetical or equivalent Grade B contours (adjacent channel frequencies based on 0 dB protection for TV and -23 dB for DTV). This means that control and mobile stations

shall keep a minimum distance of 96.5 kilometers (60 miles) from all adjacent channel TV/DTV stations.

Since operators of mobiles and portables are able to move and communicate with each other, licensees or coordinators must determine the areas where the mobiles can and cannot roam in order to protect the TV/DTV stations, and advise the mobile operators of these areas and their restrictions.

Engineering Analysis
Limiting TV/land mobile separation to distances specified in the 40 dB HAAT/ERP Separation Tables found in 90.309 may prevent public safety entities from fully utilizing this spectrum in a number of major metropolitan areas until after the DTV transition period ends. Public safety applicants will be allowed to submit engineering studies showing how they propose to meet the appropriate D/U signal ratio at the existing TV station's authorized or applied for Grade B service contour or equivalent contour for DTV stations instead of the hypothetical contour at 88.5 km.

700 MHz Band - LMR to Co-Channel TV Spacing using 40 dBu Table

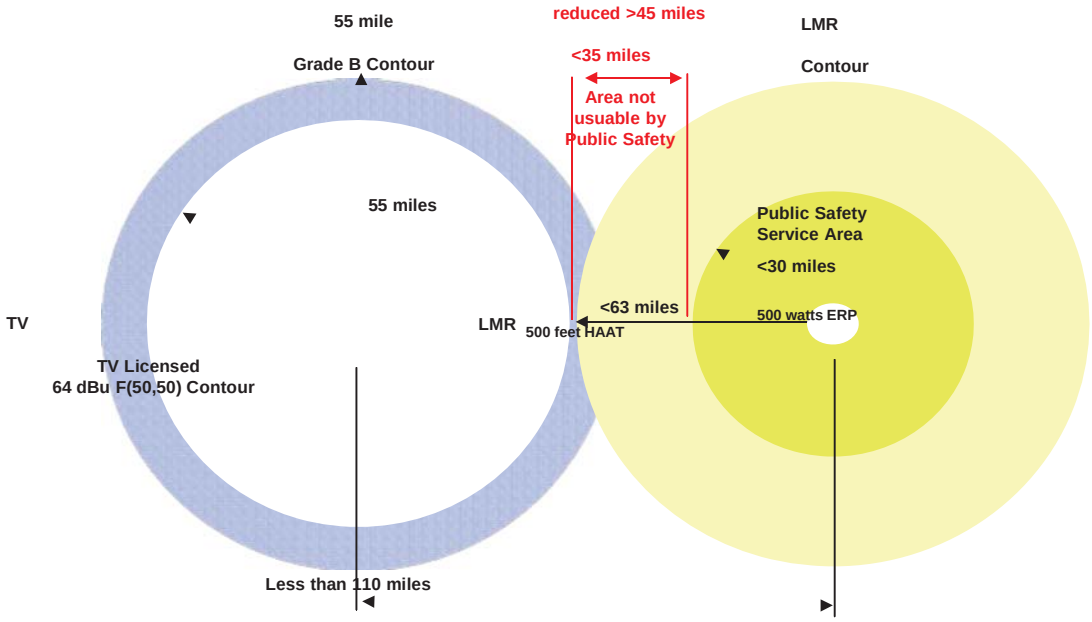


Many Channel 60-69 TV stations do not have 55 mile radius Grade B contours.
Average calculated for NE corridor is less than 45 miles.

This would permit public safety applicants to take into account intervening terrain and engineering techniques such as directional and down-tilt antennas in determining the necessary separation to provide the required protection. Public safety applicants who use the engineering techniques must consider the actual TV/DTV parameters and not base their study on the 88.5 km hypothetical or equivalent Grade B contour. If land mobile interference contour does not overlap the TV Grade B contour (or DTV equivalent), then engineering analysis may be submitted to the FCC with the application.

700 MHz Band - Public Safety to Co-Channel TV Spacing using Engineering Analysis per 90.545(c)(1)(ii)

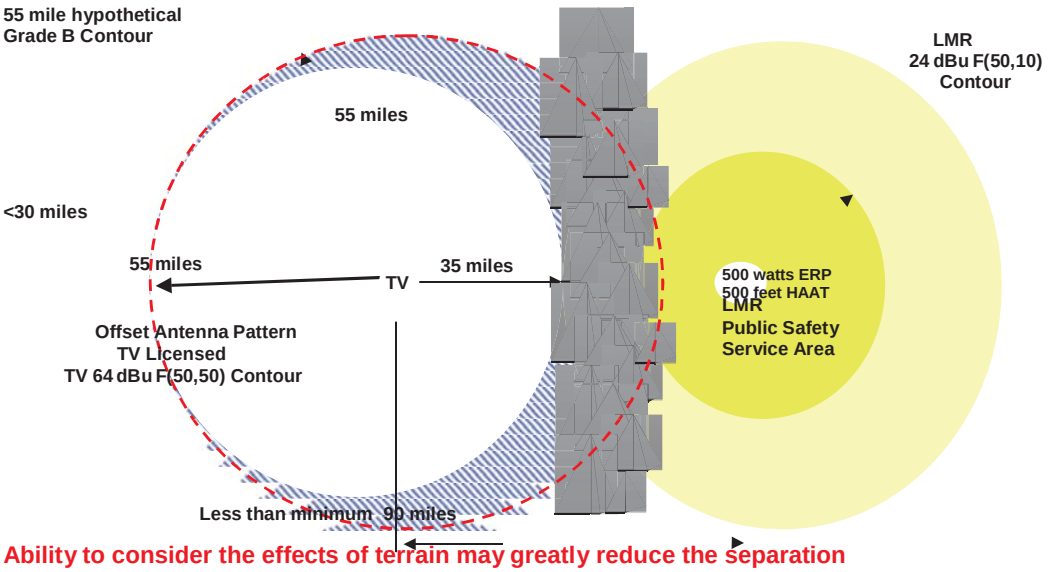
Actual LMR 24 dBu contour just touches Licensed TV/DTV 64 dBu contour



his method is most useful with lower power TV stations whose Grade B contours are much smaller than the hypothetical 55 mile (88.5 km) Grade B contour or have directional patterns.

700 MHz Band - Public Safety to Co-Channel TV Spacing using Engineering Analysis per 90.545(c)(1)(ii)

Actual LMR 24 dBu contour just touches Actual TV/DTV 64dBu contour



Ability to consider the effects of terrain may greatly reduce the separation required between LMR and TV.

Note that 200 ft AGL limitations on 700 MHz control stations is much higher than the 100 ft AGL limitation used at UHF. Limiting control station antenna height and/or ERP may greatly reduce land mobile to TV contour spacing.

Also, note that analysis for TV/DTV receivers uses 30 ft (10 m) antenna height whereas, analysis for land mobile subscribers uses about a 6 ft (2m) antenna height.

TV/DTV Short-spacing

Public safety applicants will also be allowed to "short-space" even closer if they get the (written) approval of the TV stations they are required to protect. Public safety applicants need to determine the station's intended market area vs its hypothetical Grade B contour area. Alternately, the TV/DTV station may be short- spaced against another TV/DTV station, limiting their area of operation, but does not affect LMR operations.

Instead of each agency negotiating with a TV/DTV station individually, they may want to combine into a single group or committee and negotiate together.

TV/DTV Height Adjustment Factor

In order to protect certain TV/DTV stations which have extremely large contours due to unusual height situations, such as a television station mounted on top of Mount Wilson near Los Angeles, California, the FCC incorporated an additional height adjustment factor which must be used by all public safety base, control and mobile stations to protect these few TV/DTV stations and afford the land mobile stations the necessary protection from the TV/DTV stations. The equation necessary to calculate the additional distance from the hypothetical or equivalent Grade B contour is found in the rules section 90.545(c)(2)(iii).

CANADIAN AND MEXICAN BORDER REGIONS

The FCC typically takes one of two approaches. They either postpone licensing of land mobile stations within a certain geographic distance (*e.g.,* 120 km (75 miles)) of Canada and Mexico, or permit interim authorizations conditioned on the outcome of future agreements. Because international negotiations can take many months or even years to finalize, the FCC took the later approach and adopted certain interim requirements for public safety licenses along the Canada and Mexico borders, providing that the licenses are subject to whatever future agreements the United States develops with the two countries.

Nevertheless, existing mutual agreements with Canada and Mexico for the use of these bands for UHF television must be recognized until further negotiations are completed. The US negotiated an agreement with Mexico of DTV operations near the US/Mexican border in July 1998. The US just negotiated an agreement with Mexico of DTV operations, and limited non-broadcast operations on 746-806

MHz, near the US/Canadian border in September 2000. Existing agreements recognize existing TV and/or DTV allotments and planning factors within a specified distance of the border. The Canadian Letter of Understanding also acknowledges that US plans to use 746-806 MHz for non-broadcast purposes and provides planning criteria (40 dB D/U) to protect Canadian TV/DTV receivers.

Additionally, public safety facilities within the United States must accept interference from authorized channel 60-69 TV transmitters in Canada and Mexico in accordance with the existing agreements. Since the locations of the Canadian and Mexican analog TV assignments and DTV allotments are known, the public safety applicants can consider the levels of harmful interference to expect from Canadian and Mexican TV/DTV stations when applying for a license. Both Canada and Mexico have been informally notified that the Commission has changed its allocated use of TV channels 60-69, and the Commission will discuss the possibility of mutually compatible spectrum use with Canada and Mexico.

Appendix I

FCC Public Notice of Region 10 Meeting and RPC Minutes

PUBLIC NOTICE

Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

News media information (202) 418-0500
TTY (202) 418-2555
Internet: http://www.fcc.gov

DA 15-895

August 7, 2015

PUBLIC SAFETY AND HOMELAND SECURITY BUREAU ANNOUNCES REGION 10 (GEORGIA) PUBLIC SAFETY REGIONAL PLANNING COMMITTEES TO HOLD 700 MHZ AND 800 MHZ NPSPAC REGIONAL PUBLIC SAFETY PLANNING MEETINGS

PR Docket No. 92-189 and WT Docket 02-378

The Region 10 (Georgia)[1] Regional Planning Committees (RPCs) will hold two consecutive planning meetings on Wednesday, September 30, 2015. Beginning at 10:00 a.m., the 700 MHz RPC will convene at the Georgia Public Safety Training Center (GPSTC), 1000 Indian Springs Drive, Training Bay-A, Forsyth, Georgia. Immediately following the 700 MHz RPC meeting, the 800 MHz RPC will convene at the same location. A continental breakfast and lunch will be provided. Breakfast will be served from 9:00 – 10:00 a.m.

The tentative agenda for the 700 RPC meeting will be:

- Introduction of RPC officers
- Review and approval of the meeting minutes
- FCC application process
- Old business
- New business
- Standing committee reports
- Nomination and election of Region 10 RPC officers and subcommittee members
- Discuss and vote on proposed changes to Region 10's 700 MHz Plan
- Federal Communications Commission (FCC) Regulatory Update
- Schedule 2016 RPC meeting

Immediately following the 700 MHz RPC meeting, the 800 MHz RPC will convene. The tentative agenda for the 800 MHz RPC meeting will be:

- Introduction of RPC officers
- Review and approval of the meeting minutes
- FCC application process

[1] The Region 10 700 MHz and 800 MHz Regional Planning Committees' area includes all 159 counties in the State of Georgia.

- Old business
- New business
- Standing committee reports
- Nomination and election of Region 10 RPC officers and subcommittee members
- FCC Regulatory Update
- Schedule 2016 RPC meeting

Both Region 10 RPC meetings are open to the public. All eligible public safety providers in Region 10 may utilize these frequencies. It is essential that eligible public safety agencies in all areas of government, including state, municipality, county, and Native American Tribal be represented in order to ensure that each agency's future spectrum needs are considered in the allocation process. Administrators who are not oriented in the communications field should delegate someone with this knowledge to attend, participate, and represent their agency's needs.

All interested parties wishing to participate in planning for the use of public safety spectrum in the 700 MHz and 800 MHz bands within Region 10 should plan to attend. For further information, please contact Ralph Bevan at (404) 656-2042, or Jim Mollohan.

Jim Mollohan, PMP
Chairman, Region 10, 700 MHz and 800 MHz RPCs
Georgia Technology Authority, Spectrum Management Office
47 Trinity Avenue S.W., Suite 330-22
Atlanta, Georgia 30334-9007
(404) 656-5619 Office
(678) 296-3940 Mobile
Jim.Mollohan@gta.ga.gov

- FCC -

Region 10, Georgia
700 & 800 Regional Planning Committee
Meeting Minutes of 30 September 2015

The 700 & 800 MHz RPC meeting was called to order at 10:05 AM by Chairman Jim Mollohan. A quorum of the membership was present.

Officers present:
Chairman: Jim Mollohan
Vice Chair: Ralph Bevan
Treasurer: Jimmy Williams
Absent:
Secretary: Bob Williams
At Large: Thomas Nguyen-Pham

Jim Mollohan thanked everyone for coming and introduced the RPC officers. He noted that Bob Williams would be unable to fulfill the duties as Secretary due to constraints of his new job. He introduced James Conner of Savannah who has volunteered to fill in for Bob Williams. Jim Mollohan gave a brief overview of the subcommittees of the RPC and put forth a request for volunteers to join the various subcommittees. He turned the meeting over to Ralph Bevan to report on the Technical Subcommittees.

A) Subcommittee Reports

1) Technical Subcommittee – Ralph Bevan

Ralph Bevan gave a brief overview of the duties and responsibilities of the subcommittee as to the review of submitted applications to prevent interference and to ensure compliance with the 40 dBu contour.

A. 800 MHz
   1. Houston County 8TAC is now part of the Central Georgia (Macon-Bibb) network
   2. City of Clarkston-Request for traffic radar license- informed them they need a letter from DeKalb County certifying they are authorized users
   3. Athens-Clarke County and the University of Georgia have STAs in place for a consolidated system
   4. Emory University- MO3 application pending
   5. Glynn County- Requesting additional frequencies to expand/upgrade current system.
   6. Cobb County –STA to permanent, site ERP reduced
   7. Dawson County- approved

B. 700 MHz
   1. Barrow County- STA and license approved. STA modified to meet FCC requirement

2. Oconee County- update- They had a reconfiguration issue due to improperly installed antennas by their vendor
3. Rockdale County- MO3 pending- still waiting for them to provide system status justification (2 years)
4. Bartow County- issued RFP
5. North Fulton Regional Radio System Authority- NFRRSA- new system approved, 7TACs approved
6. Clayton County- new system approved and 7TACs approved

C. CAPRAD

1. Training on CAPRAD was held at the Washington APCO conference. It was sponsored by NRPC & APCO and focused on developing new pre-coordination standards.
2. Ralph Bevan & Jim Mollohan discussed the provided handout: *700 and 800 Frequency Application Requirements and Process*

D. Outreach subcommittee – Howell McKinnon

1. Howell McKinnon requests that everyone ensure their contact information is correct.

E. Plan Development- Jim Mollohan

1. Jim Mollohan stated that user input is needed on updates to the plan
2. A request for persons proficient in MS WORD to help with the formatting of the plan was made

B) NPSTC, FCC and NRPC Updates

1. It was noted that the RPC may pick up responsibility for coordination of 4.9GHz.
2. 20K (wideband) emissions no longer valid as of 01 Jan 2015
3. NRPC is reviewing and analyzing data collected from over 28 RPC's in order to standardize loading requirements and pre-coordination parameters. NRPC is expected to have a final recommendation to the RPC's in 2016. A brief discussion on the proposal "Pre-Coordination Standards" that was presented at the APCO National Conference in Washington, D.C. on August 18, 2015 was made to the RPC. Technical Subcommittee will review the proposed changes and provide a recommendation to the RPC.
4. Jim introduced Eric Rice of the Atlanta FCC office
5. A question was asked about the requirement to provide 7TAC & 8TAC channels. Jim Mollohan explained the requirement is based on the number of channels you have. Less than 5 channels in 800MHz, there is no requirement for an 8TAC channel. Less than 6 channels in 700 MHz, than there is no requirement for a 7TAC channel.

6. Bob Davis of Savannah noted that the Technical Subcommittee, when considering system loading requests, need to look at a public safety standard vs. one designed by and for commercial entities.

Break for lunch at 11:50 AM
Meeting reconvened at 12:22 PM

C) 800 MHz Business Meeting

Meeting was called to order at 12:23 PM
Minutes from October 16, 2014 were read by JC Conner
Jim Mollohan noted it was time to elect officers. He again noted that Bob Williams would be unable to fulfill the duties of Secretary and opened the floor to nominations. Bob Davis nominated James Conner. Jim Mollohan nominated himself for Chair and Ralph Bevan for Vice Chair. The Chairman made a motion to carry over all of last year's officers, seconded by Ralph Bevan. A majority of members voted to approve the nominees. The officers for 2015-17 are:

Chairman:	Jim Mollohan
Vice Chair:	Ralph Bevan
Treasurer:	Jimmy Williams
At Large:	Thomas Nguyen-Pham
Secretary:	James Conner

The Treasury report was read by Jimmy Williams of Oconee County. He stated that there $2258.90 in the account. As there had been no activity on the account since December 14, 2011, Bank of America wanted to start charging a non-activity fee of $44.00. The account with Bank of America was closed and the funds were transferred to SunTrust Bank. Jimmy Williams also stated that there is no guidance on what can be done with the money.

Tracy Roberts of Cobb County made a motion to approve the minutes and Treasury Report ,the majority voted to do so.

1) Old Business

a. 800MHz Repacking- missed the funding deadline. Will retry next year
b. Repacking will be a major undertaking-a request for volunteers to join the Plan Development Subcommittee was made

2) New Business

a. Ralph Bevan gave a brief history of the 800MHz repacking and how 18 counties had been omitted from the pool years ago.

No new business was brought forward; meeting was adjourned with a majority of members concurring.

Meeting adjourned at 1:05 PM

D) 700 MHz Business Meeting

Meeting was called to order by the Chairman at 1:06 PM.
Minutes from October 16, 2014 were read by JC Conner
Treasury report was read by Jimmy Williams.
Jim Mollohan noted it was time to elect officers and opened the floor to nominations. Bob Davis nominated James Conner for Secretary. The Chairman made a motion to carry over all of last year's officers, seconded by Tracy Roberts. A majority of members voted to approve the nominees. The officers for 2015-17 are as listed:

Chairman:	Jim Mollohan
Vice Chair:	Ralph Bevan
Treasurer:	Jimmy Williams
At Large:	Thomas Nguyen-Pham
Secretary:	James Conner

Tracy Roberts of Cobb County made a motion to approve the minutes and Treasury Report, Bob Davis seconded. All members voted to approve.

1) Old Business

a. No old business was discussed

2) New Business

a. Air to Ground channels- RPC has reached out to the GEMA to see if we could take over state-wide coordination of air-to-ground channels. A question was asked about the parameters of the frequencies to use. Jim Mollohan believes that the frequency is restricted to two watts at an altitude of 1400 feet or less. Bob Davis asked if there were any guidance on what we can currently use. Ralph Bevan answered that there is none. Howell McKinnon made a motion that the RPC accept responsibility for the coordination contingent upon receipt of a letter from GEMA to the FCC requesting that the RPC take responsibility for the coordination of air-to-ground frequencies for the State of Georgia. The motion was seconded by Duane Studdard and passed by a majority of the membership.

b. Reserve channels- The FCC has authorized the RPC to assign up to 8 former reserve channels for deployable use and 16 channels for general use. The floor was opened to discussion as to how to allocate these assets. It was decided to allocate the channels as follows:
-4 channels for MO3 use- limited to 2 watts, does not count against county channel allotment
-6 channels to be deployable- for use in MCUs (Mobile Command Units)… No fixed assets
-14 channels for general use on a first come, first served basis

It was noted that Emory University, even though a private entity, may be eligible for a MO3 reserve channel.

A motion to adopt this channel allotment was made by Duane Studdard and seconded by Darryl Scott. The motion was approved by a majority of members.

The floor was opened to comments from members. Duane Studdard wished to recognize Nick Brown for his six years as SWIC (Statewide Interoperability Communications Coordinator). Jim Mollohan introduced Andy Pichs as the new Radio Manager for Fulton County.

There being no further new business, motion to adjourn was made by Jim Mollohan and seconded by Duane Studdard. The majority concurred.

Meeting adjourned at 2:05 PM

Place Holder for Signed LOC & Dispute Resolution

Original Approvals

REGION CHAIRMAN
Mr. Ray Carlson
Division Manager
PBC Sheriff's Office
3228 Gun Club Road
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(561) 688-3514, SC 266-3514
FAX (561) 688-3778, SC 266-3778
carlsonr@pbso.org

THE FLORIDA REGION COMMITTEE

(700 MHz Regional Planning)

REGION VICE CHAIRMAN
Mr. Jose R. Perez
Regional Communications Systems Manager
2601 W. Broward BLV
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((954) 321 4715
FAX (954) 321-5090
Jose_PEREZ2@sheriff.org

October 7, 2008

Mr. Jim Mollohan
700/800 RPC, Region 10 Chairman
Georgia Technology Authority
254 Washington St. SW
Ground Floor
Atlanta, GA 30334-9007

Dear Jim:

As Chairman and on behalf or the Region 9, 700 MHz Regional Planning Committee, Region 9 sends this Letter of Concurrence regarding the final Region 10, Georgia, 700 Mhz Plan.

Best regards, and the Region 9 staff look forward to working with Region 10 over the next very busy years.

Sincerely,

Ray Carlson
Region 9 Chairman

CHAIRMAN - SUBREGION 1
Mr. Paul Winter
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CHAIRMAN - SUBREGION 2
Mr. Leven Magruder
800 MHz Communications System Manager
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magruderl@talgov.com

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CHAIRMAN - SUBREGION 4
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Polk County Emergency Management
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CHAIRMAN - SUBREGION 6
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Lee County Communications Supervisor
Emergency Operations Center
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Astadtler@leegov.com

CHAIRMAN - SUBREGION 7
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CHAIRMAN - SUBREGION 8
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State Technology Office
4030 Esplanade Way, Suite 315K
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jean-pierre.saliba@myflorida.com

Superintendent of Public Works
Theodore H. Lawson

Assistant Superintendent of Public Works
Richard H. Crist, P.L.S.

Equipment Services Manager
Robert J. Gordon

Superintendent of Building Maintenance
George E. Oaks

Director of Inspection Services
Ted Montgomery

Director, Public Safety Communications
Eric M. Linsley

MOBILE COUNTY PUBLIC WORKS

Director of Public Works / County Engineer
Joe W. Ruffer, P.E.

October 9, 2008

Jim Mollohan, Chairman
Region 10, 700 MHz Regional Planning Committee
Georgia Technology Authority
47 Trinity Ave.
Atlanta, GA 30334-9007

Re: Region 10, Georgia 700 MHz Regional Plan

I have received your letter dated October 6, 2008 and a copy of the above-mentioned plan. As Chairman of the Region 1, Alabama Regional Planning Committee, I concur with Region 10's 700 MHz Regional Plan. I also concur with the Inter-Regional Coordination Procedures and Procedures for Resolution of Disputes and I have enclosed a signed copy.

Yours Truly

Eric M. Linsley
Director of Public Safety Communications
Chairman Region 1, 700 MHz Regional Planning Committee

cc Joe Ruffer, P.E.
County Engineer

File: C:\Documents\FCC\700 committee\concurrences\region 10 plan concurrence.wpd

Region 37 Committee
William Winn, Jr. – Chairman
P.O. Drawer 1228
Beaufort, SC 29901
843-470-3100
843-470-3054 (Fax)

October 29, 2008

Mr. Jim Mollohan PMC, NPDP
700/800 MHz RPC Region 10, Chairman
State of Georgia
Georgia Technology Authority
47 Trinity Avenue, Suite 440-10
Atlanta, GA 30334-0997

Dear Jim:

I have reviewed the Region 10 (Georgia), 700 MHz Regional Communications Plan and have also read Appendix H (Inter-Regional Dispute Resolution Agreement).

This is to advise that South Carolina sees no opposition to these documents and concurs with all written within.

Thank you for all the time and effort that has gone into this planning. We will all benefit from such inter-agency cooperation.

Should you need have any questions or concerns please feel free to call me at 843-470-3100.

Sincerely,

William Winn, Jr. – Chairman
S.C. Region 37 Committee
WWJr/cab

J drive/Region 37 Folder/2008 Folder:700 MHz Concurance.doc

Michael F. Easley
Governor
Bryan E. Beatty
Secretary
Walter J. Wilson, Jr.
Colonel

North Carolina
Department of Crime Control and Public Safety

State Highway Patrol

Location:
512 N. Salisbury Street
Raleigh, NC 27604
(919) 733-7952

Mailing Address:
4702 Mail Service Center
Raleigh, NC 27699-4702

TECHNICAL SERVICES UNIT

16 December, 2008

Jim Mollahan, Region 10 Chairman
State of Georgia,
Georgia Technology Authority
47 Trinity Ave SW
Atlanta, GA 30334-9007

Dear Chairman Mollahan,

I am receipt of the Region 10 700 MHz Regional Planning Committee's plan for Tennessee. I have reviewed the Region 10 plan and concur with the plan as presented to Region 31, of which I am the chairman. I congratulate you on the formulation of your plan and wish you success in gaining acceptance from the Federal Communications Commission. I am also returning to you, the dispute resolution document with my signature affixed.

If I may be of further assistance to you, please do not hesitate to contact me at (919) 662-4440.

