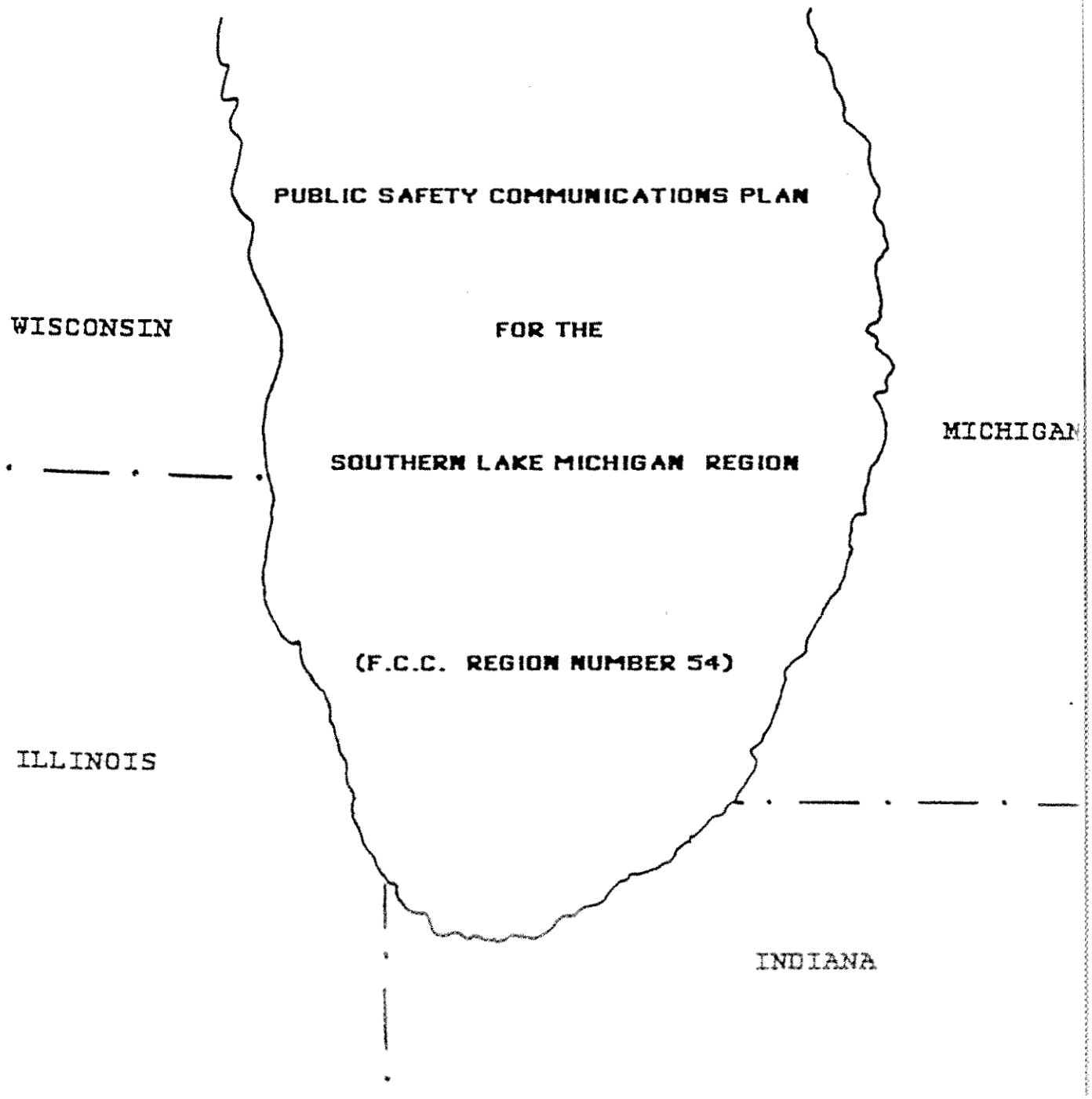
SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMITTEE



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PREFACE

In December 1983, the United States Congress directed the Federal Communications Commission (FCC) to establish a plan to ensure that the communications needs of state and local public safety authorities would be met for the future. The Commission issued a Notice of Inquiry on March 7, 1984 and evaluated over three hundred comments from the public safety community and other interested parties.

These comments formed the basis for a Staff Report issued by the Commission's Private Radio Bureau on August 1, 1985. This report suggested various methods of meeting the communications needs of public safety. One option included was the allocation of additional frequencies at 821-825 MHz and 866-870 MHz.

The Commission issued an allocation order on September 19, 1986. Six Megahertz of spectrum were selected in the 821-824 MHz and 866-869 MHz bands, since they were adjacent to frequencies already being used for public safety purposes. However, while the Commission made this allocation, it also stipulated that the frequencies could not be used until a National Plan for spectrum utilization was adopted.

The Commission then established the National Public Safety Planning Advisory Committee (NPSPAC) in December, 1986. This committee had open membership and all interested parties were invited to participate in its meetings.

The Commission charged NPSPAC with the following tasks:

(1.) Identify communications requirements of public safety agencies.

(2.) Develop a scheme for efficient use of the new frequencies.

(3.) Develop a scheme to increase the utility of existing public safety frequencies.

(4.) Recommend the manner in which new technologies can be applied to public safety frequencies.

(5.) Recommend guidelines to ensure compliance with the National Plan.

NPSPAC submitted its Initial Report to the Commission in March, 1987. On May 15, 1987 the Commission issued a Notice of Proposed Rule making proposing policies and rules for the National Plan. NPSPAC then issued its Final Report in September, 1987. On December 18, 1987 the Commission released a Report and Order regarding the development and implementation of a Public Safety National Plan: General Docket No. 87-112.

In its introductory comments the Commission expresses its belief that "while certain technical concerns must be addressed at the national level, the great diversity of needs in different areas of the country demand that input also be obtained at the State and Local levels." Thus, the United States was divided into Regions, primarily along State boundaries. A few large metropolitan areas were designated as independent Planning Regions.

Prior to the Report and Order, NPSPAC's Final Report had recommended a total of fifty-four (54) Planning Regions. The Chicagoland megalopolis was one of these. However, when the Report and Order was released, the Commission had established only forty-eight (48) Planning Regions. The multi-state Chicago megalopolis was specifically excluded from the list, as were other densely populated metropolitan areas around the country. A Petition for Limited Reconsideration was filed by NPSPAC on February 12, 1988 asking that additional planning regions be established, as previously recommended. The Commission subsequently granted this Petition and established fifty-five regions, including the Chicago Metro area.

This document constitutes the Public Safety Communications Plan for Region No. 54: The Southern Lake Michigan Planning Region. It addresses the unique spectrum allocation requirements of the public safety and governmental authorities throughout this multi-state area. It is respectfully submitted to the Commission this ---- day of ------ -------- under the umbrella of the National Plan.

Teddy F. Vratny, Chairman

THE REGION

ESTABLISHMENT OF REGIONAL BOUNDARIES

For Public Safety Communications purposes, the Southern Lake Michigan Region (the Region) is the geographic area surrounding the southern tip of Lake Michigan. The Region is comprised of forty-three counties within the four States of Wisconsin, Illinois, Indiana, and Michigan. Its approximately thirteen million people represents more than five percent of the Nation's population.

Protecting the lives and property of these persons is a function of hundreds of Public Safety and Special Emergency agencies which are operated or regulated by a multitude of various political jurisdictions. Personal mobility and the proximity of communities in today's metropolitan areas demand cooperation and coordination among these agencies. Whether the activity is search and rescue across Lake Michigan, or the pursuit of a criminal offender along the Tri-State Tollway, mobile and portable radios provide the means for the myriad of agencies involved to communicate with each other.

Radio communications also provide the means for each agency to accomplish its own individual, day-to-day operations. These communications must be reliable, and free from interference from neighboring agencies. Therefore, frequencies must be assigned to agencies throughout a given area in a manner that makes inter-agency communication possible, but prevents inter-agency interference.

Other issues to be considered when determining what area should comprise a Planning Region are: the continuing urbanization of outlying counties; the sophistication of radio technology; and most importantly, the amount of radio spectrum available to public safety agencies throughout the area.

Since agencies from around the southern tip of Lake Michigan affect each other more on these issues than they affect agencies in other parts of their own States, the decision to form a multi-state planning region was made.

The initial boundaries of the Southern Lake Michigan Region were determined by drawing a circle on a midwestern map, using downtown Chicago as the center and a 110 mile radius. Tangents were then drawn to this circle. The result was a densely populated area with a history of radio frequency problems covering 40,000 square miles. These boundaries were adopted as the starting point for definition of the Region on December 10, 1987.

Final boundaries for the Region, along county lines, were drawn in February, 1988 when the Petition was filed with the Commission. The forty-three counties which comprise the Southern Lake Michigan 800 MHz Planning Region are listed in Table 1, as shown in Figure 1.

PRELIMINARY ORGANIZATION

Monthly meetings for the planning process began in September of 1987. Deliberations on administrative and technical questions began at that time, using the Regional Planning Tasks published by NPSPAC as a functional basis for organizing small work groups. Much of the groundwork thus had already been done prior to the formal creation of the Region.

