



## MICHIGAN PUBLIC SAFETY FREQUENCY ADVISORY COMMITTEE (MPSFAC)

Serving Michigan RF Spectrum Users in the 39, 155, 460, 700 and 800 Mhz. bands Since 1946

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14 March 2013

Mr. David Turetsky, Director  
Public Safety and Homeland Security Bureau  
445 12<sup>th</sup> Street SW  
Washington D.C., 20554

**RE: WT Docket 02-55 and General Docket 90-221**

Dear Sir,

The Michigan Public Safety Frequency Advisory Committee (the Region 21 Regional Plan Update Committee) respectfully submits a revision of the Region 21 NPSPAC plan for your approval. This is the plan's first revision since it was originally approved by the Commission on June 22, 1990. Through the years, the communications landscape in Region 21 has changed significantly; however, the regional plan did not keep up with these changes. Hence, need for this revision.

This submission represents an almost total re-write of the original plan. While much of the old plan language has been retained, much has been removed and/or rewritten. The discussion presented herein references section headings given in the revised (2013) table of contents and for comparison, the original (1990) table of contents. These are reproduced here with 2013 version major headings in **UPPER CASE** bold and sub-headings in **UPPER CASE** and bold *Capitalized italicized lower case*, whereas headings from the 1990 version are presented "Capitalized and enclosed with quotation marks".

The first change the reader will notice when comparing the old and new plans is that a **SUMMARY OF MAJOR ELEMENTS REGION 21 NPSPAC PLAN** has been added to the front of the revised plan document. A **PREFACE TO THE FIRST REVISION** and a **REVISION HISTORY** chart have also been added. Next, we find an extensive **TABLE OF CONTENTS**.

Headings found under the **INTRODUCTION** include: **PURPOSE**, **REGION DEFINED** and **REGIONAL PLANNING COMMITTEE AUTHORITY**. Within the language of the **INTRODUCTION** we find a brief history of the formation of the Region 21 planning committee and planning process. Certain information found under the previous "Scope", "Authority" and "Spectrum Utilization" sections of the original plan have been rewritten and presented under new **PURPOSE** and **REGION DEFINED** headings. 1980 census data included in the original "Region Defined" has been removed. Language previously found under "Spectrum Utilization" has application in several sections of the revised document; however, this section heading has been removed. A new **REGIONAL PLANNING COMMITTEE**

**MEMBER ORGANIZATIONS**

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Michigan Association of Counties • Michigan Association of Fire Chiefs • Michigan Association of Public Communications Officials (four)  
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AUTHORITY heading has been added with sub-headings: *Michigan Public Safety Frequency Advisory Committee, International Relationships, Spectrum Allotments, Eligibility, and Coordination with Adjacent Regions.*

Under *Michigan Public Safety Frequency Advisory Committee* (MPSFAC), we add a description of this committee. The MPSFAC evolved from the original effort to coordinate police channels around 39 MHz<sup>1</sup> at the local level. The MPSFAC has been a standing committee manned by volunteers since its inception in 1948. An *International Relationships* sub-heading has been added providing a convenient reference to the international treaty governing communications along the common border between Region 21 and Canada. Under *Spectrum Allotments*, we have added new ‘pool channel’ language. Language concerning pool channels was found under the old “Frequency Assignment Methodology” heading.<sup>2</sup> The original language has been replaced with language that reflects current conditions in Region 21. A new *Eligibility* sub-heading provides relevant FCC rule sections regarding eligibility and refers the applicant to the *Competing Applications* section in cases where there are insufficient resources for all eligible applicants. A *Coordination with Adjacent Regions* section has been included describing the interregional concurrence process.

We add an **APPLICATION PROCESS** heading to make this information more easily accessible to applicants. Found under this new heading is information previously located under several different headings including “Authority”, “Communications Requirements”, and “Implementation and Procedures”. The “Regional Plan Update Committee” section retains its own heading. New headings found under **APPLICATION PROCESS** include REQUIRED APPLICATION SUBMITTALS, FREQUENCY ASSIGNMENT CRITERIA, COVERAGE AND INTERFERENCE CONSIDERATIONS, and INTEROPERABLE COMMUNICATIONS REQUIREMENTS.

Under REQUIRED APPLICATION SUBMITTALS, a bulleted list, much like in the original, provides a convenient method for applicants to ascertain the documentation required by the committee. Further, we have added an explanation of each bullet point to inform applicants of precisely what information each submittal is supposed to convey. “Reassignment of Frequencies”<sup>3</sup> has also been reworked and re-titled *Legacy Conventional Channel “Give Backs”*. The original plan called for relinquishment of “all” VHF and UHF resources in use by applicants prior to 800 system build-out. The new language permits exceptions to this and is more in the spirit of the language of the relevant section of FCC Docket 87-112. A *Who to Contact with Questions* section has also been added.

<sup>1</sup> Letter to “Chairman Board of County Supervisors” from T.J. Slowie, Secretary, FCC, 5 June 1939

<sup>2</sup> “FCC Planning Region 21”, Region 21 regional plan,pg33

<sup>3</sup> Ibid.,pg14

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A new FREQUENCY ASSIGNMENT CRITERIA section incorporates some language from the old “Spectrum Utilization” section (minus the “Region Defined” language as mentioned previously). Language establishing a “primary zone” has also been removed. The original plan defined “A primary zone...” as “... a geographic area which is severely impacted as a result of scarce spectrum...”<sup>4</sup> The original plan also specifically listed eight counties in the south east portion of Region 21 as *THE* primary zone.<sup>5</sup> Under the old language, requirements for applicants in the “primary zone” were “more restrictive” than elsewhere in the region.<sup>6</sup> Experience has shown a couple of problems with this. First, nowhere in the body of the original are these “more restrictive” requirements definitively stated. There are allusions to three and five mile 40 dB contours, but the reader is left to infer from the text, which contour applies. Second, the definition of a “primary zone” is not clear as we are given two definitions of primary zone: “...a geographic area which is severely impacted as result of excess demand...”<sup>7</sup> and “The primary zone consists of...” the eight counties in south east Michigan.<sup>8</sup> While it is true that the southeastern portion of the state is and has been “severely impacted” as a result of lack of spectrum, the same may be said of other geographic areas of the state as well. Thus, the “geographic area” definition may find broad application throughout the region, depending on the interpretation of the term “severely impacted”. However, “The primary zone consists of...” definition applies only to SE Michigan.

The intent of the “primary zone” language seems to have been to specifically designate south east Michigan as the “primary zone” yet leave open the possibility that other areas of the region would one day attain “primary zone” status and also fall under these “more restrictive” requirements. In point of fact, the eight counties in SE Michigan have seen the bulk of 800 MHz system construction in the region. These systems encompass local add-on systems to the Michigan Public Safety Communications System (MPSCS) as well as local stand-alone systems which are not affiliated with MPSCS. Applicants within the south east Michigan “primary zone” have presented the committee with engineering studies that support use of a five mile contour contrary to the specifics of the language of the original plan and have argued for exception from the “primary zone” language. The committee has found these arguments persuasive and therefore has added revised language providing for a maximum five mile service contour exception throughout the region, thus allowing more flexibility for both applicant and committee.

Also under FREQUENCY ASSIGNMENT CRITERIA, the following sections have been added: *International Treaty Considerations*, *Channel Loading* and *Spectrum Efficient Technologies*. The *International Treaty Considerations* section alerts applicants to specific obligations

<sup>4</sup> “FCC Planning Region 21”, Region 21 regional plan, pg 9

<sup>5</sup> Ibid., pg 10

<sup>6</sup> Ibid., pp 9,10

<sup>7</sup> Ibid.,pg9

<sup>8</sup> Ibid., pg 10

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contained within the international treaty relevant to users north of “Line A” and informs interested applicants where more information of the definition of Line A may be found. The **Channel Loading** section retains the language of the original plan. The **Spectrum Efficient Technologies** section rewrites language in the original “Usage Guidelines” section regarding minimum number of conventional channels allowed for use as a conventional system.<sup>9</sup> Specifically, language requiring that “...systems utilizing five or more channels...” be trunked has been rewritten to require the use of “...spectrum efficient technologies...” as it appears that “trunking” may soon go the way of the spark gap transmitter.

A new section titled **COVERAGE AND INTERFERENCE CONSIDERATIONS** replaces the old “Frequency Assignment Methodology” heading and the “Computer Aided Assignment” language under this section has been removed. To our knowledge, there is not now nor has there ever been a software program available for routine use by the RPC to perform channel assignments. Rather, it is our understanding that the program alluded to in the original language was utilized by APCO to “sort” NPSPAC channels and assign them to “county like” areas at the very beginning of the process. We are confident that the meaning was clear to the authors of the plan, but later readers have been somewhat confused by this language and therefore, we have removed it.

A new **Propagation Model** has been adopted. The original plan required contours be derived using the Okimura-Hata model. New language requires contours be calculated using the “corrected R-6602” or any comparable method given in TSB-88.

We remove language under “Usage Guidelines” that lays out a geographical area hierarchy. The 1990 plan hierarchy starts with the “state level” and proceeds to the “county/multiple municipality” level and on to the “township” level with state level systems presumed to be “large” and township level systems presumed to be “small”. Further, within the “township” level language is a provision requiring a township system to merge with a larger “county/multiple municipality” system or state system, if available, should the township not meet the loading criteria in the plan or, “...forfeit use of the limited 821 MHz spectrum.”<sup>10</sup> Though the hierarchy language is non-specific, it seems the intent was to assign channel allocation precedence to applicants with “large” systems versus applicants with “small” systems based on geographic area, and to “encourage” small systems join with larger systems. This provision has been found to be unworkable.

Interference criteria specified in the **Interference - Co-channel** and **Interference - Adjacent Channel** sections remain as before. A **Coverage Limitations** heading retains language from

<sup>9</sup> “FCC Planning Region 21”, Region 21 regional plan,pg10

<sup>10</sup> Ibid.,pg13

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Usage Guidelines” in a discussion of adherence to the service area contour, but references to “70 mile separation” have been removed.<sup>11</sup> In order to address concerns of operators of multi-jurisdictional/multi-agency consortium systems encompassing more than one county, a new **Service Area** heading has been added where the reader will find “county-like area” language. By this we expand the allowable service area<sup>12</sup> while retaining the original language curtailing the boundary of the service contour found in both “Usage Guidelines” and “Desired Coverage”.

Under the INTEROPERABLE COMMUNICATIONS REQUIREMENTS heading we have changed the language relating to “Common Channel Implementation”. Along with the build out of the digital portion of the MPSCS, the State of Michigan constructed a rather extensive ICALL/ITAC repeater system providing excellent on street coverage throughout the state. The committee adopts this as the de facto interoperable calling channel system and relieves applicants from the requirement of the old plan for further 800 MHz calling channel build out. We describe the conditions of use of the 700 MHz national itinerant channels and list them under a separate heading; **TACTICAL On Scene Communications**. The **Interoperability** section retains language from the original plan. We also list the discipline specific 700 MHz interoperability channels under **Operation on the Interoperability/Tactical Common Channels** for the convenience of system planners. With this revision, we also adopt the ANSI naming standards for the 800 MHz interoperable communications channels.

Under **APPLICATION SUBMISSION, COMPETING APPLICATIONS AND SYSTEM IMPLEMENTATION** we have revised and renamed the application “matrix” in the original plan. We have split the “matrix” into two flow charts; the **COMPETING APPLICATION FLOW CHART** and the **APPLICATION SUBMISSION AND APPROVAL FLOW CHART**. The old “Appeal Process” retains a distinct heading; however, the section has been revamped with details included as an Appendix. We have removed “Filing Window” language and replaced it with “Applications will be reviewed at scheduled meetings of the MPSFAC.” found as the first sentence under the **APPLICATION PROCESS** heading. The committee also revamped the competing application scoring process to remove ambiguity as much as is possible from the evaluation process. The revised process attempts to score applications based on the conformance to defined criteria. These criteria have been updated; in particular, language outmoded by consolidation of the various frequency pools has been updated.

A new **INTER-REGIONAL DISPUTE RESOLUTION** section replaces the “maintain coordination with neighboring regional committees” language of the original<sup>13</sup> with a formal agreement patterned after the agreement found in the 700 MHz regional plan. This agreement details the actions required of the respective regional planning committees in cases where a

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.,pg33

<sup>13</sup> Ibid.,pg8

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proposed use will impact an adjacent planning region. The **REGIONAL PLAN UPDATE COMMITTEE** section is now home to language originally found under “Future Planning Requirements”. MPSFAC committee structure language has been moved to the appendix and is found in the MPSFAC bylaws.

“Expansion of Existing Systems” language found on page 20 under “Communications Requirements” of the original has been removed as obsolete. It appears this provision came from Docket 87-112 with the intent of preventing applicants from migrating non-type accepted wideband (20k) equipment into the tighter bandwidth (16k) NPSPAC band.

The “Implementation and Procedures” section was home to the original channel sort under the “Frequency Assignments” heading. Included in this revision is a “snapshot” of current NPSPAC channel allocations by county. The allotment table has been moved out of the body of the plan and now finds its home in Appendix C – **Channel Assignments by County**, which we propose to adopt as our revised Region 21 channel “sort”.

This revision, along with the updated allocation “snapshot”, has been circulated to our adjoining regional planning committees (Regions 14, 33, 45 and 54) and has been approved by each. Copies of the approval letters may be found in the appendix. Copies of inter-regional dispute/coordination agreements may be found in the appendix as well.

Thank you for your continued support of the regional planning committees and the regional planning process. If you have any questions or require further information, please do not hesitate to contact me at 586-469-6433.

Respectfully,

Keith M. Bradshaw, Chairman  
Michigan Public Safety Frequency Advisory Committee  
[keith.bradshaw@macombgov.org](mailto:keith.bradshaw@macombgov.org)

cc Brad Stoddard, Michigan SWIC

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# REGION 21

800 MHz

PUBLIC SAFETY BAND

REGIONAL PLAN



## 800 MHz PLANNING COMMITTEE OFFICERS

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Vice Chairman: Dale Berry

Secretary: Patricia Coates

APCO Local Advisor: Brent Williams

## **SUMMARY OF MAJOR ELEMENTS REGION 21 NPSPAC PLAN**

The Region 21 NPSPAC Plan provides interested parties with the information necessary to obtain licensure of frequency resources in the 806-809/851-856 MHz (NPSPAC) frequency band. The plan has three main parts: 1) an introduction with pertinent information on the regional planning process and regional planning committee authority, 2) an application process section outlining information required to submit a complete application and 3) the application submission procedure, which describes committee procedures for accepting and handling applications, dealing with mutually exclusive applications and post licensing system implementation.

The introduction contains a brief history of the planning process, defines the region and cites Federal Communications Commission (FCC) rule and docket numbers delegating authority to the Regional Planning Committee (RPC) to write and administer this regional plan. This section describes how the original channel allotment was made (via the APCO sorting algorithm) and makes provision for a “pool” of channels consisting of unallocated channels region wide. It also describes coordination with adjacent regions.

The Application Process section begins with a list of submittals required of applicants and goes on to describe frequency assignment criteria. These criteria are based on channel loading to 100 units per trunked channel and 70 units per conventional channel. Applicants are encouraged to utilize spectrum efficient technologies. A propagation model is described and its use in determining service area contour and co and adjacent channel interference contours is outlined. Restrictions are placed on the extent of coverage overlap into adjoining political subdivisions. Interoperability requirements are given with emphasis on implementation and proper use of the Calling and Tactical Channels. The plan requires the use of plain language at all times. A list of the 700 MHz interoperability channels has been included in this plan for the convenience of the applicant. Applicants are required to make provision for establishing communications plans/links to agencies outside of their immediate geographic areas.