Sincerely,

Michael T. Hodgson
Chairman, Region 31 700 RPC

Cc: Mr. Wayne Eberhard/Mr. Dyke Hostettler,
Co-Chairs, Region 31 800 RPC

An Internationally
Accredited Agency

Law Enforcement Oath of Honor

On my honor, I will never betray my badge, my integrity, my character, or the public trust. I will always have the courage to hold myself and others accountable for our actions. I will always uphold the constitution, my community, and the agency I serve.

700 MHz
Planning Committee

Region 39, Tennessee

Region 39, 700 MHz Regional Planning Committee
John Johnson, Chairman
3041 Sidco Drive
Nashville, TN 37204

December 9, 2008

Jim Mohollon, Chairman
Region 10, Georgia, Regional Planning Committee
Georgia Technology, Authority
47 Trinity Ave. S.W.
Atlanta, GA 30334

Dear Jim:

As Chairman and on behalf of the Region 39, 700 MHz Regional Planning Committee, I send this Letter of Concurrence along with comments regarding the Region 10, Georgia 700 MHz Plan.

After reviewing the Region 10 Plan, Region 39 hereby requests that the below listed channels be reviewed by Region 39 prior to the application being submitted to the FCC. Region 39 comments are solely based on distance and not a specific site, power or ERP. Region 39 has used 70 mile criteria between counties lines to make this determination. Region 39 realizes that the actual site will most likely be further than 70 miles, but requests the below listed channels receive our approval prior to submission to the FCC in order to mitigate interference between co-channel users.

GA County	Channel #	TN County	Comments
Banks	165 – 168 489 – 492 821 – 824	Monroe Monroe Blount	Please coordinate with Region 39 prior to application submission to FCC.
Barrow	385 – 386 917 – 920	Polk	Please coordinate with Region 39 prior to application submission to FCC.
Bartow	489 – 492 821 – 824 941 – 944	Grundy Marion McMinn	Please coordinate with Region 39 prior to application submission to FCC.
Catoosa	413 - 416	Blount	Please coordinate with Region 39 prior to application submission to FCC.

Catoosa	453 – 456 529 – 532	Blount Warren	Please coordinate with Region 39 prior to application submission to FCC.
Chattooga	373 – 376 429 - 432	Meigs Polk	Please coordinate with Region 39 prior to application submission to FCC.
Cherokee	17 – 20 409 – 412 465 – 468 581 – 584 621 – 624	Rhea Rhea McMinn Marion McMinn	Please coordinate with Region 39 prior to application submission to FCC.
Cobb	213 – 216 289 – 292 337 – 340 541 – 544 677 – 680 789 - 792	Polk Hamilton Hamilton Bradley Bradley Hamilton	Please coordinate with Region 39 prior to application submission to FCC.
Dade	329 – 332 445 – 448 517 – 520 633 – 636 633 – 636 877 – 880	Monroe Warren Cannon Bedford Cumberland Rutherford	Please coordinate with Region 39 prior to application submission to FCC.
Dawson	389 – 392 673 - 676	Bradley Loudon	Please coordinate with Region 39 prior to application submission to FCC.
DeKalb			No issues
Fannin	93 – 94 93 – 96 333 – 336 473 – 476	Sevier Van Buren Anderson Rhea	Please coordinate with Region 39 prior to application submission to FCC.

Floyd	15 – 16	Grundy	Please coordinate with Region 39 prior to application submission to FCC.
	165 – 168	Monroe	
	385 – 386	Polk	
	701 – 704	Monroe	
	741 – 744	Sequatchie	
	781 – 782	Marion	
	783 – 784	Grundy	
	861 – 864	Monroe	
	917 – 920	Polk	
Forsyth	569 – 572	Polk	Please coordinate with Region 39 prior to application submission to FCC.
	713 – 716	Bradley	
	793 – 796	McMinn	
	865 – 868	Hamilton	
Franklin	909 – 912	Polk	Please coordinate with Region 39 prior to application submission to FCC.
Fulton	41 – 44	Hamilton	Please coordinate with Region 39 prior to application submission to FCC.
	161 – 164	Bradley	
	205 – 206	Bradley	
	437 – 438	Polk	
	477 – 480	Bradley	
	561 – 564	Bradley	
	629 – 630	Polk	
	669 – 672	Hamilton	
	757 – 760	Bradley	
	905 – 908	Hamilton	
	945 - 948	Hamilton	
Gilmer	57 – 60	Sequatchie	Please coordinate with Region 39 prior to application submission to FCC.
	285 – 288	Van Buren	
	397 – 400	Sequatchie	

Gilmer	837 – 840	Blount	Please coordinate with Region 39 prior to application submission to FCC.
Gordon	525 - 528	McMinn	Please coordinate with Region 39 prior to application submission to FCC.
Gwinnett	97 – 100 705 – 708 825 - 828	Bradley	Please coordinate with Region 39 prior to application submission to FCC.
Habersham	789 – 792	Sevier	Please coordinate with Region 39 prior to application submission to FCC.
Hall	413 – 416 637 - 640	Blount	Please coordinate with Region 39 prior to application submission to FCC.
Jackson	861 – 864	Monroe	Please coordinate with Region 39 prior to application submission to FCC.
Lumpkin	209 – 212 449 – 452 605 – 608	Rhea Rhea Hamilton	Please coordinate with Region 39 prior to application submission to FCC.
Murray	129 – 132 249 – 252 341 – 344	Sevier Roane Sevier	Please coordinate with Region 39 prior to application submission to FCC.
Paulding	133 – 136 425 – 428	Marion Hamilton	Please coordinate with Region 39 prior to application submission to FCC.
Pickens	293 – 296 589 – 592 829 – 832	Blount Meigs Sequatchie	Please coordinate with Region 39 prior to application submission to FCC.
Polk	605 – 608	Hamilton	Please coordinate with Region 39 prior to application submission to FCC.
Rabun			No issues
Stephens	129 – 132 369 – 372 469 – 472	Sevier Polk Blount	Please coordinate with Region 39 prior to application submission to FCC.
Towns	217 – 220 365 – 368 597 – 600	Loudon Loudon Bradley	Please coordinate with Region 39 prior to application submission to FCC.

Towns	717 – 720	Rhea	Please coordinate with Region 39 prior to application submission to FCC.
Union	201 – 204	Hamilton	Please coordinate with Region 39 prior to application submission to FCC.
	321 – 324	Jefferson	
	373 – 376	Meigs	
	425 – 428	Knox	
	425 – 428	Hamilton	
	545 – 548	Loudon	
Walker	121 – 124	White	Please coordinate with Region 39 prior to application submission to FCC.
	217 – 220	Loudon	
	217 – 220	Warren	
	393 – 396	Warren	
	485 – 488	Roane	
	833 – 836	Roane	
White	433 – 436	Loudon	Please coordinate with Region 39 prior to application submission to FCC.
	533 – 556	Hamilton	
	709 - 712	Hamilton	
Whitfield	81 – 84	White	Please coordinate with Region 39 prior to application submission to FCC.
	297 – 300	Morgan	
	405 – 408	Knox	
	585 – 588	Morgan	
	749 – 752	Loudon	
	797 - 800	Morgan	

Other than the above comments, Region 39 has no objections to the Region 10 700 MHz Plan.

Sincerely,

John W Johnson

John W. Johnson
Region 39 Chairman

Place Holder for Signed
LOC & Dispute Resolution

2015 Approvals

Appendix A REGION

10 BYLAWS

THE BYLAWS OF REGION 10 – GEORGIA
700 MHz REGIONAL PLANNING COMMITTEE April 10, 2003

ARTICLE 1

NAME & PURPOSE

1.1 Name and purpose. The name of this Region shall be Region 10 – Georgia. Its primary purpose is to foster cooperation, planning, development of regional plans and the implementation of these plans in the 700 MHz Public Safety Band.

ARTICLE II MEMBERS

For purposes of this Article, the term "member," unless otherwise specified, refers to both voting and non-voting members.

2.1 Number, Election and Qualification. The Regional Committee shall have two classes of members, "voting members" and "non-voting members." New members may be added at annual, special, or regular meetings.
Voting Members. Voting members shall consist of one representative from any single agency engaged in public safety eligible to hold a license under 47 CFR §90.20, 47 CFR §90.523 or 47 CFR 2.103. Except that a single agency shall be allowed no more than one vote for each distinct eligibility category (e.g. police, fire, EMS, highway) within the agency's organization or political jurisdiction. In voting on any issue the individual must identify himself/herself and the agency and eligibility category which he or she represents. Voting members may not vote on issues involving their entity.
Non-Voting Members. Non-voting members are all others interested in furthering the goals of public safety communications. *Non-voting members are considered crucial and important, as they may have direct knowledge of new developments in technology.*

2.2 Tenure. In general, each member shall hold MEMBERSHIP from the date of acceptance until resignation or removal.

2.3 Powers and Rights. In addition to such powers and rights as are vested in them by law, or these bylaws, the members shall have such other powers and rights as the membership may determine.

2.4 Suspension and Removal. A representative may be suspended or removed with cause by vote of a majority of members after reasonable notice and opportunity to be heard. Failure to attend 50% of meetings held in a calendar year shall be a specific cause for removal from the membership.

2.5 Resignation. A member may resign by delivering written resignation to the chairman, vice-chairman, treasurer or secretary of the Regional Committee or to a meeting of the members.

2.6 Annual Meetings. The annual meeting of the members shall be held at the Georgia Public Safety Training Center (GPSTC) in Forsyth, Georgia, (or another pre-designated location) *before or after Georgia General Assembly period*. .

If an annual meeting is not held as herein provided, a special meeting of the members may be held in place thereof with the same force and effect as the annual meeting, and in such case all references in these bylaws, except in this Section 2.6, to the annual meeting of the members shall be deemed to refer to such special meeting. Any such special meeting shall be called and notice shall be given as provided in Section 2.7 and 2.8.

2.7 Special Meetings. Special meetings of the members may be held at any time and at any place within the Regional Committee area. Special meetings of the members may be called by the chairman or by the vice-chairman, or in case of death, absence, incapacity, by any other officer or, upon written application of two or more members.

2.8 Call and Notice.

A. Annual Meetings. Reasonable notice of the time and place of scheduled meetings of the members, not being less than 30 days, shall be given to each member.Such notice may specific the purpose(s) of meeting, unless otherwise required by law or these bylaws or unless there is to be considered at the meeting (i) amendments to these bylaws, (ii) an increase or decrease in the number of members, or (iii) removal or suspension of a member who is an officer. Announcements of meetings, stating the time and place where the meetings to be held, may be published in newspapers, land mobile radio(LMR) periodicals and disseminated via e-mail and other electronic form.

B. Reasonable and sufficient notice. Except as otherwise expressly provided, it shall be reasonable and sufficient notice to a member to send notice by mail at least five days or by e-mail/facsimile at least three days before any <u>special</u> <u>meetings</u>, addressed to such member at his or her usual or last known business address, or, to give notice to such member in person or by telephone at least three days before the meeting.

2.9 Quorum. At any meeting of the members, a majority of the officers and {either a minimum number of members or a minimum percentage of members} of the voting members shall constitute a quorum. Any meeting may be adjourned to such date or dates not more than ninety days after the first session of the meeting by a majority of the votes cast upon the question, whether or not a quorum is present, and the meeting may be held as adjourned without further notice.

2.10Action by Vote. Each voting member, representing a particular agency (one vote per agency) shall have one vote; non-voting members have no right to vote. When a quorum is present at any meeting, a majority of the votes properly cast by voting members present shall decide any question, including election to any office, unless otherwise provided by law or these bylaws.

2.11Action by Writing. Any action required or permitted to be taken at any meeting of the members may be taken without a meeting if all members entitled to vote on the matter consent to the action in writing and the written consents are filed with the records of the meetings of the members. Such consents shall be treated for all purposes as a vote at a meeting.

2.12Proxies. Voting members may vote either in person or by written proxy dated not more than one month before the meeting named therein, which proxies shall be filed before being noted with the secretary or other person responsible for recording the proceedings of the meeting. Unless otherwise specifically limited by their terms, such proxies shall entitle the holders thereof to vote at any adjournment of the meeting by the proxy shall terminate after the final adjournment of such meeting.

2.12.1Voting on One's Own Application. At no time can a voting member vote on his/her application.

2.12.2Special Interest Voting. A voting member can**not** have a commercial interest in any of his/her region and/or adjacent regions application(s) on which he/she is reviewing, approving and/or voting.

ARTICLE III OFFICERS AND AGENTS

3.1 Number and qualification. The officers of the Regional Committee shall be a chairman, vice-chairman, treasurer, secretary, at large and such other officers, if any, as the voting members may determine. All officers must be voting members of the Regional Committee.

3.2 Election. The officers shall be elected by the voting members at their first meeting and, thereafter, at the annual meeting of the members.

3.3 Tenure. The officers shall each hold office until the annual meeting of the members held within one year from the adoption of these bylaws, or until their successor, if any, is chosen, or in each case until he or she sooner dies, resigns, is removed or becomes disqualified.

3.4 Chairman and Vice Chairman. The chairman shall be the chief executive officer of the Regional Committee and, subject to the control of the voting members, shall have general charge and supervision of the affairs of the Regional Committee. The chairman shall preside at all meetings of the Regional Committee. The Vice Chairman, if any, shall have such duties and powers as the voting members shall determine. The vice-chairman shall have and may exercise all the powers and duties of the chairman during the absence of the chairman or in the event of his or her inability to act.

3.5 Treasurer. The treasurer shall be the chief financial officer and the chief accounting officer of the Regional Committee. The treasurer shall be in charge of its financial affairs, funds, and valuable papers and shall keep full and accurate records thereof.

3.6 Secretary. The secretary shall record and maintain records of all proceedings of the members in a file or series of files kept for that purpose, which file or files shall be kept within the Region and shall be open at all reasonable times to the inspection of any member. Such file or files shall also contain records of all meetings and the original, or attested copies, of bylaws and names of all members and the address (including e- mail address, if available) of each. If the secretary is absent from any meeting of members, a temporary secretary chosen at the meeting shall exercise the duties of the secretary at the meeting.

3.7 At Large. The At Large position would in the temporary absence of the Vice Chairman, Treasurer or Secretary officer fulfil their duties and responsibilities. This position would also insure a majority(more than 50%) of the executive officers are present and to cast a vote in the event of a tie.

3.8 Suspension or Removal. An officer may be suspended with cause by vote of a majority of the voting members.

3.9 Resignation. An officer may resign by delivering his or her written resignation to the chairman, vice-chairman, treasurer, or secretary of the Regional Committee. Such resignation shall be effective upon receipt (unless specified to be effective at some other time), and acceptance thereof shall not be necessary to make it effective unless it so states.

3.10 Vacancies. If the office of any officer becomes vacant, the voting members may elect a successor. Each such successor shall hold office for the remainder terms, and in the case of the chairman, vice chairman, treasurer and secretary until his or her successor is elected and qualified, or in each case until he or she sooner dies, resigns, is removed or become disqualified.

ARTICLE IV AMENDMENTS

These bylaws may be altered, amended or repealed in whole or in part by vote. The voting members may by a two-thirds vote, alter, amend, or repeal any bylaws adopted by the Regional Committee members or otherwise adopt, alter, amend or repeal any provision which FCC regulation or these bylaws requires action by the voting members.

ARTICLE V DISSOLUTION

This Regional Committee may be dissolved by the consent of two-thirds plus one of the members in good standing at a special meeting called for such purpose. The FCC shall be notified.

ARTICLE VI

RULES OF PROCEDURES

The Conduct of Regional Meetings including without limitation, debate and voting, shall be governed by Robert's Rules of Order: Newly Revised, ten edition, Sarah Corbin Robert, Henry M. Robert III, William J. Evans and Daniel H. Honemann.

~~Appendix B~~

~~Region 10 Members, Agencies, Contact Information and Voting Status~~

Appendix B

State of Georgia Counties and Population Data

County Name	County Seat	Square Miles	Population 1990	Population 2000
Appling	Baxley	512	15,744	17,419
Athens-Clarke	Athens	122	87,594	101,489
Atkinson	Pearson	338.1	6,213	7,609
Bacon	Alma	285	9,566	10,103
Baker	Newton	343.2	3,615	4,074
Baldwin	Milledgeville	258.5	39,530	44,700
Banks	Homer	233.7	10,308	14,422
Barrow	Winder	162.2	29,721	46,144
Bartow	Cartersville	459.9	55,915	76,019
Ben Hill	Fitzgerald	251.8	16,245	17,484
Berrien	Nashville	452.5	14,153	16,235
Bibb	Macon	250	150,137	153,887
Bleckley	Cochran	217.4	10,430	11,666
Brantley	Nahunta	444.4	11,077	14,629
Brooks	Quitman	493.7	15,398	16,450
Bryan	Pembroke	441.8	15,438	23,417
Bulloch	Statesboro	682.6	43,125	55,983
Burke	Waynesboro	830.6	20,579	22,243
Butts	Jackson	186.6	15,326	19,522
Calhoun	Morgan	280.2	5,013	6,320
Camden	Woodbine	629.9	30,167	43,664
Candler	Metter	247	7,744	9,577
Carroll	Carrollton	499.3	71,422	87,268
Catoosa	Ringgold	162.2	42,464	53,282
Charlton	Folkston	780.8	8,496	10,282
Chatham	Savannah	440.4	216,774	232,048
Chattooga	Summerville	313.8	22,242	25,470
Cherokee	Canton	423.7	90,204	141,903
Clay	Fort Gaines	195.2	3,364	3,357
Clayton	Jonesboro	142.6	181,436	236,517
Clinch	Homerville	809.4	6,160	6,878
Cobb	Marietta	340.2	447,745	607,751
Coffee	Douglas	599.1	29,592	37,413
Colquitt	Moultrie	552.3	36,645	42,053
Columbia	Appling	290	66,031	89,288
Cook	Adel	229.1	13,456	15,771
Coweta	Newnan	443.1	53,853	89,215
Crawford	Roberta	325.1	8,991	12,495
Crisp	Cordele	273.8	20,011	21,996
Chattahoochee	Cusseta	248.8	10,107	1,196
Dade	Trenton	173.9	13,147	15,154
Dawson	Dawsonville	211	9,429	15,999
Decatur	Bainbridge	596.8	25,517	28,240
Dekalb	Decatur	268.3	546,171	665,865
Dodge	Eastman	500.6	17,607	19,171
Dooley	Vienna	393	9,901	11,525
Dougherty	Albany	329.7	96,321	96,065

County Name	County Seat	Square Miles	Population 1990	Population 2000
Douglas	Douglasville	199.3	71,120	92,174
Early	Blakely	511.3	11,854	12,354
Echols	Statenville	404.2	2,334	3,754
Effingham	Springfield	479.5	25,687	37,535
Elbert	Elberton	368.8	18,949	20,511
Emanuel	Swainsboro	686	20,546	21,837
Evans	Claxton	185	8,724	10,495
Fannin	Blue Ridge	385.8	15,992	19,798
Fayette	Fayetteville	197.4	62,415	91,263
Floyd	Rome	513.3	81,251	90,565
Forsyth	Cumming	225.8	44,083	98,407
Franklin	Carnesville	263.3	16,650	20,285
Fulton	Atlanta	528.7	648,779	816,006
Gilmer	Ellijay	426.7	13,368	23,456
Glascock	Gibson	144.2	2,357	2,556
Glynn	Brunswick	422.4	62,496	67,568
Gordon	Calhoun	355.2	35,067	44,104
Grady	Cairo	458.2	20,279	23,659
Greene	Greensboro	388.4	11,793	14,406
Gwinnett	Lawrenceville	432.9	352,910	588,448
Habersham	Clarkesville	278.2	27,622	35,902
Hall	Gainesville	393.7	95,434	139,277
Hancock	Sparta	473.3	8,908	10,076
Haralson	Buchanan	282.2	21,966	25,690
Harris	Hamilton	463.8	17,788	23,695
Hart	Hartwell	232.2	19,712	22,997
Heard	Franklin	296.1	8,628	11,012
Henry	McDonough	322.7	58,741	119,341
Houston	Perry	376.8	89,208	110,765
Irwin	Ocilla	356.8	8,649	9,931
Jackson	Jefferson	342.4	30,005	41,589
Jasper	Monticello	370.5	8,453	11,426
Jeff Davis	Hazlehurst	333.4	12,032	12,684
Jefferson	Louisville	527.7	17,408	17,266
Jenkins	Millen	349.8	8,247	8,575
Johnson	Wrightsville	304.4	8,329	8,560
Jones	Gray	393.8	20,739	23,639
Lamar	Barnesville	184.8	13,038	15,912
Lanier	Lakeland	186.8	5,531	7,241
Laurens	Dublin	812.6	39,988	44,874
Lee	Leesburg	355.8	16,250	24,757
Liberty	Hinesville	519.1	52,745	61,610
Lincoln	Lincolnton	211.1	7,442	8,348
Long	Ludowici	401	6,202	10,304
Lowndes	Valdosta	504.3	75,981	92,115
Lumpkin	Dahlonega	284.5	14,573	21,016
Macon	Oglethorpe	403.3	13,114	14,074

County Name	County Seat	Square Miles	Population 1990	Population 2000
Madison	Danielsville	284.4	21,050	25,730
Marion	Buena Vista	367.1	5,590	7,144
McDuffie	Thomson	259.8	20,119	21,231
McIntosh	Darien	433.5	8,634	10,847
Meriwether	Greenville	503.4	22,411	22,534
Miller	Colquitt	283.1	6,280	6,383
Mitchell	Camilla	512	20,275	23,932
Monroe	Forsyth	395.7	17,113	21,757
Montgomery	Mount Vernon	245.3	7,319	8,270
Morgan	Madison	349.7	12,883	15,457
Murray	Chatsworth	344.4	26,147	36,506
Muscogee	Columbus	216.3	179,280	186,291
Newton	Covington	276.4	41,808	62,001
Oconee	Watkinsville	185.8	17,618	26,225
Oglethorpe	Lexington	441.1	9,763	12,635
Paulding	Dallas	313.6	41,611	81,678
Peach	Fort Valley	151.1	21,189	23,668
Pickens	Jasper	232.1	14,432	22,983
Pierce	Blackshear	343	13,328	15,636
Pike	Zebulon	218.4	10,224	13,688
Polk	Cedartown	311.2	33,815	38,127
Pulaski	Hawkinsville	247.4	8,108	9,588
Putnam	Eatonton	344.5	14,137	18,812
Quitman	Georgetown	151.6	2,210	2,598
Rabun	Clayton	371.1	11,648	15,050
Randolph	Cuthbert	429.3	8,023	7,791
Richmond	Augusta	329	189,719	199,775
Rockdale	Conyers	130.7	54,091	70,111
Schley	Ellaville	167.6	3,590	3,766
Screven	Sylvania	648.5	13,842	15,374
Seminole	Donalsonville	238.1	9,010	9,369
Spalding	Griffin	198	54,457	58,417
Stephens	Toccoa	179.3	23,436	25,435
Stewart	Lumpkin	458.7	5,654	5,252
Sumter	Americus	485.3	30,232	33,200
Talbot	Talbotton	393.2	6,524	6,498
Taliaferro	Crawfordville	195.4	1,915	2,077
Tattnall	Reidsville	483.7	17,722	22,305
Taylor	Butler	377.5	7,642	8,815
Telfair	McRae	441.2	11,000	11,794
Terrell	Dawson	335.5	10,653	10,970
Thomas	Thomasville	548.4	38,943	42,737
Tift	Tifton	265.1	34,998	38,407
Toombs	Lyons	366.7	24,072	26,067
Towns	Hiawassee	166.5	6,754	9,319
Treutlen	Soperton	200.7	5,994	6,854
Troup	LaGrange	413.9	55,532	58,779

County Name	County Seat	Square Miles	Population 1990	Population 2000
Turner	Ashburn	286.1	8,703	9,504
Twiggs	Jeffersonville	360.4	9,806	10,590
Union	Blairsville	322.7	11,993	17,289
Upson	Thomaston	325.5	26,300	27,597
Walker	LaFayette	446.3	58,340	61,053
Walton	Monroe	329.3	38,586	60,687
Ware	Waycross	902.6	35,471	35,483
Warren	Warrenton	285.5	6,078	6,336
Washington	Sandersville	680.5	19,112	21,176
Wayne	Jesup	644.7	22,356	26,565
Webster	Preston	209.6	2,263	2,390
Wheeler	Alamo	297.7	4,903	6,179
White	Cleveland	241.6	13,006	19,944
Whitfield	Dalton	290	72,462	83,525
Wilcox	Abbeville	380.4	7,008	8,577
Wilkes	Washington	471.4	10,597	10,687
Wilkinson	Irwinton	446.6	10,228	10,220
Worth	Sylvester	569.8	19,744	21,967

~~Appendix D~~

~~List of Meetings, Summaries of Minutes, Agendas~~

Appendix D

NCC 700MHz Pre-Assignment Rules And Recommendations

Simplified 700 MHz Pre-assignment Rules

Introduction

This attachment describes a process for coordinating the initial block assignments of 700 MHz channels before details of actual system deployments is available. In this initial phase, there is little actual knowledge of the specific equipment to be deployed and the exact antenna sites locations. As a result, a simple, high-level method is proposed to establish guidelines for frequency coordination. When actual systems are deployed, additional details will be known and the system designers will be required to select specific sites and supporting hardware to control interference.