In March, 1988 four individuals were designated by the Associated Public-Safety Communications Officers, Inc. (APCO) as Co-Conveners for the Region: Teddy F. Vratny (Illinois); Donald Kottlowski (Indiana); David Held (Michigan); and Carl Guse (Wisconsin). They then prepared and published an announcement of the first official meeting for persons interested in participating in the planning process.

NOTIFICATION OF ELIGIBLES

In General Docket No. 87-112, the FCC declared that since the Public Safety Radio Service and the Special Emergency Radio Service both play important roles in public safety, it is necessary to make both services eligible to operate in the 821-824/866-869 MHz bands.

COUNTY POPULATION ESTIMATES

	CURRENT[1]	1995[2]	2005[2]
WISCONSIN			
Kenosha	121,100	117,862	113,243
Racine	171,600	173,361	173,262
Milwaukee	937,500	890,453	844,791
Ozaukee	68,400	73,997	78,795
Washington	88,400	98,102	106,378
Waukesha	285,400	306,400	315,476
Dodge	75,900	80,078	81,504
Dane	341,400	360,961	377,383
Walworth	71,200	74,330	78,255
Rock	138,300	141,898	142,330
Jefferson	67,200	69,203	71,062
ILLINOIS			
Winnebago	250,800	250,345	246,472
Boone	29,100	30,017	30,690
McHenry	158,600	180,372	196,522
Lake	468,600	603,346	533,537
Cook	5,294,900	5,394,332	5,448,171
DuPage	716,200	828,757	884,683
Kane	299,000	344,672	379,274
De Kalb	73,600	73,111	75,073
Kendall	37,000	37,503	37,464
Will	334,100	367,757	402,451
Grundy	31,200	32,187	32,616
Kankakee	98,600	94,705	92,471
INDIANA			
Lake	496,900	481,920	466,720
Porter	122,900	131,210	135,840
La Porte	106,500	101,970	97,610
Newton	14,100	13,880	13,440
Jasper	26,500	27,420	27,800
Pulaski	13,400	14,410	14,980
Starke	21,200	21,320	21,190
Marshall	41,300	43,110	44,530
St. Joseph	241,500	240,930	243,760
Elkhart	145,300	154,450	160,460
MICHIGAN			
Ottawa	167,100	190,900	216,000
Muskegon	156,900	153,600	148,600
Kent	467,200	496,700	523,200
Allegan	85,200	95,000	106,900
Van Buren	66,400	77,200	85,000
Berrien	162,700	168,200	166,600
Kalamazoo	214,100	218,800	219,100
Cass	48,300	52,600	55,600
Barry	46,800	52,600	58,000
St. Joseph	58,300	65,100	72,500
TOTALS:	12,860,700	13,425,069	13,619,733

1. U.S. Census Bureau, Current Population Reports, 1985
2. WI.: State of Wisconsin Demographic Services Center
   IL.: State of Illinois, Bureau of the Budget
   IN.: Indiana State Data Center
   MI.: Michigan Dept. of Management and Budget

TABLE 1

SOUTHERN LAKE MICHIGAN 800 MHz PLANNING REGION

COUNTY MAP

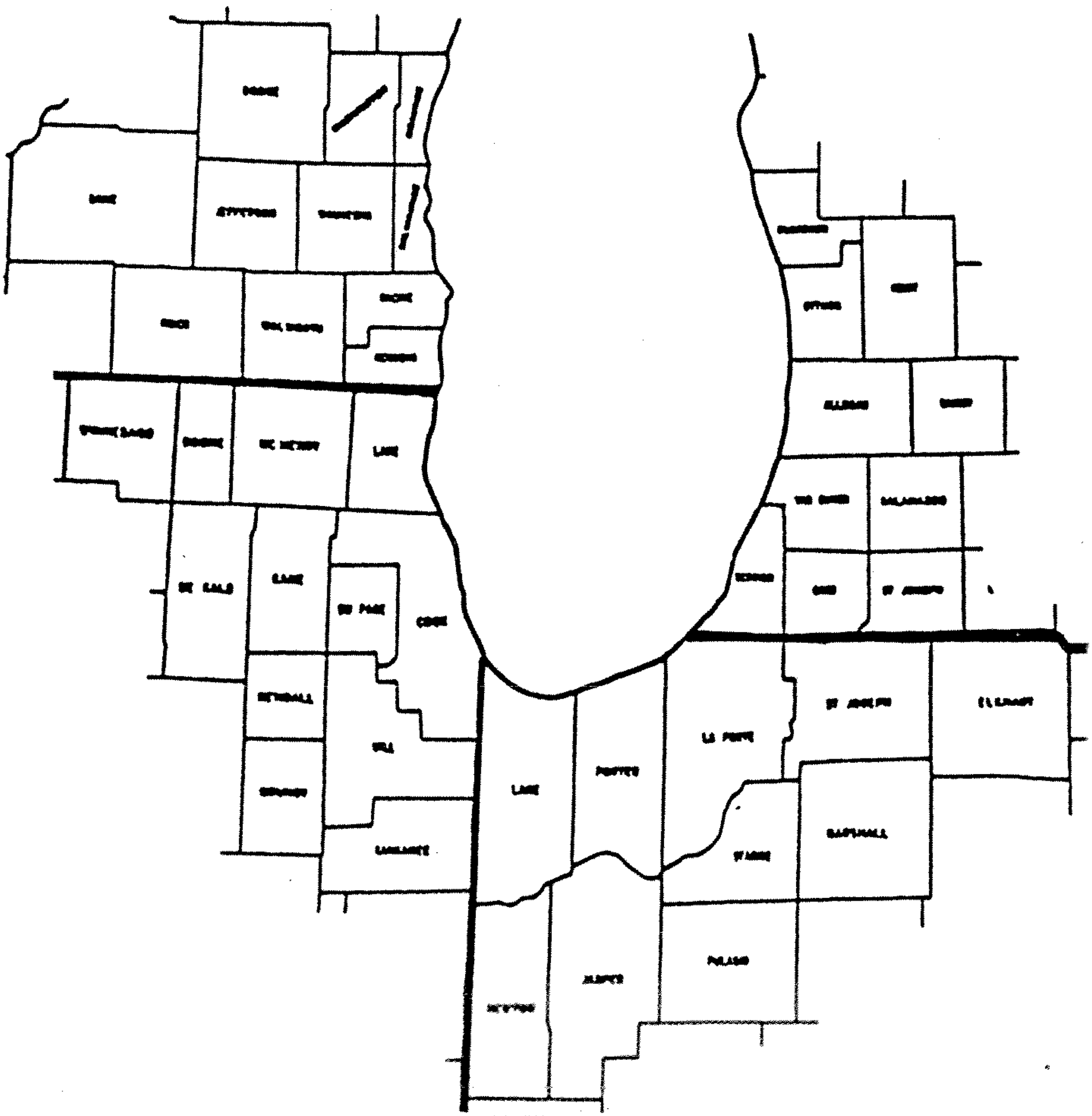

FIGURE 1

While recognizing that it may not be possible to grant requests for assignments to everyone, the Commission did conclude that membership on regional planning committees must be open to representatives from all potential user groups.

In accordance with the Report & Order, the Southern Lake Michigan Planning Region took the below listed steps to ensure that its membership was open to as broad a range of eligible participants as possible. (Referenced materials are all contained in Appendix A).

1. On March 8, 1988 the announcement of the Initial Meeting was mailed to individual public safety agencies as well as professional organizations/associations of all eligible user groups, the National Communication System, and the Federal Emergency Management Agency.

2. On March 24, 1988 the FCC issued a Public Notice announcing the initial meeting.

3. On May 2, 1988 a reminder notice was sent out through the Law Enforcement Agency Data System (LEADS).

4. The Announcement was posted in County Courthouses throughout the Region from March through May, 1988.

FORMATION OF THE PLANNING COMMITTEE

On May 12, 1988 the first official meeting of the Southern Lake Michigan 800 MHz Regional Planning Committee (the Committee) was held in Arlington Heights, Illinois. Mr. Teddy F. Vratny was elected Chairman of the Committee; Lieutenant William T. Corbett was elected Secretary.

The Summary of Proceedings of this meeting (and of all meetings preceding and succeeding it) are available for inspection at the office of the Secretary.

Appendix B contains the names, affiliations, mailing addresses and phone numbers of the officers of the Region. Appendix C contains this information for all persons who have participated in the Southern Lake Michigan 800 MHz Regional Planning Committee.

REGIONAL CONFORMANCE REVIEW COMMITTEE (RCRC)

The Committee realizes that its work does not end with the submission of this Plan. Future modifications to the Plan may be required; applications for radio systems proposed within the Region will need to be reviewed for compatibility with the Plan; implementation of these systems will require monitoring; coordination with the National Plan will continue. Obviously, there must be a mechanism by which future tasks can be accomplished.