Application Submission procedures are enumerated in the Application Submission and Approval Flow Chart. Mutually exclusive application situations may be resolved through the use of the Competing Application Flow Chart. An Appeal process is described and the Michigan Public Safety Frequency Advisory Committee (MPSFAC) is delegated as the regional plan update committee.



## PREFACE TO THE FIRST REVISION

New developments in the state of the communications art make it desirable for the Michigan Public Safety Frequency Advisory Committee (the Region 21 Regional Planning Committee) to update the Region 21 NPSPAC Plan. This the committee does with the utmost gratitude and respect for those who participated in the original planning process. That fact that many public safety communications systems have been built in Region 21 as a result of the plan these individuals crafted is a testimony to their success and dedication.

However, times and technology change and planning efforts must keep up with these changes. It is our hope that this revision of the FCC Region 21 Planning Region Plan provides to applicants and planning committee members alike a plan that is easier to understand and use and as up-to-date as possible. But as it happens, language once clearly understood can become less so over time. Thus, future committees must be proactive in keeping this plan current.

Without the many persons that have participated in the planning process through the years we would have no process at all. These individuals do not seek acclaim; but it is high time that certain of them are recognized for their outstanding contributions to the regional planning committee: Sgt. Richard Martin (MSP), Mr. Brent Williams, Mr. Dale Berry (Huron Valley Ambulance, Vice Chairman), Ms. Patricia Coates (Oakland County Clemis, Secretary), Mr. Thomas Briggs (MDOT), Ms. Kasey Mlujeak (MDOC), Chief Bill Nelson (Troy Fire Department), Mr. Karl Beckman (Motorola), Mr. Mark Sanberg (MPSCS), Chief Lloyd Collins (South Lyon Police Department), Mr. Jim Fyvie (Clinton County), Mr. Al Nowakowski (MPSCS), Mr. Timothy Spence for his help preparing this document for submittal and last but certainly not least, Mr. Joseph Turner (MML). We also recognize and thank the agencies represented by these fine individuals for generously allowing them to participate.

I hereby certify that all meetings of the Michigan Public Safety Frequency Advisory Committee (Region 21 800 MHz Regional Planning Committee) are open to the public.



Keith M. Bradshaw, Chair  
Michigan Public Safety Frequency  
Advisory Committee

Date: March 11, 2013

## REVISION HISTORY

FCC Approval	Original Plan	July 6, 1990
MPSFAC Approval	Revision 1, complete rewrite, new allotment table	October 25, 2012

# THE REGION TWENTY-ONE 806 MHz PLAN

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## **INTRODUCTION**

When the Federal Communications Commission announced allocation of radio frequency spectrum in the 800 MHz band to the Public Safety and Special Emergency Radio Services (SERS) in July 1986, the US Congress mandated that a National Plan outlining the use of these resources be in place before any agency would receive channels from this new allocation. As part of this mandate, Regional Planning Committees (RPCs) were tasked with developing regional plans conforming to the National Public Safety Planning Advisory Committee (NPSPAC) National Plan.

Michigan APCO chapter President, Mr. Robert R. Wertz appointed Mr. David Held (Michigan State Police Communications Unit) as Michigan Region Convener on January 19, 1988. During the remainder of 1988, Mr. Held along with Mr. Richard DeMello (Michigan Department of Natural Resources) and others drafted and distributed correspondence for the first meeting of the RPC. Notices for the first meeting were sent to all seventy-three county courthouses in Region 21. In addition, notices were sent to U.S. Government agencies, State and Local municipal agencies and all licensed users of the Special Emergency Radio Service frequencies. In all, approximately three thousand notices were distributed.

Mr. Held called the first Region 21 Regional Planning Committee meeting to order in Lansing, Michigan on January 19, 1989. At which time, Mr. Larry Zabkowski (City of Southfield Communications) was elected Region 21 RPC Chairman. The Committee established the following rules: 1) one vote per eligible agency present for each committee in session, 2) fifty-one percent of members present constitute a majority and 3) meetings to be conducted by Roberts Rules of Order. A final draft of the plan was adopted by majority vote of the members in attendance at a meeting held on October 26, 1989. The Region 21 Regional Plan was approved by the FCC on July 6, 1990.

### **Purpose**

This Regional Plan was developed to insure maximum public benefit is derived from the allocation of spectrum in the 806-809/851-854 MHz radio band (known as the NPSPAC band). Recognizing that spectrum in this band is at a premium, the Plan seeks to ensure the

assignment of frequencies in as equitable a fashion as possible, with priority given to those public safety and public services agencies that are primarily responsible for the protection of life and property. Further, that frequencies once assigned will be utilized in the most efficient manner.

### **Region Defined**

Region 21 consists of all counties in the Upper Peninsula and all counties in the Lower Peninsula with the exception of Muskegon, Kent, Barry, Kalamazoo, St. Joseph, Ottawa, Allegan, Van Buren, Cass, and Berrien counties, which are part of Region 54.

## **REGIONAL PLANNING COMMITTEE AUTHORITY**

Authority for the Regional Planning Committee to carry out its assigned tasks is derived from the Federal Communications Commission (FCC) Report and Order, General Docket 87-112. The criteria established in this plan form the basis for assigning and protecting NPSPAC frequencies for both applicants and incumbent licensees under authority granted in the Code of Federal Regulations Title 47 Part 90, sub-section 90.621(g) {FCC rules 47CFR90.621(g)}.

### **The Michigan Public Safety Frequency Advisory Committee**

The Michigan Public Safety Frequency Advisory Committee (MPSFAC) processes all applications for spectrum in the NPSPAC band. The MPSFAC shall conduct its affairs in accordance with its bylaws. All questions as to committee operations or decisions shall be referred to the bylaws. The bylaws may be found in the Appendix. Please note: each committee member who is a representative of an eligible agency is entitled to one vote in all Committee matters. Except as may be provided elsewhere in this plan, the majority of those present at a scheduled meeting will prevail.

The MPSFAC shall make every effort to properly coordinate each application in accordance with applicable FCC rules and the requirements of this plan. Therefore, in addition to the technical data required on FCC Form 601, the committee may request and applicants are required to provide technical information such as but not limited to, antenna and interconnecting coaxial cable data by manufacturer model and type; transmitter emissions data and receiver noise and adjacent channel rejection data; and/or any other information that

the committee may deem necessary to make proper frequency assignments. However, final determination as to the efficacy of frequency assignments and/or technical parameters of the application rests with the FCC.

### **National Interrelationships**

By officially sanctioning this plan the FCC agrees to its conformity to the National Plan. Nothing in this plan is to interfere with the proper functions and duties of the organizations appointed by the FCC for frequency coordination in the Private Land Mobile Radio Services. This plan provides procedures that are the consensus of the planning participants. In all cases of conflict, perceived or otherwise, that warrant intervention by the FCC, the judgment of the FCC will prevail.

### **International Relationships**

Assignment and use of NPSPAC frequencies in the Canadian border areas of Region 21 are subject to the conditions set forth in the “Exchange of Notes (October 24, 1962) Between the Government of Canada and the Government of the United States of America Concerning the Coordination and Use of Radio Frequencies Above 30 Mega Cycles per Second” as amended along with all pertinent Arrangements. Copies of these agreements may be found on the International Bureau section of the FCC website at [www.fcc.gov](http://www.fcc.gov).

### **Spectrum Allotments**

The Region 21 Regional Planning Committee adopted channel allotments generated by the Association of Police Communications Officials, Inc. (APCO), using an algorithm developed for this purpose. Each county within the region would receive a minimum of four (4) channels. Please note: Channels in the NPSPAC band are “offset”, i.e. they are spaced 25 kilo-Hertz (KHz) apart, yet the channel width is 25 KHz. Systems requiring 25 KHz channels will be referred to as “wideband” systems and systems requiring 12.5 KHz channels will be referred to as “narrowband” systems.

Due to the necessity of supplying channels for statewide and other large system implementations, Region 21 channel allocations have diverged somewhat from the original channel allotments. Recognizing the continuing need of growing systems for resources and the inability to honor the original sort, it is wise to acknowledge current allocations and make

provision for future needs. Therefore, all channels covered under this plan shall be considered a pool available to any applicant satisfying the requirements of this plan. Current channel allocations may be found in the Appendix.

### **Eligibility**

Eligibility requirements for persons or agencies desiring licensure in the 806-809/851-854 band are given in Title 47 Code of Federal Regulations part 90 sub-section 90.603 {47CFR90.603} and in FCC General Docket 87-112. Because these spectrum resources are finite, the Committee realizes that situations may arise in which all eligible applicants may not receive requested resources. In such instances, resources will be allocated according to the provisions of this plan as outlined in the Competing Application Flow Chart. In such cases, priority will be given to those applicants whose primary charge is the protection of life and property.

### **Coordination With Adjacent Regions**

Coordination with adjacent regions was accomplished by sending each a copy of the completed plan along with the appropriate inter-regional concurrence and dispute resolution agreement. Adjacent regional planning committees were requested to review and comment within 21 days. These agreements are located in the Appendix. Any system or frequency that may impact a neighboring planning region must be coordinated by the respective committees of the affected regions.

## **APPLICATION PROCESS**

Applications will be reviewed at scheduled meetings of the MPSFAC. Applicants must contact the MPSFAC chairperson with a request to include their application as an agenda item and must supply all members of the MPSFAC with a copy of the application, either electronically or via US mail, at least two weeks before the review meeting. Late applications will be reviewed at the next scheduled meeting of the MPSFAC. Applications may be filed for committee review at scheduled meetings of the MPSFAC; however, applications so filed will be reviewed at the next scheduled meeting. The flow chart, entitled



"Application Submission and Approval Flow Chart", depicts the sequence of steps the committee will use in the allocation of 800 MHz spectrum resources.

## **REQUIRED APPLICATION SUBMITTALS**

Each applicant shall supply the following information:

- Statement of need for installing a new NPSPAC system.
- Explanation of budget commitment that has been made for the proposed system; include agency budgets and/or agency resolution(s).
- FCC Form(s) 601
- Details of engineering studies showing radio coverage will *not* exceed applicant's minimum requirements.
- An explanation of how an applicant's agency will comply with interoperability requirements of this plan.
- Proof of notification of surrounding entities of intent to seek 800 MHz channel resources and any plans or discussions to address cross-band and/or cross-agency interoperability
- An explanation of provision for future growth of agencies not involved in the initial system build out, if any.
- List of PW radio pool frequencies of all agencies migrating to new system. Provide a brief description of utilization along with dates they are to be given back to the PW pool.

### **Statement of Need**

Applicants are required to demonstrate need for frequencies requested. Frequency assignments will not be made so that applicants can storehouse such assignments for future use.

### **Budgetary Commitment**

Applicants must demonstrate the financial resources to build the proposed system. Documentation in the form of Resolutions for bonding or other fiscal mechanisms or agency budgets must be provided.

### **FCC Form 601**

Applicants must submit Form 601 along with the appropriate coordination request form of the desired PW frequency coordination body. Form 601 consists of the following: Main Form (four pages), Schedule D (as appropriate), Schedule H (as appropriate), other schedules as necessary. If the applicant has identified potential frequencies, these will appear on Schedule H. If the applicant wishes the Committee to identify frequencies, Schedule H will be blank.

### **Engineering Studies**

Contour studies showing service area, co-channel interference and adjacent channel interference must be supplied with the application. These shall include a 40dbu(50,50) service area contour, a 25dbu(50,10) adjacent channel interference contour and a 5dbu(50,50) co-channel interference contour. Contours are discussed in detail in the section titled Coverage and Interference Considerations elsewhere in this document.

### **Interoperability Requirements**

Applicants must demonstrate that the proposed system will provide interoperability with disparate agencies and disciplines as appropriate for their region as specified elsewhere in this document. Applicants wishing to utilize 700 MHz channels with a proposed or existing system must also comply with the requirements of the Region 21 700 MHz Plan, State Interoperability Executive Committee (SIEC) or other entity charged with managing the assignment and use of 700 MHz interoperability resources.

Applicants must provide proof they communicated an announcement of their intent to seek new 800 MHz frequencies and offered an invitation to the state, the county or counties within which the proposed system is located, local governmental units within these counties and other relevant stakeholders to participate in a discussion and formulate plans and procedures to facilitate interoperability. Interoperability plans and procedures must be included in the application package.

### **Legacy Conventional Channel “Give Backs”**

Applicants must give consideration to the disposition of frequencies currently being used by those agencies planning to transition to the 800 MHz system. Applicants are required to

provide the committee a schedule for those agencies to return their operating frequencies to the appropriate pool. While it is recognized by the Committee that circumstances may render impossible the return of all listed frequencies, it is expected that applicants shall make a good faith effort to return the maximum number of such as possible.

It is not consistent with the objectives of this Plan to allow agencies to “farm down” frequencies to other radio services within their political structure simply to take advantage of surplus equipment. The need for communications by such an agency may be outweighed by the needs of another political subdivision. “Warehousing” frequencies is not permitted under FCC rules. FCC-authorized frequency coordinators will be responsible for assignment of returned channels through normal coordination procedures.

**Who to contact with questions.**

Any questions regarding the application process may be directed to the Michigan APCO Local Advisor or the Chairperson of the MPSFAC. Contact information for persons currently holding these positions is available in the Appendix or on the MPSFAC and Michigan APCO website at [www.MPSFAC.net](http://www.MPSFAC.net) and [www.miapco.org](http://www.miapco.org) respectively.

**FREQUENCY ASSIGNMENT CRITERIA**

**International Treaty Considerations**

Use of certain allotted frequencies in the counties east of the 85<sup>th</sup> meridian (Line A) is subject to international treaty obligations. These frequencies are noted in the channel allotments found in the appendix. Please see Title 47 Code of Federal Regulations Part 90.7 for the complete definition of Line A.

**Channel Loading**

Each applicant is to certify that a minimum of 100 subscriber units for each frequency requested shall be placed into service immediately upon system completion unless said applicant is requesting a slow growth build out plan. In that case, applicants will certify that 100 subscriber units per frequency will be placed in service within five years of the initial application approval date. If either of the applicable target loading criteria is not met, less than fully loaded channels shall be returned to the allotment pool and the licensee shall

modify their license accordingly. Conventional channels shall be loaded to 100 subscriber units per channel. Where an applicant does not load conventional channels to 70 mobile radios per channel, the unloaded or under-loaded channel(s) will be available for assignment to other licensees. Mobile, portable and control station units are to be counted as subscriber units.

### **Spectrum Efficient Technologies**

Systems requiring four (4) or less channels may operate in the conventional, non-trunked mode. Systems requiring five (5) or more channels are expected to utilize spectrum efficient technologies meeting or exceeding FCC bandwidth rules.

## **COVERAGE AND INTERFERENCE CONSIDERATIONS**

### **Propagation Model**

The propagation model preferred for use in calculating the required contours is the corrected R-6602 model or any other methodology as provided for in TSB-88. Various software packages are commercially available to plot these contours.

### **Service Area**

Service area for systems serving a single jurisdiction or system serving multi-disciplinary/multi-jurisdiction consortiums within the geographical boundaries of a single county will be defined as the boundaries of the contiguous geographic areas in which an applicant routinely offers public safety services plus three (3) miles. An applicant for a county-wide multi-jurisdictional/multi-disciplinary system may request to use a county-like area to define their service area. In such cases, the county-wide system applicant will be permitted to utilize channels allotted to their county within the county like area defined above – provided the channel(s) conform to the adjacent and co-channel interference criteria of this plan.

Some applicants may require coverage that encompasses more than one contiguous county. A multiple county consortium may utilize county-like areas when determining their service area. In such cases, the service area would be considered the geographic boundaries of the contiguous counties plus ten (10) miles. In that case, and with permission of the governing board of the affected county, allocations from each affected county may be used within the

other county. Should such a consortium be located in an area that lies beyond a distance of 113km from an adjacent planning region, no concurrence from that region will be necessary. If however, the consortium will operate within 113km of an adjacent region, concurrence from that region for the proposed frequency plan will be required.