Overview

Assignments will be based on a defined service area for each applicant. This will normally be an area defined by geographical or political boundaries such as city, county or by a data file consisting of line segments creating a polygon that encloses the defined area. The service contour is normally allowed to extend slightly beyond the geo/political boundaries such that systems can be designed for maximum signal levels within the boundaries, or coverage area. Systems must also be designed to minimize signal levels outside their geo/political boundaries to avoid interference into the coverage area of other co-channel users.

For co-channel assignments, the 40 dBμ service contour will be allowed to extend beyond the defined service area by 3 to 5 miles, depending on the type of environment: urban, suburban or rural. The co-channel 5 dBμ interfering contour will be allowed to touch but not overlap the 40 dBμ service contour of the system being evaluated. All contours are (50,50).

For adjacent and alternate channels, the 60 dBμ interfering contour will be allowed to touch but not overlap the 40 dBμ service contour of the system being evaluated. All contours are (50,50).

Discussion

Based upon the ERP/HAAT limitations referenced in 47CFR ¶ 90.541(a), the maximum field strength will be limited to 40 dB relative to 1μV/m (customarily denoted as 40 dBμ). It is assumed that this limitation will be applied similar to the way it is applied in the 821-824/866-869 MHz band. That is, a 40 dBμ field strength can be deployed up to a defined distance beyond the edge of the service area, based on the size of the service area or type of applicant, i.e. city, county or statewide system. This is important that public safety systems have adequate margins for reliability within their service area in the presence of interference, including the potential for interference from CMRS infrastructure in adjacent bands.

The value of 40 dBμ in the 700 MHz band corresponds to a signal of -92.7 dBm, received by a half-wavelength dipole (λ/2) antenna. The thermal noise floor for a 6.25 kHz bandwidth receiver would be in the range of -126 dBm, so there is a margin of approximately 33 dB available for "noise limited" reliability. Figure 1 shows show the various interfering sources and how they accumulate to form a composite noise floor that can be used to determine the "reliability" or probability of achieving the desired performance in the presence of various interfering sources with differing characteristics.

If CMRS out-of-band emissions (OOBE) noise is allowed to be equal to the original thermal noise floor, there is a 3 dB reduction[1] in the available margin. This lowers the reliability and/or the channel performance of Public Safety systems. The left side of Figure 1 shows that the original 33 dB margin is reduced by 3 dB to only 30 dB available to determine "noise + CMRS OOBE limited" performance and reliability.

There are also different technologies with various channel bandwidths and different performance criteria. C/N in the range of 17 – 20 dB is required to achieve channel performance.

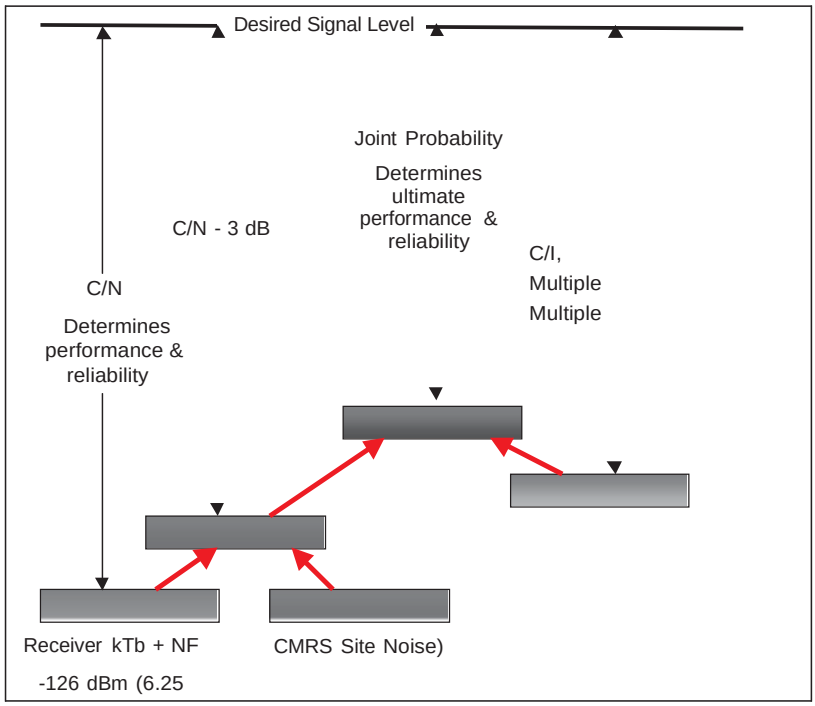


Figure 1 - Interfering Sources Create A "Noise" Level Influencing Reliability

In addition, unknown adjacent and alternate channel assignments need to be accounted for. The co-channel and adjacent/alternate sources are shown in the right hand side of Figure 1. At the edge of the service area, there would normally be only a single co-channel source, but there could potentially be several adjacent or alternate channel sources involved. It is recommended that co-channel assignments limit interference to

[1] TIA TR8 made this 3 dB allowance for CMRS OOBE noise during the meetings in Mesa, AZ, January 2001.

<1% at the edge of the service area (worst case mile). A C/I ratio of 26.4 dB plus the required capture value (~10 dB) is required to achieve this goal.[2].

The ultimate performance and reliability has to take into consideration both the noise sources (thermal & CMRS OOBE) and all the interference sources. The center of Figure 1 shows that the joint probability that the both performance criteria and interference criteria are met must be determined.

Table 1 shows estimated performance considering the 3 dB rise in the noise floor at the 40 dBµ signal level. Performance varies due to the different Cf/N requirements and noise floors of the different modulations and channel bandwidths.

Note that since little is known about the affects of terrain, an initial lognormal standard deviation of 8 dB is used.

Comparison of Joint Reliability for various				
Channel Bandwidth	6.25 kHz	12.5 kHz	12.5 kHz	25.0 kHz
Receiver ENBW (kHz) Noise	6	6	9	18
Figure(10 dB) Receiver Noise	10	10	10	10
Floor (dBm) Rise in Noise Floor	-126.22	-126.22	-124.46	-121.45
(dB)	3.00	3.00	3.00	3.00
New Receiver Noise Floor (dB)	-123.22	-123.22	-121.46	-118.45
40 dBu = -92.7 dBm Receiver	-92.7	-92.7	-92.7	-92.7
Capture (dB) Noise Margin (dB)	10.0	10.0	10.0	10.0
C/N Required for DAQ = 3	30.52	30.52	28.76	25.75
C/N Margin (dB) Standard	17.0	17.0	18.0	20.0
deviation (8 dB) Z	**13.52**	**13.52**	**10.76**	**5.75**
Noise Reliability (%)	8.0	8.0	8.0	8.0
C/I for <1% prob of capture	1.690	1.690	1.345	0.718
I (dBu) I (dBm)	**95.45%**	**95.45%**	**91.06%**	**76.37%**
Joint Probability (C & I)	36.4	36.4	36.4	36.4
	3.7	3.7	3.7	3.7
	-129.0	-129.0	-129.0	-129.0
	94.7%	**94.7%**	**90.4%**	**76.1%**
40 dBu = -92.7 dBm @ 770 MHz				

Table 1 Joint Probability For Project 25, 700 MHz Equipment Configurations.

These values are appropriate for a mobile on the street, but are considerably short to provide reliable communications to portables inside buildings.

Portable In-Building Coverage

Most Public Safety communications systems, today, are designed for portable in-building[3] coverage and the requirement for >95 % reliable coverage. To analyze the impact of

[2] See Appendix A for an explanation of how the 1% interference value is defined and derived.
[3] Building penetration losses typically required for urban = 20 dB, suburban = 15 dB, rural = 10 dB.

requiring portable in building coverage and designing to a 40 dBµ service contour, several cenarios are presented. The different scenarios involve a given separation from the desired sites. Whether simulcast or multi-cast is used in wide-area systems, the antenna sites must be placed near the service area boundary and directional antennas, directed into the service area, must be used. The impact of simulcast is included to show that the 40 dBµ service contour must be able to fall outside the edge of the service area in order to meet coverage requirements at the edge of the service area. From the analysis, recommendations are made on how far the 40 dBµ service contour should extend beyond the service area.

Table 2 estimates urban coverage where simulcast is required to achieve the desired portable in building coverage. Several assumptions are required to use this estimate.

- Distance from the location to each site. Equal distance is assumed.
- CMRS noise is reduced when entering buildings. This is not a guarantee as the type of deployments is unknown. It is possible that CMRS units may have transmitters inside buildings. This could be potentially a large contributor unless the CMRS OOBE is suppressed to TIA's most recent recommendation and the "site isolation" is maintained at 65 dB minimum.
- The 40 dBµ service contour is allowed to extend beyond the edge of the service area boundary.
- Other configurations may be deployed utilizing additional sites, lower tower heights, lower ERP and shorter site separations.

Estimated Performance at 2.5 miles from each site				
Channel Bandwidth	6.25 kHz	12.5 kHz	12.5 kHz	25.0 kHz
Receiver Noise Floor (dBm)	-126.20	-126.20	-124.50	-118.50
Signal at 2.5 miles (dBm)	-72.7	-72.7	-72.7	-72.7
Margin (dB)	53.50	53.50	51.80	45.80
C/N Required for DAQ = 3	17.0	17.0	18.0	20.0
Building Loss (dB)	20	20	20	20
Antenna Loss (dBd)	8	8	8	8
Reliability Margin	8.50	8.50	5.80	-2.20
Z	1.0625	1.0625	0.725	-0.275
Single Site Noise Reliability (%)	**85.60%**	**85.60%**	**76.58%**	**39.17%**
Simulcast with 2 sites	97.93%	97.93%	94.51%	62.99%
Simulcast with 3 sites	99.70%	99.70%	98.71%	77.49%
Simulcast with 4 sites	99.96%	99.96%	99.70%	86.30%

Table 2, Estimated Performance From Site(s) 2.5 Miles From Typical Urban Buildings.

Table 2 shows for the example case of 2.5 miles a single site cannot provide >95% reliability. Either more sites must be used to reduce the distance or other system design techniques must be used to improve the reliability. For example, the table shows that simulcast can be used to achieve public safety levels of reliability at this distance. Table 2 also shows that the difference in performance margin requirements for wider bandwidth channels requires more sites and closer site-to-site separation.

Figures 2 and 3 show how the configurations would potentially be deployed for a typical site with 240 Watts ERP. This is based on:

• 75 Watt transmitter,	18.75 dBW
• 200 foot tower	
• 10 dBd 180 degree sector antenna	+10.0 dBd
• 5 dB of cable/filter loss.	- 5.0 dB
	23.75 dBW = 240 Watts (ERPd)

Site A

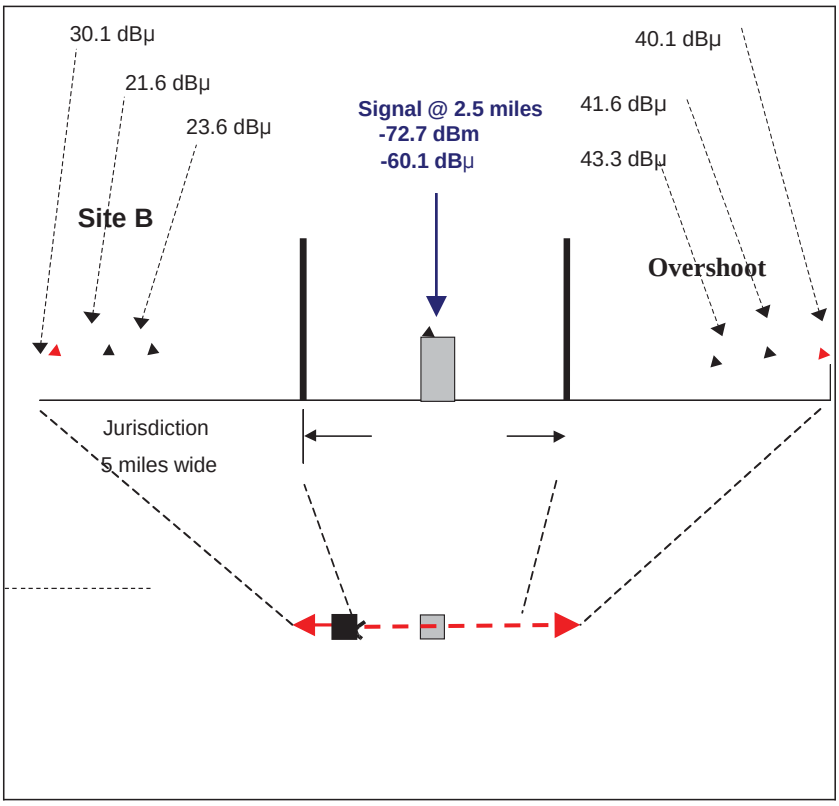


Figure 2 - Field Strength From Left Most Site.

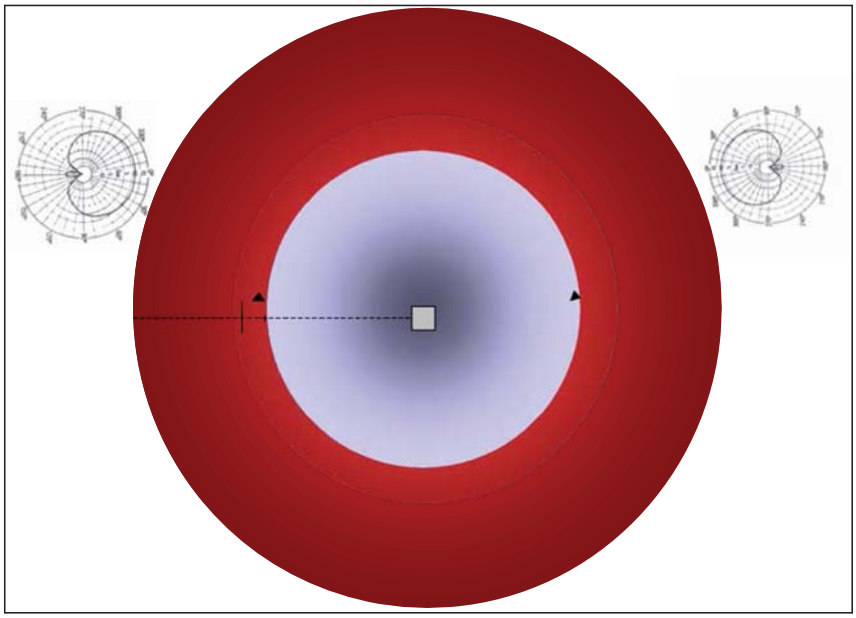


Figure 3 - Antenna Configuration Required To Limit Field Strength Off “Backside”

Figure 2 is for an urbanized area with a jurisdiction defined as a 5 mile circle. To provide the necessary coverage to portables in buildings at the center of the jurisdiction requires that the sites be placed along the edge of the service area and utilize directional antennas oriented toward the center of the service area (Figure 3). In this case, at 5 miles beyond the edge of the service area, the sites would produce a composite field strength of approximately 40 dBµ. Since one site is over 10 dB dominant, the contribution from the other site is not considered. The control of the field strength behind the site relies on a 20 dB antenna with a Front to Back Ratio (F/B) specification as shown in Figure 3. This performance may be optimistic due to back scatter off local obstructions in urbanized areas. However, use of antennas on the sides of buildings can assist in achieving better F/B ratios and the initial planning is not precise enough to prohibit using the full 20 dB.

The use of a single site at the center of the service area is not normally practical. To provide the necessary signal strength at the edge of the service area would produce a field strength 5 miles beyond in excess of 44 dBµ. However, if the high loss buildings were concentrated at the service area’s center, then potentially a single site could be deployed, assuming that the building loss sufficiently decreases near the edge of the service area allowing a reduction in ERP to achieve the desired reliability.

Downtilting of antennas, instead of directional antennas, to control the 40 dBu is not practical, in this scenario. For a 200 foot tall tower, the center of radiation from a 3 dBu down-tilt antenna hits the ground at ~ 0.75 miles[4]. The difference in angular discrimination from a 200 foot tall tower at service area boundary at 5 miles and service contour at 10 miles is approximately 0.6 degrees, so ERP is basically the same ERP toward the horizon. It would not be possible to achieve necessary signal strength at service boundary area and have 40 dBu service contour be less than 5 miles away

[4] Use of high gain antennas with down-tilt on low-level sites is one of the causes of far-near interference experienced in the 800 MHz band.

Tables 3 and 4 represent the same configuration, but for less dense buildings. In these cases, the distance to extend the 40 dBµ service contour can be determined from Table 5.

Estimated Performance at 3.5 miles from each site				
Channel Bandwidth	6.25 kHz	12.5 kHz	12.5 kHz	25.0 kHz
Receiver Noise Floor (dBm)	-126.20	-126.20	-124.50	-118.50
Signal at 3.5 miles (dBm)	-77.7	-77.7	-77.7	-77.7
Margin (dB)	48.50	48.50	46.80	40.80
C/N Required for DAQ = 3	17.0	17.0	18.0	20.0
Building Loss (dB)	15	15	15	15
Antenna Loss (dBd)	8	8	8	8
Reliability Margin	8.50	8.50	5.80	-2.20
Z	1.0625	1.0625	0.725	-0.275
Single Site Noise Reliability (%)	**85.60%**	**85.60%**	**76.58%**	**39.17%**
Simulcast with 2 sites	97.93%	97.93%	94.51%	62.99%
Simulcast with 3 sites	99.70%	99.70%	98.71%	77.49%
Simulcast with 4 sites	99.96%	99.96%	99.70%	86.30%

Table 3 - Lower Loss Buildings, 3.5 Mile From Site(s)

Estimated Performance at 5.0 miles from each site				
Channel Bandwidth	6.25 kHz	12.5 kHz	12.5 kHz	25.0 kHz
Receiver Noise Floor (dBm)	-126.20	-126.20	-124.50	-118.50
Signal at 5.0 miles (dBm)	-82.7	-82.7	-82.7	-82.7
Margin (dB)	43.50	43.50	41.80	35.80
C/N Required for DAQ = 3	17.0	17.0	18.0	20.0
Building Loss (dB)	10	10	10	10
Antenna Loss (dBd)	8	8	8	8
Reliability Margin	8.50	8.50	5.80	-2.20
Z	1.0625	1.0625	0.725	-0.275
Single Site Noise Reliability (%)	**85.60%**	**85.60%**	**76.58%**	**39.17%**
Simulcast with 2 sites	97.93%	97.93%	94.51%	62.99%
Simulcast with 3 sites	99.70%	99.70%	98.71%	77.49%
Simulcast with 4 sites	99.96%	99.96%	99.70%	86.30%

Table 4 - Low Loss Buildings, 5.0 Miles From Site(s)

Note that the receive signals were adjusted to offset the lowered building penetration loss. This produces the same numerical reliability results, but allows increasing the site to building separation and this in turn lowers the magnitude of the “overshoot” across the service area.

Table 5 shows the field strength for a direct path and for a path reduced by a 20 dB F/B antenna. This allows the analysis to be simplified for the specific example being discussed.

	Site A Direct Path	Site B Back Side of 20 dB F/B Antenna
Overshoot Distance (mi)	Field Strength (dBμ)	Field Strength (dBμ)
1	73.3	53.3
2	63.3	43.3
2.5	60.1	40.1
3	57.5	37.5
4	53.3	**33.5**
5	50.1	30.1
...	**...**	
10	40.1	
11	**38.4**	
12	37.5	
13	36.0	
14	34.5	
15	33.0	

Table 5 - Field Strength Vs. Distance From Site

For the scenarios above, the composite level at the Service Contour is the sum of the signals from the two sites. The sum cannot exceed 40 dBμ. Table 5 allows you to calculate the distance to Service Contour given the distance from one of the sites.

Scenario 1: Refer to Figure 3a. Site B is just inside the Service Area boundary and Service Contour must be <5 Miles outside Service Area boundary. Signal level at Service Contour from Site B is 30.1 dBμ. Signal level for Site A can be up to 40 dBμ, since when summing two signals with >10 dB delta, the lower signal level has little effect (less than 0.4 dB in this case). Therefore, Site A can be 10 miles from the Service Contour, or 5 miles inside the Service Area boundary. The coverage performance for this scenario is shown in Table 2, above, for 20 dB building loss typical of urban areas.

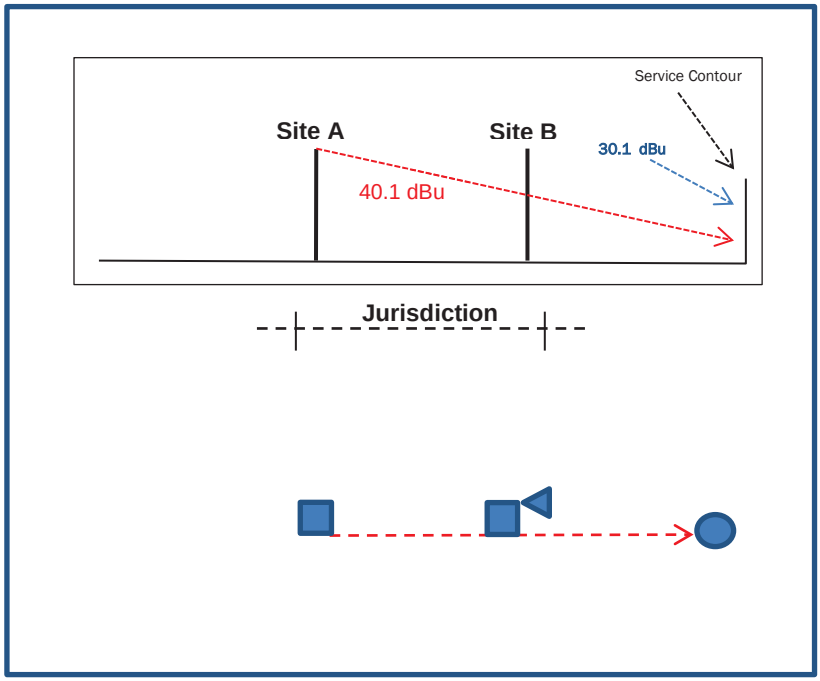


Figure 3a. Scenario 1 on of Use of Table 5

Scenario 2: Refer to bold data in Table 5. Site B is just inside the Service Area boundary and Service Contour must be <4 Miles outside Service Area boundary. Signal level at Service Contour from Site B is 33.5 dBµ. Signal level for Site A can be up to 38.4 dBµ. (See Appendix B for simple method to sum the powers of signals expressed in decibels.) The composite power level is 39.7 dBµ. Therefore, Site A can be slightly less than 11 miles from the Service Contour, or ~7 miles inside the Service Area boundary. The coverage perfomance for this example is shown in Table 3, above, for 15 dB building loss typical of suburban areas.

Scenario 3: Site B is just inside the Service Area boundary and Service Contour must be <3 Miles outside Service Area boundary. Signal level at Service Contour from Site B is 37.5 dBµ. Signal level for Site A can be up to 36.4 dBµ. (See Appendix B simple method to sum signals expressed in decibels.) The composite power level is 40.0 dBµ. Therefore, Site A can be ~13 miles from the Service Contour, or ~10 miles inside the Service Area boundary. The coverage perfomance for this example is shown in Table 4, above, for 10 dB building loss typical of rural areas.

Service Contour Extension Recommendation

The resulting recommendation for extending the 40 dBµ service contour beyond the service area boundary is:

Type of Area	Extension (mi.)
Urban (20 dB Buildings)	5
Suburban (15 dB Buildings)	4
Rural (10 dB Buildings)	3

Table 6 - Recommended Extension Distance of 40 dBµ Field Strength

Using this recommendation the 40 dBµ service contour can then be constructed based on the defined service area without having to perform an actual prediction.

Interfering Contour

Table 1 above shows that 36.4 dB of margin is required to provide 10 dB of co-channel capture and <1% probability of interference. Since the 40 dBµ service contour is beyond the edge of the service area, some relaxation in the level of interference is reasonable. Therefore, a 35 dB co-channel C/I ratio is recommended and is consistent with what is currently being licensed in the 821-824/866-869 MHz Public Safety band.

Co-Channel Interfering Contour Recommendation

- Allow the constructed 40 dBµ (50,50) service contour to extend beyond the edge of the defined service area by the distance indicated in Table 6.
- Allow the 5 dBµ (50,50) interfering contour to intercept but not overlap the 40 dBµ service contour.