To provide this mechanism, the Committee of the Whole has established the Regional Conformance Review Committee (RCRC) (See Appendix D). This committee will be composed of the Frequency Advisory Committee Chairman and another representative from each State within the Region, plus the Regional Planning Committee Chairman. The RCRC will convene upon the Commission's approval of this Plan.

COORDINATION WITH ADJACENT REGIONS

There are four planning regions which are adjacent to the Southern Lake Michigan Region. They consist of the remaining portions of each of the four States. A combination of three historical facts has created an excellent opportunity for coordinating this Plan with those of the regions adjacent to it:

(1) Among the five regions, the Southern Lake Michigan Region was the first to organize a planning committee.

(2) From its beginnings in 1987, this Region has had as members, the Frequency Advisors and Regional Planning Conveners of each encompassing State.

(3) As of this date, two members of the SLMRPC have been elected Chairman of their home state's regional planning committees (Illinois and Indiana).

Communication among regions has thus been ever present during the drafting of this Plan. Implementation of each of the five plans will likewise be coordinated through the mutual membership and cooperation of the planning committees.

CONFORMITY WITH THE NATIONAL PLAN

It is the expressed intent of the Committee to conform with the requirements of the National Plan as defined in paragraphs 11 - 40 of General Docket No. 87-112. This Plan is submitted to the Commission subject to the review process described in the Report and Order.

REVIEW PRIOR TO SUBMISSION

As work progressed on the Regional Planning Tasks the original small groups were organized into three Subcommittees: Administrative, Technical, and Operational. They codified their suggestions, and wrote draft proposals on individual topics. After reaching a consensus, the subcommittees then presented their proposals to the Committee of the Whole for review and comment.

Upon acceptance of its content by the Committee, each draft was then forwarded to the Administrative subcommittee for collation. The complete final draft was then presented to the Committee of the Whole for page by page review.

AUTHORITY

The Southern Lake Michigan 800 MHz Regional Planning Committee derives its authority to carry out the activities required for composition and implementation of this Plan from the Commission's Report and Order General Docket No. 87-112 released on December 18, 1987 and the Petition for Limited Reconsideration as a multi-state region granted by the Commission on March 30, 1988.

NEEDS ANALYSIS

The Report & Order specifies that regional plans explain how the requirements of all eligible entities were considered. This section of the Plan describes how this specification has been met.

QUESTIONNAIRE DEVELOPMENT

It was decided that the best means of identifying the radio spectrum needs of the Region as a whole was to survey the potential users individually. To this end, work began on drafting a questionnaire in February, 1988. Sample documents were prepared and given to Committee members for comment during the ensuing three months. This review process resulted in the final survey instrument which is contained in Appendix E: The Southern Lake Michigan 800 MHz Regional Planning Committee Radio User Questionnaire.

Distribution to potential eligibles began in May, 1988. Over 1500 copies of the questionnaire were mailed to both individual public safety agencies and professional organizations/associations. Appendix F contains a listing of the professional organizations contacted. These organizations were requested to photocopy the survey and distribute it to their members. Because of this extended process the exact number of questionnaire recipients cannot be determined.

The questionnaire was designed to elicit meaningful information detailing current, as well as future, radio frequency needs. The years 1995 and 2005 were used for future projections. Information was requested in four topical sections:

(I) "General Information" asked the respondents to provide agency identification information including the type of service supplied to the public.

(II) "Demographic Information" asked specific questions regarding the agency's service area.

(III) "Frequency Needs" asked questions regarding the agency's use of radio frequencies for voice and data transmissions.

(IV) "Equipment" asked the respondents to project their agency's inventory of several radio equipment items.

QUESTIONNAIRE RESULTS

Section (I)

Four hundred and ninety-two (492) usable surveys were returned, compiled, and analyzed using the computer program DBASE III Plus. The objective of including both Public Safety and Special Emergency Service agencies was achieved. Surveys were received from all types of governmental and non-governmental organizations (i.e., Law Enforcement, Fire Fighting, Emergency Medical, Forestry, Veterinary, School Bus, etc.).

Section (II)

Eight agencies reported that their service area encompassed their entire state and five agencies reported that their service areas cross state lines. 389 of the agencies service an area that is urban, or both urban and rural. This statistic reflects the continuing urbanization of the outlying areas in the Southern Lake Michigan Region.

Section (III)

35.7% of the agencies reported that their radio system is not adequate for their needs today. This percentage increases to over two-thirds and more than three-fourths for the years of 1995 and 2005, respectively. One third of the respondents reported that their field units "often" have to wait for access to a voice channel. When asked if they planned to expand their use of radio frequencies for data transmission, 34.3% of the respondents said that they did.

Two other statistics found in this section of the questionnaire bear directly on issues raised in the Report and Order: prioritization of eligibles and frequency give-backs.

First, the total number of new 800 MHz frequencies reported to be needed now is 425; this total increases to 684 in 1995; by 2005, responding agencies expect to need over one thousand new 800 MHz frequencies in the Region. Secondly, given a choice between additional frequencies in the 800 MHz spectrum or additional frequencies in their current spectrum, 74.5% preferred the latter. The first statistic demonstrates the need for this Region to prioritize agencies applying for the new spectrum, according to their degree of involvement in providing for the protection of life and property. The second statistic supports the assumption that public safety entities in the Region are "waiting in line" for lower band frequencies. As licensees move up to the new spectrum they will be expected to make every effort to give up their lower band frequencies, as described in the Report and Order.

While the number of frequencies projected to be needed by the respondents appears to exceed the number available in the new spectrum, it should be noted that actual applications for them are few at this time. When asked if an application for 800 MHz channels was pending, only four (4) agencies responded affirmatively. Only one (Naperville, Illinois) has forwarded a frequency coordination request to the Committee. Prioritization is therefore expected to satisfy the needs of all public safety eligibles in the Region at this time of filing.

Section (IV)

This last section of the survey gathered figures relating to the amount of radio equipment in the Region. Mobile and portable radios constitute the largest portion of this equipment (approximately 67,000 owned now, over 100,000 units projected to be owned by 2005). The largest growth categories of equipment are mobile data terminals and automatic vehicle locators. These categories are projected to increase from 528 (MDT) now to 12,684 in 2005; and from 30 (AVL) now to 10,785 in 2005, respectively. The need to include data transmissions when planning spectrum allocations becomes obvious when confronted with these numbers.

For the sake of brevity, this section of the Plan has presented selected items of information as evidence to the Commission of the Planning Committee's efforts to identify the radio frequency needs of this Region's potential eligible users. More detailed results are contained in Appendix G. It is anticipated that the information collected with this questionnaire will prove as useful to future planning and coordinating activities within the Region as it has proven to be in the development of this Plan.

APPLICATIONS

This section of the Plan describes the procedures for applying for a license to operate a radio system in the new spectrum, as well as the process by which that application will be evaluated. Applications shall be submitted during specific periods of time known as "filing windows". Said filing windows will be designated by the RCRC, be opened at least once annually, and be announced in advance. It is the intention of the RCRC to announce the dates of the first filing window within thirty (30) days of the date of the Commission's approval of this Plan.

APPLICATION REVIEW

Applications for licenses in the 821-824/866-869 MHz band will be subject to review by the RCRC at the closing of each filing window. This review is required prior to formal submission of the application to the national APCO frequency coordination office. Applications may be rejected at the Regional level for non-conformance with this Plan. Also, any application received outside of the designated "filing window" will be returned to the applicant for re-submission during the next filing window.

APPLICATION PROCEDURES

Applications will be submitted to the local Frequency Advisory Committee Chairman. The Frequency Advisory Committee Chairman will peruse the application packet for completeness, and the eligibility of the applying organization. Incomplete applications, or applications from agencies which are not considered by this Plan to be eligible for the limited spectrum, will be returned to the applicant with the appropriate remarks. Copies of complete applications received from eligible public safety entities will be forwarded to the RCRC for evaluation.

INFORMATION REQUIRED

The current standardized APCO Frequency Coordination and FCC License Application forms will be used. In addition, the applicant will be required to furnish supplemental information in specific categories. These categories are enumerated (and briefly defined) on the following page. Each category has been assigned a numerical weight for application evaluation purposes. Category weights are contained in Appendix H. Where further comments affecting a category are made elsewhere in this Plan, the appropriate page number(s) are also specified.

1. Service --- What tasks or duties the agency is charged with accomplishing.

2. System Type --- In narrative form, a description of the radio system being proposed (trunked, conventional, voice, data, voice/data combined, etc.) (page 14).

3. Intersystem Interoperability --- How agents of the applying organization will communicate with agents of different organizations. (pages 18, 21-25).

4. Channel Loading Factors --- Equipment inventory totals, and the maximum number of mobile radios potentially in use at a given time. (pages 16, 19).

5. Coverage Area --- Details of an engineering survey showing the radio coverage required for minimum coverage of jurisdictional boundaries. (pages 14, 15, 18).

6. Vacated Frequencies Returned --- Which frequencies the agency will release. (pages 16, 17).

7. Implementation Schedule --- An explanation of any budgetary commitment and a proposed time frame for putting equipment into service.