The maximum “designed mean signal strength” at a contour extending three (3) miles outside of the boundary of the applicant's jurisdiction shall not exceed +40dBu (+40dB above one microvolt per meter). This contour shall be included with the applicant’s submittals and shall be calculated using the corrected R-6602 at a (location,time) confidence of (50,50). In order to allow for practical system design, this three (3) mile limit may be altered on a case by case basis. In any case, the 40dbu contour shall not exceed five (5) miles beyond the boundary of the applicant's jurisdiction. Signal level may be verified using a 1/4 wave whip antenna five feet (5’) above the ground.

#### **Interference - Co-channel**

Co-channel assignments will be made when it is determined that the two or more systems will create a signal of +5dbu or less anywhere within their co-channel partner's boundary. This contour shall be included with the applicant’s submittals and shall be calculated using the corrected R-6602 at a (location,time) confidence of (50,50).

#### **Interference - Adjacent Channel**

As mentioned previously, channels in the NPSPAC band are spaced 12.5 kHz apart, yet they are 25 KHz wide. Many new and legacy systems require “wideband” 25 kHz channels in which to operate while others require “narrowband” 12.5 kHz channels. Systems that operate “wideband” will tend to interfere with systems that operate “narrowband” on a 12.5 kHz adjacent channel and vice versa. Therefore, adjacent channel interference must be considered in light of the requirements of the proposed system versus pre-existing incumbent operations.

Adjacent channel assignments (wideband to narrowband and vice versa) will be made when it is determined that: 1) the two or more systems will create a signal strength of +25dBu or less anywhere within the adjacent channel user’s jurisdictional boundary and 2) the emissions bandwidth of the incumbent and proposed equipment is 11.2kHz (11.2k) or greater, or if any

of the applicant's equipment does not meet FCC emission Mask H. The +25dBu contour shall be included with the applicant's submittals and shall be calculated using the corrected R-6602 at a (location,time) confidence of (50,10).

Adjacent channel assignments (narrowband to narrowband) will be made when it is determined that: 1) the two or more systems will create a signal strength of +60dBu or less anywhere within the adjacent channel user's jurisdictional boundary and 2) the emissions bandwidth of the incumbent and proposed equipment is 11.2kHz (11.2k) or greater, or if any of the applicant's equipment does not meet FCC emission Mask H. The +60dBu contour shall be included with the applicant's submittals and shall be calculated using the corrected R-6602 at a (location,time) confidence of (50,10).

### **Coverage Limitations**

Strict adherence for limiting area of coverage to within the service area contour bounding the applicant's jurisdiction will be observed. Overlap or extended coverage must be minimized even where systems utilizing trunked radio are proposing to intermix for cooperative and/or mutual aid purposes. Antenna heights are to be limited to provide only the necessary coverage for a system. When this is not feasible, transmitter outputs and special antenna patterns must be employed to produce the necessary coverage with an appropriate effective radiated power.

Distance between transmitters for co-channel reuse will be determined by interference to incumbent operations, the coverage needs of the applicant, natural barriers for separation, antenna patterning and limited ERP where possible. Applicants may be required to supply actual system test results and/or interference studies to ensure minimal adverse effect on incumbent operations.

## **INTEROPERABLE COMMUNICATIONS REQUIREMENTS**

### **TACTICAL On Scene Communications**

In the Third Report and Order in Docket 96-86, the FCC allocated twenty-four 6.24 kHz frequency pairs in the 700MHz band for low-power, on-site operations such as fireground.

Analog primary operations are permitted on these frequencies. When allocating for analog use, 12.5 kHz bandwidth would be required. Operation on these frequencies is limited to two (2) watts ERP and antenna height is limited to 20' above ground. Six (three 12.5 kHz pairs) of these frequencies are for nationwide itinerant usage and are not subject to regional planning. The remaining 18 (nine 12.5 kHz pairs) low power frequencies are to be administered by the 700 MHz Regional Planning Committees.

Interest has arisen from national fire service representatives to establish common channel naming and tone squelch for these channels in order to accommodate common usage on the foreground and other tactical situations. The following is a draft proposal to address this interest. Analog 12.5 kHz operation with a common tone of 156.7Hz would be used on all frequencies. Each channel has been given a discipline indicator to allow users some channels to focus on: however, all nine channels would be available for assignment as needed. Within each discipline group, frequency separation has been provided in order to reduce interference.

<b>ALIAS</b>	<b>Mobile RX</b>	<b>Mobile TX</b>
<b>7FTAC1D</b>	<b>769.00625</b>	<b>769.00625</b>
<b>7FTAC2D</b>	<b>774.93125</b>	<b>774.93125</b>
<b>7FTAC3D</b>	<b>769.04375</b>	<b>769.04375</b>
<b>7GTAC4D</b>	<b>769.03125</b>	<b>769.03125</b>
<b>7GTAC5D</b>	<b>774.95625</b>	<b>774.95625</b>
<b>7LTAC6D</b>	<b>769.01875</b>	<b>769.01875</b>
<b>7LTAC7D</b>	<b>774.94375</b>	<b>774.94375</b>
<b>7LTAC8D</b>	<b>774.98125</b>	<b>774.98125</b>
<b>7MTAC9D</b>	<b>774.96875</b>	<b>774.96875</b>
<b>7NTAC10D</b>	<b>769.05625</b>	<b>769.05625</b>
<b>7NTAC11D</b>	<b>769.06875</b>	<b>769.06875</b>
<b>7NTAC12D</b>	<b>774.99375</b>	<b>774.99375</b>

**Figure 1 National Itinerant Channels**

**Interoperability**

Interoperability between Federal, State and Local Governments during both daily and disaster operations will primarily take place on the channels designated for interoperability in the 700 – 800 MHz spectrum as identified in section 47CFR90.531. Additionally, through the use of S-160 or equivalent agreements, a licensee may permit Federal use of a non-Federal communications system. Such use on other than the five identified common channels, is to

be in full compliance with FCC requirements governing the use of non-government frequencies (Title 47 Code of Federal Regulations, Sub-section 2.103).

### **Common Channel Implementation**

The implementation of the common channels required under the National plan will utilize a two tier network.

1. The 800 MHz calling channel (8CALL90) has been implemented as a full mobile relay utilizing a CTCSS of 156.7 Hz. The locations of these wide area coverage transmitters are shown in the Appendix. A watch is maintained on this channel by the Michigan State Police regional dispatch centers. Due to the configuration of the 8CALL infrastructure, repeaters on the calling channel shall be maintained in the “Repeat-OFF” mode.
2. Tactical channels (8TAC91 thru 8TAC94) will also utilize a CTCSS of 156.7 Hz for both transmit and receive. Tactical Channel operation will primarily be on scene simplex (8TAC91D thru 8TAC94D) or mobile/portable repeater operation. The interoperability and tactical channels may be utilized by individual agencies where there is a need for in building coverage for tactical operations such as firefighting, law enforcement tactical, or similar emergency related communications that trunked system infrastructure may not provide due to coverage, loading, or specialized applications such as communicating through self contained breathing apparatus (SCBA). Any fixed mobile relay stations on the Tactical channels shall be maintained in non-repeat mode unless specifically requested by a participating agency.

### **Operation on the Interoperability/Tactical Common Channels Operating Procedures**

Plain ENGLISH will be used at all times on ALL interoperability channels. The use of agency specific terms, phrases or codes will not be allowed. Users will be coming from varied backgrounds and disciplines each having his/her own discipline/agency specific language; therefore, for personnel safety and clarity of communications use only PLAIN ENGLISH when utilizing the interoperability channels.



**Calling Channel (8CALL90)**

The calling channel shall be used to contact other users in the region that can render assistance at an incident. This channel shall not be utilized as an ongoing working channel. Once contact is made between agencies, an agreed upon tactical or interoperability channel shall be used for continued communications.

**Interoperability Channels**

These frequencies are designated for use by those agencies involved in multi-agency and/or multi-discipline operations requiring radio communications. Incidents requiring multi-agency participation will utilize these frequencies as directed by the incident commander or Communications Unit Leader for an incident or area of concern. These frequencies may be subdivided into use by various services of public safety as needed.

Alias	Mobile Rx	Mobile Tx	Alias	Mobile Rx	Mobile Tx
7CALL50D	769.24375	769.24375	7TRVL70D	773.25625	773.25625
7TAC55D	769.74375	769.74375	7TAC75D	773.75625	773.75625
7TAC56D	770.24375	770.24375	7TAC76D	774.25265	774.25265
7MOB59D	770.89375	770.89375	7MOB79D	774.50625	774.50325
7LAW61D	770.39375	770.39375	7LAW81D	774.00625	774.00625
7LAW63D	770.49375	770.49375	7LAW82D	774.35625	774.35625
7FIRE63D	769.89375	769.89375	7FIRE83D	773.50625	773.50625
7FIRE64D	769.99375	769.99375	7FIRE84D	773.85625	773.85625
7MED65D	769.39375	769.39375	7MED86D	773.00625	773.00625
7MED66D	769.49375	769.49375	7MED87D	773.35625	773.35625
7CALL50	769.24375	799.24375	7TRVL70	773.25625	803.25625
7TAC55	769.74375	799.74375	7TAC75	773.75625	803.75625
7MOD59	770.89375	800.89375	7MOB79	774.50625	804.50625
7LAW61	770.39375	800.39375	7LAW81	774.00625	804.00625
7FIRE63	769.89375	799.89375	7FIRE83	773.50625	803.50625
7MED65	769.39375	799.39375	7MED86	773.00625	803.00625

Figure 2 700 MHz Interoperability Channels

**Use of Long-Range Communications**

During incidents of major proportions, public safety requirements might include the need for long-range communications in and out of a disaster area. Applicants must show, as part of the interoperability requirements of this plan, what provisions have been incorporated into system design and implementation to facilitate long-range communications. Such long distance radio communications could be amateur radio operations, satellite communications and/or long-range emergency preparedness communications systems.

## **APPLICATION SUBMISSION, COMPETING APPLICATIONS AND SYSTEM IMPLEMENTATION**

This plan has been written to facilitate consistent evaluation of applications, resolve conflicts due to competing spectrum requests and monitor system implementation after the license has been issued. Variation outside of the parameters of this plan may require evaluation beyond the norm. Therefore, it is necessary for the MPSFAC to evaluate each situation on its own merit. The flow chart entitled Application Submission and Approval Flow Chart presents the sequence of events that will be followed in the allocation and utilization of the 800 MHz spectrum. The Competing Application Flow Chart is to be used when two or more applicants request frequencies in an area where insufficient resources exist to satisfy all requests. For the following discussion, please refer to the flow charts found in the Appendix.

### **APPLICATION SUBMISSION AND APPROVAL FLOW CHART (Blocks I thru IX)**

Applications are received by the MPSFAC (Block I). A needs assessment review is conducted (Block II). This statement of need submitted with the application serves as an over-view of the proposed system. If the application is not in compliance with SIEC requirements and Regional Plan requirements, the application will be rejected at this point (Block III) and returned to the applicant with an explanation of the reason(s) for rejection. Applicants who chose to do so may appeal the committee's decision at this point. If there are no competing applications (Block IV) to be considered, the application will be populated with channels (Block V) and be forwarded to the frequency coordinating body of choice (Block VI and beyond).

### **POST LICENSING SYSTEM IMPLEMENTATION (Blocks X thru XVI)**

Should system implementation not begin (award of contract) within a two-year period or if projected channel loading is not attained within four years after the granting of a license(s), the channel(s) will be returned for reassignment to others. A one-year extension may be supported by the MPSFAC depending upon circumstances that are beyond the control of the applicant. The applicant will be responsible to contact the FCC to request an extension from

the Commission. Any applicant must be doing all in their power to implement the project within their authority.

The MPSFAC will determine if progress is being made on the implementation of the system (Block X). Monitoring of systems implementation by the MPSFAC will take place at a minimum of one-year intervals. If progress is made the system is implemented (Block XI). If progress is not made, the licensee is advised that the FCC and the PW frequency coordinator will be informed of the situation (Block XII). The MPSFAC continues to monitor progress on the implementation of the system (Block X). If progress is still not being made, the licensee is notified of the pending action of the MPSFAC to advise FCC of lack of progress and request the license be withdrawn (Block XIII). The notified licensee can appeal this action (Block XIV) or can allow the license to be withdrawn (Block XV). If the authorized frequencies are withdrawn they are added back to the frequency allotment pool (Block XVI) and the process starts a second iteration at Block I.

## **APPEAL PROCESS**

Applicants so disposed shall initiate an appeal to MPSFAC within ten (10) business days of the rejection of their application. Appeals will then be decided based on the Region 21 Appeal Procedure as given in the Appendix. In the event that an appeal reaches the FCC, the decision of the FCC will be final and binding upon all parties.

## **COMPETING APPLICATION FLOW CHART (Blocks 1. thru 8.)**

The implementation of the Competing Application Evaluation Flow Chart will result in the award of a score for each application. The application score is the total number of the points awarded in eight categories. The applicant with the highest total score will have their application processed and supported for frequency coordination. Others will be returned to the applicant if no spectrum is available. The eight categories are as follows:

### **Service and Use**

1. Service and Use (Block #1) – maximum score 375 points.

Who will make routine use of the proposed system? Score points for each individual discipline. Total points for this block will be the sum of the point assignments for each discipline and use the system is to support.

Service and Use Points:

Local Gov	25
Police	50
Fire	50
EMS	50
Schools	50
Road Commission	<u>25</u>
	250

Multiple Jurisdiction/Discipline Multiplier = 1.5 (1.5 X 250 = 375 Maximum)

**Interoperability Diversity**

- Interoperability Diversity (Block #2) – maximum score 200 points, minimum score 0 points.

The application is scored on the degree of interoperability that is demonstrated, with range of points from 0 to 200. This category does not rate the application on the inclusion of the mandated interoperability channels. This category does rate the application on its proposed ability to communicate with different levels of government and services during times of emergency.

Interoperability Points:

Each applicant is encouraged to have direct communications among the following applicable agencies:

Federal	20
State	20
Tribal Nations	20
Local Police	20
Local EMS	20
Local Fire	20
Local DPW	20
Highway Maintenance/ Road Commission	20
Non Governmental Organizations	20
Public Utilities.	<u>20</u>
	200 (Max)

**Cooperative Use**

- Cooperative Use (Block #3) – maximum score 300 points. Those applications that have demonstrated that they are part of cooperative, multi-organization systems will be scored depending upon the extent of the cooperative system.

Cooperative Use Points:

Multi jurisdiction trunked system	150, or
Multi jurisdiction Conventional system	75

**Expansion of Existing Systems**

As it is the intent of this plan to promote cooperative use of the spectrum, expansion of an existing system will be given greater competitive weight than a new system. Therefore, the point award from the aforementioned category will be doubled as;

$$\text{Cooperative Use Points} \times 2 = \text{Score (Max 300)}$$

**Spectrum Efficient Technology**

4. Spectrum Efficient Technology (Block #4) - maximum score 200 points.  
This category scores the application on the degree of efficiency of spectrum use that the system demonstrates. A point value range of 0 to 100 points can be awarded for this category.

Spectrum Efficiency Points:

Description	Points
Trunked voice only	200, or
Trunked voice and data	100, or
Conventional voice and data	50, or
Conventional voice only	25

**Urban Sprawl**

5. Urban Sprawl (Block #5) – maximum score 150 points.  
If the applicant has recently established or plans to establish (applicant must show approved funding) a public safety agency, the applicant has no legacy frequency resources and the proposed system will support this new agency, the application will be credited 150 points.