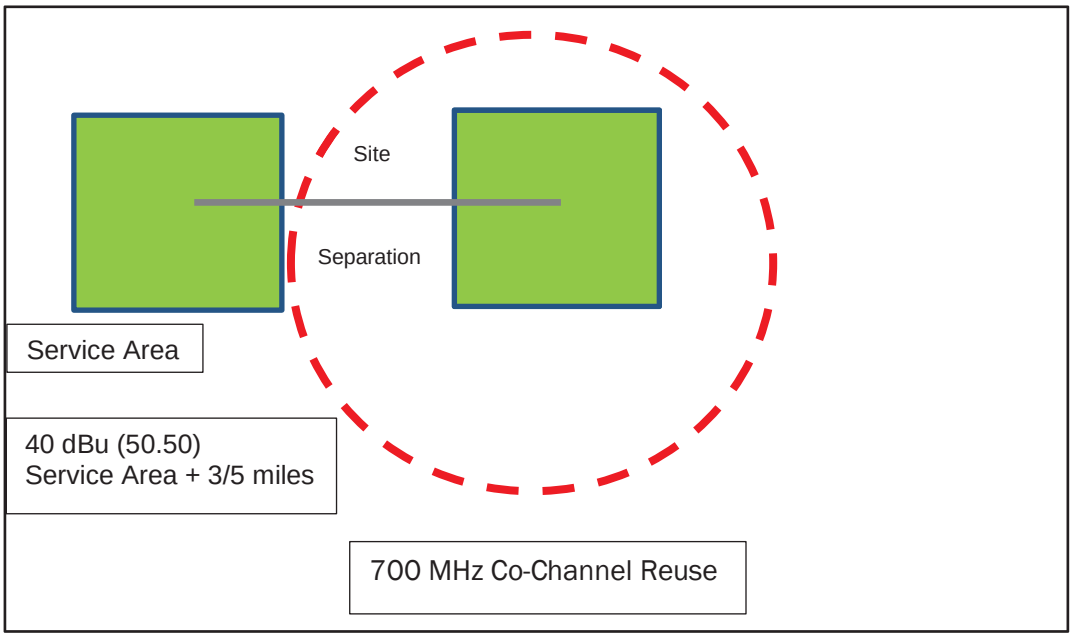


Figure 4 - Co-Channel Reuse Criterion

Adjacent and Alternate Channel Considerations

Adjacent and alternate channels are treated as being noise sources that alter the composite noise floor of a victim receiver. Using the 47 CFR § 90.543 values of ACCP can facilitate the coordination of adjacent and alternate channels. The C/I requirements for <1% interference can be reduced by the value of ACCPR. For example to achieve an X dB C/I for the adjacent channel that is -40 dBc a C/I of [X-40] dB is required. Where the alternate channel ACP value is -60 dBc, then the C/I = [X-60] dB is the goal for assignment(s). There is a compounding of interference energy, as there are numerous sources, i.e. co channel, adjacent channels and alternate channels plus the noise from CMRS OOBE.

There is insufficient information in 47 CFR § 90.543 to include the actual receiver performance. Receivers typically have “skirts” that allow energy outside the bandwidth of interest to be received. In addition, the FCC defines ACCP differently than does the TIA. The term used by the FCC is the same as the TIA definition of ACP. The subtle difference is that ACCP defines the energy intercepted by a defined receiver filter (e.g., 6 kHz ENBW). ACP defines the energy in a measured bandwidth that is typically wider than the receiver (e.g., 6.25 kHz channel bandwidth). As a result, the FCC values are optimistic at very close spacing and somewhat pessimistic at wider spacings, as the typical receiver filter is less than the channel bandwidth.

In addition, as channel bandwidth is increased, the total amount of noise intercepted rises compared to the level initially defined in a 6.25 kHz channel bandwidth. However, the effect is diminished at very close spacings as the slope of the noise curve falls off rapidly. At greater spacings, the slope of the noise curve is essentially flat and the receiver’s filter limits the noise to a rise in the thermal noise floor.

Digital receivers tend to be less tolerant to interference than analog. Therefore, a 3 dB reduction in the C/(I+N) can reduce a DAQ = 3 to a DAQ = 2, which is threshold to complete muting in digital receivers. Therefore to maintain a DAQ = 3, at least 17 dB of fading margin plus the 26.4 dB margin for keeping the interference below 1% probability is required, for a total margin of 43.4 dB. However, this margin would be at the edge of the service area and the 40 dBμ service contour is allowed to extend past the edge of the service area.

Frequency drift is controlled by the FCC requirement for 0.4-ppm stability when locked. This equates to approximately a 1 dB standard deviation, which is negligible when associated with the recommended initial lognormal standard deviation of 8 dB and can be ignored.

Project 25 requires that a transceiver receiver have an ACIPR of 60 dB. This implies that an ACCPR ≥ 65 dB will exist for a “companion receiver”. A companion receiver is one that is designed for the specific modulation. At this time the highest likelihood is that receivers will be deploying the following receiver bandwidths at the following channel bandwidths.

Estimated Receiver Parameters	
Channel Bandwidth	Receiver Bandwidth
6.25 kHz	5.5 kHz
12.5 kHz	5.5 or 9 kHz
25 kHz	18.0 kHz

Table 7 - Estimated Receiver Parameters

Based on 47 CFR ¶ 90.543 and the P25 requirement for an ACCPR ≥ 65 dB into a 6.0 kHz channel bandwidth and leaving room for a migration from Phase 1 to Phase 2, allows for making the simplifying assumption that 65 dB ACCPR is available for both adjacent 25 kHz spectrum blocks.

The assumption is that initial spectrum coordination sorts are based on 25 kHz bandwidth channels. This provides the maximum flexibility by using 65 dB ACCPR for all but one possible combination of 6.25 kHz channels within the 25 kHz allotment.

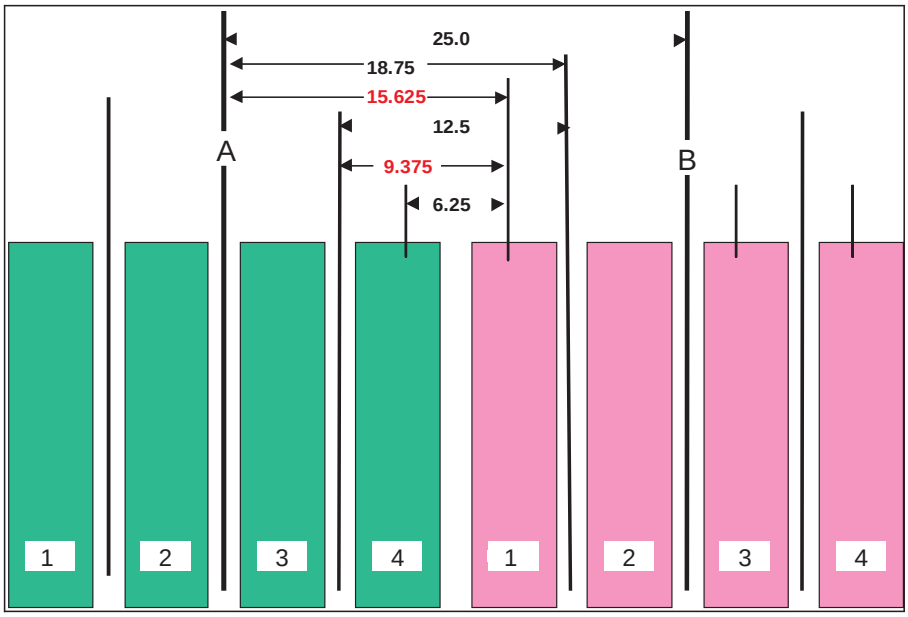


Figure 5, Potential Frequency Separations

Case	Spacing	ACCPR
25 kHz to 25 kHz	25 kHz	65 dB
25 kHz to 12.5 kHz	18.750 kHz	65 dB
25 kHz to 6.25 kHz	15.625 kHz	>40 dB
12.5 kHz to 12.5 kHz	12.5 kHz	65 dB
12.5 kHz to 6.25 kHz	9.375 kHz	>40 dB
6.25 kHz to 6.25 kHz	6.25 kHz	65 dB

Table 8 - ACCPR Values For Potential Frequency Separations

All cases meet or exceed the FCC requirement. The most troublesome cases occur where the wider bandwidths are working against a Project 25 Phase 2 narrowband 6.25 kHz channel. This pre-coordination based upon 25 kHz spectrum blocks still works if system designers and frequency coordinators keep this consideration in mind and move the edge 6.25 kHz channels inward away from the edge of the system. This approach allows a constant value of 65 dB ACCPR to be applied across all 25 kHz spectrum blocks regardless of what channel bandwidth is eventually deployed. There will also be additional coordination adjustments when exact system design details and antenna sites are known.

For spectrum blocks spaced farther away, it must be assumed that transmitter filtering, in addition to transmitter performance improvements due to greater frequency separation, will further reduce the ACCPR.

Therefore it is recommended that a consistent value of 65 dB ACCPR be used for the initial coordination of adjacent 25 kHz channel blocks. Rounding to be conservative due to the possibility of multiple sources allows the Adjacent Channel Interfering Contour to be approximately 20 dB above the 40 dBμ service contour, at 60 dBμ.

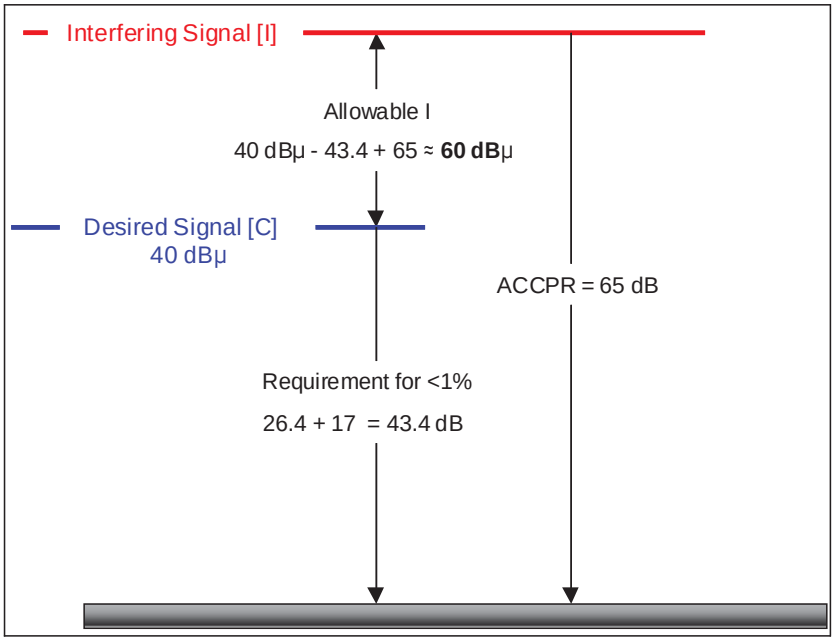
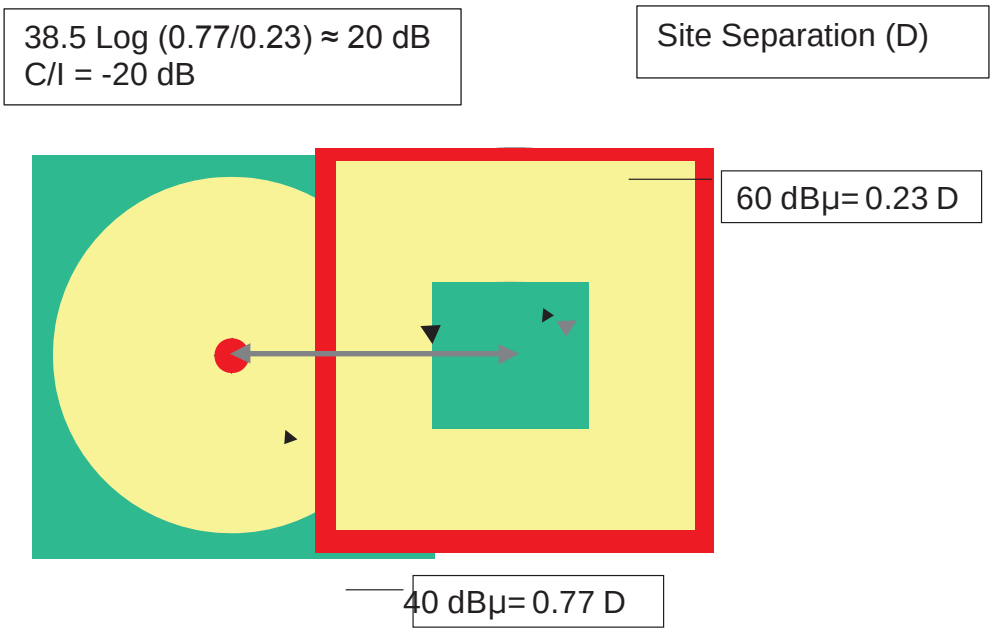


Figure 6 - Adjusted Adjacent 25 kHz Channel Interfering Contour Value



65 dB ACCPR, Based on P25 Requirements of 60 dB ACIPR

Figure 7 - Example Of Adjacent/Alternate Overlap Criterion

Adjacent Channel Interfering Contour Recommendation

An adjacent (25 kHz) channel shall be allowed to have its 60 dBμ (50,50) interfering contour touch but not overlap the 40 dBμ (50,50) service contour of a system being evaluated. Evaluations should be made in both directions.

Final Detailed Coordination

This simple method is only adequate for presorting large blocks of spectrum to potential entities. A more detailed analysis should be executed in the actual design phase to take all the issues into consideration.

Additional factors that should be considered include:

- Degree of Service Area Overlap
- Different size of Service Areas
- Different ERPs and HAATs
- Actual Terrain and Land Usage
- Differing User Reliability Requirements
- Migration from Project 25 Phase 1 to Phase 2
- Actual ACCP
- Balanced Systems
- Mobiles vs. Portables
- Use of voting
- Use of simulcast
- Radio specifications
- Simplex Operation
- Future unidentified requirements.

Special attention needs to be paid to the use of simplex operation. In this case, an interferer can be on an offset adjacent channel and in extremely close proximity to the victim receiver. This is especially critical in public safety where simplex operations are frequently used at a fire scene or during police operation. This type operation is also quite common in the lower frequency bands. In those cases, evaluation of base-to-base as well as mobile-to-mobile interference should be considered and evaluated.

Appendix A

Carrier to Interference Requirements

There are two different ways that Interference is considered.

- Co-channel
- Adjacent and Alternate Channels

Both involve using a C/I ratio. The C/I ratio requires a probability be assigned. For example, if 10% Interference is specified, the C/I implies 90% probability of successfully achieving the desired ratio. 1% interference means that there is a 99% probability of achieving the desired C/I.

$$\frac{C}{I}\% = \frac{1}{2} \cdot erfc\left(\frac{\left(\frac{C}{I}\right)_{margin}}{2\sigma}\right) \qquad (1)$$

This can also be written in a form using the standard deviate unit (*Z*). In this case the *Z* for the desired probability of achieving the C/I is entered. For example, for a 90% probability of achieving the necessary C/I, *Z* = 1.28.

$$\frac{C}{I}\% = Z \cdot \frac{\quad}{2 \cdot \sigma} \qquad (2)$$

The most common requirements for several typical lognormal standard deviations ( ) are included in the following table based on Equation (2).

Location Standard Deviation ( ) dB	5.6	6.5	8	10
Probability %				
10%	10.14 dB	11.77 dB	14.48 dB	18.10 dB
5%	13.07 dB	15.17 dB	18.67 dB	23.33 dB
4%	13.86 dB	16.09 dB	19.81 dB	24.76 dB
3%	14.90 dB	17.29 dB	21.28 dB	26.20 dB
2%	16.27 dB	18.88 dB	23.24 dB	29.04 dB
1%	18.45 dB	21.42 dB	**26.36 dB**	32.95 dB

Table A1 - Probability Of Not Achieving C/I For Various Location Lognormal Standard Deviations

These various relationships are shown in Figure A1, a continuous plot of equation(s) 1 and 2.

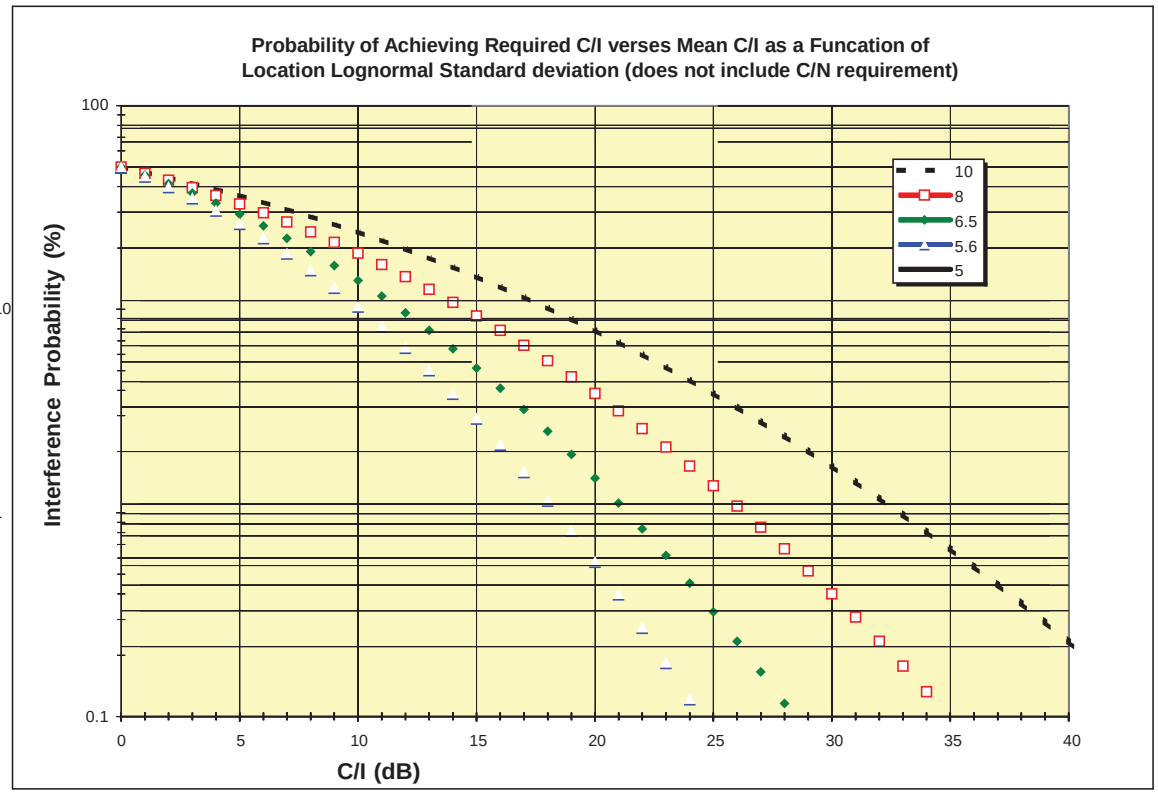


Figure A1, Probability of Achieving Required C/I As A Function Of Location Standard Deviation

For co-channel the margin needs to include the "capture" requirement. When this is done, then a 1% probability of co channel interference can be rephrased to mean, there is a 99% probability that the "capture ratio" will be achieved. The capture ratio varies with the type of modulation. Older analog equipment has a capture ratio of approximately 7 dB. Project 25 FDMA is specified at 9 dB. Figure A1 shows the C/I requirement without including the capture requirement.

The 8 dB value for lognormal location standard deviation is reasonable when little information is available. Later when a detailed design is required, additional details and high-resolution terrain and land usage databases will allow a lower value to be used. The TIA recommended value is 5.6 dB. Using 8 dB initially and changing to 5.6 dB provides additional flexibility necessary to complete the final system design.

To determine the desired probability that both the C/N and C/I will be achieved requires that a joint probability be determined. Figure A2 shows the effects of a family of various levels of C/N reliability and the joint probability (Y-axis) in the presence of various probabilities of Interference. Note that at 99% reliability with 1% interference (X-axis) that the reduction is nearly the difference. This is because the very high noise reliability is degraded by the interference, as there is little probability that the noise criterion will not be satisfied. At 90%, the 1% interference has a greater likelihood that it will occur simultaneously when the noise criterion not being met, resulting in less degradation of the 90%.

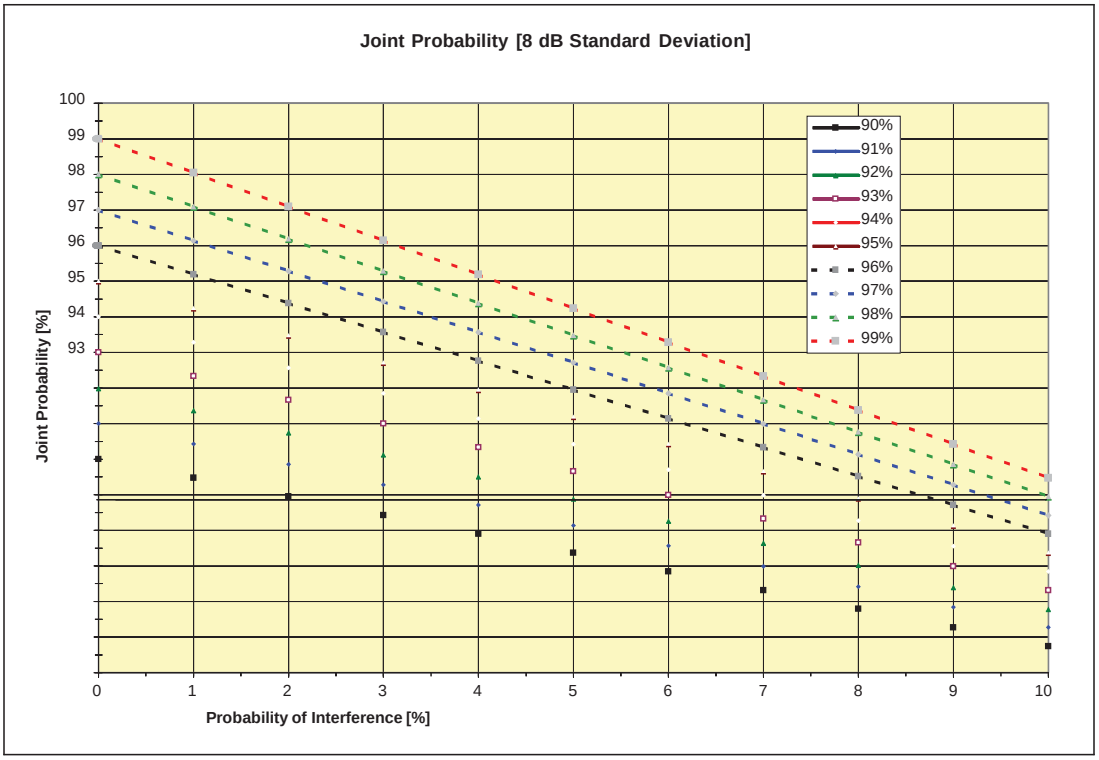
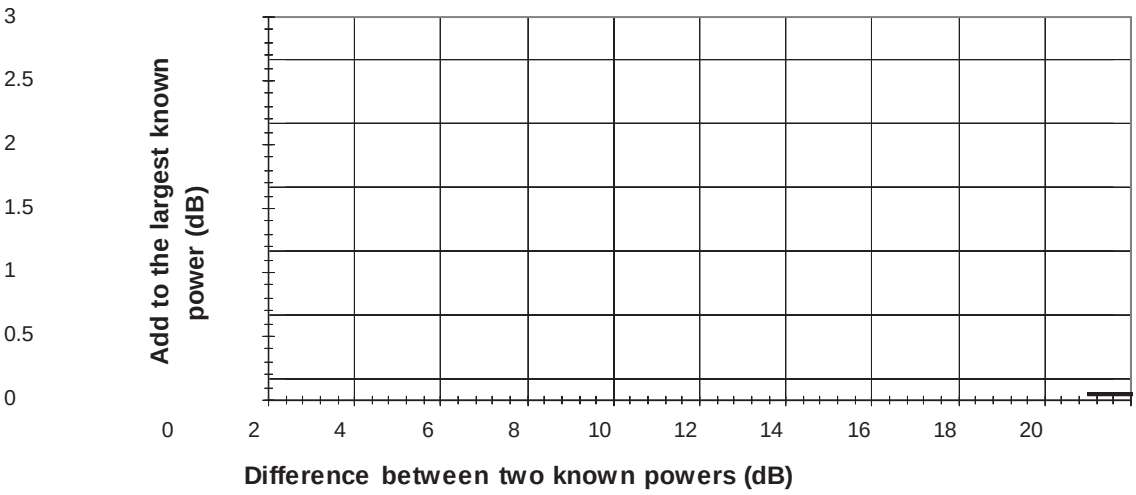


Figure A2 - Effect Of Joint Probability On The Composite Probability

For adjacent and alternate channels, the channel performance requirement must be added to the C/I ratio. When this is applied, then a 1% probability of adjacent/alternate channel interference can be rephrased to mean, there is a 99% probability that the "channel performance ratio" will be achieved.

Appendix B

Adding Two Known Non-Coherent Powers



In order to sum the power of two or more signals expressed in dBm or dBµ, they level should be converted to a voltage level or a power level, summed (root of the sum of the squares), and then converted back to dBm or dBu.

The chart above provides simple method to sum two power levels expressed in dBm or dBµ. First find the difference between the two signals on the horizontal axis. Go up to the curve and across to the vertical axis to find the power delta. Add the power delta to the larger of the two original signal levels.

Example 1: Signal A is 36.4 dBµ. Signal B is 37.5 dBµ. Difference is 1.1 dB. Power delta is about 2.5 dB. Composite signal level is 37.5 dBµ + 2.5 dB = 40 dBµ.