The RCRC may request additional information at the time of review to assist in evaluation.

APPLICATION EVALUATION

The Regional Conformance Review Committee (RCRC) will review each application for its conformity to this Plan. Evaluations will be based upon the seven factors mentioned above. A final point total will be determined by adding the points earned in each category as listed in Appendix H. The RCRC will base their recommendation for approval or rejection of the application upon the final point total.

Once an application has been reviewed it will be returned to the applicant for the appropriate action (e.g., filing, additional information required, modification, etc.).

ELIGIBILITY

Agencies applying for frequencies in the 821-824 and 866-869 MHz band will be prioritized according to the degree that the service(s) they provide is fundamental to the protection of life and property. Only Public Safety and Special Emergency Radio Service agencies are eligible to apply for a license in the 821-824/866-869 MHz band.

APPEAL PROCESS

Throughout the frequency allocation process, applicants are given opportunities to appeal decisions which have caused rejection of their application. The appeal process has two levels, APCO and the FCC. An applicant who decides to appeal a rejection should initiate that appeal immediately upon notification of the rejection. In the event that an appeal reaches the second level (the FCC), the Commission's decision will be final and binding upon all parties.

SPECTRUM UTILIZATION

This portion of the Plan lays the foundation for the efficient and effective utilization of the spectrum. Its purpose is to guide the RCRC in the task of evaluating new applications for the use of radio frequencies in the 821-824/866-869 MHz bands.

PRIMARY AND SECONDARY ZONES

The demand for frequencies varies depending on population of the area. Dense urban areas contain many individual public safety agencies, all making their own demands for frequencies. This problem is not as intense in more rural areas where the number of individual agencies is fewer. To differentiate between such areas of the Region, Primary and Secondary "zones" have been designated. A Primary zone contains jurisdictions which are severely impacted as a result of an excess demand for scarce spectrum. A Secondary zone contains jurisdictions which are impacted to a lesser degree. The requirements for system implementation in a Primary zone will be more restrictive than in a Secondary zone.

At this time the Primary zones are defined as the following six counties: Cook, DuPage, Lake, and Kane (Illinois); Lake (Indiana); Milwaukee (Wisconsin). The remaining 37 counties of the Region are all defined as Secondary zones.

TRUNKING

Applicants requesting licenses for five (5) or more channels will be required to trunk those channels. Exceptions to the rule will not be allowed unless an equally spectrum efficient technology is proposed, or, the applicant can otherwise demonstrate that trunking will not meet the specific operational requirements of the agency.

Applicants requesting licenses for four (4) or less channels within the Secondary zone may be permitted conventional operation. In the Primary zone, conventional operations with four (4) or less channels will only be allowed when all efforts to consolidate communications with other agencies are proven to be infeasible.

COVERAGE AREA

The desired coverage of a system is considered to be a maximum of three (3) miles outside of the boundary of the applicant's jurisdiction. The maximum designed mean signal strength at this contour shall not exceed 40 dBu (+40dB above one microvolt per meter) measured with an antenna mounted no less than five feet (5') above ground. Petitions to provide coverage exceeding these parameters will be examined on a case by case basis. Overlap or extended coverage must be minimized even where agencies are proposing to intermix systems for cooperative and/or mutual aid purposes.

ADJACENT CHANNEL ASSIGNMENTS

Adjacent channel assignments will be made when it is determined that the two or more systems will create a signal strength of +25dBu or less, anywhere within their partners' boundary.

CO-CHANNEL ASSIGNMENTS

Co-channel assignments will be made when it is determined that the two or more systems will create a signal strength of +5dBu or less, anywhere within their co-channel partners' boundary.

To achieve the most efficient use of the spectrum, distances between transmitters for co-channel reuse will not be held to a seventy (70) mile separation in this Plan. Separation of co-channel transmitters will be determined by the coverage needs of the applicant, natural barriers for separation, antennae patterning, and limited ERP's where possible.

CHANNEL LOADING CRITERIA

In this Plan, existing loading standards will be applied for Priority Level I voice communications: 70 mobiles per conventional channel, 100 mobiles per trunked channel. For all data only systems and Priority Level II and III voice (or voice/data combined) systems, the loading criteria will increase: 100 mobiles per conventional channel, and 150 mobiles per trunked channel.

Agencies that support interoperability by permitting Federal use of their frequencies through S-160 (or equivalent) agreements, may augment their channel requirements by a maximum of 2% to account for the increased number of mobile units. Written documentation detailing the expected number of Federal radios involved will be required at the time of application.

In order to conserve spectrum, agencies must demonstrate that the number of radios potentially in use at one time meet these loading criteria. Agencies which cannot demonstrate this potential may be denied exclusive use of the allocated channel(s). Petitions to deviate from these criteria will be considered by the RCRC on an individual basis.

VACATED FREQUENCIES

It is anticipated that as public safety agencies implement 800MHz radio systems, they will be able to vacate the VHF and UHF frequencies on which they previously operated. The RCRC will apply the three conditions governing frequency give-backs described in the Report and Order:

(1) The new system fully replaces the functions of the old one.
(2) The licensee has no other communications requirements that could be met through the use of the lower frequencies.
(3) The new system has operated satisfactorily for long enough to allow a smooth transition from former operations, and to demonstrate its reliability.

Vacated frequencies will be returned to their respective pools to be re-assigned by the FCC approved Frequency Advisory Committee Chairman, with recommendations by the RCRC, in order to provide the most beneficial use to public safety.

INITIAL SPECTRUM ALLOCATION

The methodology used to determine the spectrum allocations at the time of filing this Plan is contained in Appendix J. The allocation itself is contained in Appendix K.

TECHNICAL DESIGN CONSIDERATIONS

This section of the Plan discusses topics which must be considered when engineering a new system.

CHANNELING PLAN

The 25 KHz offset channeling plan established by the National Plan will be required of all systems to be licensed in the 821-824/866-869 MHz bands.

INTEROPERABILITY WITH ADJACENT LOWER BANDS

There are several hundred agencies in the Region currently operating on frequencies in the 806-821/851-866 MHz bands. While most of these agencies may continue operating in these frequencies for several years, many of them will be looking to expand their systems into the new spectrum. Any application submitted under the auspices of this Plan must demonstrate technical ability to provide communication between new and existing systems. Waivers for technical specifications on existing 800 MHz equipment will be considered on an individual basis.

SYSTEM DESIGN

When designing a system, engineers will be required to minimize the distance between transmitter sites by using a combination of limited Effective Radiated Power (ERP), tower height, type of terrain, or any other factors which are technically feasible to minimize adjacent and co-channel interference. Information detailing the methodologies used (including calculations) must be included in the application.

DATA TRANSMISSION

The SLMRPC user survey revealed the use of radio frequencies for data transmissions as the largest "growth" category among responding agencies in the Region. As stated in the Loading Criteria section of this Plan, data only transmissions, whether for emergency or routine messages, will demand a higher loading standard.

CELLULAR RADIO TECHNOLOGY

Trunking technology is presently considered the most spectrum efficient use of radio transmissions for public safety. Cellular radio technology has so far proven useful only for telephone communications. However, it may, with future technological improvements, prove useful for public safety. Agencies are cautioned that any proposal of the use of cellular radio as an alternative to a trunked radio system must demonstrate that it can provide the same or greater degree of spectrum efficiency as trunking, and handle communications in an emergency situation.

MOBILE SATELLITE SERVICE (MSS)

During incidents of major proportions such as airliner crashes, earthquakes, tornadoes, floods, forest fires or nuclear reactor calamities, public safety requirements might include the need for long-range communications in and out of a disaster area. The planned Mobile Satellite Service (MSS) may prove to be a viable alternative to land based systems in these situations, once technical innovations are developed which will provide uni-directed or corridor-driven communications over a lengthy distance. This service should be restricted to frequencies above 960 MHz, however, and licensing in the Public Safety spectrum shall be limited to public safety eligibles only.

AIRCRAFT TO GROUND COMMUNICATIONS

The use of any 800 MHz radio in an aircraft shall be restricted. Air to ground transmissions shall be limited to a maximum effective radiated power (ERP) of one (1) Watt* unless system design dictates. Otherwise, tactical transmissions shall be on the mobile relay output or talk-around frequencies only. Co-channel and adjacent channel users are not required to provide protection to airborne users. No transmissions on limited area channels are allowed above 2,000 feet AGL, and no transmissions are allowed above 5,000 feet AGL, even on wide area mutual aid channels.

* Aircraft will be permitted to utilize additional power under 500 feet AGL.

INTEROPERABILITY CONSIDERATIONS

This section of the Plan outlines the steps taken by the Committee to permit Federal, State and Local agencies to coordinate their activities during an emergency or disaster situation.

INTERSYSTEM INTEROPERABILITY

The intent of this Plan is to enhance interagency communication. Extensive mutual aid communication networks already exist throughout the Region. The National Plan has now set aside five (5) channels in the new spectrum for mutual aid. Agencies applying for licenses in the 821-824 and 866-869 MHz bands will be required to explain how they will implement the new Common Channels. They will also be required to explain how they will maintain intercommunication with their neighboring agencies who do not implement the Common Channels, but still are dependent upon the applying agency for assistance in an emergency.