Urban Sprawl Points:	150
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**System Implementation**

6. System Implementation Factors (Block #6) – maximum score 200 points.  
This category scores the application on two factors, budgetary commitment and planning completeness. The degree of budgetary commitment and planning completeness are scored individually as a percentage with a maximum per category of 100 points. Applicants who demonstrate a high degree of commitment in funding and planning completeness will receive a higher score. Applicants will be required to submit a timetable for the implementation of the communications system or systems.

System Implementation Points:

$$\begin{array}{r} \text{Funding commitment} \\ \text{Planning Completeness} \end{array} \qquad \begin{array}{r} (\% \text{ funding X } 100) \\ + \frac{(\% \text{ complete X } 100)}{200 \text{ points Max}} \end{array}$$

Resolutions or letters of intent verifying financial commitment shall be included with each application.

**System Density**

7. System Density (Block #7)  
Each application will be scored on the ratio of subscriber units to the coverage area of the individual sites. For wide area or consortium systems, only count subscriber units permanently assigned within the boundary of the political subdivision where each site is located. Do not count itinerant units.

System Density Points:  
 $\{(\text{Number of units assigned to jurisdiction}) / (\text{Area of jurisdiction in square miles})\}$   
= Score. (Ratios less than one score zero points.)

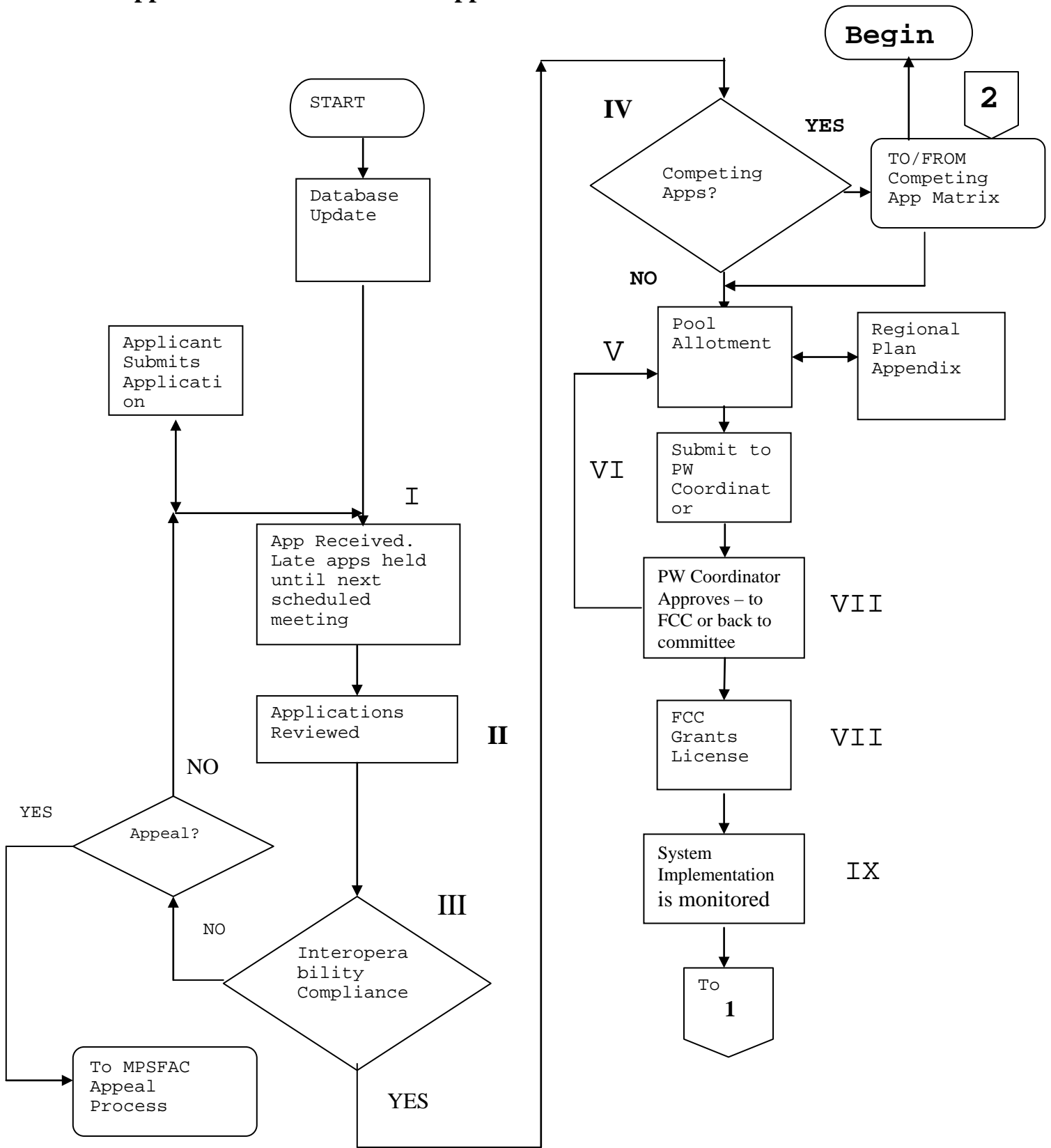
**Givebacks**

8. Givebacks or Relinquished Frequency(s) (Block #8) – maximum score 200 points.  
The applicant is scored on the number of channels given back. (UHF repeater pairs score as 1; VHF repeater pairs score as 2.)

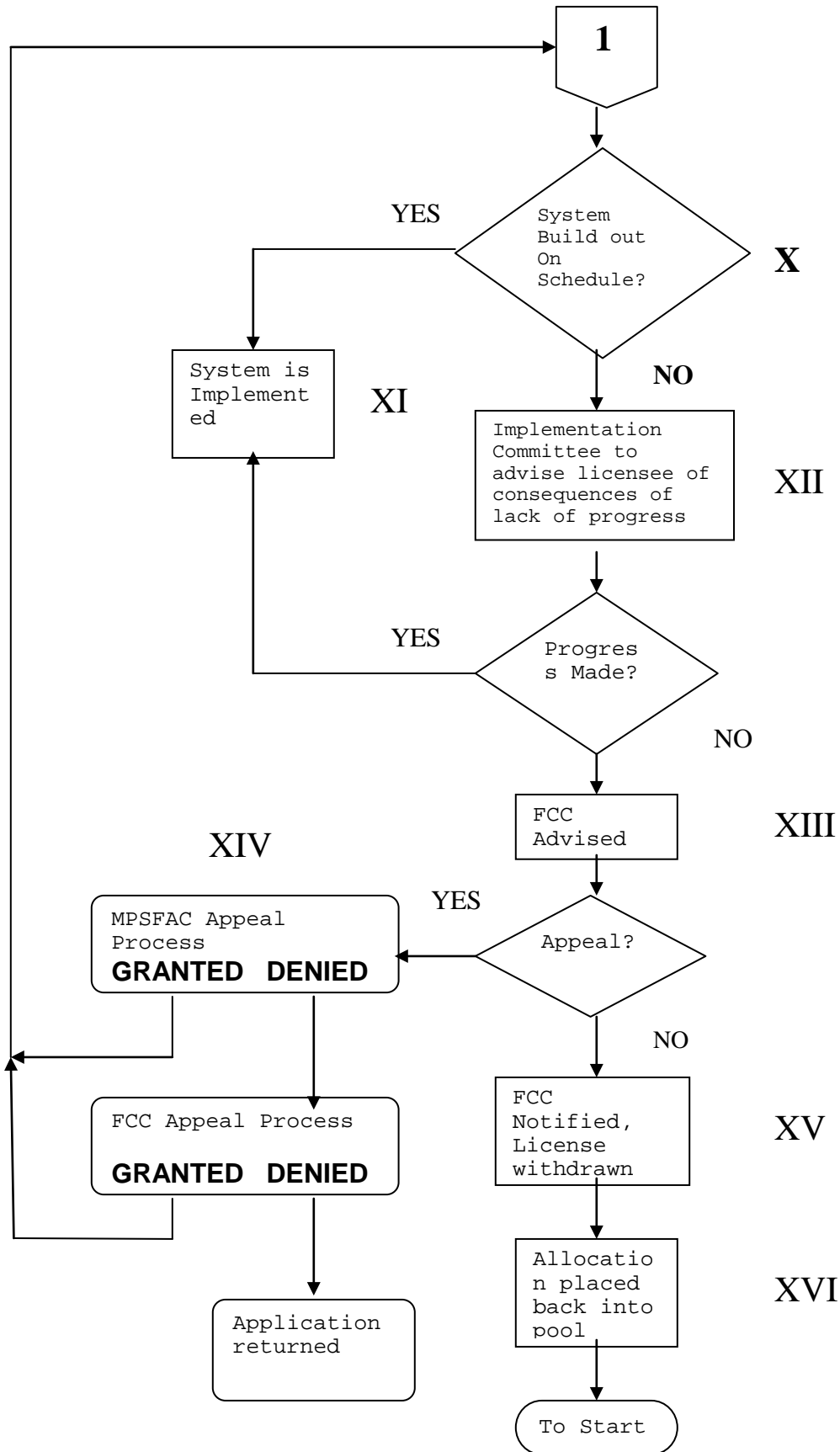
Give Back Points:  
 $(\text{Number frequencies to be relinquished}) \times 10 = \text{Score}$

Matrix points are totaled for each application (Block #SUM).

### Application Submission and Approval Flow Chart

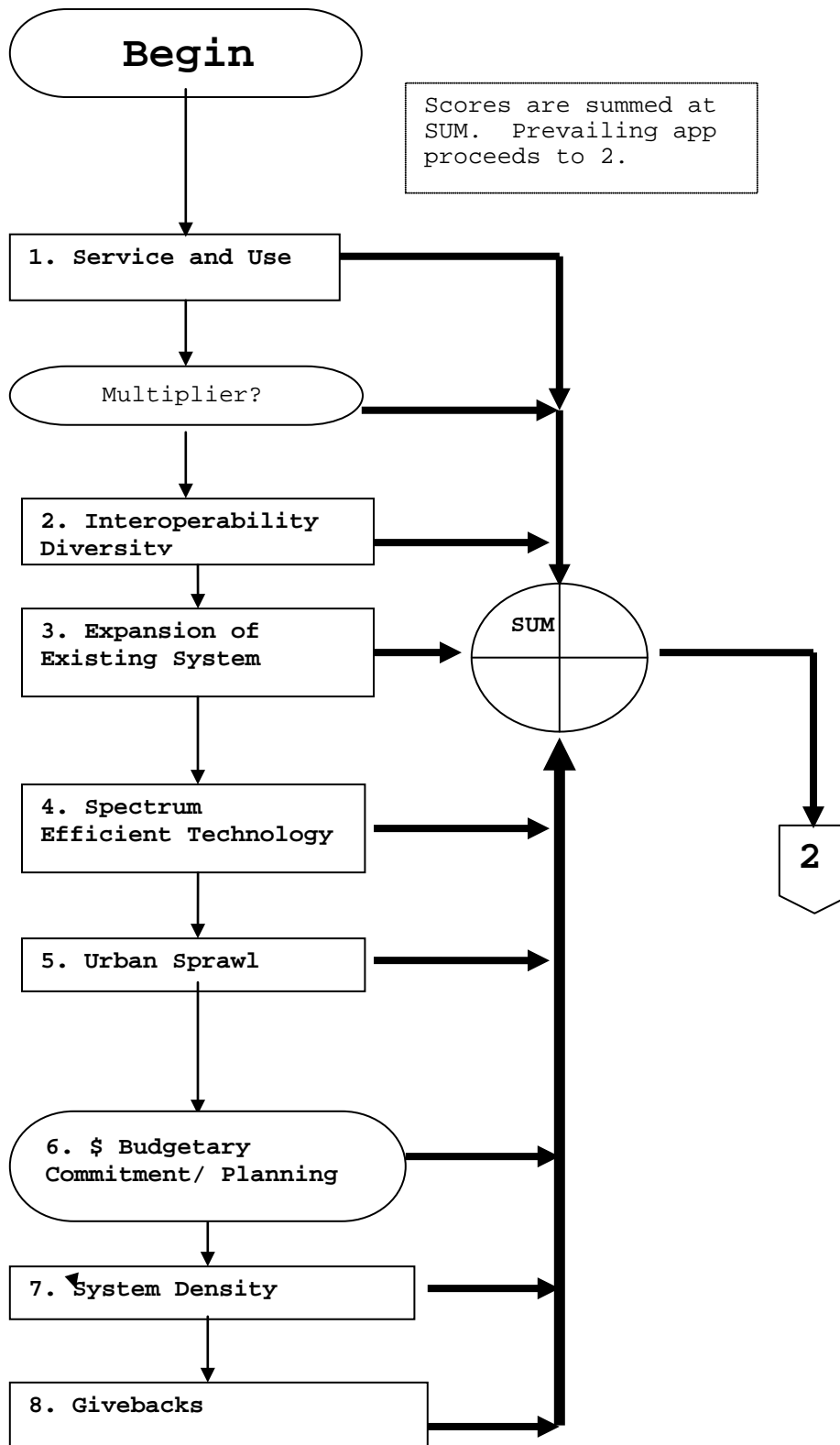


### Application Submission and Approval, cont





### Competing Application Flow Chart



### **INTER-REGIONAL DISPUTE RESOLUTION**

Disputes between adjoining regions arising due to competing applications or interference situations will be resolved through the use of the appropriate inter-regional coordination procedures. These procedures may be found in the Appendix.

### **REGIONAL PLAN UPDATE COMMITTEE**

The Michigan Public Safety Frequency Advisory Committee (MPSFAC) shall be the Regional Plan Update Committee. This committee will remain in place to process applications, recommend changes to this Regional Plan and provide a mechanism for interregional problem resolution.

### **APPENDICES**

## Appendix A

### Inter-Regional Dispute Resolution/Concurrence

*Inter-Regional Coordination Procedures  
and  
Procedures for Resolution of Disputes  
That May Arise Under FCC Approved Plans*

*I. Coordination Procedures*

**I. INTRODUCTION**

1. This is a mutually agreed upon Inter-Regional Coordination Procedures Agreement (Agreement) by and between the following 800 MHz Regional Planning Committees, Region 21 and Region 33.

**II. INTER-REGIONAL COORDINATION AGREEMENT**

2. The following is the specific procedure for inter-regional coordination which has been agreed upon by Regions 21 and 33, and which will be used by the Regions to coordinate with adjacent Regional Planning Committees.

e. 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.<sup>1</sup> This information will be sent to the adjacent Regional chairperson(s) using email or the CAPRAD database.

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

*II. Dispute Resolution*

(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 10 (Ten)

---

<sup>1</sup> If an applicant's proposed service area or interference contour extends into an adjacent Public Safety Region(s), the application must be approved by the affected Region(s). Service area shall normally be defined as the area included within the geographical boundary of the applicant, plus three (3) miles. Interference contour shall normally be defined as a 5 dBu co-channel contour or a 25 dBu adjacent channel contour. Other definitions of service area or interference shall be justified with an accompanying *Memorandum of Understanding (MOU)* or other application documentation between agencies, i.e. mutual aid agreements.

calendar days via email. If the applying Region cannot modify the application to satisfy the objections of the adjacent Region then, a working group comprised of representatives 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 chairperson's email (CAPRAD database). Findings may include, but not be limited to:

- (i) Unconditional concurrence;
- (ii) Conditional concurrence contingent upon modification of applicant's technical parameters; or
- (iii) Partial or total denial of proposed frequencies due to inability to meet co-channel/adjacent channel interference free protection to existing licensees within 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)<sup>2</sup>, of the National Public Safety Telecommunications Council. 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 mutually advantageous to each disputing Region.

g. Where adjacent Region concurrence has been secured, and the channel assignments would result in no change to the Region's currently Commission approved channel

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<sup>2</sup> The Regional Plan Oversight Committee (RPOC) is a committee within the National Public Safety Telecommunications Council (NPSTC) established to arbitrate disputes between 700 MHz Regions that cannot be resolved by the impacted Regions.