Example 2: Signal is –96.3 dBm. Signal B is –95.2 dBm. Difference is 1.1 dB. Power delta is about 2.5 dB. Composite signal level is –95.2 dBm + 2.5 dB = -92.7 dB

Appendix C

700MHz Interoperability - Channel Nomenclature

Standard Channel Nomenture for Public Safety 700 MHz Interoperbility Channels
APCO/NPSTC ANSI 1.104.1-2010

	FCC Channel	Mobile (MHz)	Base(MHz)	Primary Use	Original NCC Name	New NCC Name
1	039-040	769.243750	799.243750	I/O Nationwide Call Channel	7CAL59	7CALL50
2	681-682	773.256250	803.256250	I/O Nationwide Call Channel	7CAL75	7CALL70
3	279-280	770.743750	800.743750	Mobile Data	7DAT71	7DATA69
4	921-922	774.756250	804.756250	Mobile Data	7DAT87	7DATA89
5	143-144	769.893750	799.893750	Fire Service	7FIR64	7FIRE63
6	159-160	769.993750	799.993750	Fire Service	7FIR65	7FIRE64
7	721-722	773.506250	803.506250	Fire Service	7FIR80	7FIRE83
8	777-778	773.856250	803.856250	Fire Service	7FIR81	7FIRE84
9	319-320	770.993750	800.993750	Other Public Service	7TAC73	7GTAC57
10	937-938	774.856250	804.856250	Other Public Service	7TAC89	7GTAC77
11	223-224	770.393750	800.393750	Law Enforcement Service	7LAW68	7LAW61
12	239-240	770.493750	800.493750	Law Enforcement Service	7LAW69	7LAW62
13	801-802	774.006250	804.006250	Law Enforcement Service	7LAW84	7LAW81
14	857-858	774.356250	804.356250	Law Enforcement Service	7LAW85	7LAW82
15	063-064	769.393750	799.393750	Emergency Medical Service	7MED60	7MED65
16	079-080	769.493750	799.493750	Emergency Medical Service	7EMS61	7MED66
17	697-698	773.356250	803.356250	Emergency Medical Service	7EMS77	7MED77
18	641-642	773.006250	803.006250	Emergency Medical Service	7EMS76	7MED86
19	303-304	770.893750	800.893750	Mobile Repeater(MO3 Use Primary)	7MOB72	7MOB59
20	881-882	774.506250	804.506250	Mobile Repeater(MO3 Use Primary)	7MOB88	7MOB79
21	023-024	769.143750	799.143750	General Public Safety Services (secondary trunked)	7TAC58	7TAC51
22	103-104	769.643750	799.643750	General Public Safety Services (secondary trunked)	7TAC56	7TAC52
23	183-184	770.143750	800.143750	General Public Safety Services (secondary trunked)	7TAC66	7TAC53
24	263-264	770.643750	800.643750	General Public Safety Services (secondary trunked)	7TAC70	7TAC54
25	119-120	769.743750	799.743750	General Public Safety Service	7TAC63	7TAC55
26	199-200	770.243750	800.243750	General Public Safety Service	7TAC67	7TAC56
27	657-658	773.106250	803.106250	General Public Safety Services (secondary trunked)	7TAC74	7TAC71
28	737-738	773.606250	803.606250	General Public Safety Services (secondary trunked)	7TAC78	7TAC72
29	817-818	774.106250	804.106250	General Public Safety Services (secondary trunked)	7TAC82	7TAC72
30	897-898	774.606250	804.606250	General Public Safety Services (secondary trunked)	7TAC86	7TAC74
31	761-762	773.756250	803.756250	General Public Safety Service	7TAC79	7TAC75
32	841-842	774.256250	804.256250	General Public Safety Service	7TAC83	7TAC76

Appendix E

Region 10

700MHz Spectrum Allocations

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
Appling	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	349-352	771.1875	801.1875
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	669-672	773.1875	803.1875
	Voice 25KHz	717-720	773.4875	803.4875
	Voice 25KHz	821-824	774.1375	804.1375
Atkinson	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	477-480	771.9875	801.9875
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	781-784	773.8875	803.8875
	Voice 25KHz	825-828	774.1625	804.1625
Bacon	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	633-636	772.9625	802.9625
Baker	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	789-792	773.9375	803.9375
	Voice 25KHz	829-832	774.1875	804.1875
Baldwin	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	573-576	772.5875	802.5875
	Voice 25KHz	637-640	772.9875	802.9875
	Voice 25KHz	781-784	773.8875	803.8875
	Voice 25KHz	861-864	774.3875	804.3875
	Voice 25KHz	909-912	774.6875	804.6875
Banks	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	821-824	774.1375	804.1375
Barrow	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	497-500	772.1125	802.1125
	Voice 25KHz	573-576	772.5875	802.5875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	917-920	774.7375	804.7375
Bartow	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	753-756	773.7125	803.7125
	Voice 25KHz	821-824	774.1375	804.1375
	Voice 25KHz	941-944	774.8875	804.8875
Ben Hill	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	549-552	772.4375	802.4375
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	709-712	773.4375	803.4375
	Voice 25KHz	829-832	774.1875	804.1875
Berrien	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	877-880	774.4875	804.4875
Bibb	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	293-296	770.8375	800.8375
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	545-548	772.4125	802.4125
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	705-708	773.4125	803.4125
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	865-868	774.4125	804.4125
	Voice 25KHz	905-908	774.6625	804.6625
	Voice 25KHz	945-948	774.9125	804.9125
Bleckley	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	481-484	772.0125	802.0125
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	941-944	774.8875	804.8875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
Brantley	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	705-708	773.4125	803.4125
Brooks	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	701-704	773.3875	803.3875
Bryan	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	553-556	772.4625	802.4625
	Voice 25KHz	789-792	773.9375	803.9375
Bulloch	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	361-364	771.2625	801.2625
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	633-636	772.9625	802.9625
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	753-756	773.7125	803.7125
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	861-864	774.3875	804.3875
	Voice 25KHz	913-916	774.7125	804.7125
Burke	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	637-640	772.9875	802.9875
Butts	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	505-508	772.1625	802.1625
	Voice 25KHz	553-556	772.4625	802.4625

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	745-748	773.6625	803.6625
	Voice 25KHz	793-796	773.9625	803.9625
Calhoun	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	877-880	774.4875	804.4875
Camden	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	553-556	772.4625	802.4625
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	745-748	773.6625	803.6625
	Voice 25KHz	789-792	773.9375	803.9375
	Voice 25KHz	873-876	774.4625	804.4625
	Voice 25KHz	945-948	774.9125	804.9125
Candler	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	745-748	773.6625	803.6625
	Voice 25KHz	833-836	774.2125	804.2125
Carroll	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	573-576	772.5875	802.5875
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	825-828	774.1625	804.1625
	Voice 25KHz	865-868	774.4125	804.4125
Catoosa	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	529-532	772.3125	802.3125
Charlton	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	417-420	771.6125	801.6125

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	665-668	773.1625	803.1625
Chatham	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	125-128	769.7875	799.7875
	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	437-440	771.7375	801.7375
	Voice 25KHz	477-480	771.9875	801.9875
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	717-720	773.4875	803.4875
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	825-828	774.1625	804.1625
	Voice 25KHz	865-868	774.4125	804.4125
	Voice 25KHz	905-908	774.6625	804.6625
	Voice 25KHz	945-948	774.9125	804.9125
Chattahoochee	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	481-484	772.0125	802.0125
	Voice 25KHz	561-564	772.5125	802.5125
Chattooga	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	901-904	774.6375	804.6375
Cherokee	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	621-624	772.8875	802.8875
Clarke	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	289-292	770.8125	800.8125

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	753-756	773.7125	803.7125
Clay	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	213-216	770.3375	800.3375
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	497-500	772.1125	802.1125
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	665-668	773.1625	803.1625
Clayton	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	577-580	772.6125	802.6125
	Voice 25KHz	701-704	773.3875	803.3875
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	861-864	774.3875	804.3875
Clinch	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	361-364	771.2625	801.2625
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	637-640	772.9875	802.9875
Cobb	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	213-216	770.3375	800.3375
	Voice 25KHz	289-292	770.8125	800.8125
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	717-720	773.4875	803.4875
	Voice 25KHz	789-792	773.9375	803.9375
	Voice 25KHz	869-872	774.4375	804.4375
	Voice 25KHz	913-916	774.7125	804.7125
Coffee	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	165-168	770.0375	800.0375

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	421-424	771.6375	801.6375
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	573-576	772.5875	802.5875
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	745-748	773.6625	803.6625
	Voice 25KHz	865-868	774.4125	804.4125
	Voice 25KHz	905-908	774.6625	804.6625
	Voice 25KHz	945-948	774.9125	804.9125
Colquitt	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	293-296	770.8375	800.8375
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	577-580	772.6125	802.6125
	Voice 25KHz	633-636	772.9625	802.9625
	Voice 25KHz	673-676	773.2125	803.2125
	Voice 25KHz	917-920	774.7375	804.7375
Columbia	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	345-348	771.1625	801.1625
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	545-548	772.4125	802.4125
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	861-864	774.3875	804.3875
Cook	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	485-488	772.0375	802.0375
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	869-872	774.4375	804.4375
Coweta	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	421-424	771.6375	801.6375

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	545-548	772.4125	802.4125
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	873-876	774.4625	804.4625
	Voice 25KHz	917-920	774.7375	804.7375
Crawford	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	717-720	773.4875	803.4875
Crisp	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	125-128	769.7875	799.7875
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	497-500	772.1125	802.1125
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	637-640	772.9875	802.9875
	Voice 25KHz	833-836	774.2125	804.2125
Dade	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	633-636	772.9625	802.9625
	Voice 25KHz	877-880	774.4875	804.4875
Dawson	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	673-676	773.2125	803.2125
DeKalb	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	549-552	772.4375	802.4375
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	781-784	773.8875	803.8875
	Voice 25KHz	877-880	774.4875	804.4875
Decatur	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	349-352	771.1875	801.1875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	561-564	772.5125	802.5125
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	837-840	774.2375	804.2375
Dodge	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	561-564	772.5125	802.5125
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	913-916	774.7125	804.7125
Dooly	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	421-424	771.6375	801.6375
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	701-704	773.3875	803.3875
Dougherty	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	289-292	770.8125	800.8125
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	573-576	772.5875	802.5875
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	717-720	773.4875	803.4875
	Voice 25KHz	781-784	773.8875	803.8875
	Voice 25KHz	821-824	774.1375	804.1375
	Voice 25KHz	861-864	774.3875	804.3875
	Voice 25KHz	901-904	774.6375	804.6375
	Voice 25KHz	941-944	774.8875	804.8875
Douglas	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	553-556	772.4625	802.4625

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	745-748	773.6625	803.6625
Early	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	549-552	772.4375	802.4375
	Voice 25KHz	637-640	772.9875	802.9875
Echols	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	561-564	772.5125	802.5125
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	669-672	773.1875	803.1875
Effingham	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	577-580	772.6125	802.6125
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	669-672	773.1875	803.1875
Elbert	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	793-796	773.9625	803.9625
	Voice 25KHz	865-868	774.4125	804.4125
Emanuel	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	213-216	770.3375	800.3375
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	437-440	771.7375	801.7375
	Voice 25KHz	505-508	772.1625	802.1625
	Voice 25KHz	573-576	772.5875	802.5875
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	869-872	774.4375	804.4375
Evans	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	345-348	771.1625	801.1625
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	481-484	772.0125	802.0125
	Voice 25KHz	665-668	773.1625	803.1625

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
Fannin	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	785-788	773.9125	803.9125
Fayette	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	293-296	770.8375	800.8375
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	617-620	772.8625	802.8625
Floyd	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	701-704	773.3875	803.3875
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	781-784	773.8875	803.8875
	Voice 25KHz	861-864	774.3875	804.3875
	Voice 25KHz	917-920	774.7375	804.7375
Forsyth	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	505-508	772.1625	802.1625
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	793-796	773.9625	803.9625
	Voice 25KHz	865-868	774.4125	804.4125
Franklin	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	665-668	773.1625	803.1625
	Voice 25KHz	909-912	774.6875	804.6875
Fulton	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	345-348	771.1625	801.1625
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	437-440	771.7375	801.7375
	Voice 25KHz	477-480	771.9875	801.9875
	Voice 25KHz	561-564	772.5125	802.5125
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	669-672	773.1875	803.1875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	833-836	774.2125	804.2125
	Voice 25KHz	905-908	774.6625	804.6625
	Voice 25KHz	945-948	774.9125	804.9125
Gilmer	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	665-668	773.1625	803.1625
	Voice 25KHz	837-840	774.2375	804.2375
Glascock	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	865-868	774.4125	804.4125
Glynn	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	673-676	773.2125	803.2125
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	753-756	773.7125	803.7125
	Voice 25KHz	829-832	774.1875	804.1875
	Voice 25KHz	909-912	774.6875	804.6875
Gordon	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	573-576	772.5875	802.5875
Grady	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	257-260	770.6125	800.6125
	Voice 25KHz	361-364	771.2625	801.2625
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	609-612	772.8125	802.8125

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	825-828	774.1625	804.1625
Greene	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	717-720	773.4875	803.4875
Gwinnett	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	361-364	771.2625	801.2625
	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	485-488	772.0375	802.0375
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	705-708	773.4125	803.4125
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	825-828	774.1625	804.1625
Habersham	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	577-580	772.6125	802.6125
	Voice 25KHz	789-792	773.9375	803.9375
Hall	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	637-640	772.9875	802.9875
	Voice 25KHz	873-876	774.4625	804.4625
Hancock	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	549-552	772.4375	802.4375
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	829-832	774.1875	804.1875
	Voice 25KHz	917-920	774.7375	804.7375
Haralson	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	909-912	774.6875	804.6875
Harris	Voice 25KHz	53-56	769.3375	799.3375

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	405-408	771.5375	801.5375
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	789-792	773.9375	803.9375
Hart	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	785-788	773.9125	803.9125
Heard	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	837-840	774.2375	804.2375
Henry	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	821-824	774.1375	804.1375
Houston	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	577-580	772.6125	802.6125
	Voice 25KHz	633-636	772.9625	802.9625
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	745-748	773.6625	803.6625
	Voice 25KHz	789-792	773.9375	803.9375
	Voice 25KHz	837-840	774.2375	804.2375
	Voice 25KHz	877-880	774.4875	804.4875
	Voice 25KHz	917-920	774.7375	804.7375
Irwin	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	665-668	773.1625	803.1625
Jackson	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	457-460	771.8625	801.8625

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	861-864	774.3875	804.3875
Jasper	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	337-340	771.1125	801.1125
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	713-716	773.4625	803.4625
Jeff Davis	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	545-548	772.4125	802.4125
	Voice 25KHz	789-792	773.9375	803.9375
Jefferson	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	665-668	773.1625	803.1625
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	821-824	774.1375	804.1375
	Voice 25KHz	945-948	774.9125	804.9125
Jenkins	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	905-908	774.6625	804.6625
Johnson	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	717-720	773.4875	803.4875
	Voice 25KHz	877-880	774.4875	804.4875
Jones	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	477-480	771.9875	801.9875
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	833-836	774.2125	804.2125
Lamar	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	709-712	773.4375	803.4375

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
Lanier	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	861-864	774.3875	804.3875
	Voice 25KHz	909-912	774.6875	804.6875
Laurens	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	289-292	770.8125	800.8125
	Voice 25KHz	345-348	771.1625	801.1625
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	553-556	772.4625	802.4625
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	673-676	773.2125	803.2125
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	785-788	773.9125	803.9125
	Voice 25KHz	825-828	774.1625	804.1625
Lee	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	325-328	771.0375	801.0375
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	913-916	774.7125	804.7125
Liberty	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	497-500	772.1125	802.1125
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	701-704	773.3875	803.3875
	Voice 25KHz	741-744	773.6375	803.6375
	Voice 25KHz	781-784	773.8875	803.8875
	Voice 25KHz	837-840	774.2375	804.2375

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	877-880	774.4875	804.4875
Lincoln	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	553-556	772.4625	802.4625
	Voice 25KHz	781-784	773.8875	803.8875
Long	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	637-640	772.9875	802.9875
	Voice 25KHz	793-796	773.9625	803.9625
Lowndes	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	349-352	771.1875	801.1875
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	549-552	772.4375	802.4375
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	709-712	773.4375	803.4375
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	789-792	773.9375	803.9375
	Voice 25KHz	829-832	774.1875	804.1875
	Voice 25KHz	901-904	774.6375	804.6375
	Voice 25KHz	941-944	774.8875	804.8875
Lumpkin	Voice 25KHz	125-128	769.7875	799.7875
	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	745-748	773.6625	803.6625
Macon	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	437-440	771.7375	801.7375
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	781-784	773.8875	803.8875
Madison	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	477-480	771.9875	801.9875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	833-836	774.2125	804.2125
	Voice 25KHz	945-948	774.9125	804.9125
Marion	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	349-352	771.1875	801.1875
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	713-716	773.4625	803.4625
McDuffie	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	293-296	770.8375	800.8375
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	481-484	772.0125	802.0125
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	741-744	773.6375	803.6375
McIntosh	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	505-508	772.1625	802.1625
Meriwether	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	465-468	771.9125	801.9125
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	901-904	774.6375	804.6375
	Voice 25KHz	941-944	774.8875	804.8875
Miller	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	625-628	772.9125	802.9125
Mitchell	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	329-332	771.0625	801.0625
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	601-604	772.7625	802.7625
	Voice 25KHz	705-708	773.4125	803.4125
	Voice 25KHz	873-876	774.4625	804.4625
Monroe	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	213-216	770.3375	800.3375
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	685-688	773.2875	803.2875
Montgomery	Voice 25KHz	13-16	769.0875	799.0875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	125-128	769.7875	799.7875
	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	405-408	771.5375	801.5375
	Voice 25KHz	613-616	772.8375	802.8375
Morgan	Voice 25KHz	253-256	770.5875	800.5875
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	785-788	773.9125	803.9125
	Voice 25KHz	913-916	774.7125	804.7125
Murray	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	609-612	772.8125	802.8125
Muscogee	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	701-704	773.3875	803.3875
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	837-840	774.2375	804.2375
	Voice 25KHz	877-880	774.4875	804.4875
	Voice 25KHz	917-920	774.7375	804.7375
Newton	Voice 25KHz	125-128	769.7875	799.7875
	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	673-676	773.2125	803.2125
	Voice 25KHz	837-840	774.2375	804.2375
Oconee	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	213-216	770.3375	800.3375
	Voice 25KHz	349-352	771.1875	801.1875
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	481-484	772.0125	802.0125

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	869-872	774.4375	804.4375
Oglethorpe	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	669-672	773.1875	803.1875
	Voice 25KHz	905-908	774.6625	804.6625
Paulding	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	637-640	772.9875	802.9875
	Voice 25KHz	709-712	773.4375	803.4375
Peach	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	485-488	772.0375	802.0375
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	665-668	773.1625	803.1625
	Voice 25KHz	821-824	774.1375	804.1375
Pickens	Voice 25KHz	293-296	770.8375	800.8375
	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	589-592	772.6875	802.6875
	Voice 25KHz	829-832	774.1875	804.1875
Pierce	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	869-872	774.4375	804.4375
Pike	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	637-640	772.9875	802.9875
	Voice 25KHz	785-788	773.9125	803.9125
Polk	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	497-500	772.1125	802.1125
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	605-608	772.7875	802.7875
Pulaski	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	349-352	771.1875	801.1875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	513-516	772.2125	802.2125
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	669-672	773.1875	803.1875
	Voice 25KHz	901-904	774.6375	804.6375
Putnam	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	173-176	770.0875	800.0875
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	437-440	771.7375	801.7375
	Voice 25KHz	561-564	772.5125	802.5125
	Voice 25KHz	629-632	772.9375	802.9375
	Voice 25KHz	873-876	774.4625	804.4625
Quitman	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	505-508	772.1625	802.1625
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	909-912	774.6875	804.6875
Rabun	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	533-536	772.3375	802.3375
	Voice 25KHz	613-616	772.8375	802.8375
	Voice 25KHz	913-916	774.7125	804.7125
Randolph	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	869-872	774.4375	804.4375
Richmond	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	93-96	769.5875	799.5875
	Voice 25KHz	161-164	770.0125	800.0125
	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	361-364	771.2625	801.2625
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	673-676	773.2125	803.2125
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	793-796	773.9625	803.9625
	Voice 25KHz	833-836	774.2125	804.2125
	Voice 25KHz	873-876	774.4625	804.4625
	Voice 25KHz	913-916	774.7125	804.7125
Rockdale	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	493-496	772.0875	802.0875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	557-560	772.4875	802.4875
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	909-912	774.6875	804.6875
Schley	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	673-676	773.2125	803.2125
Screven	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	289-292	770.8125	800.8125
	Voice 25KHz	349-352	771.1875	801.1875
	Voice 25KHz	389-392	771.4375	801.4375
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	829-832	774.1875	804.1875
Seminole	Voice 25KHz	333-336	771.0875	801.0875
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	421-424	771.6375	801.6375
	Voice 25KHz	485-488	772.0375	802.0375
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	577-580	772.6125	802.6125
Spalding	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	89-92	769.5625	799.5625
	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	349-352	771.1875	801.1875
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	665-668	773.1625	803.1625
	Voice 25KHz	753-756	773.7125	803.7125
	Voice 25KHz	829-832	774.1875	804.1875
Stephens	Voice 25KHz	129-132	769.8125	799.8125
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	421-424	771.6375	801.6375
	Voice 25KHz	469-472	771.9375	801.9375
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	941-944	774.8875	804.8875
Stewart	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	205-208	770.2875	800.2875
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	793-796	773.9625	803.9625
	Voice 25KHz	833-836	774.2125	804.2125
Sumter	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	245-248	770.5375	800.5375
	Voice 25KHz	341-344	771.1375	801.1375

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	473-476	771.9625	801.9625
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	825-828	774.1625	804.1625
	Voice 25KHz	865-868	774.4125	804.4125
	Voice 25KHz	905-908	774.6625	804.6625
	Voice 25KHz	945-948	774.9125	804.9125
Talbot	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	669-672	773.1875	803.1875
Taliaferro	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	569-572	772.5625	802.5625
	Voice 25KHz	789-792	773.9375	803.9375
Tattnall	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	521-524	772.2625	802.2625
	Voice 25KHz	561-564	772.5125	802.5125
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	677-680	773.2375	803.2375
	Voice 25KHz	901-904	774.6375	804.6375
	Voice 25KHz	941-944	774.8875	804.8875
Taylor	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	573-576	772.5875	802.5875
	Voice 25KHz	861-864	774.3875	804.3875
	Voice 25KHz	909-912	774.6875	804.6875
Telfair	Voice 25KHz	49-52	769.3125	799.3125
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	357-360	771.2375	801.2375
	Voice 25KHz	445-448	771.7875	801.7875
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	589-592	772.6875	802.6875
Terrell	Voice 25KHz	57-60	769.3625	799.3625
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	669-672	773.1875	803.1875
	Voice 25KHz	709-712	773.4375	803.4375
	Voice 25KHz	749-752	773.6875	803.6875
Thomas	Voice 25KHz	17-20	769.1125	799.1125

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	125-128	769.7875	799.7875
	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	345-348	771.1625	801.1625
	Voice 25KHz	397-400	771.4875	801.4875
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	545-548	772.4125	802.4125
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	665-668	773.1625	803.1625
	Voice 25KHz	745-748	773.6625	803.6625
	Voice 25KHz	833-836	774.2125	804.2125
Tift	Voice 25KHz	41-44	769.2625	799.2625
	Voice 25KHz	85-88	769.5375	799.5375
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	437-440	771.7375	801.7375
	Voice 25KHz	505-508	772.1625	802.1625
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	713-716	773.4625	803.4625
	Voice 25KHz	785-788	773.9125	803.9125
	Voice 25KHz	837-840	774.2375	804.2375
Toombs	Voice 25KHz	293-296	770.8375	800.8375
	Voice 25KHz	341-344	771.1375	801.1375
	Voice 25KHz	381-384	771.3875	801.3875
	Voice 25KHz	477-480	771.9875	801.9875
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	581-584	772.6375	802.6375
	Voice 25KHz	661-664	773.1375	803.1375
	Voice 25KHz	705-708	773.4125	803.4125
	Voice 25KHz	757-760	773.7375	803.7375
	Voice 25KHz	909-912	774.6875	804.6875
Towns	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	717-720	773.4875	803.4875
Treutlen	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	353-356	771.2125	801.2125
	Voice 25KHz	453-456	771.8375	801.8375
	Voice 25KHz	497-500	772.1125	802.1125
	Voice 25KHz	541-544	772.3875	802.3875
	Voice 25KHz	837-840	774.2375	804.2375
	Voice 25KHz	917-920	774.7375	804.7375
Troup	Voice 25KHz	13-16	769.0875	799.0875
	Voice 25KHz	97-100	769.6125	799.6125