COMMON CHANNELS

The Common Channels used in this Region comply with the National Plan, and consist of one (1) calling channel and four (4) tactical channels (Tac 1 through Tac 4). (See Table 2).

SOUTHERN LAKE MICHIGAN 800 MHz PLANNING REGION
COMMON CHANNEL FREQUENCY DESIGNATIONS

USAGE	FREQUENCY
Calling Channel	821.0125 MHz *
	866.0125 MHz **
Tactical Channel 1	821.5125 MHz *
	866.5125 MHz **
Tactical Channel 2	822.0125 MHz *
	867.0125 MHz **
Tactical Channel 3	822.5125 MHz *
	867.5125 MHz **
Tactical Channel 4	823.0125 MHz *
	868,0125 MHz **

* - MOBILE

** - BASE

TABLE 2

Tac Channel coverage design shall ensure that at least one channel is available for each section of the Region. Multi-agency communications events will be coordinated by the Primary Dispatch Center, or assigned to the controlling agency. The coordinating agency shall relinquish control of the channels when the incident is cleared.

CROSS SYSTEM PATCHES

Cross system patches to existing day to day systems, other mutual aid channels, or long range communications systems must be manually controlled. Automatic patches are not permitted. Cross system patches are normally handled by the Primary Dispatch Center in the section of the Region involved.

Communications on Common Channels use a two-tier structure: initial contact (calling), and working (tactical) channels. These channels are not to be used for daily operations, nor for inter-agency communications that do not involve an emergency situation. The Tactical Channels shall cover the entire Regional area, with mobile relay stations normally operating in the "repeat disable" mode.

The Common Channels are restricted to required intercommunications among agencies that do not have access to other compatible communications channels. A "Primary Dispatch Center" will assign one or more tactical channels for the duration of a specific emergency or incident requiring multi-agency communications.

Because of the wide variance of voice codes among agencies ("ten" signals, alpha-numeric codes, etc.), agencies will use plain English on the Common Channels. The Primary Dispatch Center, with full support of the Regional Committee, will monitor radio traffic discipline, and resolve serious or chronic infractions.

PRIMARY DISPATCH CENTER

The four (4) State governments of the Region will be responsible for the implementation and operation of the National Calling Channel, Tactical Channels, and Primary Dispatch Centers. They will ensure that interoperable tactical channel mobile relays exist in specific areas of the Region. The mobile relay stations will provide the required number of working channels within the Region necessary to assure interoperable communications between Federal, State and Local Government agencies involved in an emergency. Other services shall participate as required, to ensure the public safety.

Agencies involved in an incident will be subject to the Regional rules on inter-agency communication. Radio transmissions will be made in accordance with the directions of the Primary Dispatch Center or controlling agency.

CALLING CHANNEL

Calling Channel base stations will be configured as mobile relays, strategically located to assure complete regional coverage, and connected by a suitable network to Primary Dispatch Centers. Mobile "talk around" is permitted on the Calling Channel to establish initial contact between agencies, for the purpose of determining which Tactical Channel(s) to use for the duration of an incident.

Depending on geographical size and population density, several networks may be necessary to cover the outer areas of the Region. Primary Dispatch Centers, and agencies operating base/control stations in the area shall monitor the Calling Channel to provide assistance and/or assign a Tactical Channel to requesting field units.

The Calling Channel shall be used only to make initial contact with other agencies in the Region, or with the Primary Dispatch Center in that section of the Region. After contact is established, a tactical or other mutual aid channel shall be expeditiously agreed upon, or be assigned by the Primary Dispatch Center. The Calling Channel shall not be used as a working channel for continued communications. It shall be vacated as soon as possible, to free it up for the next initial contact.

TACTICAL CHANNELS (TAC 1 THROUGH TAC 4)

Tactical Channels are reserved for agencies involved in multi-agency communications during emergencies or other occurrences requiring interoperable communications. Tactical channels, like the Calling Channel, will be strategically located to provide maximum coverage throughout the Region. Design criteria will limit Tac Channel coverage to permit multiple re-use of the channels within the Region as required in coordination with adjacent regions to prevent or minimize interference.

APPENDIX

A

S Southern
L Lake
M Michigan
800 MHZ
R Regional
P Planning
C Commission

136 N. County Farm Road
Wheaton, Illinois 60187
March 8, 1988

Dear Sirs:

Having been duly certified to the Federal Communications Commission (FCC) by the Associated Public Safety Communications Officers, Inc. (APCO) as the Convenors for the initial meeting of representatives of parties eligible for radio licensing in the FCC's Public Safety and Special Emergency Radio Services to establish a Regional Planning Commission in the Chicago Metropolitan/Southern Lake Michigan Area, we are attaching a copy of the official notice of said meeting. This notice also contains the counties included in this regional planning area, along with the convenors mailing addresses and phone numbers.

This region is one that should be designated by the FCC as a planning region as a result of a petition for limited reconsideration submitted by the National Public Safety Planning Advisory Committee on February 12, 1988.

The responsibility of the Regional Planning Commission will be to develop a plan for the use of frequencies in the 821-824 and 866 - 869 megahertz bands allocated by the FCC for use by such licensees. Parties interested in participating in the regional planning process should contact one of the convenors listed below.

This Public Notice is in accordance withe FCC's Report and Order in General Docket No. 87-112, adopted by the FCC on November 24, 1987 and printed in the Federal Register of January 15, 1988. (53 Fed. Reg. 1022).

The Report and Order was based in large part on the final report of the National Public Safety Planning Advisory Committee, which was submitted to the FCC on September 9, 1987.

Copies of both the Report and Order and the Final Report are available from the FCC's duplication contractor, International Transcription Services, INc. Suite 140, 2100 M Street, N.W., Washington D.C. 20037. Phone (202) 857-3800

Convenor for Illinois: Teddy F. Vratny
Convenor for Indiana: Donald Kottlowski
Convenor for Michigan: Dave Held
Convenor for Wisconsin: Carl Guse

Announcement of the Initial
Regional Public Safety Planning Meeting For
The Chicago Metropolitan/Southern Lake Michigan Area

The purpose of this Public Notice is to announce the initial meeting of the Chicago Metropolitan/Southern Lake Michigan Regional Planning Commission.

Date/Time: Wednesday May 12, 1988 at 10:00AM.

Location: Woodfield Hilton
Woodfield #1 Meeting Room
3400 West Euclid Avenue
Arlington Heights, Illinois 60006

Convenors:

Illinois
Teddy F. Vratny
Du-Comm Central Dispatch
136 N. County Farm Rd.
Wheaton, IL 60187
(312) 690-8088

Indiana
Donald Kottlowski
Indiana State Police
Room 309 State Office Buillding
Indianapolis, IN 46204
(317) 232-8257

Michigan
Dave Held
Michigan State Police
714 S. Harrison Road
East Lansing, MI 48823
(517) 332-2521

Wisconsin
Carl Guse
Wisconsin Frequency Coordinator
N5504 Highway E
Iron Ridge, WI 53035
(414) 485-4455

As a result of a Petition for Reconsideration, to the Commission's National Plan for Public Safety, Report and Order, Gen Docket 87-112, 53 Fed. Reg. 1022 (January 15, 1988), submitted by the National Public Safety Planning Advisory Committee on February 12, 1988, the Commission is now considering the reconfiguration of the boundaries of several of the planning regions. Among these is the Chicago Metropolitan Area region which, depending on future Commission action, may eventually contain the following counties:

Illinois - Winnebago, Boone, McHenry, Lake, Cook, DuPage, Kane, DeKalb, Kendall, Will, Grundy and Kankakee

Indiana - Lake, Porter, LaPorte, Newton, Jasper, Pulaski, Starke, Marshall, St. Joseph, and Elkhart

Michigan - Ottawa, Muskegon, Kent, Allegan, Van Buren, Berrien, Kalamazoo, Cass, Barry and St. Joseph

Wisconsin - Kenosha, Racine, Milwaukee, Ozaukee, Washington, Waukesha, Dodge, Dane, Walworth, Rock and Jefferson

All parties located int the Metropolitan Chicago Area and interested in participating in the public safety planning process are encouraged to contact any of the convenors listed above for further information.

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON, D.C. 20554

MAR 3 1 1988

IN REPLY REFER TO:

Mr. Teddy F. Vratny
Du-Comm Central Dispatch
136 N. County Farm Rd.
Wheaton, IL 60187

Dear Mr. Vratny:

Enclosed is a copy of the Public Notice that was issued by the FCC to assist you in announcing the initial meeting of the Chicago Metropolitan/Southern Lake Michigan Public Safety Planning Committee.

The Commission appreciates your work in organizing this most important meeting, and I would like to offer my continuing support to you and the Committee in your upcoming planning efforts. Please do not hesitate to contact me (202-632-7597) if I can be of further assistance to you.