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 the Commission.

h. Where adjacent Region concurrence has been secured, and the channel assignments would result in a change to the Region's currently Commission approved channel assignment matrix, then the initiating Region shall file with the 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).

i. 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 the Commission.

### III. CONCLUSION

3. IN AGREEMENT HERETO, Regions 21 and 33 do hereunto set their signatures the day and year first above written.

Respectfully,



Keith M. Bradshaw, Chair  
Region 21

Date: 03/4/2013



Paul M. Mayer  
Region 33 Chairman

Date: 03/01/2013



Region 33 (Ohio) 700 MHz. Planning Committee  
Paul M. Mayer, Chairman  
2022 Charmingfare Street, Columbus, Ohio 43228  
614-312-1199 (voice) e-mail [region33.rpc@gmail.com](mailto:region33.rpc@gmail.com)

February 14, 2013

Keith M. Bradshaw, Chairman  
Michigan Public Safety Frequency Advisory Committee  
Macomb County Radio Department  
21930 Dunham  
Mount Clemens, MI 48043

Dear Mr. Bradshaw,

The Region 33 700 MHz RPC has reviewed the Region 21 700 MHz plan and is in concurrence with the provisions of the plan. Therefore, Region 33 hereby grants its approval of this revision of the Region 21 700 MHz plan.

Respectfully,

A handwritten signature in blue ink that reads "Paul M. Mayer". The signature is written in a cursive, flowing style.

Paul M. Mayer  
Chairman

*Inter-Regional Coordination Procedures  
and  
Procedures for Resolution of Disputes  
That May Arise Under FCC Approved Plans*

*I. Coordination Procedures*

**I. INTRODUCTION**

1. This is a mutually agreed upon Inter-Regional Coordination Procedures Agreement (Agreement) by and between the following 800 MHz Regional Planning Committees, Region 21 and Region 54.

**II. INTER-REGIONAL COORDINATION AGREEMENT**

2. The following is the specific procedure for inter-regional coordination which has been agreed upon by Regions 21 and 54, and which will be used by the Regions to coordinate with adjacent Regional Planning Committees.

e. 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.<sup>1</sup> This information will be sent to the adjacent Regional chairperson(s) using email or the CAPRAD database.

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

*II. Dispute Resolution*

(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 10 (Ten)

---

<sup>1</sup> If an applicant's proposed service area or interference contour extends into an adjacent Public Safety Region(s), the application must be approved by the affected Region(s). Service area shall normally be defined as the area included within the geographical boundary of the applicant, plus three (3) miles. Interference contour shall normally be defined as a 5 dBu co-channel contour or a 25 dBu adjacent channel contour. Other definitions of service area or interference shall be justified with an accompanying *Memorandum of Understanding (MOU)* or other application documentation between agencies, i.e. mutual aid agreements.



calendar days via email. If the applying Region cannot modify the application to satisfy the objections of the adjacent Region then, a working group comprised of representatives 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 chairperson's email (CAPRAD database). Findings may include, but not be limited to:

- (i) Unconditional concurrence;
- (ii) Conditional concurrence contingent upon modification of applicant's technical parameters; or
- (iii) Partial or total denial of proposed frequencies due to inability to meet co-channel/adjacent channel interference free protection to existing licensees within 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 Regional Planning Council (NRPC). 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 NRPC will, within thirty (30) calendar days, report its recommendation(s) to the Regional chairpersons via the CAPRAD database. The NRPC's decision may support either of the disputing Regions or it may develop a proposal that it deems mutually advantageous to each disputing Region.

g. Where adjacent Region concurrence has been secured, and the channel assignments would result in no change to the Region's currently Commission approved 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 the Commission.

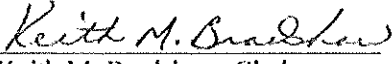
h. Where adjacent Region concurrence has been secured, and the channel assignments would result in a change to the Region's currently Commission approved channel assignment matrix, then the initiating Region shall file with the Commission a *Petition to Amend* their current Regional plan's frequency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

i. 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 the Commission.


### III. CONCLUSION

3. IN AGREEMENT HERETO, Regions 21 and 54 do hereunto set their signatures the day and year first above written.

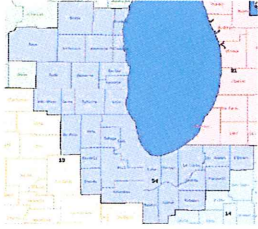
Respectfully,

  
Keith M. Bradshaw, Chair  
Region 21

Date: 3/11/13

  
Chris Kindlespire  
Region 54 Chairman

Date: 3/15/13



**FCC Region 54**  
**800 MHz RCRC**  
Southern Lake Michigan Region

Carl Guse  
Chair  
Wisconsin

Christopher Kindelspire  
Executive Member  
Illinois

Gary Cochran  
Executive Member  
Illinois

Alex Whitaker  
Executive Member  
Indiana

Douglas Cochran  
Executive Member  
Indiana

Kathleen Lordo  
Executive Member  
Wisconsin

Richard Melbow  
Executive Member  
Michigan

Patrick Kenealy  
Executive Member  
Michigan

Ned Jacklin  
Secretary  
Illinois

To: Keith Bradshaw  
Michigan Region 21 Regional Planning Committee

From: Carl Guse  
Region 54 Regional Planning Committee Chair

Dear Mr. Bradshaw,

The Southern Lake Michigan Region 54 NPSPAC Regional Planning Committee is in receipt of your proposed NPSPAC Regional Plan. Region 54 met on November 13, 2012 and formally approved Region 21's plan.

This letter serves as the official written concurrence of Region 54 to your proposed 800 MHz regional plan update.

Sincerely,

Carl Guse  
Region 54 NPSPAC Chair  
POB 7912  
Madison WI 53707-7912

*Inter-Regional Coordination Procedures  
and  
Procedures for Resolution of Disputes  
That May Arise Under FCC Approved Plans*

*I. Coordination Procedures*

**INTRODUCTION**

1. This is a mutually agreed upon Inter-Regional Coordination Procedures Agreement (Agreement) by and between the following 800 MHz Regional Planning Committees, Region 21 and Region 14.

**II. INTER-REGIONAL COORDINATION AGREEMENT**

2. The following is the specific procedure for inter-regional coordination which has been agreed upon by Regions 21 and 14, and which will be used by the Regions to coordinate with adjacent Regional Planning Committees.

c. 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.<sup>1</sup> This information will be sent to the adjacent Regional chairperson(s) using email or the CAPRAD database.

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

*II. Dispute Resolution*

(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 10 (Ten)

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<sup>1</sup> If an applicant's proposed service area or interference contour extends into an adjacent Public Safety Region(s), the application must be approved by the affected Region(s). Service area shall normally be defined as the area included within the geographical boundary of the applicant, plus three (3) miles. Interference contour shall normally be defined as a 5 dBu co-channel contour or a 25 dBu adjacent channel contour. Other definitions of service area or interference shall be justified with an accompanying *Memorandum of Understanding (MOU)* or other application documentation between agencies, i.e. mutual aid agreements.

calendar days via email. If the applying Region cannot modify the application to satisfy the objections of the adjacent Region then, a working group comprised of representatives 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 chairperson's email (CAPRAD database). Findings may include, but not be limited to:

- (i) Unconditional concurrence;
- (ii) Conditional concurrence contingent upon modification of applicant's technical parameters; or
- (iii) Partial or total denial of proposed frequencies due to inability to meet co-channel/adjacent channel interference free protection to existing licensees within 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)<sup>2</sup>, of the National Public Safety Telecommunications Council. 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 mutually advantageous to each disputing Region.

g. Where adjacent Region concurrence has been secured, and the channel assignments would result in no change to the Region's currently Commission approved channel

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<sup>2</sup> The Regional Plan Oversight Committee (RPOC) is a committee within the National Public Safety Telecommunications Council (NPSTC) established to arbitrate disputes between 800 MHz Regions that cannot be resolved by the impacted Regions.

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 the Commission.

h. Where adjacent Region concurrence has been secured, and the channel assignments would result in a change to the Region's currently Commission approved channel assignment matrix, then the initiating Region shall file with the 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).

i. 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 the Commission.

### III. CONCLUSION

3. IN AGREEMENT HERETO, Regions 21 and 14 do hereunto set their signatures the day and year first above written.

Respectfully,



Keith M. Bradshaw, Chair  
Region 21

Date: 3/6/2013



Alex Whitaker  
Region 14 Chairman

Date: 3/6/13

**INDIANA 800 MHZ REGIONAL CONFORMANCE  
AND REVIEW COMMITTEE  
FCC REGION 14**

**Alex R. Whitaker, Chairman**

**Douglas B. Cochrane, Secretary**

**c/o The State of Indiana – The Integrated Public Safety Commission**

**Indiana Government Center North – Room N340**

**100 North Senate Avenue, Indianapolis, Indiana 46204**

**TX: 317-234-6513 ; FAX: 317-234-6514**

**E-mail: [alwhitaker@ipsc.in.gov](mailto:alwhitaker@ipsc.in.gov)**

**E-mail: [dcochrane@ipsc.in.gov](mailto:dcochrane@ipsc.in.gov)**

February 21, 2013

Keith M. Bradshaw, Chairman  
Michigan Public Safety Frequency Advisory Committee  
Macomb County Radio Department  
21930 Dunham  
Mount Clemens, MI 48043

Dear Mr. Bradshaw,

The Region 14 800 MHz Regional Conformance and Review Committee (RCRC) has reviewed the Region 21 800 MHz plan, and is in concurrence with its provisions. Therefore, Region 14 hereby grants its approval of this revision of the Region 21 800 MHz plan. Furthermore, Region 14 would like to extend congratulations to the Region 21 800 MHz RPC for the fine results of your hard work.

Sincerely,



Alex R. Whitaker  
Chairman, Region 14 800 MHz RCRC

---

*Inter-Regional Coordination Procedures  
and  
Procedures for Resolution of Disputes  
That May Arise Under FCC Approved Plans*

**I. INTRODUCTION**

1. This is a mutually agreed upon Inter-Regional Coordination Procedures Agreement (Agreement) by and between the following 800 MHz Regional Planning Committees, Region 21 and Region 45 (the Regions).

**II. INTER-REGIONAL COORDINATION AGREEMENT**

2. The following is the specific procedure for inter-regional coordination which has been agreed upon by the Regions and which will be used by the Regions to coordinate with adjacent Regional Planning Committees.

e. 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.<sup>1</sup> This information will be sent to the adjacent Regional chairperson(s) using email or the CAPRAD database.

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

**III. DISPUTE RESOLUTION**

(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 10 (Ten) calendar

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<sup>1</sup> If an applicant's proposed service area or interference contour extends into an adjacent Public Safety Region(s), the application must be approved by the affected Region(s). Service area shall normally be defined as the area included within the geographical boundary of the applicant, plus three (3) miles. Interference contour shall normally be defined as a 5 dBu co-channel contour or a 25 dBu adjacent channel contour. Other definitions of service area or interference shall be justified with an accompanying *Memorandum of Understanding (MOU)* or other application documentation between agencies, i.e. mutual aid agreements.



days via email. If the applying Region cannot modify the application to satisfy the objections of the adjacent Region then, a working group comprised of representatives 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 chairperson's email (CAPRAD database). Findings may include, but not be limited to:

- (i) Unconditional concurrence;
- (ii) conditional concurrence contingent upon modification of applicant's technical parameters; or
- (iii) partial or total denial of proposed frequencies due to inability to meet co-channel/adjacent channel interference free protection to existing licensees within 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)<sup>2</sup>, of the National Public Safety Telecommunications Council. 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 mutually advantageous to each disputing Region.

g. Where adjacent Region concurrence has been secured, and the channel assignments would result in no change to the Region's currently Commission approved channel

---

<sup>2</sup> The Regional Plan Oversight Committee (RPOC) is a committee within the National Public Safety Telecommunications Council (NPSTC) established to arbitrate disputes between 700 MHz Regions that cannot be resolved by the impacted Regions.

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 the Commission.

h. Where adjacent Region concurrence has been secured, and the channel assignments would result in a change to the Region's currently Commission approved channel assignment matrix, then the initiating Region shall file with the 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).

i. 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 the Commission.

#### IV. CONCLUSION

3. IN AGREEMENT HERETO, Region 45 and Region 21 do hereunto set their signatures the day and year first above written.

Respectfully,



Keith M. Bradshaw, Chair  
Region 21

Date: 2/25/2013



Russell J. Schreiner, Chair  
Region 45

Date: 2/25/2013



## Region 45 800 MHz NPSPAC RPC

January 14th, 2013

Mr. Keith Bradshaw  
Michigan Public Safety Frequency Advisory Committee  
Macomb County Radio Department  
21930 Dunham  
Mount Clemens, MI 48043

Dear Mr. Bradshaw:

The Region 45 800 MHz NPSPAC Regional Planning Committee (RPC) has recently reviewed the Region 21 revised 800 MHz NPSPAC plan. Region 45 is satisfied with the revisions to the Region 21 plan, and wishes to issue its concurrence and approval of the revised Region 21 800 MHz NPSPAC plan. Region 45 wishes to thank Region 21 for their patients during this review process, and to congratulate Region 21 for their excellent work.

Sincerely,

Russell R. Schreiner  
Chairman, Region 45 800MHz NPSPAC RPC  
Communications & Electronics Technician  
Sheboygan Police Department  
1315 North 23rd Street  
Sheboygan, WI 53081  
Ph # 920-459-3351  
rschreiner@ci.sheboygan.wi.us

## Appendix B

### Appeal Process

## **APPENDIX B**

### Appeal Process (2008)

#### **Appeal Procedure**

Appeals from decisions made with respect to a variety of matters regulated by the Regional Planning process and MPSFAC will be heard. The formal requirements of the appeal process are set out below.

In order to ensure that the appeal process is open and understandable to the public, the Regional Committee has developed this procedure. Those involved in the appeal process can expect the Committee and its members to follow the procedures. Where any matter arises during the course of an appeal that is not dealt with in this document, the Committee will do whatever is necessary to enable it to be resolved fairly, effectively and completely on the appeal. The Committee may dispense with any part of this procedure where it is appropriate to do so.

The MPSFAC will make every effort to process appeals in a timely fashion and issue decisions expeditiously.

#### *Members*

##### Appeals Committee

The MPSFAC Chairman may organize the Committee into Sub-Committees, each comprised of one or more members.

Where an appeal is scheduled to be heard by a Sub-Committee the chair is determined as follows:

if the chair of the Committee is on the Sub-Committee they are the chair;

if the chair of the Committee is not on the Sub-Committee but the vice-chair is then the vice-chair will be the chair; and

if neither the chair nor the vice-chair is on the Sub-Committee, the MPSFAC Committee will designate one of the members to be the chair.

#### Withdrawal or Disqualification of a Committee Member on the Grounds of Bias

Where the chair or a Committee member becomes aware of any facts that would lead an informed person, viewing the matter reasonably and practically, to conclude that a member, whether consciously or unconsciously, would not decide a matter fairly, the member will be prohibited from conducting the appeal unless consent is obtained from all parties to continue. In addition, any party to an appeal may challenge a member on the basis of real or a reasonable apprehension of bias.

#### **THE APPEAL PROCESS**

An official of the entity who filed the original application to the MPSFAC must be the person who files the appeal on behalf of the entity.

#### How to appeal

A notice of appeal must be served upon the MPSFAC. The notice of appeal may be “delivered” by mail, courier, or hand delivered to the office of the Chair and all Members of the Committee. See page 19 of the Region 21 NPSFAC plan for information. The Committee will also accept a

notice of appeal by electronic means to the Chair and Secretary with the original paper copy of the notice of appeal served as indicated above.