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	165-168	770.0375	800.0375
	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	485-488	772.0375	802.0375
	Voice 25KHz	537-540	772.3625	802.3625
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	705-708	773.4125	803.4125
Turner	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	405-408	771.5375	801.5375
	Voice 25KHz	457-460	771.8625	801.8625
	Voice 25KHz	529-532	772.3125	802.3125
	Voice 25KHz	909-912	774.6875	804.6875
Twiggs	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	449-452	771.8125	801.8125
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	613-616	772.8375	802.8375
Union	Voice 25KHz	201-204	770.2625	800.2625
	Voice 25KHz	321-324	771.0125	801.0125
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	545-548	772.4125	802.4125
Upson	Voice 25KHz	169-172	770.0625	800.0625
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	289-292	770.8125	800.8125
	Voice 25KHz	361-364	771.2625	801.2625
	Voice 25KHz	425-428	771.6625	801.6625
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	869-872	774.4375	804.4375
Walker	Voice 25KHz	121-124	769.7625	799.7625
	Voice 25KHz	217-220	770.3625	800.3625
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	393-396	771.4625	801.4625
	Voice 25KHz	485-488	772.0375	802.0375
	Voice 25KHz	593-596	772.7125	802.7125
	Voice 25KHz	833-836	774.2125	804.2125
Walton	Voice 25KHz	421-424	771.6375	801.6375
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	633-636	772.9625	802.9625
	Voice 25KHz	901-904	774.6375	804.6375
	Voice 25KHz	941-944	774.8875	804.8875
Ware	Voice 25KHz	53-56	769.3375	799.3375
	Voice 25KHz	93-96	769.5875	799.5875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
	Voice 25KHz	133-136	769.8375	799.8375
	Voice 25KHz	177-180	770.1125	800.1125
	Voice 25KHz	285-288	770.7875	800.7875
	Voice 25KHz	345-348	771.1625	801.1625
	Voice 25KHz	409-412	771.5625	801.5625
	Voice 25KHz	525-528	772.2875	802.2875
	Voice 25KHz	565-568	772.5375	802.5375
	Voice 25KHz	605-608	772.7875	802.7875
	Voice 25KHz	793-796	773.9625	803.9625
	Voice 25KHz	833-836	774.2125	804.2125
	Voice 25KHz	913-916	774.7125	804.7125
Warren	Voice 25KHz	241-244	770.5125	800.5125
	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	501-504	772.1375	802.1375
	Voice 25KHz	577-580	772.6125	802.6125
	Voice 25KHz	701-704	773.3875	803.3875
Washington	Voice 25KHz	45-48	769.2875	799.2875
	Voice 25KHz	281-284	770.7625	800.7625
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	421-424	771.6375	801.6375
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	617-620	772.8625	802.8625
	Voice 25KHz	709-712	773.4375	803.4375
	Voice 25KHz	901-904	774.6375	804.6375
Wayne	Voice 25KHz	97-100	769.6125	799.6125
	Voice 25KHz	137-140	769.8625	799.8625
	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	249-252	770.5625	800.5625
	Voice 25KHz	289-292	770.8125	800.8125
	Voice 25KHz	365-368	771.2875	801.2875
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	549-552	772.4375	802.4375
	Voice 25KHz	609-612	772.8125	802.8125
	Voice 25KHz	785-788	773.9125	803.9125
	Voice 25KHz	917-920	774.7375	804.7375
Webster	Voice 25KHz	401-404	771.5125	801.5125
	Voice 25KHz	441-444	771.7625	801.7625
	Voice 25KHz	545-548	772.4125	802.4125
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	785-788	773.9125	803.9125
Wheeler	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	509-512	772.1875	802.1875
	Voice 25KHz	597-600	772.7375	802.7375
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	861-864	774.3875	804.3875

County	Band Width	Channel	Base Frequency (MHz)	Mobile Frequency (MHz)
White	Voice 25KHz	433-436	771.7125	801.7125
	Voice 25KHz	553-556	772.4625	802.4625
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	709-712	773.4375	803.4375
	Voice 25KHz	797-800	773.9875	803.9875
Whitfield	Voice 25KHz	81-84	769.5125	799.5125
	Voice 25KHz	297-300	770.8625	800.8625
	Voice 25KHz	405-408	771.5375	801.5375
	Voice 25KHz	493-496	772.0875	802.0875
	Voice 25KHz	585-588	772.6625	802.6625
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	749-752	773.6875	803.6875
	Voice 25KHz	797-800	773.9875	803.9875
	Voice 25KHz	873-876	774.4625	804.4625
Wilcox	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	373-376	771.3375	801.3375
	Voice 25KHz	413-416	771.5875	801.5875
	Voice 25KHz	489-492	772.0625	802.0625
	Voice 25KHz	873-876	774.4625	804.4625
Wilkes	Voice 25KHz	209-212	770.3125	800.3125
	Voice 25KHz	369-372	771.3125	801.3125
	Voice 25KHz	461-464	771.8875	801.8875
	Voice 25KHz	625-628	772.9125	802.9125
	Voice 25KHz	837-840	774.2375	804.2375
	Voice 25KHz	877-880	774.4875	804.4875
Wilkinson	Voice 25KHz	17-20	769.1125	799.1125
	Voice 25KHz	385-388	771.4125	801.4125
	Voice 25KHz	429-432	771.6875	801.6875
	Voice 25KHz	517-520	772.2375	802.2375
	Voice 25KHz	565-568	772.5375	802.5375
Worth	Voice 25KHz	213-216	770.3375	800.3375
	Voice 25KHz	377-380	771.3625	801.3625
	Voice 25KHz	417-420	771.6125	801.6125
	Voice 25KHz	481-484	772.0125	802.0125
	Voice 25KHz	553-556	772.4625	802.4625
	Voice 25KHz	621-624	772.8875	802.8875
	Voice 25KHz	753-756	773.7125	803.7125
	Voice 25KHz	793-796	773.9625	803.9625

Appendix F

Inter-Regional Dispute Resolution Agreement

INTER-REGIONAL DISPUTE RESOLUTION AGREEMENT

INTRODUCTION

This is a mutually agreed upon Inter-Regional Coordination Procedures Agreement and Dispute Resolution Agreement between the respective 700 MHz Regional Planning Committees of Region 1 – Alabama; Region 9 – Florida; Region 10 – Georgia; Region 31 – North Carolina; Region 37 – Region 37 – South Carolina; and Region 39 – Tennessee which will be used by the Regions to coordinate with the adjacent Regional Planning Committees.

INTER-REGIONAL COORDINATION PROCEDURES AGREEMENT

The coordination procedure will consist of the following steps:

1. An application-filing window is opened or the Region announces that it is prepared to begin accepting applications on a first-come/first-served basis.

2. Applications by eligible entities are accepted.

3. An application-filing window (if this procedure is being used) is closed after appropriate time interval.

4. Intra-Regional review and coordination takes place, including a technical review resulting in assignment of channels.

5. After Intra-Regional review, a copy of those frequency-specific applications requiring adjacent Region approval, including a definition statement of proposed service area, shall then be forwarded to the adjacent Region(s) for review.[1] This information will be sent to the adjacent Regional chairperson(s) using the CAPRAD database.

6. The adjacent Region reviews the application. If the application is approved, a letter of concurrent shall be sent, via the CAPRAD database, to the initiating Regional chairperson within thirty (30) calendar days.

7. Where adjacent Region concurrence has been secured, and the channel assignment would result in no change to the Region's Commission approval channel assignment matrix. The initiating Region may then advise the applicant(s) that their application may be forwarded to a frequency coordinator for processing and filing with Commission.

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[1] If an applicant's proposed service area extends into an adjacent Public Safety Region(s), the affected Region(s) must approve the application. Service area shall normally be defined as the area included within the geographical boundary of the applicant, plus three (3) miles. Other definitions of service area shall be justified with an accompanying *Memorandum of Understanding (MOU)* or other application documentation between agencies, i.e. mutual aid agreements.

8. Where adjacent Region concurrence has been secured, and the channel assignment matrix, then the initiating Region shall file with Commission a *Petition to Amend* their current Regional plan's frequency matrix, reflecting the new channel assignments, with a copy of the *Petition* sent to the adjacent Regional chairperson(s).

9. Upon Commission issuance of an *Order* adopting the amended channel assignment matrix, the initiating Regional chairperson will send a courtesy copy of the *Order* to the adjacent Regional chairperson(s) and may then advise the applicant(s) that they may forward their applications to the frequency coordinator for processing and filing with Commission.

DISPUTE RESOLUTION

The procedure will consist of the following steps should a dispute occur:

1. If the adjacent Region(s) cannot approve the request, the adjacent Region shall document the reasons for partial or non-concurrence, and respond within ten (10) calendar days via e-mail. If the applying Region cannot modify the application to satisfy the objections of the adjacent Region then, a working group comprised of representative of the two Regions shall be convened within thirty (30) calendar days to attempt to resolve the dispute. The working group shall then report its findings within thirty (30) calendar days to the Regional chairpersons e-mail, mail or fax. Findings may include, but not limited to:

a. Unconditional concurrence;

b. Conditional concurrence contingent upon modification of Applicant's technical parameters; or

c. Partial or total denial of proposed frequencies due to inability to meet co-channel/adjacent channel interference free protection to existing licenses with the adjacent Region.

2. If the Inter-Regional Working Group cannot resolve the dispute, then the matter shall be forwarded for evaluation to the National Plan Oversight Committee (NPOC), of the National Public Safety Telecommunications Council (NPSTC). Each Region involved in the dispute shall include a detailed explanation of its position, including engineering studies and any other technical information deemed relevant. The NPOC will, within thirty (30) calendar days, report its recommendation(s) to the Regional chairpersons via the CAPRAD database. The NPOC's decision may support either of the disputing Regions or it may develop a proposal that it deems advantageous to each disputing Region.

CONCLUSION

IN AGREEMENT HERETO, Regions 1, 9, 10, 31, 37 and 39 hereunto set their signatures the day and year first above written.

Respectfully,
[all signatories to agreement]

Jim Mollohan
Chairman, Region 10 Georgia

~~John Johnson~~
~~Chairman, Region 39 Tennessee~~

~~Eric Linsley~~
~~Chairman, Region 1 Alabama~~

~~William Winn~~
~~Chairman, Region 37 South Carolina~~

~~Ray Carlson~~
~~Chairman, Region 9 Florida~~

~~Michael T. Hodgson~~
~~Chairman, Region 31 North Carolina~~

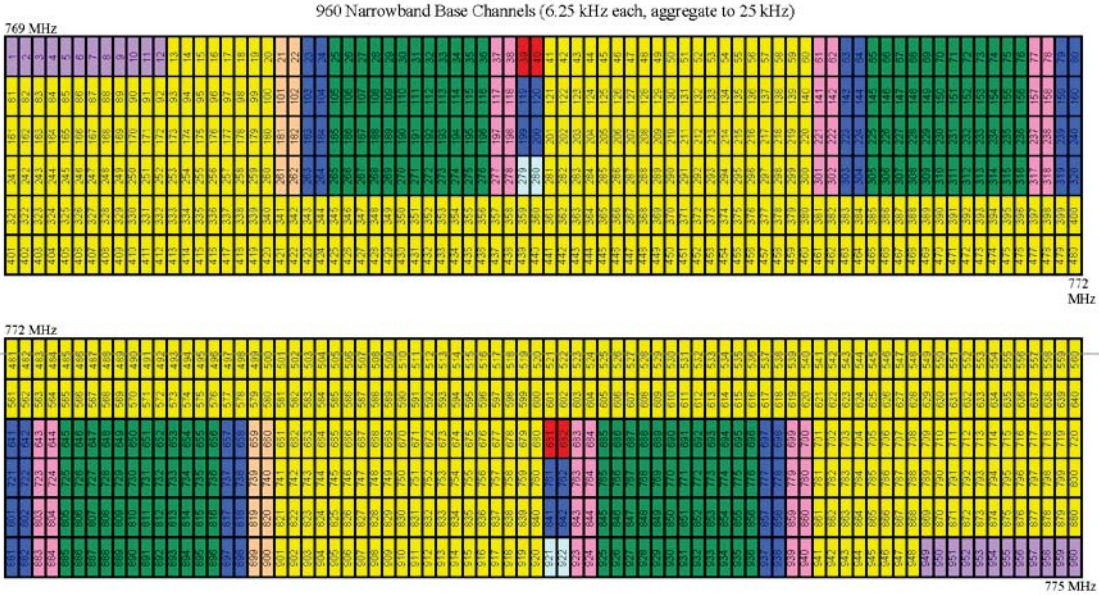
- See Signed LOC's after Appendix I for signed letters from the respective Regions.

Appendix H

700MHz Band Plan

700 MHz BAND PLAN per Second R&O in PS Docket 06-229

960 Narrowband Base Channels (6.25 kHz each, aggregate to 25 kHz)

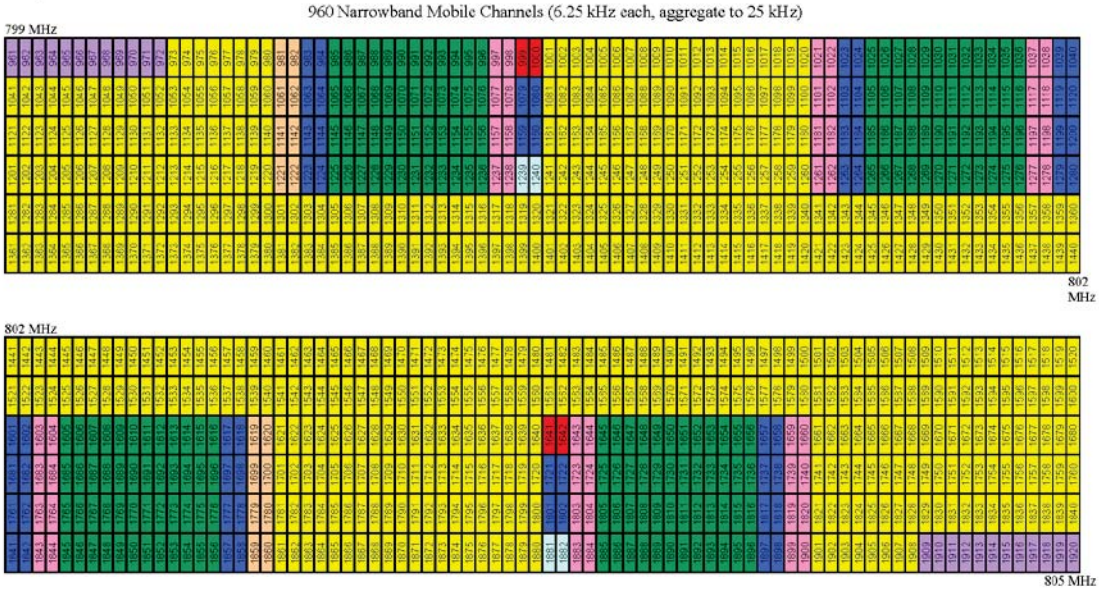


Narrowband Channels

- Two may be combined provided that the lower channel number is odd (*e.g.*, 1, 3, 5)
- Four may be combined provide that the lower channel number is 1 + 4n, n = 0 to 479 (*e.g.*, 1, 5, 1917)
- Channel numbers for combined channels are designated by the lowest and highest channel numbers separated by a hyphen, *e.g.*, "1-2" and "1-4".
- Narrowband channels must maintain a data throughput efficiency of not less than 4.8 kbps for each 6.25 kHz of bandwidth

General Use
Interoperability
Reserve
State License
Low Power
2ndary Trunking
I/O Nationwide Call
I/O Low Speed Data

960 Narrowband Mobile Channels (6.25 kHz each, aggregate to 25 kHz)



Narrowband Channels

- Two may be combined provided that the lower channel number is odd (*e.g.*, 1, 3, 5)
- Four may be combined provide that the lower channel number is 1 + 4n, n = 0 to 479 (*e.g.*, 1, 5, 1917)
- Channel numbers for combined channels are designated by the lowest and highest channel numbers separated by a hyphen, *e.g.*, "1-2" and "1-4".
- Narrowband channels must maintain a data throughput efficiency of not less than 4.8 kbps for each 6.25 kHz of bandwidth

General Use
Interoperability
Reserve
State License
Low Power
2ndary Trunking
I/O Nationwide Call
I/O Low Speed Data

Appendix G

DTV Protection and Incumbency Conclusion

Region 10 – Georgia

TV Stations

Search FCC Database TV Code Glossary

County	Channel	Call Sign	Location	Latitude NAD83	Longitude NAD83
Bibb County	64	WGNM	Macon	32°45'51"N	83°33'32"W
Catoosa County	63	WRNG-LP	Ringgold	34°55'30"N	85°5'50"W
Early County	69	W69DO	Colquitt	31°14'35"N	84°44'55"W
Fulton County	69	WUPA	Atlanta	33°45'34"N	84°23'19"W
Muscogee County	62	W62DG	Columbus	32°25'58"N	84°57'2"W
Rockdale County	63	920228KE	Monroe	33°44'38"N	84°0'39"W
Rockdale County	63	WHSG-TV	Monroe	33°44'22"N	84°0'14"W
Tift County	62	W62DE	Tifton	31°26'34"N	83°30'27"W
Washington County	68	940415DL	Sandersville	32°58'23"N	82°48'34"W
Whitfield County	66	DW66BA	Dalton	34°47'21"N	84°58'11"W

INCUMBENT FULL POWER TV LICENSEES ON CHANNELS 59-69 (SE AREA) As of 12/1/99

CALL SIGN	CH	TYPE	CITY	ST	LICENSEE/PERMITTEE	ERP (KW)	HAAT (MTR)	LOCATION OF FACILITY LAT					LONG		
WJEB	59	LIC	JACKSONVILLE	FL	JACKSONVILLE EDUCATORS B/CING., INC.	3310	289	N	30	16	34	W	81	33	53
WTJP	60	LIC	GADSDEN	AL	ALL AMERICAN NETWORK	5000	352	N	33	48	53	W	86	26	55
WFGC	61	CP MOD	PALM BEACH	FL	CHRISTIAN TV OF PALM BEACH CTY, INC.	5000	125	N	26	45	47	W	80	1	19
WLXI	61	LIC	GREENSBORO	NC	RADIANT LIFE MINISTRIES, INC.	501	168	N	36	8	58	W	80	3	21
WDSI	61	LIC	CHATTANOOGA	TN	WDSI LICENSE CORP.	4900	370	N	35	12	34	W	85	16	39
WBSV	62	LIC	VENICE	FL	ENTRAVISION HOLDINGS, LLC	4680	167	N	27	6	1	W	82	22	18
WASV	62	LIC	ASHEVILLE	NC	PAPPAS TELECASTING OF THE CAROLINAS	5000	556	N	35	13	20	W	82	32	58
WFPX	62	LIC	FAYETTEVILLE	NC	PAXSON COMMUNICATIONS LIC. CO., LLC	933	256	N	34	53	5	W	79	4	31
WPPB	63	CP MOD	BOCA RATON	FL	PALMETTO B/CASTERS ASSOC. FOR COMM.	646	159	N	26	9	11	W	80	10	12
WHSG	63	LIC	MONROE	GA	TRINITY BROADCASTING NETWORK	5000	363	N	33	44	22	W	84	0	14
WQHB	63	LIC	SUMTER	SC	MCLAUGHLIN BROADCASTING, INC.	13.2	165	N	33	54	52	W	80	17	38
WGNM	64	LIC	MACON	GA	GOOD NEWS TELEVISION	51.3	185	N	32	44	58	W	83	33	35
WAXN	64	LIC	KANNAPOLIS	NC	KANNAPOLIS TELEVISION COMPANY	1910	300	N	35	15	41	W	80	43	38
WRBW	65	LIC	ORLANDO	FL	UTV OF ORLANDO, INC.	5000	465	N	28	34	51	W	81	4	32
WSWS	66	LIC	OPELIKA	AL	PAPPAS TELECASTING OF OPELIKA	794	207	N	32	38	33	W	85	14	13
WXPX	66	LIC	BRADENTON	FL	PAXSON COMMUNICATIONS LIC. CO., LLC	2240	465	N	27	24	30	W	82	15	0
WJFB	66	LIC	LEBANON	TN	BRYANT COMMUNICATIONS, INC.	2240	161	N	36	9	13	W	86	22	46
WRJM	67	CP MOD	TROY	AL	STAGE DOOR DEVELOPMENT, INC.	1260	592	N	31	58	32	W	86	9	46
WPXP	67	LIC	LAKE WORTH	FL	HISPANIC BROADCASTING, INC.	3980	128	N	26	45	47	W	80	12	19
WABM	68	LIC	BIRMINGHAM	AL	BIRMINGHAM (WABM-TV) LICENSEE, INC.	1450	314	N	33	27	37	W	86	51	7
WBCC	68	LIC	COCOA	FL	BREVARD COMMUNITY COLLEGE	2820	287	N	28	18	26	W	80	54	48
WAMI	69	LIC	HOLLYWOOD	FL	UNIVISION PARTNERSHIP OF HOLLYWOOD, FL	5000	264	N	25	57	59	W	80	12	33
WUPA	69	LIC	ATLANTA	GA	VSC COMMUNICATIONS, INC	2630	299	N	33	45	34	W	84	23	19

Frequency Availability through the DTV Transition

On August 14, 1996, the FCC released a Sixth Further Notice of Proposed Rule Making *in the digital television (DTV) proceeding. A portion of the spectrum recovered from TV channels 60-69 when DTV is fully deployed "could be used to meet public safety needs."*[5] *By Congressional direction in the Balanced Budget Act of 1997, the FCC reallocated 24 MHz of spectrum to Public Safety services in the 764-776 MHz and 794-806 MHz bands. The statute required the FCC to establish service rules, by September 30, 1998, in order to start the process of assigning licenses. The rules that the FCC established by September 30, 1998, "provided the minimum technical framework necessary to standardize operations in this spectrum band, including, but not limited to: (a) establishing interference limits at the boundaries of the spectrum block and service areas; (b) establishing technical restrictions necessary to protect full-service analog and digital television service during the transition to digital television services; (c) permitting public safety licensees the flexibility to aggregate multiple licenses to create larger spectrum blocks and service areas, and to disaggregate or partition licenses to create smaller spectrum blocks or service areas; and (d) ensuring that the new spectrum will not be subject to harmful interference from television broadcast licensees"*[6].

In April 1997, the FCC assigned a second 6 MHz block of spectrum to each license (or permit to construct) holders of full power, analog, television broadcast station (NTSC) in order to construct a digital television station (DTV). Secondary low power television stations (LPTV), secondary translators and boosters (TX), mutually exclusive applications for new stations, and application filed after a cut-off date did not receive a second 6 MHz allotment for DTV. The FCC established about a 10 year timeline for those stations with a DTV assignment to construct a DTV station, cease NTSC transmissions, and return one of the two 6 MHz blocks of spectrum to the FCC. Target date for the end of analog television (NTSC) transmission was set for December 31, 2006.

Congress provided several market penetration loopholes (>85% households served, all 4 major networks converted, etc) allowing NTSC operations to continue past the December 31, 2006 date. While there are over 100 NTSC full power stations in this band, there are also about 12 DTV assignments. The DTV assignments might continue operations past the December 31, 2006 date for two reasons. 1) They must find a suitable channel below channel 60 to move to, which may be their own NTSC assignment. They may not be able to find another allocation until other NTSC stations have ceased operations and returned a channel below 60 to the FCC. Or, 2) their license does not expire until after 2006 (most are licensed into 2007 or 2008).

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[5] Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, MM Docket No. 87-268, *Sixth Further Notice of Proposed Rule Making*,11 FCC Rcd 10,968, 10,980 (1996) (*DTV Sixth Notice*).

[6] FCC 98-191, 1st R&O and 3rd NPRM on WT Docket No. 96-86 Operational & Technical Requirements or the 700 MHz Public Safety Band, para.4.

Protection of Public Safety from future TV/DTV Stations

Public safety base and mobile operations must have a safe distance between the co-channel or adjacent TV and DTV systems. This typically means that a co- channel and adjacent channel base and mobile system cannot operate in areas where TV stations already exist. The public safety systems that will operate in the 700 MHz band for some locations in the U.S. and its possessions must wait until the transition period is over and the TV/DTV stations have moved to other channels before beginning operations. In other areas, channels will be available for public safety operations. During the transition period, public safety stations must be acutely aware of the TV allocations for both TV and DTV stations. The FCC wants the number of situations where the public safety licensee has to coordinate its station with the existing TV stations kept to a minimum. The Commission's decisions in the reallocation of spectrum to DTV implemented two requirements which will help public safety systems to protect TV/DTV stations and reduce the number of coordinations. The first requirement is that full power UHF-TV stations can no longer apply for channels 60-69 or modifications in channels 60-69 which would increase the stations' service areas, which creates a known environment for public safety licensees.[7] The second requirement is that since only existing TV station licensees can apply for DTV channels, the applicants and their proposed locations are already known.[8]

[7] *See Reallocation Report and Order*, 12 FCC Rcd 22,969-22,970. Stations with existing channel 60-69 TV construction permits must complete their stations and file for a license by January 2, 2001.

[8] *See DTV Sixth Report and Order*, 12 FCC Rcd 14,739-14,754; *See also* In the Matter of Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, *Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order* in MM Docket No. 87-268, 13 FCC Rcd 7418 (1998). The 11 DTV allotments are:

Also, the low power TV stations and translators already on channels 60-69 are secondary and must cease operations if they cause harmful interference when a primary service, like land mobile, comes into operation. The secondary Low Power TV stations already on channels 60-69 cannot apply for the new Class A protection status.

STATE	CITY	NTSC TV Ch.	DTV Ch.	ERP (kW)	HAAT (m)
California	Stockton	64	62	63.5	874
California	Los Angeles	11	65	688.7	896
California	Riverside	62	68	180.1	723
California	Concord	42	63	61.0	856
Pennsylvania	Allentown	39	62	50.0	302
Pennsylvania	Philadelphia	6	64	1000.0	332
Pennsylvania	Philadelphia	10	67	791.8	354
Puerto Rico	Aguada	50	62	50.0	343
Puerto Rico	Mayaguez	16	63	50.0	347
Puerto Rico	Naranjito	64	65	50.0	142
Puerto Rico	Aguadilla	12	69	691.8	665

Spectrum Overview

700 MHz Public Safety Band - 24 megahertz of spectrum

TV 61	TV 62	TV 63	TV 64	TV 65	TV 66	TV 67	TV 68	TV 69	806-824 LMR Band
		Public Safety 6 MHz	Public Safety 6 MHz				Public Safety 6 MHz	Public Safety 6 MHz	

TV Channel 63 TV Channel 64 TV Channel 68 TV Channel 69

764 MHz 770 776 794 MHz 800 806

NB 3 MHz | WB 6 MHz | NB 3 MHz | NB 3 MHz | WB 6 MHz | NB 3 MHz

NB = narrowband channels WB = wideband channels

The FCC designated 764-776 MHz (TV Channels 63 and 64) for base-to-mobile transmissions and 794-806 MHz (TV Channels 68 and 69) for mobile-to-base communications. In addition, base transmit channels in TV Channel 63 are paired with mobile channels in TV Channel 68 and likewise that base channels in TV Channel 64 are paired with mobile channels in TV Channel 69. This provides 30 MHz separation between base and mobile transmit channel center frequencies. This band plan was suggested because of the close proximity of TV Channels 68 and 69 to the 806-824 MHz band, which already contains the transmit channels for mobile and portable radios (base receive).