Sincerely,

Richard J. Shiben, Chief
Land Mobile and Microwave Division

PUBLIC NOTICE

FEDERAL COMMUNICATIONS COMMISSION
1919 M STREET N.W.
WASHINGTON, D.C. 20554

News media information 202/632-5050. Recorded listing of releases and texts 202/632-0002.

March 24, 1988

ANNOUNCEMENT OF THE INITIAL REGIONAL PUBLIC SAFETY PLANNING MEETING FOR THE CHICAGO METROPOLITAN/SOUTHERN LAKE MICHIGAN AREA

The purpose of this Public Notice is to announce the initial meeting of the Chicago Metropolitan/Southern Lake Michigan Public Safety Planning Committee.

DATE/TIME: May 12, 1988/10:00 AM

LOCATION: Woodfield Hilton
Illinois Meeting Room
3400 West Euclid Avenue
Arlington Heights, Illinois 60006

CONVENORS: Illinois - Teddy F. Vratny
Du-Comm Central Dispatch
136 N. County Farm Rd.
Wheaton, IL 60187
(312) 690-8088

Michigan - Dave Held
Michigan State Police
714 S. Harrison Road
East Lansing, MI 48823
(517) 332-2521

Indiana - Donald Kottlowski
Indiana State Police
State Office Building, Room 309
Indianapolis, IN 46204
(317) 232-8257

Wisconsin - Carl Guse
Wisconsin Frequency Coordinator
N5504 Highway E
Iron Ridge, WI 53035
(414) 485-4455

In the Commission's National Plan for Public Safety, Report and Order, Gen. Docket 87-112, 53 Fed. Reg. 1022 (January 15, 1988), an interstate "Chicago Metropolitan" planning region was not established. Planning for the Chicago area was, instead, to be handled by the Illinois, Indiana, Michigan, and Wisconsin regions.

As a result of a Petition for Reconsideration submitted by the National Public Safety Planning Advisory Committee on February 12, 1988, however, the Commission is now considering the realignment of the boundaries of several of the planning regions. Included in this realignment will be the creation of the Chicago Metropolitan/Southern Lake Michigan region, which, upon adoption by the Commission, will contain the following counties:

Illinois - Winnebago, Boone, McHenry, Lake, Cook, DuPage, Kane, DeKalb, Kendall, Will, Grundy, and Kankakee

Indiana - Lake, Porter, LaPorte, Newton, Jasper, Pulaski, Starke, Marshall, St. Joseph, and Elkhart

Michigan - Ottawa, Muskegon, Kent, Allegan, VanBuren, Berrien, Kalamazoo, Cass, Barry, and St. Joseph

Wisconsin - Kenosha, Racine, Milwaukee, Ozaukee, Washington, Waukesha, Dodge, Dane, Walworth, Rock, and Jefferson

All parties located in the Chicago area and interested in participating in the public safety planning process are encouraged to contact any of the convenors listed above for further information.

- FCC -

XDU
3JTH 050288 09.04L02 L03 L04 L05 JTH .
MSG NR:JTH83-001
ALL AGENCIES
ATTN: CHIEF OF POLICE
RE: SOUTHERN LAKE MICHIGAN REGIONAL PLAN COMMITTEE MTG
THE SOUTHERN LAKE MICHIGAN REGIONAL PLAN COMMISSION WILL
BE HOLDING HEARINGS TO DISCUSS THE NEW 800 MHZ FREQUENCY ON
MAY 12, 1988 AT 10:00 A.M. AT THE WOODFIELD HILDTON, WOODFIELD
#1 MEETING ROOM, 3400 W. EUCLID AV. ARLINGTON HGTS, IL 60006
THE PURPOSE OF THIS NOTICE IS TO ANNOUNCE THE INITIAL MEETING
OF THE CHICAGO METRO/SOUTHERN LAKE MICH REGIONAL PLANNING COM
MISSION . THE COMMISION IS NOW CONSIDERING THE RECONFIGURATION
OF THE BOUNDARIES OF SEVERAL OF THE PLANNING REGIONS. AMONG
THESE IS THE CHGO AREA REGION WHICH, DEPENDING ON FUTURE COMMIS
SION ACTION, MAY EVENTUALLY CONTAIN THE FOLLOWING COUNTIES
WINNEBAGO, BOONE, MCHENRY, LAKE, (PAGE 2 TO FOLLOW)
PD ORLAND PARK AUTH: CHIEF 'DUKE' GORRIS

XDU
3JTH 050288 10.04 32L02 L03 L04 L05 JTH .
MSG NR: JTH88-001
ALL AGENCIES
ATTN: CHIEF OF POLICE (PAGE 2 OF 2)
RE: SOUTHERN LAKE MICHIGAN REGIONAL PLAN COMMITTE MTG
COOK, DUPAGE, KANE, DEKALB, KENDALL, WILL, GRUNDY, AND KANKAKEE
WITHIN THE STATE OF ILLINOIS. ALL DEPARTMENTS LOCATED IN
IN THE METRO CHICAGO AREA AND INTERESTED IN PARTICIPATING IN T
HE PLANNING PROCESS ARE ENCOURAGED TO CONTACT TEDDY VRATNY, DUC
OM CENTRAL DISPATCH, 136 N. COUNTY FARM RD. WHEATON, IL 60187
TELEPHONE 312/690-8088.
PD ORLAND PARK AUTH:CHIEF 'DUKE' GORRIS
1004 PN

APPENDIX

B

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING OFFICIALS

CHAIRMAN

Teddy F. Vratny
Du-Comm
136 North County Farm Road
Wheaton, Illinois 60187
(312) 260-7500

SECRETARY

William T. Corbett
Chicago Police Department
1202 West Madison Street
Chicago, Illinois 60607
(312) 421-4803

CO-CONVENORS

MICHIGAN

David H. Held
Michigan State Police
714 S. Harrison Road
East Lansing, Michigan 48823
(517) 337-6240

INDIANA

Donald W. Kottlowski
Indiana State Police Communications
100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 899-8257

WISCONSIN

Carl R. Guse
Dodge County Sheriff
N5504 Highway E
Iron Ridge, Wisconsin 53035
(414) 485-4455

APPENDIX

C

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMITTEE

AGENCY/PHONE LISTING

NAME	AGENCY	PHONE
Adler, James	Jefferson County Sheriff	(414) 674-2306
Anderson, Kenneth	Deerfield Police Dept.	(312) 945-8636
Antonacci, Ralph	State of Illinois EMS	(217) 785-2080
Barlog, Gene	I.S.P. Lowell Communications	(219) 838-3184
Barnes, Larry W.	Highland Police Dept.	(219) 838-3184
Bartz, Darrell R.	Illinois State Police	(217) 782-7345
Bishop, Gregory B.	Chicago Fire Dept.	(312) 744-8635
Bottando, James O.	City of Gary	(219) 886-0066
Brown, James H.	Illinois APCO FAC	(309) 788-0581
Buggs, Dick	Walworth County Sheriff's Department	(414) 741-4425
Burlison, Jack R.	Indiana State Police	(317) 899-8259
Celeski, Michael J.	Chicago Police Dept.	(312) 421-4803
Chase, James	Waukesha County	(414) 548-7125
Cima, Michael D.	Illinois State Police	(217) 782-7345

Clancy, Bill	General Electric Co.	(312) 573-3650
Corbett, William T.	Chicago Police Dept.	(312) 421-4803
Cox, Raymond R.	Hoffman Estates Police Dept.	(312) 882-9100
De Mello, Dick	Michigan Dept. of Natural Resources	(517) 373-1190
DeWitt, Ray	Indiana Toll Road	(219) 674-8836
Edmonds, Doug	Northwest Central Dispatch	(312) 398-1130
Eisenbrandt, Ralph A.	Frankfort Fire Dept.	(815) 469-1700
Eklof, Daniel W.	State of Wisconsin-Div. of Health	(608) 266-0471
Fasano, Pat	Motorola, Inc.	(312) 350-3718
Finch, Richard L.	Indiana DNR-Radio Communications	
Fitzsimmons, Robert G.	Chicago Police Dept.	(312) 744-6351
Fleissner, Robert	Motorola, Inc.	(201) 447-7618
Flores, Gus	Emergency Communications Center	(219) 391-8493
Flynn, John	Bolingbrook Fire Dept.	(312) 759-0443
Galas, Jeff	Illinois Dept. of Transportation	(312) 705-4376
Garcia, John	Emergency Communications Center	(219) 391-8493
Gorris, Chief Duke	Orland Park Police Dept.	(312) 349-4111
Graves, William B.	Racine Police Department	