Certain things must be included in a notice of appeal for it to be accepted. The notice of appeal **must** include:

1. the name and address of the appellant;
2. the name of the person, if any, making the request for an appeal on behalf of the appellant;
3. the address for service of the appellant;
4. the grounds for appeal (a detailed explanation of the appellant's objections to the determination – describe errors in the decision);
5. a description of the relief requested (what do you want the MPSFAC/Committee/Sub-Committee to order at the end of the appeal);
6. the signature of the appellant or the appellant's representative; and data.

#### Time limit for filing the appeal

To appeal a determination or allocation the entity must deliver a notice of appeal within 10 business days after receiving the decision. If a notice of appeal is not delivered within the time required, the right to an appeal is lost. However, the Committee is allowed to extend the deadline, either before or after its expiration based upon a 2/3 majority of the Committee.

#### Rejection of a notice of appeal

The Committee may reject a notice of appeal if:

- (a) it is determined that the appellant does not have standing to appeal; or
- (b) the Committee does not have jurisdiction over the subject matter or the remedy sought.

Before a notice of appeal is rejected, the MPSFAC will inform the appellant of this in writing, with reasons. The appellant has an opportunity to make submissions within 10 business days.

#### *Appeal Meeting*

The MPSFAC and/or established Sub-Committee will set a meeting date to review the appeal documents submitted by the applicant and meet with them to discuss the issue in an open meeting. The MPSFAC will arrive at a decision based upon the documents presented, FCC rules, NCC requirements, and the regional plan and advise the applicant of the decision.

Committee members will not contact a party on any matter relevant to the merits of the appeal, unless that member puts all other parties on notice and gives them an opportunity to participate.

## Appendix C

### Channel Assignment by County

ORIG FCC CH NUMBER	ORIG FREQ	NEW FCC CH NUMBER	NEW Post-RB FREQ	Original Channel Sort from 1990 Plan	MI NPS PAC Current license locations (From ULS)
601	866.0125	1	851.0125	INTEROP 8CALL90	INTEROP 8CALL90
****	Guard	****	851.0250		
602	866.0375	2	851.0375	Alcona Antrim Baraga Lake Saginaw Washtenaw Alger Menominee	WEXFORD GENESSEE OAKLAND
603	866.0500	3	851.0500	Benzie Clare Clinton Dickinson Gogebic Lapeer Mackinac	MISSAUKEE MONROE
604	866.0625	4	851.0625	Alcona Charlevoix Houghton Mason Washtenaw Bay Delta	EMMET MACOMB MASON DELTA
605	866.0750	5	851.0750	Crawford Genesee Ionia Iron	CRAWFORD IONIA MARQUETTE GENESSEE
606	866.0875	6	851.0875	Cheboygan Gladwin Gr. Traverse Lenawee Oceana Ontonagon Schoolcraft	JACKSON
607	866.1000	7	851.1000	Eaton Huron Mecosta Oscoda Marquette Oakland	MARQUETTE OAKLAND
608	866.1125	8	851.1125	Emmet Hillsdale Manistee Saginaw	MONROE INGHAM
609	866.1250	9	851.1250	Iosco Kalkaska Livingston Newaygo	WEXFORD MACOMB
610	866.1375	10	851.1375	Branch Gratiot Lapeer Leelanau Montmorency	ANTRIM JACKSON BAY OAKLAND
611	866.1500	11	851.1500	Jackson Missaukee Bay	WAYNE
612	866.1625	12	851.1625	Isabella Osseo Oakland	OGEMAW
613	866.1750	13	851.1750	Jackson Ogemaw Presque Isle Sanilac Wexford	MACOMB MONTCALM
614	866.1875	14	851.1875	Genesee Montcalm	JACKSON
615	866.2000	15	851.2000	Midland Washtenaw	CALHOUN OAKLAND
616	866.2125	16	851.2125	Lapeer Osceola Arenac	INGHAM
617	866.2250	17	851.2250	Livingston Midland	TUSCOLA OAKLAND
618	866.2375	18	851.2375	Roscommon Tuscola	OAKLAND
619	866.2500	19	851.2500	Midland Oakland	KALKASKA
620	866.2625	20	851.2625	Ingham	ROSCOMMON
621	866.2750	21	851.2750	Calhoun Genesee	CALHOUN WAYNE OAKLAND
622	866.2875	22	851.2875	Alcona Antrim Baraga Lake Washtenaw Alger Bay Menominee	ALGER MARQUETTE BAY
623	866.3000	23	851.3000	Benzie Clare Clinton Dickinson Gogebic Lapeer Mackinac	MONROE GENESSEE
624	866.3125	24	851.3125	Alcona Charlevoix Houghton Mason Washtenaw Bay Delta	GENESSEE MASON
625	866.3250	25	851.3250	Genesee Ionia Iron	LAKE MARQUETTE
626	866.3375	26	851.3375	Cheboygan Gladwin Gr. Traverse Lenawee Oceana Ontonagon Schoolcraft	OAKLAND
627	866.3500	27	851.3500	Eaton Huron Mecosta Oscoda Marquette Oakland	DICKINSON
628	866.3625	28	851.3625	Statewide	OSCEOLA CHEBOYGAN LENAWEE DICKINSON MARQUETTE
629	866.3750	29	851.3750	Statewide	MONTCALM LEELANAU NEWAYGO GRATIOT MACOMB MARQUETTE HOUGHTON LENAWEE
630	866.3875	30	851.3875	Statewide	OTSEGO MECOSTA LEELANAU GENESSEE MONROE MARQUETTE GOGEBIC
631	866.4000	31	851.4000	Statewide	OSCODA WEXFORD DELTA BRANCH BARAGA NEWAYGO IONIA MACKINAC WAYNE GOGEBIC
632	866.4125	32	851.4125	Statewide	EMMET HILLSDALE SAGINAW GOGEBIC
633	866.4250	33	851.4250	Statewide	OSCODA WEXFORD CHARLEVOIX MONTCALM SAGINAW MASON MACKINAC MENOMINEEMARQUETTEONTONAGAN
634	866.4375	34	851.4375	Statewide	CLARE KALKASKA MASON SHIAWASSEE DELTA IRON GOGEBIC KEWEENAW
635	866.4500	35	851.4500	Statewide	IONIA DELTA WASHTEENAW CHIPPEWA DICKINSON KEWEENAW ONTANAGAN
636	866.4625	36	851.4625	Statewide	CLARE ALCONA EMMET BENZIE INGHAM MARQUETTE HOUGHTON
637	866.4750	37	851.4750	Statewide	OSCODA RAND TRAVERS LAKE EMMET CHIPPEWA WAYNE ALGER BARAGA GENESSEE
638	866.4875	38	851.4875	Statewide	ARENAC ALPENA MANISTEE NEWAYGO EMMET HOUGHTON LUCE IRON
****	Guard	****	851.5000		
639	866.5125	39	851.5125	INTEROP 8TAC91	INTEROP 8TAC91
****	Guard	****	851.5250		
640	866.5375	40	851.5375	Emmet Genesee Iosco Manistee Wayne C Chippewa	WAYNE JACKSON
641	866.5500	41	851.5500	Gratiot Jackson Kalkaska Sanilac Wayne C Chippewa	ANTRIM WAYNE SAGINAW CHIPPEWA
642	866.5625	42	851.5625	Leelanau Montmorency Newaygo Arenac Macomb	JACKSON NEWAYGO MACOMB
643	866.5750	43	851.5750	Isabella Jackson Wayne C	WAYNE JACKSON
644	866.5875	44	851.5875	Genesee Missaukee	MISSAUKEE LAPEER
645	866.6000	45	851.6000	Calhoun Midland Osseo Wayne	OTSEGO CALHOUN WAYNE MIDLAND
646	866.6125	46	851.6125	Genesee Montcalm Ogemaw	WAYNE
647	866.6250	47	851.6250	Calhoun Midland Presque Isle Wayne	WEXFORD WAYNE SAGINAW
648	866.6375	48	851.6375	Genesee Osceola	OAKLAND
649	866.6500	49	851.6500	Midland Wayne	EMMET EATON MACOMB
650	866.6625	50	851.6625	Roscommon Shiawassee St. Clair	ROSCOMMON ST. CLAIR WASHTEENAW
651	866.6750	51	851.6750	Calhoun Wexford Oakland	WAYNE SAGINAW
652	866.6875	52	851.6875	Saginaw St. Clair	WEXFORD ST. CLAIR JACKSON MACOMB
653	866.7000	53	851.7000	Livingston	LIVINGSTON
654	866.7125	54	851.7125	Saginaw	SAGINAW WAYNE
655	866.7250	55	851.7250	Ingham Macomb	WAYNE
656	866.7375	56	851.7375	Monroe Saginaw	CRAWFORD GENESSEE MARQUETTE
657	866.7500	57	851.7500	Oakland	MACOMB
658	866.7625	58	851.7625	Ingham Tuscola	WAYNE
659	866.7750	59	851.7750	Wayne C	CALHOUN
660	866.7875	60	851.7875	Genesee	GENESSEE
661	866.8000	61	851.8000	Jackson Wayne C Bay Chippewa	GENESSEE JACKSON CHIPPEWA MONROE
662	866.8125	62	851.8125	Branch Macomb	KALKASKA IONIA LAPEER
663	866.8250	63	851.8250	Wayne C Bay	WAYNE
664	866.8375	64	851.8375	Ingham	LAKE INGHAM OAKLAND LAPEER
665	866.8500	65	851.8500	Wayne	WAYNE
666	866.8625	66	851.8625	Statewide	OSCEOLA IOSCO CHEBOYGAI WASHTEENAW WAYNE DELTA ONTANAGAN MARQUETTE CHIPPEWA
667	866.8750	67	851.8750	Statewide	MONTCALM LEELANAU NEWAYGO GRATIOT ST. CLAIR CALHOUN WASHTEENAW MARQUETTE HOUGHTON
668	866.8875	68	851.8875	Statewide	OTSEGO MECOSTA LEELANAU MACKINAC LIVINGSTON MARQUETTE GOGEBIC
669	866.9000	69	851.9000	Statewide	OSCODA WEXFORD NEWAYGO IONIA MACOMB MACKINAC DELTA BRANCH BARAGA GOGEBIC MACOMB
670	866.9125	70	851.9125	Statewide	OGEMAW MIDLAND MANISTEE PRESQUE ISLE OAKLAND MENOMINEE HILLSDALE MARQUETTE ONTANAGAI SCHOOLCRAFT
671	866.9250	71	851.9250	Statewide	KALKASKA MONTCALM SAGINAW PRESQUE ISLE MASON CHIPPEWA CALHOUN WAYNE DELTA IRON GOGEBIC KEWEENAW
672	866.9375	72	851.9375	Statewide	CLARE KALKASKA ALCONA LEELANAU MASON CHEBOYGAI SHIAWASSEE SANILAC WAYNE MENOMINEE BARAGA GOGEBIC
673	866.9500	73	851.9500	Statewide	MONTCALM BENZIE MECOSTA SAGINAW ST. CLAIR WASHTEENAW MARQUETTE IRON MACOMB
674	866.9625	74	851.9625	Statewide	ARENAC ALPENA MANISTEE NEWAYGO EMMET LUCE ALGER IRON HOUGHTON OAKLAND
675	866.9750	75	851.9750	Statewide	OTSEGO IOSCO ISABELLA PRESQUE ISLE OCEANA MACKINAC EATON WAYNE ALGER DICKINSON GOGEBIC HOUGHTON
676	866.9875	76	851.9875	Statewide	ALPENA CHARLEVOIX SAGINAW MANISTEE MACKINAC OAKLAND MACOMB ALGER MARQUETTE GOGEBIC KEWEENAW