Mobile transmissions are allowed on any part of the 700 MHz band, not just the upper 12 MHz. This will facilitate direct mobile-to-mobile communications (*i.e.*, not through a repeater) that are often employed at the site of an incident, where wide area communications facilities are not available or desired. Allowing mobile transmissions on both halves of a paired channel is generally consistent with FCC rules governing use of other public safety bands.

Non-uniform TV Channel Pairing

There are currently geographical areas where, either licensed or otherwise protected full-service analog or new digital, television stations are currently authorized to operate on TV Channels 62, 63, 64, 65, 67, 68, and 69.[9] During the DTV transition period, an incumbent TV station occupying one or more of the four Public Safety channels (63, 64, 68, 69) or the three adjacent channels (62, 65, 67) may preclude pairing of the channels in accordance with the band plan defined above. Therefore, to provide for cases where standard pairing is not practicable during the DTV transition period, the FCC will allow the RPCs to consider pairing base-to-mobile channels in TV Channel 63 with mobile-to-base channels in TV Channel 69 and/or base-to-mobile channels in TV Channel 64 with mobile-to-base channels in TV Channel 68. Because such non-standard channel pairing may

cause problems when the band becomes more fully occupied, the FCC expects the RPCs to permit such non-standard channel pairing only when absolutely necessary, and the FCC may require stations to return to standard channel pairing after the DTV transition period is over. <u>However, the FCC will not permit non-standard channel pairing on the nationwide interoperability channels in the 700 MHz band because of the need for nationwide uniformity of these channels</u>.

At least three issues must be considered before deciding upon non-uniform channel pairing:

1) Preliminary analysis, looking at current incumbent TV stations, shows few geographic areas where non-uniform pairing allows early implementation of 700 MHz systems. As DTV Transition progresses, and TV stations vacate the band, this situation might change.

2) If interoperability channels must be uniform, operation on I/O channels will be blocked until all incumbent TV stations are cleared, even though General Use channels may be implemented earlier.

3) If I/O channels must follow uniform pairing, and general use & reserve channels can be implemented using non-uniform pairing, narrowband voice subscriber equipment must operate on 3 different channel pairings - 39 MHz (764-767 paired with 803-806 MHz), 30 MHz, and 21 MHz (773-776 paired with 794-797 MHz). Likewise, there will be 3 different channel pairing for wideband channels. No vendors have volunteered to build equipment & systems for non-uniform pairing, yet.

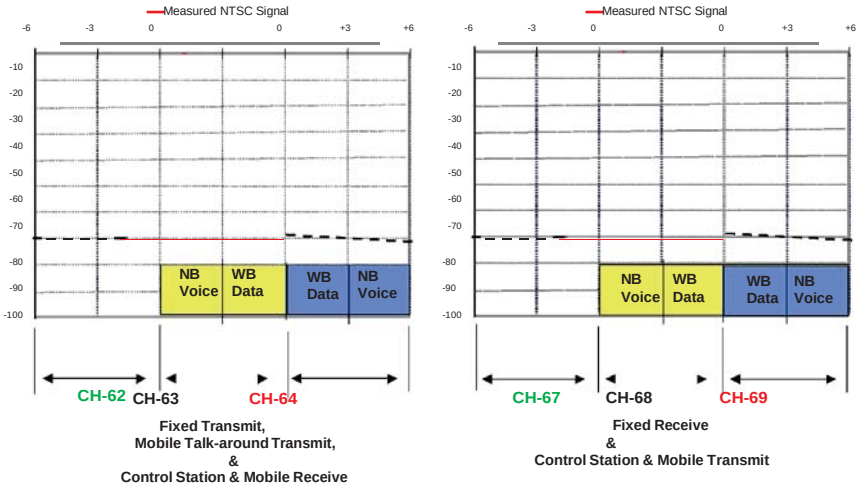
TV/DTV Protection

During the DTV Transition period, public safety must consider all co-channel and adjacent channel TV and DTV stations within about a 160 mile radius.

For public safety channel pair 63/68, public safety must consider six TV/DTV channels - co-channels 63 and 68, as well as, adjacent channels 62, 64, 67, and 69.

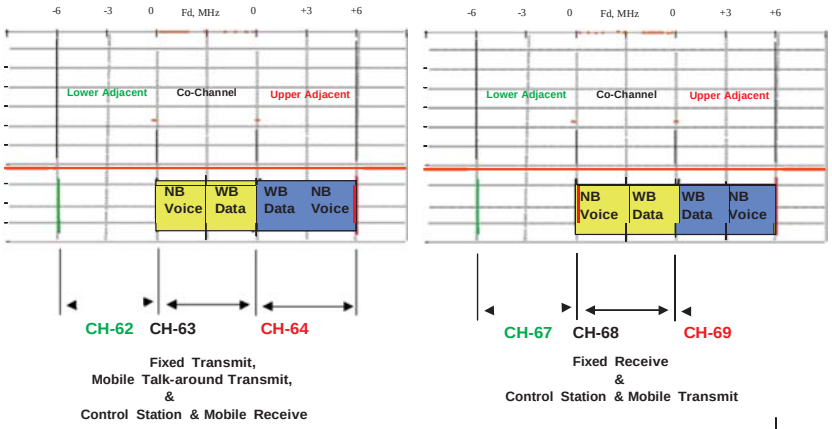
[9] *See Reallocation, Notice of Proposed Rule Making,* 12 FCC Rcd at 14,141, 14,177-78 and 14,182-83.

Measured (off-the-air) Analog TV Signal vs 700 MHz Public Safety Assignments



HAVE 2 CO-CHANNEL AND 4 ADJACENT CHANNELS TO CONSIDER FOR EACH 700 MHz PAIRED BLOCKS OF SPECTRUM

DTV Emission Mask vs 700 MHz Public Safety Assignments



HAVE 2 CO-CHANNEL AND 4 ADJACENT CHANNELS TO CONSIDER FOR EACH 700 MHz PAIRED BLOCKS OF SPECTRUM

For public safety channel pair 64/69, public safety must consider five TV/DTV channels; co-channels 64 and 69, as well as, adjacent channels 63, 65, and 68.

It may only takes one TV/DTV station to block operations on one, the other, or both public safety channel pairs. For a public safety system at 500 watts ERP and 500 ft HAAT, co-channel TV stations can block a 120 mile radius and adjacent channel TV/DTV stations can block a 90 mile radius.

Since base stations transmitters are located only on channels 63 and 64, LMR mobile only TV/DTV protection spacing on channels 68 and 69 may be shorter than LMR base TV/DTV protection on channels 63 & 64.

TV/DTV Protection Criteria

Public safety applicants can select one of three ways to meet the TV/DTV protection requirements:

(1) utilize the geographic separation specified in the 40 dB Tables of 90.309;

(2) submit an engineering study to justify other separations which the Commission approves; or

(3) obtain concurrence from the applicable TV/DTV station(s).

90.309 40 dB D/U Tables

The FCC adopted a 40 dB desired (TV/DTV) to undesired (LMR) signal ratio for co-channel operations and a 0 dB desired/undesired (D/U) signal ratio for adjacent channel operations. The D/U ratio is used to determine the geographic separation needed between public safety base stations and the Grade B service contours of co-channel and adjacent channel TV/DTV stations.[10] The D/U signal ratio is used to determine the level of land mobile signals that can be permitted at protected fringe area TV receiver locations without degrading the TV picture to less than a defined picture quality. In other words, the D/U signal ratio indicates what relative levels of TV and land mobile signals can be tolerated without causing excessive interference to TV reception at the fringe of the TV service area.

Desired and undesired contours are not quite the same thing. Desired analog TV contours are defined as F(50,50), meaning coverage is 50% of the places and 50% of the time. Undesired land mobile or interference contours are defined as F(50,10). For Digital TV, the desired contours are defined as F(50,90), while the undesired land mobile contour are still F(50,10).

[10] *See Second Notice*, 12 FCC Rcd 17,803.

Land mobile and analog TV services have successfully shared the 470-512 MHz band (TV Channels 14-20) within a 50 mile radius of eleven major cities since the early 1970's based upon providing a signal ratio of at least 50 dB[11] between the desired TV signal and undesired co-channel land mobile signal (D/U signal ratio) at a hypothetical 88.5 km (55 mi) Grade B service contour and an adjacent channel D/U signal ratio of 0 dB at the same hypothetical Grade B service contour. These separation distances also protected the land mobile systems from interference from the TV stations. In 1985, recognizing that 50 dB D/U was too conservative, the FCC proposed to expand land mobile/TV sharing to other TV channels and proposed that the geographic separation requirements for co- channel operations be based on a D/U signal ratio of 40 dB rather than 50 dB.[12] That proceeding was put on hold pending completion of the DTV proceeding, which has now been completed. In the 470-512 MHz band, the FCC also relied on minimum separation distances based on the various heights and powers of the land mobile stations (HAAT/ERP separation tables) to prevent harmful interference.

Since this simple, yet conservative, method was successful, the FCC decided to use this same method, the 90.309 HAAT/ERP Separation Tables, to administer LMR to TV/DTV receiver protection criteria for the services in the 700 MHz band.

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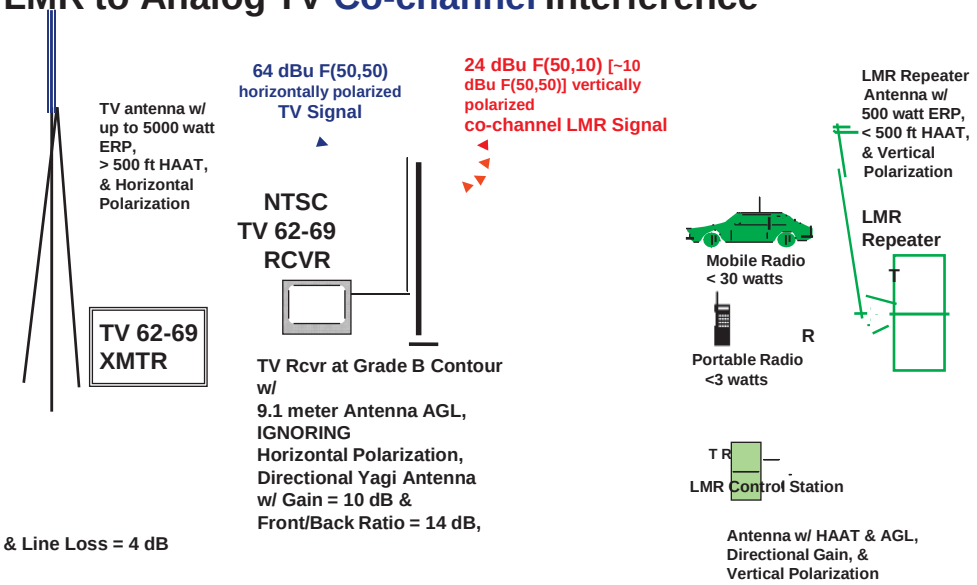
[11] For TV Channel 15 in New York City, a 40 dB D/U signal ratio is used. *See* 47 C.F.R. §§ 90.307(b) and 90.309 (Table B). A 50 dB protection ratio means that the amplitude of the desired TV signal is more than 300 times greater than the amplitude of the undesired signal at the Grade B service contour. A 40 dB protection ratio means the desired TV signal is 100 times greater.

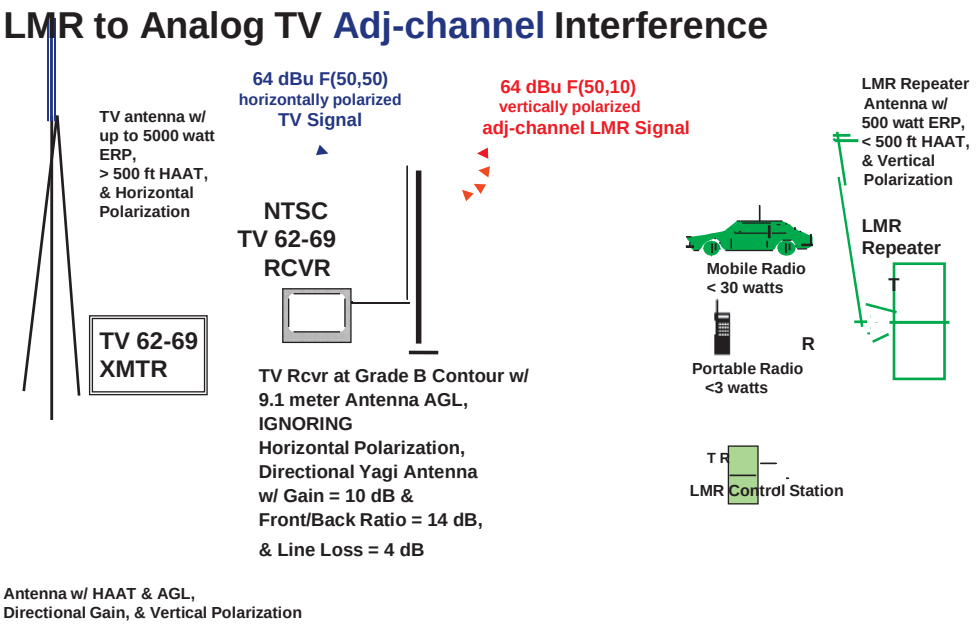
[12] *See* Amendment of the Rules Concerning Further Sharing of the UHF Television Band by Private Land Mobile Radio Services, GEN Docket No. 85-172, *Notice of Proposed Rulemaking*, 101 FCC 2d 852, 861 (1985) (*UHF-TV Sharing NPRM*).

Co-channel land mobile base station transmitters are limited to a maximum signal strength at the hypothetical TV Grade B contour 40 dB D/U below desired 64 dBu F(50,50) analog TV signal level, or 24 dBu F(50,10).[13] The FCC adopted a 0 dB D/U signal ratio for adjacent channel operations. Adjacent channel land mobile transmitters will be limited to a maximum signal of 64 dBu F(50,10) which is 0 dB D/U below the TV Grade B signal of 64 dBu F(50,50) at the TV station Grade B contour of 88.5 km (55 miles). A typical TV receiver's adjacent channel rejection is at least 10-20 dB greater than this level which will further safeguards TV receivers from land mobile interference.

LMR to Analog TV Co-channel Interference



[13] In terms of miles, if everything else is the same, a 40 dB D/U ratio rather than a 50 dB D/U ratio allows base stations to be located approximately 48.3 km (30 mi) closer to a co-channel TV station. *See* 47 C.F.R. § 90.309, Tables A & B.



The equivalent ratios for a DTV station's 41 dB F(50,90) desired field strength contour are land mobile 17 dB F(50,10) contour for co-channel and land mobile - 23 dB F(50,10) contour for adjacent channel.

The Tables to protect TV/DTV stations are found in Section 90.309 of the Commission's rules. These existing Tables cover co-channel protection based on a 40 dB D/U ratio using the separation methods described in Section 73.611 of the Commission's rules for base, control, and mobile stations, and for adjacent channel stations for base stations based on a 0 dB D/U ratio.

However, the original considerations in 470-512 MHz band under Section 90.309 were different in that mobiles were limited in their roaming distance from the base station (less than 30 miles) and mobiles were on the same TV channel as the base station.

Control and mobile stations (including portables) are limited in height (200 ft for control stations, 20 ft for mobiles/portables) and power (200 watts ERP for control stations, 30 watts for mobiles, 3 watts for portables). Mobiles and control stations shall afford protection to co-channel and adjacent channel TV/DTV stations in accordance with the values specified in Table D (co-channel frequencies based on 40 dB protection for TV and 17 dB for DTV) in § 90.309.

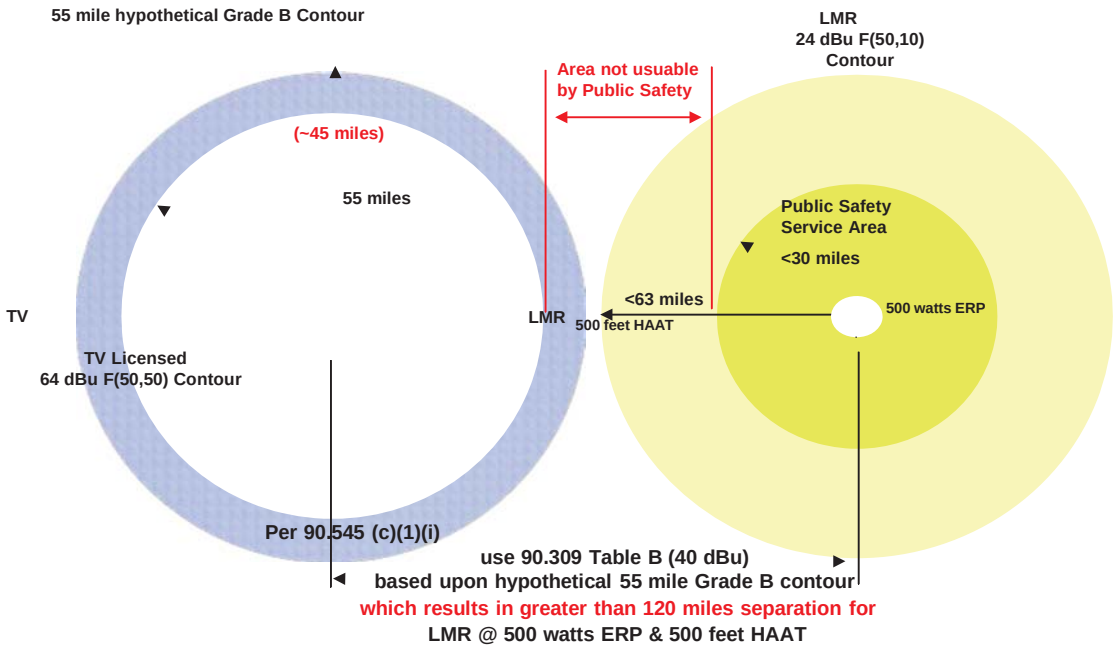
Control stations and mobiles/portables shall keep a minimum distance of 8 kilometers (5 miles) from all adjacent channel TV/DTV station hypothetical or equivalent Grade B contours (adjacent channel frequencies based on 0 dB protection for TV and -23 dB for DTV). This means that control and mobile stations

shall keep a minimum distance of 96.5 kilometers (60 miles) from all adjacent channel TV/DTV stations.

Since operators of mobiles and portables are able to move and communicate with each other, licensees or coordinators must determine the areas where the mobiles can and cannot roam in order to protect the TV/DTV stations, and advise the mobile operators of these areas and their restrictions.

Engineering Analysis
Limiting TV/land mobile separation to distances specified in the 40 dB HAAT/ERP Separation Tables found in 90.309 may prevent public safety entities from fully utilizing this spectrum in a number of major metropolitan areas until after the DTV transition period ends. Public safety applicants will be allowed to submit engineering studies showing how they propose to meet the appropriate D/U signal ratio at the existing TV station's authorized or applied for Grade B service contour or equivalent contour for DTV stations instead of the hypothetical contour at 88.5 km.

700 MHz Band - LMR to Co-Channel TV Spacing using 40 dBu Table

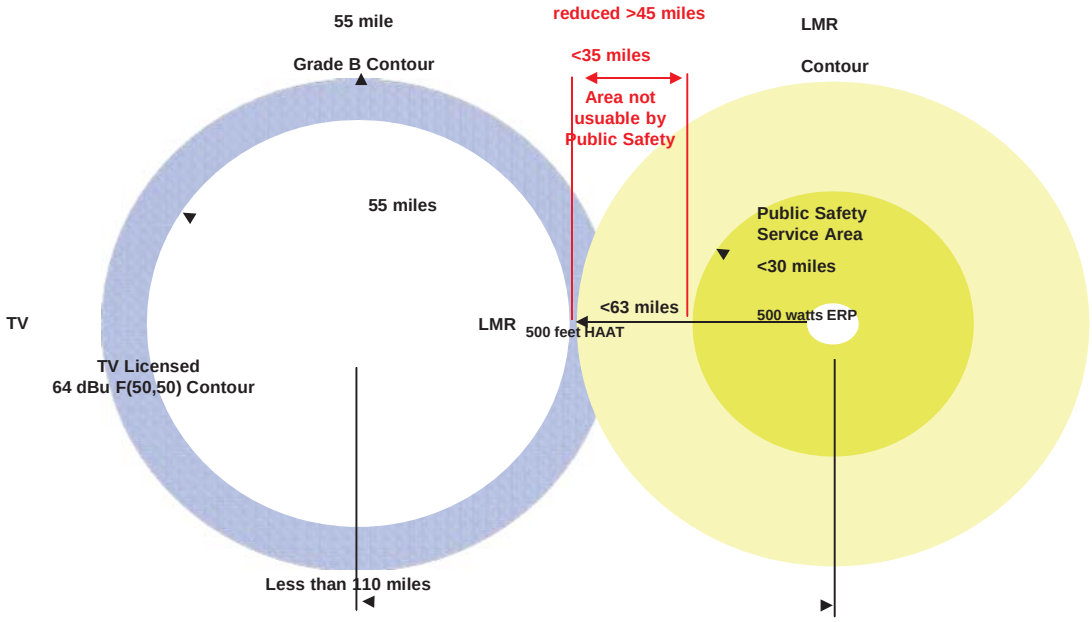


Many Channel 60-69 TV stations do not have 55 mile radius Grade B contours.
Average calculated for NE corridor is less than 45 miles.

This would permit public safety applicants to take into account intervening terrain and engineering techniques such as directional and down-tilt antennas in determining the necessary separation to provide the required protection. Public safety applicants who use the engineering techniques must consider the actual TV/DTV parameters and not base their study on the 88.5 km hypothetical or equivalent Grade B contour. If land mobile interference contour does not overlap the TV Grade B contour (or DTV equivalent), then engineering analysis may be submitted to the FCC with the application.

700 MHz Band - Public Safety to Co-Channel TV Spacing using Engineering Analysis per 90.545(c)(1)(ii)

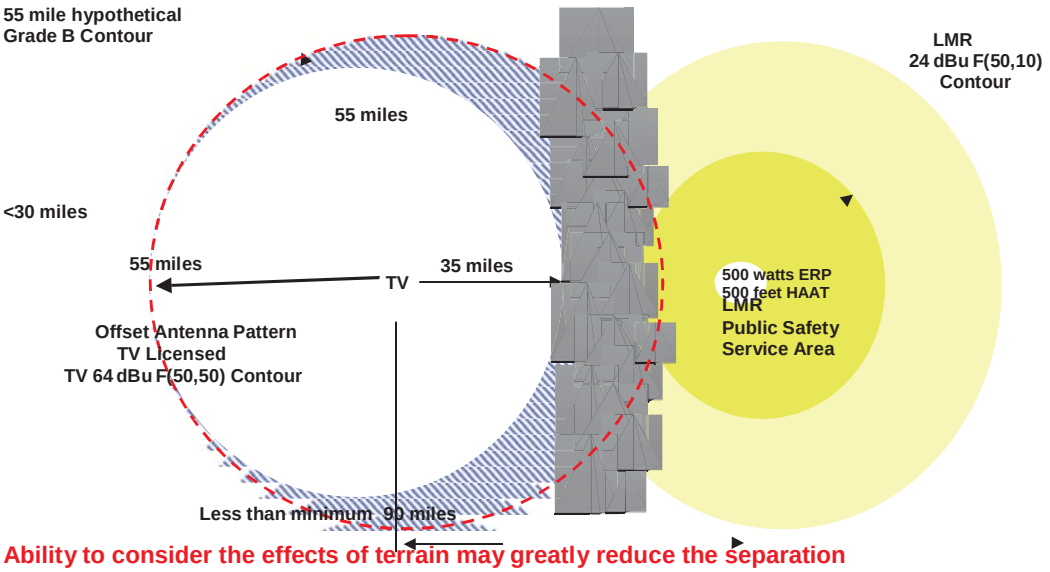
Actual LMR 24 dBu contour just touches Licensed TV/DTV 64 dBu contour



his method is most useful with lower power TV stations whose Grade B contours are much smaller than the hypothetical 55 mile (88.5 km) Grade B contour or have directional patterns.

700 MHz Band - Public Safety to Co-Channel TV Spacing using Engineering Analysis per 90.545(c)(1)(ii)

Actual LMR 24 dBu contour just touches Actual TV/DTV 64dBu contour



Ability to consider the effects of terrain may greatly reduce the separation required between LMR and TV.

Note that 200 ft AGL limitations on 700 MHz control stations is much higher than the 100 ft AGL limitation used at UHF. Limiting control station antenna height and/or ERP may greatly reduce land mobile to TV contour spacing.

Also, note that analysis for TV/DTV receivers uses 30 ft (10 m) antenna height whereas, analysis for land mobile subscribers uses about a 6 ft (2m) antenna height.

TV/DTV Short-spacing

Public safety applicants will also be allowed to "short-space" even closer if they get the (written) approval of the TV stations they are required to protect. Public safety applicants need to determine the station's intended market area vs its hypothetical Grade B contour area. Alternately, the TV/DTV station may be short- spaced against another TV/DTV station, limiting their area of operation, but does not affect LMR operations.

Instead of each agency negotiating with a TV/DTV station individually, they may want to combine into a single group or committee and negotiate together.