Gray, Gary D.	APCO	(714) 938-4311
Guse, Carl R.	Dodge County Sheriff	(414) 485-4455
Hajek, Robert J.	Melrose Park ESDA	(312) 294-3285
Hallman Jr., Donald E.	Hallman Electronics, Inc	(616) 926-1555
Haney, Gene T.	Racine Police Department	(414) 554-7802
Heine, Warren A.	Elgin Police Department	(312) 695-6500
Held, David H.	Michigan State Police	(517) 337-6240
Heller, Wallace P.	Lake County Radio Dept.	(312) 362-1960
Henrici, Charles	Elk Grove Fire Dept.	(312) 364-2673
Hermes, Michael	Wheeling Police Dept.	(312) 459-2600
Hoyer, Charles R.	Naperville Police Dept.	(312) 420-6721
Hugg, Roger	Illinois Fire Chiefs Assn.	(312) 397-3352
Israel, Fred K.	DuPage County Sheriff's Dept.	(312) 682-7265
Jautokas, Victor	Chicago Police Dept.	(312) 744-5422
Johnston, Paul F.	E.F. Johnson Co.	(815) 623-6088
Kottlowski, Donald W.	Indiana State Police Communications	(317) 899-8257
Kurt, Erick	Ogden Dunes Fire Dept.	(219) 762-4125

Marshall, Paul E.	Motorola, Inc	(312) 350-3714
Maxin, Gus	City of Gary, C&E Dept.	(219) 886-0066
McCune, Duane J.	G.E. Mobile Radio	(312) 573-3650
Mieure, T.G.	Gurnee Police Dept.	(312) 244-1132
Moeller, Bruce J.	Naperville Fire Dept.	(312) 420-4198
Novy, Phyllis	Orland Park Police Dept.	(312) 349-4111
O'Neill, Timothy	City of Delavan Police	(414) 728-6311
Opanasenko, Mitchell	Michigan Dept. of Trans.	(517) 373-2719
Payne, Stanley A.	Motorola, Inc.	(312) 350-3538
Pestikas, Steve J.	Munster Police Department	(219) 836-8131
Pickett, Ross	State of Illinois ESDA	(217) 782-6818
Race, Charles	Waukesha Co. Emergency Govt.	(414) 548-7580
Riddle, Greg	Elk Grove Fire Dept.	(312) 364-2672
Rimicci, John R.	Chicago Police Dept.	(312) 744-5444
Robinson, Russ	RAM Communication Consultants	(313) 569-2337
Rutili, Julius J.	Cook County Sheriff's Dept.	(312) 865-4808
Schoenfeld, Roger J.	Kenosha County Sheriff's Dept	(414) 656-7300
Schuld, Al	Barrington Hills Police Dept.	(312)

		551-3006
Schwoegler, Alan	City of Madison	(608) 266-4767
Sepic, Frank	Milwaukee Police Dept.	(414) 344-5656
Shulak, Richard	Wisconsin State Patrol, BOC	(608) 267-9799
Shulock, George	Emergency Communications Center	(219) 391-8493
Smolynsky, Jerry	Illinois Dept. of Transportation	(312) 705-4378
Sperling, William	Woodridge Police Dept.	(312) 852-7000
Springer, William	Illinois Tollway Authority	(312) 574-2000
Stouffer, Dale	National Communication System	(703) 746-1242
Strauss, Richard	Milwaukee County	(414) 278-4858
Swan, David G.	City of Peoria	(309) 672-8769
Szymczak, Lud	Illinois Tollway Authority	(312) 574-2000
Tiegs, William A.	Greenfield Police Dept.	(414) 281-9480
Tinsman Jr, Maynard J.	Federal Emergency Mgmt Agency	(202) 646-3065
Toscas, John Z.	Cook County Sheriffs Dept.	(312) 865-4808
Vogel, Emil	Motorola, Inc.	(201) 447-4000
Vratny, Teddy F.	Du-Comm Central Dispatch	(312) 690-8088
Wackowski, Edward	Gary Fire Department	(219) 886-0727

Walstra, Rick	Porter County EMS	(219) 464-9663
Watson, Jack T.	Illinois Tollway Authority	(312) 574-2000
Watson, Mike	Mishawaka Fire Dept.	(219) 258-1673
Williams, Donald C.	Illinois State Police	(217) 782-7345
Williams, Allen	E.F. Johnson Co.	(219) 583-7890
Witzke, Neal	Tri-Electronics	(219) 931-6895
Zubler, Glenn W.	City of South Bend	(219) 284-9295

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMITTEE

MAILING ADDRESSES

James A. Adler	P.O. Box 297	Jefferson	WI	53549
Kenneth S Anderson	850 Waukegan Road	Deerfield	IL	60015
Ralph Antonacci	525 W. Jefferson St	Springfield	IL	62761
Gene Barlog	1550 W. 181st Ave	Lowell	IN	46356
Larry W. Barnes	3333 Ridge Rd	Highland	IN	46322
Darrell R. Bartz	601 Sangamon Ave	Springfield	IL	62702
Gregory B. Bishop	543 W. Taylor St	Chicago	IL	60607
James O. Bottando	1128 Massachusetts	Gary	IN	46407
James H. Brown	1510 46 Ave	Rock Island	IL	61201
Dick Buggs	Courthouse Bldg - County Jail	Elkhorn	WI	53121
Jack R. Burlison	100 N. Senate Ave	Indianapolis	IN	46204
Michael J. Celeski	1202 W. Madison St	Chicago	IL	60607
James Chase	P.O. Box 1488	Waukesha	WI	53187
Michael D. Cima	601 Sangamon Ave	Springfield	IL	62702
Bill Clancy	2015 Spring Rd	Oak Brook	IL	60522
William T. Corbett	1202 W. Madison St	Chicago	IL	60607
Raymond R. Cox	1200 N. Gannon Dr	Hoffman Estates	IL	60196
Dick De Mello	Procurement P.O. 30028	Lansing	MI	48909
Ray DeWitt	P.O. Box 1	Granger	IN	46530
Doug Edmonds	33 S Arlington Hts Rd	Arlington Hts	IL	60005
Ralph Eisenbrandt	333 W. Nebraska St	Frankfort	IL	60423
Daniel W. Eklof	P.O. Box 309	Madison	WI	53701
Pat Fasano	1000 Mittel Dr	Wood Dale	IL	60191

Richard Finch	613 State Office Bldg	Indianapolis	IN	46204
Robert Fitzsimmons	1121 S. State St	Chicago	IL	60605
Robert Fleissner	85 Harristown Rd	Glen Rock	NJ	07452
Gus Flores	2201 E. Columbus Dr	East Chicago	IN	46312
John Flynn	375 W. Briarcliff	Bolingbrook	IL	60439
Jeff Galas	201 W. Center Ct	Schaumburg	IL	60196
John Garcia	2201 E. Columbus Dr	East Chicago	IN	46312
Chief Duke Gorris	14600 Ravinia Ave	Orland Park	IL	60462
William B. Graves	730 Center	Racine	WI	
Gary D. Gray	481 the City Dr South	Orange	CA	92668
Carl R. Guse	N5504 Hwy E	Iron Ridge	WI	53035
Robert J. Hajek	P.O. Box H	Riverside	IL	60546
Donald E. Hallman Jr.	276 Colfax Ave	Benton Harbor	MI	49022
Gene T. Haney	2507 S. Green Bay Rd	Racine	WI	53406
Warren A. Heine	150 Dexter Court	Elgin	IL	60120
David H. Held	714 S. Harrison Rd	East Lansing	MI	48823
Wallace P. Heller	1303 N. Milwaukee Ave	Libertyville	IL	60048
Charles Henrici	101 Biesterfield Rd	Elk Grove Vlge	IL	60007
Michael Hermes	255 W. Dundee Rd, Box V	Wheeling	IL	60090
Charles R. Hoyer	131 W. Jefferson	Naperville	IL	60540
Roger Hugg	2455 Plumb Grove Rd	Rolling Meadows	IL	60008
Fred K. Israel	501 N. County Farm Rd	Wheaton	IL	60190
Victor Jautokas	1121 S. State St	Chicago	IL	60605
Paul F. Johnston	P.O. Box 588	Roscoe	IL	61073
Donald W. Kottlowski	100 N. Senate Ave	Indianapolis	IN	46204
Erick Kurt	111 Hillcrest Rd	Odgen Dunes	IN	46368
Paul E. Marshall	1000 Mittel Dr	Wood Dale	IL	60191
Gus Maxin	1128 Massachusetts St	Gary	IN	46407