****	Guard	****	852.0000	INTEROP 8TAC92			INTEROP 8TAC92									
677	867.0125	77	852.0125	Genesee			GENESEE OAKLAND									
****	Guard	****	852.0250	Calhoun Midland Wayne			MIDLAND WAYNE									
678	867.0375	78	852.0375	Lapeer			WEXFORD LAPEER EATON LENAWE									
679	867.0500	79	852.0500	Livingston			CRAWFORD WAYNE MIDLAND									
680	867.0625	80	852.0625	Calhoun Monroe Saginaw			CALHOUN WAYNE BAY									
681	867.0750	81	852.0750	Macomb			MISSAUKEE WAYNE									
682	867.0875	82	852.0875	Livingston			OAKLAND									
683	867.1000	83	852.1000	Wayne C St Clair			ANTRIM IONIA ST. CLAIR WAYNE ARENAC									
684	867.1125	84	852.1125	Saginaw			INGHAM LAPEER									
685	867.1250	85	852.1250	Oakland			SAGINAW JACKSON WAYNE									
686	867.1375	86	852.1375	Jackson Saginaw			SHIAWASEE									
687	867.1500	87	852.1500	Monroe			WAYNE IONIA									
688	867.1625	88	852.1625	Oakland			ALCONA CHEBOYGAN TUSCOLA MASON JACKSON MARQUETTE									
689	867.1750	89	852.1750	Unassigned			WAYNE									
690	867.1875	90	852.1875	Ingham Wayne C			CHARLEVOIX MASON IONIA WASHTENAW									
691	867.2000	91	852.2000	Unassigned			SHIAWASEE WASHTENAW									
692	867.2125	92	852.2125	Macomb			SAGINAW WAYNE									
693	867.2250	93	852.2250	Washtenaw			WAYNE WEXFORD EMMET INGHAM OAKLAND									
694	867.2375	94	852.2375	Unassigned			KALKASKA OAKLAND									
695	867.2500	95	852.2500	Wayne			WAYNE									
696	867.2625	96	852.2625	Ingham			WAYNE CALHOUN ROSCOMMON									
697	867.2750	97	852.2750	Macomb			WAYNE INGHAM									
698	867.2875	98	852.2875	Washtenaw			WAYNE									
699	867.3000	99	852.3000	Calhoun			KALKASKA GENESEE									
700	867.3125	100	852.3125	Oakland			OSCODA BARAGA ALGER CHIPPEWA WAYNE OSCEOLA GRAND TRAI HURON EMMET									
701	867.3250	101	852.3250	Monroe			MONTMOREN' LEE LANAU NEWAYGO GRATIOT ST. CLAIR CALHOUN WASHTENAW MARQUETTI HOUGHTON									
702	867.3375	102	852.3375	Jackson Saginaw Macomb			OTSEGO MECOSTA LEELANAU MACKINAC MACOMB LENAWE MARQUETTE GOGEBIC									
703	867.3500	103	852.3500	Statewide			OSCODA WEXFORD NEWAYGO IONIA CHIPPEWA MACKINAC MACOMB DELTA BRANCH MONROE BARAGA GOGEBIC GENESEE									
704	867.3625	104	852.3625	Statewide			KALKASKA MIDLAND PRESQUE IS IRON OAKLAND CHIPPEWA DELTA HILLSDALE GOGEBIC KEWEENAW									
705	867.3750	105	852.3750	Statewide			MONTMOREN' BENZIE MECOSTA SAGINAW CALHOUN WAYNE MARQUETTE IRON									
706	867.3875	106	852.3875	Statewide			ARENAC ALPENA MANISTEE NEWAYGO EMMET SHIAWASSE SANILAC WAYNE LUCE LENAWE ALGER IRON HOUGHTON									
707	867.4000	107	852.4000	Statewide			MIDLAND DICKINSON ALCONA LAKE CHEBOYGAI IONIA ST. CLAIR DELTA WASHTENAW MACOMB CHIPPEWA ONTONAGAI KEWEENAW									
708	867.4125	108	852.4125	Statewide			CLARE ALCONA EMMET BENZIE TUSCOLA INGHAM CHIPPEWA LUCE MARQUETTI HOUGHTON OAKLAND									
709	867.4250	109	852.4250	Statewide			ISABELLA ALPENA CHARLEVOIX MANISTEE OCEANA LAPEER MACKINAC WAYNE MONROE ALGER MARQUETTI KEWENAW GOGEBIC									
710	867.4375	110	852.4375	Statewide			SAGINAW PRESQUE ISLE ANTRIM HURON OAKLAND MACOMB CHIPPEWA SCHOOLCR' DICKINSON HOUGHTON									
****	Guard	****	852.2000	INTEROP 8TAC93			INTEROP 8TAC93									
715	867.5125	115	852.5125	Keweenaw Luce Monroe Shiawassee			LAPEER									
****	Guard	****	852.2250	Oakland			WAYNE									
716	867.5375	116	852.5375	Unassigned			WEXFORD JACKSON DICKINSON CHIPPEWA LAPEER GENESEE									
717	867.5500	117	852.5500	Wayne C			WAYNE									
718	867.5625	118	852.5625	Ingham			SAGINAW OAKLAND MACKINAC WEXFORD									
719	867.5750	119	852.5750	Unassigned			WAYNE INGHAM									
720	867.5875	120	852.5875	Oakland			WASHTENAW									
721	867.6000	121	852.6000	Monroe			WAYNE BAY									
722	867.6125	122	852.6125	Ingham			WEXFORD LAPEER EATON									
723	867.6250	123	852.6250	Lapeer			MACOMB									
724	867.6375	124	852.6375	Oakland			MISSAUKEE GENESEE									
725	867.6500	125	852.6500	Hillsdale			LAKE MACOMB HILLSDALE									
726	867.6625	126	852.6625	Livingston			ROSCOMMOI ST. CLAIR WASHTENAW									
727	867.6750	127	852.6750	Lenawee			WAYNE INGHAM									
728	867.6875	128	852.6875	Unassigned			CALHOUN WAYNE ALGER KALKASKA CHIPPEWA MONTCALM									
729	867.7000	129	852.7000	Saginaw			GENESEE									
730	867.7125	130	852.7125	Washtenaw			MIDLAND PRESQUE ISLE MACOMB JACKSON MARQUETTI IONIA									
731	867.7250	131	852.7250	Unassigned			WAYNE									
732	867.7375	132	852.7375	Washtenaw			LAPEER JACKSON									
733	867.7500	133	852.7500	Saginaw			EMMET SHIAWASEE WAYNE									
734	867.7625	134	852.7625	Lapeer			WAYNE									
735	867.7750	135	852.7750	Wayne			JACKSON WAYNE BAY									
736	867.7875	136	852.7875	Genesee Keweenaw Luce			OAKLAND									
737	867.8000	137	852.8000	Jackson Wayne C			CRAWFORD WAYNE									
738	867.8125	138	852.8125	Bay			KALKASKA OAKLAND									
739	867.8250	139	852.8250	Genesee Wayne C			EATON WAYNE									
740	867.8375	140	852.8375	Jackson			OSCEOLA MARQUETTE DELTA WAYNE IOSCO CHEBOYGAI WASHTENAW CHIPPEWA									
741	867.8500	141	852.8500	Midland Wayne			WASHTENAW MONTMOREN' LEE LANAU NEWAYGO GRATIOT MACKINAC ST. CLAIR CALHOUN MARQUETTI HOUGHTON									
742	867.8625	142	852.8625	Statewide			ALGER BARAGA OSCODA GTRAND TR MECOSTA HURON EMMET WAYNE CHIPPEWA LENAWE									
743	867.8750	143	852.8750	Statewide			MONTMOREN' BENZIE MECOSTA IONIA MACOMB MARQUETTI IRON MONROE									
744	867.8875	144	852.8875	Statewide			SCHOOLCRAF HILLSDALE MARQUETTI MENOMINEE OGE MAW MANISTEE SAGINAW NEWAYGO PRESQUE IS WAYNE ONTONAGAN									
745	867.9000	145	852.9000	Statewide			MACKINAC MINOMINEE CALHOUN OSCODA MARQUETTI WEXFORD CHARLEVOIX MONTCALM SAGINAW MASON CHIPPEWA WAYNE ONTONAGAN									
746	867.9125	146	852.9125	Statewide			MENOMINEE CLARE KALKASKA ALCONA LENAWE MASON CHEBOYGAN SHIAWASSE SANILAC BARAGA LEE LANAU GOGEBIC									
747	867.9250	147	852.9250	Statewide			CHIPPEWA DICKINSON MIDLAND ALCONA LAKE CHEBOYGAI IONIA LIVINGSTON DELTA ST. CLAIR KEWEENAW ONTONAGAI MACOMB									
748	867.9375	148	852.9375	Statewide			CLARE ALPENA CHARLEVOIX MANISTEE TUSCOLA INGHAM MACKINAC JACKSON WAYNE ALGER MARQUETTI GOGEBIC KEWEENAW									
749	867.9500	149	852.9500	Statewide			OTSEGO IOSCO ISABELLA PRESQUE IS OCEANA LAPEER MACKINAC EATON WAYNE ALGER DICKINSON GOGEBIC HOUGHTON									
750	867.9625	150	852.9625	Statewide			PRESQUE ISL ANTRIM SAGINAW HURON MACOMB CHIPPEWA SCHOOLCRAF DICKINSON HOUGHTON									
751	867.9750	151	852.9750	Statewide												
752	867.9875	152	852.9875	Statewide												
****	Guard	****	853.0000	INTEROP 8TAC94			INTEROP 8TAC94									
753	868.0125	153	853.0125													

****	Guard	****	883.0250																		
754	868.0375	154	863.0375	Monroe	Saginaw	ST. CLAIR	OAKLAND														
755	868.0500	155	863.0500	Livingston		CALHOUN	WAYNE														
756	868.0625	156	863.0625	Saginaw		LAPEER	JACKSON														
757	868.0750	157	863.0750	Calhoun	Wayne	WAYNE															
758	868.0875	158	863.0875	Genesee		WAYNE	MISSAUKEE														
759	868.1000	159	863.1000	Wayne		WAYNE		EATON	GENESEE												
760	868.1125	160	863.1125	Lapeer		LAKE	LAPEER	EATON	GENESEE												
761	868.1250	161	863.1250	Eaton	Wayne	WAYNE															
762	868.1375	162	863.1375	Genesee	Hillsdale	WAYNE															
763	868.1500	163	863.1500	Washtenaw		GENESEE															
764	868.1625	164	863.1625	Branch	Saginaw	Macomb															
765	868.1750	165	863.1750	Unassigned		ANTRIM	WAYNE	OAKLAND													
766	868.1875	166	863.1875	Calhoun	Genesee	Wayne C		MECOSTA	EMMET	JACKSON	MARQUETT	LUCE									
767	868.2000	167	863.2000	Ingham		SAGINAW	WAYNE	WEXFORD	INGHAM	OAKLAND											
768	868.2125	168	863.2125	Wayne		ROSCOMMO	GENESEE														
769	868.2250	169	863.2250	Ingham	Midland	WAYNE															
770	868.2375	170	863.2375	Lapeer	Monroe	WAYNE															
771	868.2500	171	863.2500	Livingston	Midland	WASHTENAW	TUSCOLA														
772	868.2625	172	863.2625	Calhoun	Roscommon	St Clair	CRAWFORD	MACOMB													
773	868.2750	173	863.2750	Midland	Osceola	Oakland	OTSEGO	GENESEE													
774	868.2875	174	863.2875	Jackson	Wexford	Wayne C	WAYNE		Arenac												
775	868.3000	175	863.3000	Gratiot	Oscoda	Macomb	WAYNE	GRATIOT	WAYNE	Bay											
776	868.3125	176	863.3125	Jackson	Osceola	Wayne C	ST. CLAIR	JACKSON													
777	868.3250	177	863.3250	Genesee	Montcalm	Ogemaw	LIVINGSTON	PRESQUE ISLE													
778	868.3375	178	863.3375	Calhoun	Missaukee	Oceana	WAYNE	BAY	Wayne												
779	868.3500	179	863.3500	Genesee		Isabella	LAPEER	ISABELLA													
780	868.3625	180	863.3625	Statewide		Manistee	IOSCO	CHEBOYGAN	MASON	WAYNE	DELTA	MARQUETT	ONTONAGAN								
781	868.3750	181	863.3750	Statewide			BARAGA	OSCODA	GRAND TRA	GRATIOT	HURON	EMMET	GENESEE	ST. CLAIR	CALHOUN	WASHTENAW	CHIPPEWA	ALGER			
782	868.3875	182	863.3875	Statewide			ARENAC	ALPENA	MANISTEE	NEWAYGO	GENESEE	EMMET	LUCE	LENAWEE	ALGER	IRON	HOUGHTON				
783	868.4000	183	863.4000	Statewide			KALKASKA	PRESQUE ISLE	NEWAYGO	IONIA	CHIPPEWA	MACOMB	DELTA	MONROE	IRON	BRANCH	GOGEBIC	KEWEENAW			
784	868.4125	184	863.4125	Statewide			OGEWAW	MIDLAND	MANISTEE	PRESQUE IS	WAYNE	SCHOOLCR	MENOMINEE	MARQUETT	ONTONAGAN						
785	868.4250	185	863.4250	Statewide			OSCODA	WEXFORD	CHARLEVOI	MONTCALM	MASON	CHIPPEWA	OAKLAND	MACKINAC	CALHOUN	MENOMINEE	MARQUETT	ONTONAGAN			
786	868.4375	186	863.4375	Statewide			CLARE	KALKASKA	ALCONA	LEELANAU	MASON	CHEBOYGAI	SHIAWASSEE	SANILAC	WAYNE	LENAWEE	BARAGA	MENOMINEE	GOGEBIC		
787	868.4500	187	863.4500	Statewide			DICKINSON	MIDLAND	ALCONA	LAKE	CHEBOYGAI	IONIA	ST. CLAIR	DELTA	JACKSON	CHIPPEWA	KEWEENAW	ONTONAGAN			
788	868.4625	188	863.4625	Statewide			CLARE	ALCONA	EMMET	BENZIE	TUSCOLA	INGHAM	CHIPPEWA	LUCE	MARQUETT	HOUGHTON	OAKLAND				
789	868.4750	189	863.4750	Statewide			OTSEGO	IOSCO	ISABELLA	PRESQUE IS	OCEANA	LAPEER	MACKINAC	EATON	WAYNE	ALGER	DICKINSON	GOGEBIC	HOUGHTON		
790	868.4875	190	863.4875	Statewide			SAGINAW	PRESQUE ISLE	ANTRIM	HURON	OAKLAND	CHIPPEWA	SCHOOLCR	LENAWEE	DICKINSON	HOUGHTON					
791	868.5000	191	863.5000	Statewide			GRAND TRAVEL	SAGINAW	WAYNE												
792	868.5125	192	863.5125	Ingham	Kalkaska	Tuscola	INGHAM	OAKLAND													
793	868.5250	193	863.5250	Emmet	Gladwin	Leelanau	WAYNE														
794	868.5375	194	863.5375	Iosco	Monroe	Sanilac	Shiawassee	Mackinaw	Marquette	Ontonagon											
795	868.5500	195	863.5500	Cheboygan	Gr. Traverse	Keweenaw	Mackinac	Bay	Delta	Oakland											
796	868.5625	196	863.5625	Crawford	Iron		IONIA	WAYNE													
797	868.5750	197	863.5750	Alpena	Charlevoix	Houghton	MASON	LIVINGSTON	ST. CLAIR	MARQUETT	CHIPPEWA										
798	868.5875	198	863.5875	Benzie	Clare	Clinton	HURON	WAYNE	DICKINSON												
799	868.6000	199	863.6000	Alcona	Antrim	Baraga	Hillsdale	Lake	Lucas	Bay	Macomb	Menominee	KALKASKA	LAPEER	MARQUETTE						
800	868.6125	200	863.6125	Washtenaw			LIVINGSTON														
801	868.6250	201	863.6250	Bay	Macomb		WAYNE														
802	868.6375	202	863.6375	Genesee	Lenawee	Roscommon	ROSCOMMO	ST. CLAIR	LENAWEE												
803	868.6500	203	863.6500	Midland	Wayne		WAYNE														
804	868.6625	204	863.6625	Eaton	Lapeer	Osceola	OAKLAND														
805	868.6750	205	863.6750	Livingston	Midland		WAYNE	INGHAM	MIDLAND												
806	868.6875	206	863.6875	Monroe	Montcalm	Oscoda	WAYNE														
807	868.7000	207	863.7000	Calhoun	Midland	Oakland	WAYNE	MIDLAND													
808	868.7125	208	863.7125	Ogemaw	Presque Isle	Wexford	WAYNE														
809	868.7250	209	863.7250	Isabella	Osceola	Washtenaw	OTSEGO	WAYNE	GENESEE												
810	868.7375	210	863.7375	Genesee	Missaukee	Oceana	WAYNE														
811	868.7500	211	863.7500	Calhoun	Gratiot	Manistee	INGHAM	TUSCOLA	LAPEER												
812	868.7625	212	863.7625	Ingham	Kalkaska	Tuscola	LEELANAU	CALHOUN	WAYNE												
813	868.7750	213	863.7750	Calhoun	Emmet	Gladwin	Leelanau	Newaygo	Schoolcraft	Wayne											
814	868.7875	214	863.7875	Iosco	Sanilac	Shiawassee	LAPEER	JACKSON	MARQUETTE												
815	868.8000	215	863.8000	Cheboygan	Gr. Traverse	Jackson	SAGINAW	WAYNE	DICKINSON	BAY	Delta										
816	868.8125	216	863.8125	Crawford	Iron	Lapeer	IONIA	LAPEER	WASHTENAW	BRANCH											
817	868.8250	217	863.8250	Alpena	Charlevoix	Houghton	MASON	SAGINAW	WASHTENAW	ALGER	CHIPPEWA										
818	868.8375	218	863.8375	Benzie	Clare	Clinton	WAYNE	MARQUETTE	HURON												
819	868.8500	219	863.8500	Alcona	Antrim	Baraga	Branch	Lake	Livingston	Lucas	Bay	Menominee	LIVINGSTON	ST. CLAIR	LAKE						
820	868.8625	220	863.8625	Statewide			IOSCO	SAGINAW	CHEBOYGAI	WAYNE	DELTA	MARQUETT	ONTONAGAN	CHIPPEWA							
821	868.8750	221	863.8750	Statewide			ARENAC	MONTMORENC	BENZIE	GRATIOT	ST. CLAIR	CALHOUN	WASHTENAW	MARQUETT	IRON						
822	868.8875	222	863.8875	Statewide			OTSEGO	MECOSTA	LEELANAU	GENESEE	MACKINAC	LENAWEE	MARQUETTE	GOGEBIC							
823	868.9000	223	863.9000	Statewide			OSCODA	WEXFORD	NEWAYGO	IONIA	MACKINAC	MACOMB	DELTA	MONROE	BARAGA	GOGEBIC					
824	868.9125	224	863.9125	Statewide			MARQUETTE	MENOMINEE	WAYNE	OGEWAW	MIDLAND	MANISTEE	PRESQUE ISLE	ONTONAGAI	SCHOOLCRAFT						
825	868.9250	225	863.9250	Statewide			OSCODA	WEXFORD	CHARLEVOI	CHIPPEWA	OAKLAND	MACKINAC	CALHOUN	MENOMINEE	MARQUETT	ONTONAGAN					
826	868.9375	226	863.9375	Statewide			CLARE	KALKASKA	ALCONA	LEELANAU	CHEBOYGAI	SHIAWASSEE	SANILAC	WAYNE	LENAWEE	MENOMINEE	BARAGA	GOGEBIC			
827	868.9500	227	863.9500	Statewide			ALPENA	CHARLEVOIX	MANISTEE	OAKLAND	JACKSON	ST. CLAIR	ALGER	MARQUETT	GOGEBIC	KEWEENAW					
828	868.9625	228	863.9625	Statewide			CLARE	ALCONA	EMMET	BENZIE	TUSCOLA	INGHAM	CHIPPEWA	WAYNE	LUCE	MARQUETT	HOUGHTON				
829	868.9750	229	863.9750	Statewide			OTSEGO	IOSCO	PRESQUE IS	LAPEER	MACKINAC	EATON	WAYNE	ALGER	DICKINSON	GOGEBIC	HOUGHTON				
830	868.9875	230	863.9875	Statewide			SAGINAW	PRESQUE ISLE	ANTRIM	HURON	OAKLAND	MACOMB	CALHOUN	CHIPPEWA	SCHOOLCR	DICKINSON	HOUGHTON				

## Appendix D

### Committee Structure and By-Laws

## APPENDIX D

### MPSFAC Committee Structure

Agency	Number of Representatives
Michigan State Police	2
Michigan Department of Natural Resources	1
Michigan Department of Public Health	1
Michigan Municipal League	1
Michigan Sheriffs Association	1
Michigan Association of Chiefs of Police	1
Michigan Department of Transportation	1
EMS service providers	1
MI APCO frequency advisor	1
Forestry Conservation Communications Association	1
Michigan Association of Fire Chiefs	1

There are also four (4) members of the committee appointed by APCO representing city (one from the City of Detroit) or county public safety agencies that have a background in either or both of the following:

1. radio frequency systems
2. public safety answering point

#### MPSFAC Meetings

The MPSFAC meetings function in accordance with Roberts Rules of Order.