TV/DTV Height Adjustment Factor

In order to protect certain TV/DTV stations which have extremely large contours due to unusual height situations, such as a television station mounted on top of Mount Wilson near Los Angeles, California, the FCC incorporated an additional height adjustment factor which must be used by all public safety base, control and mobile stations to protect these few TV/DTV stations and afford the land mobile stations the necessary protection from the TV/DTV stations. The equation necessary to calculate the additional distance from the hypothetical or equivalent Grade B contour is found in the rules section 90.545(c)(2)(iii).

CANADIAN AND MEXICAN BORDER REGIONS

The FCC typically takes one of two approaches. They either postpone licensing of land mobile stations within a certain geographic distance (*e.g.,* 120 km (75 miles)) of Canada and Mexico, or permit interim authorizations conditioned on the outcome of future agreements. Because international negotiations can take many months or even years to finalize, the FCC took the later approach and adopted certain interim requirements for public safety licenses along the Canada and Mexico borders, providing that the licenses are subject to whatever future agreements the United States develops with the two countries.

Nevertheless, existing mutual agreements with Canada and Mexico for the use of these bands for UHF television must be recognized until further negotiations are completed. The US negotiated an agreement with Mexico of DTV operations near the US/Mexican border in July 1998. The US just negotiated an agreement with Mexico of DTV operations, and limited non-broadcast operations on 746-806

MHz, near the US/Canadian border in September 2000. Existing agreements recognize existing TV and/or DTV allotments and planning factors within a specified distance of the border. The Canadian Letter of Understanding also acknowledges that US plans to use 746-806 MHz for non-broadcast purposes and provides planning criteria (40 dB D/U) to protect Canadian TV/DTV receivers.

Additionally, public safety facilities within the United States must accept interference from authorized channel 60-69 TV transmitters in Canada and Mexico in accordance with the existing agreements. Since the locations of the Canadian and Mexican analog TV assignments and DTV allotments are known, the public safety applicants can consider the levels of harmful interference to expect from Canadian and Mexican TV/DTV stations when applying for a license. Both Canada and Mexico have been informally notified that the Commission has changed its allocated use of TV channels 60-69, and the Commission will discuss the possibility of mutually compatible spectrum use with Canada and Mexico.

Appendix I

FCC Public Notice of Region 10 Meeting and RPC Minutes

PUBLIC NOTICE

Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

News media information (202) 418-0500
TTY (202) 418-2555
Internet: http://www.fcc.gov

DA 15-895

August 7, 2015

PUBLIC SAFETY AND HOMELAND SECURITY BUREAU ANNOUNCES REGION 10 (GEORGIA) PUBLIC SAFETY REGIONAL PLANNING COMMITTEES TO HOLD 700 MHZ AND 800 MHZ NPSPAC REGIONAL PUBLIC SAFETY PLANNING MEETINGS

PR Docket No. 92-189 and WT Docket 02-378

The Region 10 (Georgia)[1] Regional Planning Committees (RPCs) will hold two consecutive planning meetings on Wednesday, September 30, 2015. Beginning at 10:00 a.m., the 700 MHz RPC will convene at the Georgia Public Safety Training Center (GPSTC), 1000 Indian Springs Drive, Training Bay-A, Forsyth, Georgia. Immediately following the 700 MHz RPC meeting, the 800 MHz RPC will convene at the same location. A continental breakfast and lunch will be provided. Breakfast will be served from 9:00 – 10:00 a.m.

The tentative agenda for the 700 RPC meeting will be:

- Introduction of RPC officers
- Review and approval of the meeting minutes
- FCC application process
- Old business
- New business
- Standing committee reports
- Nomination and election of Region 10 RPC officers and subcommittee members
- Discuss and vote on proposed changes to Region 10's 700 MHz Plan
- Federal Communications Commission (FCC) Regulatory Update
- Schedule 2016 RPC meeting

Immediately following the 700 MHz RPC meeting, the 800 MHz RPC will convene. The tentative agenda for the 800 MHz RPC meeting will be:

- Introduction of RPC officers
- Review and approval of the meeting minutes
- FCC application process

[1] The Region 10 700 MHz and 800 MHz Regional Planning Committees' area includes all 159 counties in the State of Georgia.

- Old business
- New business
- Standing committee reports
- Nomination and election of Region 10 RPC officers and subcommittee members
- FCC Regulatory Update
- Schedule 2016 RPC meeting

Both Region 10 RPC meetings are open to the public. All eligible public safety providers in Region 10 may utilize these frequencies. It is essential that eligible public safety agencies in all areas of government, including state, municipality, county, and Native American Tribal be represented in order to ensure that each agency's future spectrum needs are considered in the allocation process. Administrators who are not oriented in the communications field should delegate someone with this knowledge to attend, participate, and represent their agency's needs.

All interested parties wishing to participate in planning for the use of public safety spectrum in the 700 MHz and 800 MHz bands within Region 10 should plan to attend. For further information, please contact Ralph Bevan at (404) 656-2042, or Jim Mollohan.

Jim Mollohan, PMP
Chairman, Region 10, 700 MHz and 800 MHz RPCs
Georgia Technology Authority, Spectrum Management Office
47 Trinity Avenue S.W., Suite 330-22
Atlanta, Georgia 30334-9007
(404) 656-5619 Office
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Jim.Mollohan@gta.ga.gov

- FCC -

Region 10, Georgia
700 & 800 Regional Planning Committee
Meeting Minutes of 30 September 2015

The 700 & 800 MHz RPC meeting was called to order at 10:05 AM by Chairman Jim Mollohan. A quorum of the membership was present.

Officers present:
Chairman: Jim Mollohan
Vice Chair: Ralph Bevan
Treasurer: Jimmy Williams
Absent:
Secretary: Bob Williams
At Large: Thomas Nguyen-Pham

Jim Mollohan thanked everyone for coming and introduced the RPC officers. He noted that Bob Williams would be unable to fulfill the duties as Secretary due to constraints of his new job. He introduced James Conner of Savannah who has volunteered to fill in for Bob Williams. Jim Mollohan gave a brief overview of the subcommittees of the RPC and put forth a request for volunteers to join the various subcommittees. He turned the meeting over to Ralph Bevan to report on the Technical Subcommittees.

A) Subcommittee Reports

1) Technical Subcommittee – Ralph Bevan

Ralph Bevan gave a brief overview of the duties and responsibilities of the subcommittee as to the review of submitted applications to prevent interference and to ensure compliance with the 40 dBu contour.

A. 800 MHz
   1. Houston County 8TAC is now part of the Central Georgia (Macon-Bibb) network
   2. City of Clarkston-Request for traffic radar license- informed them they need a letter from DeKalb County certifying they are authorized users
   3. Athens-Clarke County and the University of Georgia have STAs in place for a consolidated system
   4. Emory University- MO3 application pending
   5. Glynn County- Requesting additional frequencies to expand/upgrade current system.
   6. Cobb County –STA to permanent, site ERP reduced
   7. Dawson County- approved

B. 700 MHz
   1. Barrow County- STA and license approved. STA modified to meet FCC requirement

2. Oconee County- update- They had a reconfiguration issue due to improperly installed antennas by their vendor
3. Rockdale County- MO3 pending- still waiting for them to provide system status justification (2 years)
4. Bartow County- issued RFP
5. North Fulton Regional Radio System Authority- NFRRSA- new system approved, 7TACs approved
6. Clayton County- new system approved and 7TACs approved

C. CAPRAD

1. Training on CAPRAD was held at the Washington APCO conference. It was sponsored by NRPC & APCO and focused on developing new pre-coordination standards.
2. Ralph Bevan & Jim Mollohan discussed the provided handout: *700 and 800 Frequency Application Requirements and Process*

D. Outreach subcommittee – Howell McKinnon

1. Howell McKinnon requests that everyone ensure their contact information is correct.

E. Plan Development- Jim Mollohan

1. Jim Mollohan stated that user input is needed on updates to the plan
2. A request for persons proficient in MS WORD to help with the formatting of the plan was made

B) NPSTC, FCC and NRPC Updates

1. It was noted that the RPC may pick up responsibility for coordination of 4.9GHz.
2. 20K (wideband) emissions no longer valid as of 01 Jan 2015
3. NRPC is reviewing and analyzing data collected from over 28 RPC's in order to standardize loading requirements and pre-coordination parameters. NRPC is expected to have a final recommendation to the RPC's in 2016. A brief discussion on the proposal "Pre-Coordination Standards" that was presented at the APCO National Conference in Washington, D.C. on August 18, 2015 was made to the RPC. Technical Subcommittee will review the proposed changes and provide a recommendation to the RPC.
4. Jim introduced Eric Rice of the Atlanta FCC office
5. A question was asked about the requirement to provide 7TAC & 8TAC channels. Jim Mollohan explained the requirement is based on the number of channels you have. Less than 5 channels in 800MHz, there is no requirement for an 8TAC channel. Less than 6 channels in 700 MHz, than there is no requirement for a 7TAC channel.

6. Bob Davis of Savannah noted that the Technical Subcommittee, when considering system loading requests, need to look at a public safety standard vs. one designed by and for commercial entities.

Break for lunch at 11:50 AM
Meeting reconvened at 12:22 PM

C) 800 MHz Business Meeting

Meeting was called to order at 12:23 PM
Minutes from October 16, 2014 were read by JC Conner
Jim Mollohan noted it was time to elect officers. He again noted that Bob Williams would be unable to fulfill the duties of Secretary and opened the floor to nominations. Bob Davis nominated James Conner. Jim Mollohan nominated himself for Chair and Ralph Bevan for Vice Chair. The Chairman made a motion to carry over all of last year's officers, seconded by Ralph Bevan. A majority of members voted to approve the nominees. The officers for 2015-17 are:

Chairman:	Jim Mollohan
Vice Chair:	Ralph Bevan
Treasurer:	Jimmy Williams
At Large:	Thomas Nguyen-Pham
Secretary:	James Conner

The Treasury report was read by Jimmy Williams of Oconee County. He stated that there $2258.90 in the account. As there had been no activity on the account since December 14, 2011, Bank of America wanted to start charging a non-activity fee of $44.00. The account with Bank of America was closed and the funds were transferred to SunTrust Bank. Jimmy Williams also stated that there is no guidance on what can be done with the money.

Tracy Roberts of Cobb County made a motion to approve the minutes and Treasury Report ,the majority voted to do so.

1) Old Business

a. 800MHz Repacking- missed the funding deadline. Will retry next year
b. Repacking will be a major undertaking-a request for volunteers to join the Plan Development Subcommittee was made

2) New Business

a. Ralph Bevan gave a brief history of the 800MHz repacking and how 18 counties had been omitted from the pool years ago.

No new business was brought forward; meeting was adjourned with a majority of members concurring.

Meeting adjourned at 1:05 PM

D) 700 MHz Business Meeting

Meeting was called to order by the Chairman at 1:06 PM.
Minutes from October 16, 2014 were read by JC Conner
Treasury report was read by Jimmy Williams.
Jim Mollohan noted it was time to elect officers and opened the floor to nominations. Bob Davis nominated James Conner for Secretary. The Chairman made a motion to carry over all of last year's officers, seconded by Tracy Roberts. A majority of members voted to approve the nominees. The officers for 2015-17 are as listed:

Chairman:	Jim Mollohan
Vice Chair:	Ralph Bevan
Treasurer:	Jimmy Williams
At Large:	Thomas Nguyen-Pham
Secretary:	James Conner

Tracy Roberts of Cobb County made a motion to approve the minutes and Treasury Report, Bob Davis seconded. All members voted to approve.

1) Old Business

a. No old business was discussed

2) New Business

a. Air to Ground channels- RPC has reached out to the GEMA to see if we could take over state-wide coordination of air-to-ground channels. A question was asked about the parameters of the frequencies to use. Jim Mollohan believes that the frequency is restricted to two watts at an altitude of 1400 feet or less. Bob Davis asked if there were any guidance on what we can currently use. Ralph Bevan answered that there is none. Howell McKinnon made a motion that the RPC accept responsibility for the coordination contingent upon receipt of a letter from GEMA to the FCC requesting that the RPC take responsibility for the coordination of air-to-ground frequencies for the State of Georgia. The motion was seconded by Duane Studdard and passed by a majority of the membership.

b. Reserve channels- The FCC has authorized the RPC to assign up to 8 former reserve channels for deployable use and 16 channels for general use. The floor was opened to discussion as to how to allocate these assets. It was decided to allocate the channels as follows:
-4 channels for MO3 use- limited to 2 watts, does not count against county channel allotment
-6 channels to be deployable- for use in MCUs (Mobile Command Units)… No fixed assets
-14 channels for general use on a first come, first served basis

It was noted that Emory University, even though a private entity, may be eligible for a MO3 reserve channel.

A motion to adopt this channel allotment was made by Duane Studdard and seconded by Darryl Scott. The motion was approved by a majority of members.

The floor was opened to comments from members. Duane Studdard wished to recognize Nick Brown for his six years as SWIC (Statewide Interoperability Communications Coordinator). Jim Mollohan introduced Andy Pichs as the new Radio Manager for Fulton County.

There being no further new business, motion to adjourn was made by Jim Mollohan and seconded by Duane Studdard. The majority concurred.

Meeting adjourned at 2:05 PM

Place Holder for Signed LOC & Dispute Resolution

Original Approvals

REGION CHAIRMAN
Mr. Ray Carlson
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FAX (561) 688-3778, SC 266-3778
carlsonr@pbso.org

THE FLORIDA REGION COMMITTEE

(700 MHz Regional Planning)

REGION VICE CHAIRMAN
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Regional Communications Systems Manager
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FAX (954) 321-5090
Jose_PEREZ2@sheriff.org

October 7, 2008

Mr. Jim Mollohan
700/800 RPC, Region 10 Chairman
Georgia Technology Authority
254 Washington St. SW
Ground Floor
Atlanta, GA 30334-9007

Dear Jim:

As Chairman and on behalf or the Region 9, 700 MHz Regional Planning Committee, Region 9 sends this Letter of Concurrence regarding the final Region 10, Georgia, 700 Mhz Plan.

Best regards, and the Region 9 staff look forward to working with Region 10 over the next very busy years.

Sincerely,

Ray Carlson
Region 9 Chairman

CHAIRMAN - SUBREGION 1
Mr. Paul Winter
1705 Metropolian Blvd
Suite 200
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CHAIRMAN - SUBREGION 4
Mr. Jason Matthews
DeputySheriff/Radio Technologies Services
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CHAIRMAN - SUBREGION 5
Mr. Ben Holycross
Radio Systems Manager
Polk County Emergency Management
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CHAIRMAN - SUBREGION 6
Mr. Andrew Stadtler
Lee County Communications Supervisor
Emergency Operations Center
2665 Ortiz Ave.
Fort Myers, Florida 33905
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CHAIRMAN - SUBREGION 7
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Martin County Radio Systems Manager
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CHAIRMAN - SUBREGION 8
Mr. Jean-Pierre Saliba, P.E.
Supervisor
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jean-pierre.saliba@myflorida.com

Superintendent of Public Works
Theodore H. Lawson

Assistant Superintendent of Public Works
Richard H. Crist, P.L.S.

Equipment Services Manager
Robert J. Gordon

Superintendent of Building Maintenance
George E. Oaks

Director of Inspection Services
Ted Montgomery

Director, Public Safety Communications
Eric M. Linsley

MOBILE COUNTY PUBLIC WORKS

Director of Public Works / County Engineer
Joe W. Ruffer, P.E.

October 9, 2008

Jim Mollohan, Chairman
Region 10, 700 MHz Regional Planning Committee
Georgia Technology Authority
47 Trinity Ave.
Atlanta, GA 30334-9007

Re: Region 10, Georgia 700 MHz Regional Plan

I have received your letter dated October 6, 2008 and a copy of the above-mentioned plan. As Chairman of the Region 1, Alabama Regional Planning Committee, I concur with Region 10's 700 MHz Regional Plan. I also concur with the Inter-Regional Coordination Procedures and Procedures for Resolution of Disputes and I have enclosed a signed copy.

Yours Truly

Eric M. Linsley
Director of Public Safety Communications
Chairman Region 1, 700 MHz Regional Planning Committee

cc Joe Ruffer, P.E.
County Engineer

File: C:\Documents\FCC\700 committee\concurrences\region 10 plan concurrence.wpd

Region 37 Committee
William Winn, Jr. – Chairman
P.O. Drawer 1228
Beaufort, SC 29901
843-470-3100
843-470-3054 (Fax)

October 29, 2008

Mr. Jim Mollohan PMC, NPDP
700/800 MHz RPC Region 10, Chairman
State of Georgia
Georgia Technology Authority
47 Trinity Avenue, Suite 440-10
Atlanta, GA 30334-0997

Dear Jim:

I have reviewed the Region 10 (Georgia), 700 MHz Regional Communications Plan and have also read Appendix H (Inter-Regional Dispute Resolution Agreement).

This is to advise that South Carolina sees no opposition to these documents and concurs with all written within.

Thank you for all the time and effort that has gone into this planning. We will all benefit from such inter-agency cooperation.

Should you need have any questions or concerns please feel free to call me at 843-470-3100.

Sincerely,

William Winn, Jr. – Chairman
S.C. Region 37 Committee
WWJr/cab

J drive/Region 37 Folder/2008 Folder:700 MHz Concurance.doc

Michael F. Easley
Governor
Bryan E. Beatty
Secretary
Walter J. Wilson, Jr.
Colonel

North Carolina
Department of Crime Control and Public Safety

State Highway Patrol

Location:
512 N. Salisbury Street
Raleigh, NC 27604
(919) 733-7952

Mailing Address:
4702 Mail Service Center
Raleigh, NC 27699-4702

TECHNICAL SERVICES UNIT

16 December, 2008

Jim Mollahan, Region 10 Chairman
State of Georgia,
Georgia Technology Authority
47 Trinity Ave SW
Atlanta, GA 30334-9007

Dear Chairman Mollahan,

I am receipt of the Region 10 700 MHz Regional Planning Committee's plan for Tennessee. I have reviewed the Region 10 plan and concur with the plan as presented to Region 31, of which I am the chairman. I congratulate you on the formulation of your plan and wish you success in gaining acceptance from the Federal Communications Commission. I am also returning to you, the dispute resolution document with my signature affixed.

If I may be of further assistance to you, please do not hesitate to contact me at (919) 662-4440.

Sincerely,

Michael T. Hodgson
Chairman, Region 31 700 RPC

Cc: Mr. Wayne Eberhard/Mr. Dyke Hostettler,
Co-Chairs, Region 31 800 RPC

An Internationally
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On my honor, I will never betray my badge, my integrity, my character, or the public trust. I will always have the courage to hold myself and others accountable for our actions. I will always uphold the constitution, my community, and the agency I serve.

700 MHz
Planning Committee

Region 39, Tennessee

Region 39, 700 MHz Regional Planning Committee
John Johnson, Chairman
3041 Sidco Drive
Nashville, TN 37204

December 9, 2008

Jim Mohollon, Chairman
Region 10, Georgia, Regional Planning Committee
Georgia Technology, Authority
47 Trinity Ave. S.W.
Atlanta, GA 30334

Dear Jim:

As Chairman and on behalf of the Region 39, 700 MHz Regional Planning Committee, I send this Letter of Concurrence along with comments regarding the Region 10, Georgia 700 MHz Plan.

After reviewing the Region 10 Plan, Region 39 hereby requests that the below listed channels be reviewed by Region 39 prior to the application being submitted to the FCC. Region 39 comments are solely based on distance and not a specific site, power or ERP. Region 39 has used 70 mile criteria between counties lines to make this determination. Region 39 realizes that the actual site will most likely be further than 70 miles, but requests the below listed channels receive our approval prior to submission to the FCC in order to mitigate interference between co-channel users.

GA County	Channel #	TN County	Comments
Banks	165 – 168 489 – 492 821 – 824	Monroe Monroe Blount	Please coordinate with Region 39 prior to application submission to FCC.
Barrow	385 – 386 917 – 920	Polk	Please coordinate with Region 39 prior to application submission to FCC.
Bartow	489 – 492 821 – 824 941 – 944	Grundy Marion McMinn	Please coordinate with Region 39 prior to application submission to FCC.
Catoosa	413 - 416	Blount	Please coordinate with Region 39 prior to application submission to FCC.

Catoosa	453 – 456 529 – 532	Blount Warren	Please coordinate with Region 39 prior to application submission to FCC.
Chattooga	373 – 376 429 - 432	Meigs Polk	Please coordinate with Region 39 prior to application submission to FCC.
Cherokee	17 – 20 409 – 412 465 – 468 581 – 584 621 – 624	Rhea Rhea McMinn Marion McMinn	Please coordinate with Region 39 prior to application submission to FCC.
Cobb	213 – 216 289 – 292 337 – 340 541 – 544 677 – 680 789 - 792	Polk Hamilton Hamilton Bradley Bradley Hamilton	Please coordinate with Region 39 prior to application submission to FCC.
Dade	329 – 332 445 – 448 517 – 520 633 – 636 633 – 636 877 – 880	Monroe Warren Cannon Bedford Cumberland Rutherford	Please coordinate with Region 39 prior to application submission to FCC.
Dawson	389 – 392 673 - 676	Bradley Loudon	Please coordinate with Region 39 prior to application submission to FCC.
DeKalb			No issues
Fannin	93 – 94 93 – 96 333 – 336 473 – 476	Sevier Van Buren Anderson Rhea	Please coordinate with Region 39 prior to application submission to FCC.

Floyd	15 – 16	Grundy	Please coordinate with Region 39 prior to application submission to FCC.
	165 – 168	Monroe	
	385 – 386	Polk	
	701 – 704	Monroe	
	741 – 744	Sequatchie	
	781 – 782	Marion	
	783 – 784	Grundy	
	861 – 864	Monroe	
	917 – 920	Polk	
Forsyth	569 – 572	Polk	Please coordinate with Region 39 prior to application submission to FCC.
	713 – 716	Bradley	
	793 – 796	McMinn	
	865 – 868	Hamilton	
Franklin	909 – 912	Polk	Please coordinate with Region 39 prior to application submission to FCC.
Fulton	41 – 44	Hamilton	Please coordinate with Region 39 prior to application submission to FCC.
	161 – 164	Bradley	
	205 – 206	Bradley	
	437 – 438	Polk	
	477 – 480	Bradley	
	561 – 564	Bradley	
	629 – 630	Polk	
	669 – 672	Hamilton	
	757 – 760	Bradley	
	905 – 908	Hamilton	
	945 - 948	Hamilton	
Gilmer	57 – 60	Sequatchie	Please coordinate with Region 39 prior to application submission to FCC.
	285 – 288	Van Buren	
	397 – 400	Sequatchie	

Gilmer	837 – 840	Blount	Please coordinate with Region 39 prior to application submission to FCC.
Gordon	525 - 528	McMinn	Please coordinate with Region 39 prior to application submission to FCC.
Gwinnett	97 – 100 705 – 708 825 - 828	Bradley	Please coordinate with Region 39 prior to application submission to FCC.
Habersham	789 – 792	Sevier	Please coordinate with Region 39 prior to application submission to FCC.
Hall	413 – 416 637 - 640	Blount	Please coordinate with Region 39 prior to application submission to FCC.
Jackson	861 – 864	Monroe	Please coordinate with Region 39 prior to application submission to FCC.
Lumpkin	209 – 212 449 – 452 605 – 608	Rhea Rhea Hamilton	Please coordinate with Region 39 prior to application submission to FCC.
Murray	129 – 132 249 – 252 341 – 344	Sevier Roane Sevier	Please coordinate with Region 39 prior to application submission to FCC.
Paulding	133 – 136 425 – 428	Marion Hamilton	Please coordinate with Region 39 prior to application submission to FCC.
Pickens	293 – 296 589 – 592 829 – 832	Blount Meigs Sequatchie	Please coordinate with Region 39 prior to application submission to FCC.
Polk	605 – 608	Hamilton	Please coordinate with Region 39 prior to application submission to FCC.
Rabun			No issues
Stephens	129 – 132 369 – 372 469 – 472	Sevier Polk Blount	Please coordinate with Region 39 prior to application submission to FCC.
Towns	217 – 220 365 – 368 597 – 600	Loudon Loudon Bradley	Please coordinate with Region 39 prior to application submission to FCC.

Towns	717 – 720	Rhea	Please coordinate with Region 39 prior to application submission to FCC.
Union	201 – 204	Hamilton	Please coordinate with Region 39 prior to application submission to FCC.
	321 – 324	Jefferson	
	373 – 376	Meigs	
	425 – 428	Knox	
	425 – 428	Hamilton	
	545 – 548	Loudon	
Walker	121 – 124	White	Please coordinate with Region 39 prior to application submission to FCC.
	217 – 220	Loudon	
	217 – 220	Warren	
	393 – 396	Warren	
	485 – 488	Roane	
	833 – 836	Roane	
White	433 – 436	Loudon	Please coordinate with Region 39 prior to application submission to FCC.
	533 – 556	Hamilton	
	709 - 712	Hamilton	
Whitfield	81 – 84	White	Please coordinate with Region 39 prior to application submission to FCC.
	297 – 300	Morgan	
	405 – 408	Knox	
	585 – 588	Morgan	
	749 – 752	Loudon	
	797 - 800	Morgan	

Other than the above comments, Region 39 has no objections to the Region 10 700 MHz Plan.

Sincerely,

John W Johnson

John W. Johnson
Region 39 Chairman

Place Holder for Signed
LOC & Dispute Resolution

2015 Approvals