#### MPSFAC Routine Duties

- A chairman is elected during the first meeting each year.

Meetings are scheduled at the call of the chair but are usually held the second Thursday every other month. Applications are to be sent to committee members by the applicant two weeks prior to the meeting. The applicant can obtain the addresses from the MPSFAC secretary.

## Appendix D page 2

- Review application(s) based upon the Region 21 matrix. Review application(s) for interoperability technical requirements. Further, the MPSFAC will review the application(s) for interoperability operational requirements if there is no SIEC.
- Deal with appeals/application clarification and consider applicant presentations.
- Interact with applicants to determine if the implementation of their systems is in accordance with their applications.
- Maintain coordination with neighboring regional committees and other FCC certified frequency coordinators and their advisors.
- Promulgate other rules and procedures as needed to operate efficiently and effectively. Further, the MPSFAC will adjust its membership, as needed, to insure that it is representative of the agencies it serves.

**MICHIGAN PUBLIC SAFETY  
 FREQUENCY ADVISORY COMMITTEE  
 BY LAWS  
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MICHIGAN PUBLIC SAFETY  
FREQUENCY ADVISORY COMMITTEE

BY LAWS

## **Article I: Name and Purpose**

### **Section 1. Name:**

This organization shall be known as the Michigan Public Safety Frequency Advisory Committee (MPSFAC).

### **Section 2. Purpose:**

This committee will implement the 806Mhz and 700Mhz Region 21 Frequency Plans as authorized by FCC Docket #87-112 , 90-221 and Docket #96-86 and FCC Part 90 Subpart "R" and "S". , and modify these plans as changes in law and need may require. Encourage the implementation of Interoperability of radio systems. Inform the Public Safety Community on matters of FCC regulation and Public Safety Communications in general. Attempt to mitigate interference problems brought to the committee's attention. Represent Region 21 before the FCC and other regulatory agencies in regard to proposed policy and rule changes. Assist APCO Frequency Advisors with their duties as they may request.

## *Article II: Organization and Operation.*

### **Section 1. Authority:**

This Committee (MPSFAC) shall operate as a volunteer-staffed, independent non-profit body constituted under regulations created by the Federal Communications Commission in the National Public Safety Planning Advisory Committee proceeding identified as Docket 87-112, 90-221 and Docket 96-86 and the Michigan Region 21 plans.

### **Section 2. Voting:**

All meetings shall be conducted by Roberts Rules of Order. All actions of the Committee may be approved by a simple majority vote of representatives attending a regularly scheduled and pre-announced Committee meeting that has a quorum. Should action be required between meetings an e-mail or telephone vote may be taken by the Chairperson and will require a majority of official committee members for approval.

### Section 3. Quorum:

A quorum must be present to conduct a formal vote on any motion. A quorum shall be five duly authorized members present at an officially announced meeting.

### Section 4. Officers;

The MPSFAC shall have a Chairperson, Vice Chairperson and Secretary/Treasurer. Officers shall be elected at the first meeting after Jan 1<sup>st</sup> of every year and serve a term of 1 year.

#### A: Duties:

Chairperson: Shall conduct all meetings, call special meetings as needed, appoint committees, develop agendas and enforce these by laws.

Vice Chairperson: Shall assume duties of the Chairperson in case the chairperson is absent.

Secretary/Treasurer: Shall record minutes of all meetings and maintain them in a binder available at meetings for review. Minutes shall include record of all applications submitted to the committee and actions taken. Send announcements of meetings by e-mail to all members. Administer any funds that may be used by the MPSFAC and submit a financial report to each meeting if funds are available.

#### B: Vacancies of Officers:

Chairperson shall fill any vacancies that occur between elections by appointment. In case of vacancy of the Chairperson the Vice Chairperson shall serve as Chairperson until the next election.

### Section 5. Finance:

Individual Committee Members, Officers and Representatives expenses for their attendance at meetings shall be borne by those individuals. The MPSFAC may accept any grants, gifts and donations that are offered or solicited for expenses and activities directly related to the business of the committee. Any funds shall be accounted for and in the custody of the Secretary/Treasurer.

### *Article III: Policy and Procedure.*



### Section 1. Equality:

The services of the MPSFAC shall be made available equally to all applicants and licensees in the Michigan Public Safety Community.

### Section 2. Applications:

All applications shall be submitted at least two weeks before the next scheduled MPSFAC meeting for consideration at that meeting. The Chairperson may waive this under special conditions. Copies of the application must be sent to all current members at that time. E Mail copies are sufficient. A hard copy must be submitted to the Chairperson or Secretary/Treasurer.

### Section 3, Application Content:

Applications must contain sufficient information to allow the committee to fully evaluate the application. This shall include all information called for in the appropriate Region 21 Plan and any other supplemental information that will aid the Committee in evaluating the application.

### Section 4. Application Approval:

Applications will require a majority vote of the members present at a regular scheduled Committee meeting having a quorum. The Chairperson may also, under special circumstances, request a vote on an application outside of a regularly scheduled meeting. Such a vote may be conducted by telephone or e-mail after distribution of the Application to all committee members. Under these circumstances a majority vote of the current membership is necessary to approve the application. Failure to obtain valid response from a simple majority of the membership shall table the application until the next scheduled meeting.

### Section 5. Interoperability:

MPSFAC shall create, adopt and follow policy and procedure to assure that interoperability channels identified by the FCC, Proper Band Plans and the MPSFAC are protected and promoted. MPSFAC shall encourage work done to establish interoperability channels and plans in Michigan and Nationally.

### Section 6. Policy & Procedure Record:

The MPSFAC shall maintain a record of committee established Policy and Procedure in addition to meeting minutes. This Policy & Procedure book shall be generated and maintained by the Secretary/Treasurer or a member appointed by the Chairperson. This Policy Book shall be made available at all meetings and made available for members to copy.

## *Article IV: Membership.*

### **Section 1. Qualifications:**

Member and Alternate Representatives of the MPSFAC shall be employed by or retired from a Public Safety Organization. Members who have interest or benefit directly or indirectly from the actions of the MPSFAC must abstain from any such vote.

### **Section 2. Membership :**

The MPSFAC shall be composed of at least nine Members but not more than fourteen. Drawn from Agencies or Representative Organizations of eligible licensees as described in FCC Part 90 Subpart "R" and "S" , Eligibility Section and/or the appropriate 800 or 700mhz Region 21 Plans.

### **Section 3: Petition For Membership To the Committee:**

Addition or deletion of Members to the MPSFAC may be made by a majority vote of the committee at a regular committee meeting with a quorum. New Member requests must be made to the Chairman in writing.

### **Section 4: Member Appointment:**

A Primary and Alternate Member shall be designated by each Member Organization and shall meet the requirements of Section 1 of this Article. Appointments must be received on respective organization letter head and signed by the organizations appropriate officer. If no change is received by January 31 of each year in writing to the Chairperson of MPSFAC it shall be assumed that the preceding year Member Representative is reappointed.

### **Section 5: Representative Responsibility:**

Each appointed representative shall represent the interest of their appointing authority, the Public Safety Community and the goals and objectives of the MPSFAC. Each representative shall notify the Secretary if they are unable to attend a meeting and notify their Alternate to attend. Each representative shall have one vote, may hold office if selected and serve on Sub-Committees as appointed by the Chairperson.

### **Section 6: Alternate Representative:**

Alternate Member Representatives must meet the requirements of Article IV Section 1. Alternates may attend any meeting of the MPSFAC but may vote only in the absence of the Primary Representative. Member Alternates may serve on Sub-Committees if appointed by the Chairperson.

## *Article V. Meetings:*

### **Section 1. Schedule:**

MPSFAC shall meet at least twice a year and may meet at the discretion of the majority members or by call of the Chairperson. Time and Location of meetings shall be at the call of the Chairperson or majority vote at a meeting.

### **Section 2. Notification:**

The Secretary shall notify each Member Representative by e-mail two weeks in advance with the place and date of the next meeting. Member organizations and MPSFAC may also post meeting schedules on their Web Sites.

### **Section 3. Attendance:**

All meetings are open to Public Attendance. Applicants and their engineering and vendor support are encouraged to attend. The Chairperson shall acknowledge the Public in Attendance and ask for name and representation. Chairperson shall give opportunity for Public Comments at each meeting.

## *Article VI. Communications:*

### **Section 1. Official Communications:**

Official Communications of the MPSFAC, written, oral or electronic shall only come directly from the Chairperson or authorized member as approved by a majority vote at any MPSFAC meeting or by appointment of Chairperson in writing. All written communications shall be on an approved MPSFAC letterhead and be approved by majority vote at any MPSFAC meeting.

### **Section 2. FCC Comments:**

At the direction of the MPSFAC majority at any meeting the Chairperson or designated member shall comment or respond to any FCC proceeding in the Committees name to support and promote Public Safety Communication.

### **Section 3. Publication:**

The MPSFAC may upon majority vote at any meeting direct the publication of any Brochure, Letter, Newsletter or Magazine Article as they may see fit to educate, inform and instruct the Public Safety Community regarding all Communication matters.

#### Section 4. Website:

The MPSFAC may maintain an electronic Web Site under the direction of the Chairperson or appointed Webmaster, with the purpose of Communicating with the Public Safety Community. Content shall be kept current and reviewed by all members and may be altered by majority vote.

#### *Article VII. Bylaw Changes:*

##### Section 1. Proposal:

Any member organization representative may suggest an amendment to the bylaws and present it to the Chairperson in writing. It shall be reviewed at the next MPSFAC meeting. The drafted change shall then be sent to all Members by US Mail or e-mail within 30 days along with the date and place a meeting will be held for vote.

##### Section 2. Bylaw Voting:

It shall require a 2/3 affirmative vote by members present at a regular scheduled and announced meeting with a quorum. Change shall be effective immediately.

#### *Article VIII. Dissolution.*

##### Section 1. Assets:

Upon dissolution of the MPSFAC all assets shall be distributed as follows. Any remaining grant funds shall be returned to the granting authority. Any other funds shall be dispersed as directed by a Majority vote of the membership representatives.

##### Section2. Records:

Records of the committee shall be maintained in a secure place where they may be available to any past applicant or member as directed by a majority vote of the MPSFAC.

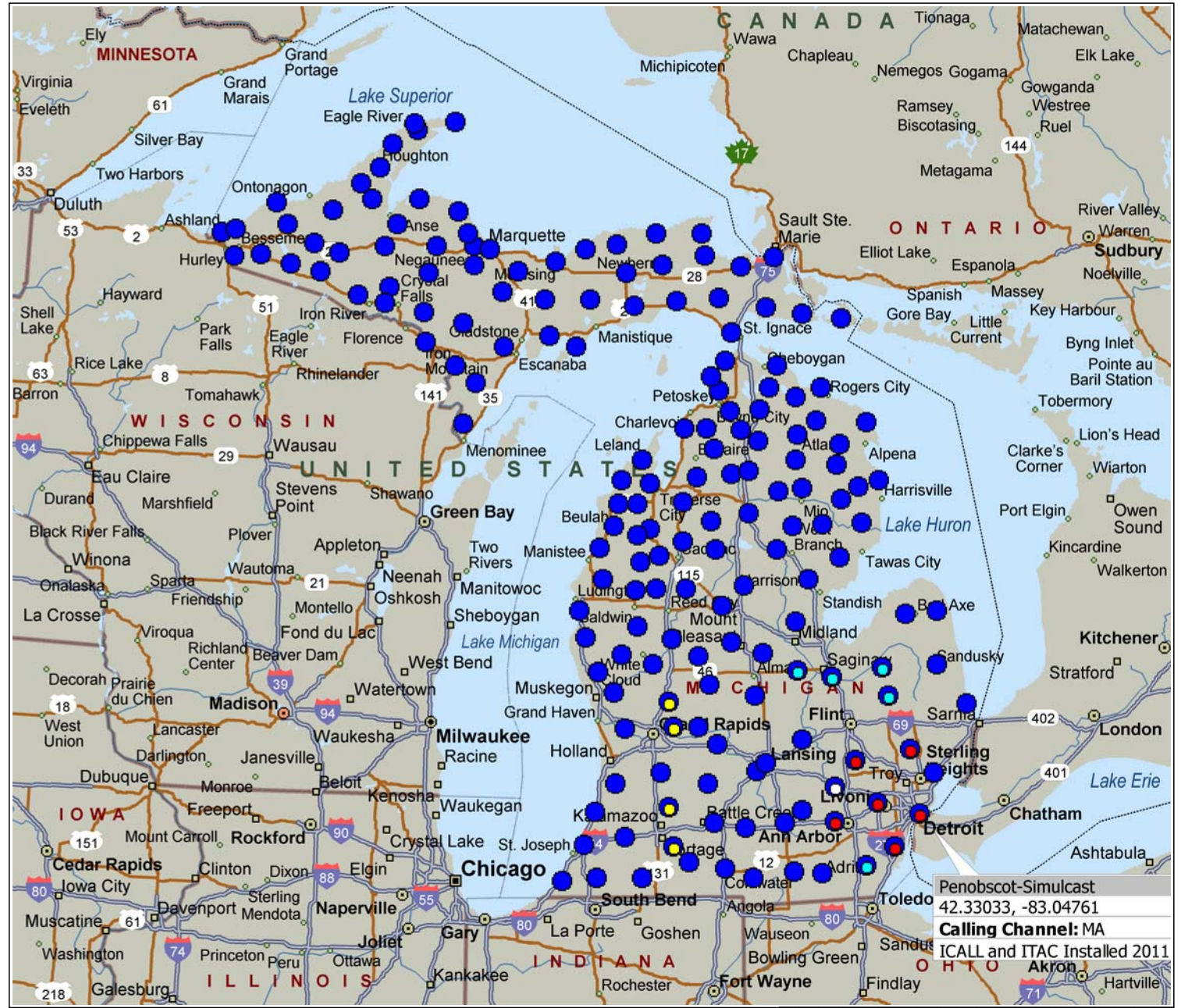
## Appendix E

### 8CALL System Map

# MPSCS Mutual Aid Map (062911)

## Pushpins

- Mutual Aid ICALL Locations
- TAC1 by Latitude & Longitude**
- TAC1
- TAC4 by Latitude & Longitude**
- TAC4
- TAC3 by Latitude & Longitude**
- TAC3
- TAC2 by Latitude & Longitude**
- TAC2



Penobscot-Simulcast  
 42.33033, -83.04761  
**Calling Channel: MA**  
 ICALL and ITAC Installed 2011