Duane J. McCune	2015 Spring Rd	Oak Brook	IL	60522
T.G. Mieure	1014 Massena	Waukegan	IL	60085
Bruce J. Moeller	133 W. Jefferson	Naperville	IL	60540
Phyllis Novy	14600 Ravinia Ave	Orland Park	IL	60462
Timothy O'Neill	123 S. 2nd St	Delavan	WI	53115
Mitchell Opanasenko	425 W. Ottawa St	Lansing	WI	48933
Stanley A. Payne	1000 Mittel Dr	Wood Dale	IL	60191
Steve J. Pestikas	1001 Ride Road	Munster	IN	46321
Ross Pickett	110 E. Adams St	Springfield	IL	62706
Charles Race	515 W. Moreland Blvd	Waukesha	WI	53188
Greg Riddle	101 Biesterfield	Elk Grove Vlge	IL	60007
John R. Rimicci	1121 S. State St	Chicago	IL	60605
Russ Robinson	18311 W Ten Mile Rd	Southfield	MI	48075
Julius J. Rutili	1401 S. Maybrook Dr	Maywood	IL	60153
Roger J. Schoenfeld	1000 - 55th St	Kenosha	WI	53140
Al Schuld	112 Algonquin Rd	Barrington	IL	60010
Alan Schwoegler	1120 Sayle St	Madison	WI	53715
Frank Sepic	749 State St	Milwaukee	WI	53233
Richard Shulak	4802 Shebboygan Ave	Madison	WI	53707
George Shulock	2201 E. Columbus Dr	East Chicago	IN	46312
Jerry Smolynsky	200 W. Center Ct	Schaumburg	IL	60196
William Sperling	One Plaza Drive	Woodridge	IL	60517
William Springer	2001 W. 22nd St.	Oak Brook	IL	60521
Dale Stouffer	Ace & So Courthouse Rd	Arlington	VA	22204
Richard Strauss	907 N. 10th St, Rm 313	Milwaukee	WI	53233
David G. Swan	6526 N. Sheridan Rd	Peoria	IL	61614
Lud Szymczak	2001 W. 22nd St.	Oak Brook	IL	60521
William A. Tiegs	5300 W. Layton Ave	Greenfield	WI	53220

Maynard Tinsman, Jr.	Office of Emergency Management	Washington	DC	20472
John Z. Toscas	1401 S. Maybrook Dr	Maywood	IL	60153
Emil Vogel	85 Harristown Rd	Glen Rock	NJ	07452
Teddy F. Vratny	136 N. County Farm Rd	Wheaton	IL	60187
Edward Wackowski	200 East 5th Ave	Gary	IN	46402
Rick Walstra	2206 LaPorte Ave	Valparaiso	IN	46385
Jack T. Watson	2001 W. 22nd St.	Oak Brook	IL	60521
Mike Watson	600 E. Third St	Mishawaka	IN	46544
Donald C. Williams	601 Sangamon Ave	Springfield	IL	62702
Allen Williams	P.O. Box 595	Monticello	IN	47960
Neal Witzke	6231 Calumet	Hammond	IN	46324
Glenn W. Zubler	701 Sample St	South Bend	IN	46625

APPENDIX

D

This Appendix contains the minutes of the November 17, 1988 meeting during which formation of the Regional Conformance Review Committee (RCRC) was decided upon. Reference to this is found beginning with the second paragraph on the second page.

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMITTEE

MEETING SUMMARY

NOVEMBER 17, 1988 KENOSHA, WISCONSIN

The Committee of the Whole was called to order by Chairman Ted Vratny at 10:10 A.M. Roger Schoenfeld welcomed everyone to the Kenosha County Public Safety Building and introduced staff members from the center. A sign-in sheet was circulated throughout the audience for the record of attendance. Ted then introduced Emil Vogel who updated the Committee on relevant issues.

Regarding the Commission's Notice of Inquiry on trunking standards, Emil reported that many organizations had filed comments. Opinions and positions contained in these papers varied widely, resulting in no clear cut mandate for the Commission. Thus, it is felt that the standards issue probably will not remain on the "fast track", as originally hoped. What effect this will have on the release of frequencies is unclear.

Next, Emil reported on the three regional plans (Florida, Dallas/Ft. Worth, and New York Metro) which were submitted to the Commission in August.

The Plan submitted by the State of Florida was rejected. The planners had divided the state into "subregions" and their draft only addressed the Southeast section of the State at the time. The Commission directed the planners to eliminate the "subregions" and re-submit their plan encompassing the entire State. It is anticipated that this will be accomplished in January, 1989.

The Dallas/Fort Worth Plan was also rejected. In this case, the rejection was based on the conclusions made from their user questionnaire. The planners did not qualify their findings when they reported that there was a greater demand for spectrum than there is spectrum available. The Commission reasoned that the purpose of the regional plans is to make the best use of the 6 MHz being made available to public safety. Plans should not be submitted which state that this amount is not enough. What is required in the plans is a statement of whether the needs of all agencies requesting frequencies were satisfied. If they weren't, the plan must explain how agencies were prioritized. The plan must also explain how the needs of those agencies who will not receive allocations in the new spectrum will be satisfied.

The New York Plan has been approved by FCC Staff. APCO has filed comments in support of the plan; an adjacent region has filed comments criticizing it. Reply Comments were due on November 28th. A decision by the Commission will likely be forthcoming in January, 1989.

After distributing (and briefly commenting on) the Reply Comments filed by the SLMRPC on the trunking standards issue, Ted raised four topics for discussion: Regional Plan Review Committee; Frequency Coordination; Frequency Specifics; and Mutual Aid Channels.

Discussion on the first two topics became intertwined, as it was agreed that the Plan ought to establish a standing committee to accomplish future tasks; and that frequency coordination within the new spectrum was possibly one of those tasks.

Carl Guse moved that the standing committee be composed of the Frequency Advisory Committee Chairman from each State, plus one other representative of each State, plus the Chairman of the Southern Lake Michigan Regional Planning Committee. Discussion on this motion resulted in agreement that the "other state representative" must be from an agency operating within the Region. This motion was seconded by Dick Buggs and put to the Committee of the Whole for a vote; it passed without opposition.

The title of this standing committee was then considered. It was pointed out that "Regional Plan Review Committee" was somewhat of a misnomer, since the committee's functions would apparently encompass much more than reviewing the Plan. It was agreed by consensus that the standing committee would be entitled the "Regional Conformance Review Committee" (or RCRC) to indicate that its general purpose was one of reviewing documents, applications, systems, etc. for their conformance to the Regional Plan.

The next motion brought to the floor regarded the voting authority of the members of the RCRC. Bill Corbett moved that each member be allowed one vote. If one representative from a State was absent during a vote, the other representative from that state would be empowered with the absent member's proxy. However, if both representatives of a state are absent, no proxies would be allowed and a majority of those present would decide the issue. The motion was amended to include the right of the Regional Planning Committee Chairman to vote in all instances, not merely in instances of a tie vote. The motion was seconded by Dave Held and then passed by the Committee of the Whole without opposition. Comments were briefly introduced regarding the by-laws of the RCRC, but it was decided that the establishment of by-laws and operating procedures was more appropriately a task left to the members of the RCRC themselves.

The topic of Frequency Specificity was then raised. Jim Brown asked whether the "CET" computer program will be able to provide assistance in this area. Emil reported that as yet, National APCO has not had a chance to fully implement this software in the New Smyrna offices. However, it appeared that the timing would coincide with our needs.

Dave Held pointed out that there are two issues to address: (1) How many channels will each agency be allocated; and (2) Which frequencies will they be allocated. To do this, Emil suggested that the Statewide agencies' needs must be determined first, then distribution of the remaining frequencies can be made depending on frequency re-use criteria. Resolution of this topic was not possible at this time, and Ted asked Jim Brown to have his Technical Subcommittee consider it, using the results of the User Questionnaires.

On the question of how many mutual aid channels are required in the Southern Lake Michigan Region, it was decided that the five (5) channels designated in the National Plan are enough.

Jack Watson passed out copies of a draft of the Operational Subcommittee's proposals. The ensuing conversation highlighted certain considerations. Jack mentioned that mobile relay base stations on the common channels will be required to normally operate in the repeat disable mode. Dick DeMello said that in wide-area networks, school buses will have to be allowed access to these channels. Ted suggested that stricter guidelines be imposed in metropolitan areas than in rural areas regarding the school bus issue. It was also noted that while fixed end equipment might only require one channel, mobile equipment will have to have all five channels. Finally, Emil reported that the Commission has dropped the subject of Encryption from the Report & Order; thus, it need not be addressed in the regional plans. Jack Watson asked that all members review the document that he distributed and call him prior to the next meeting with comments or suggestions.

The Committee of the Whole adjourned at 12:08 P.M.

NEXT MEETING:

December 14, 1988 @ 10:00 (CST) A.M. at the

Munster, Indiana Police Department
1001 Ridge Road
Munster, Indiana 46321

Exit Interstate 80 at Calumet Avenue and follow the attached local area map.

CONTACT PERSON:

Lt. Steve J. Pestikas (Munster P.D.)
(219) 836-8131

APPENDIX

E

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMISSION

Teddy F. Vratny
Representative for the State of Illinois
Du-Comm Central Dispatch
136 North County Farm Road
Wheaton, Illinois 60187
(312) 690-8088

Dear Sir:

The Federal Communications Commission is making new portions of the radio spectrum available to Public Safety and Special Emergency Radio services. However, before the FCC will grant licenses in this new spectrum (821-824 & 866-869 MHz), a "Regional Plan" showing a coordinated approach to spectrum allocation among the various eligible users must be submitted.

Such a plan is being developed by representatives from the States of Michigan, Indiana, Illinois and Wisconsin for the greater metropolitan Chicagoland area. This area is known as the **Southern Lake Michigan 800 MHz Planning Region** and encompasses forty-three counties within the four states. Your organization has been identified as a potential user of the 800 MHz radio spectrum in this Region.

Enclosed you will find a questionnaire developed by the Regional Planning Commission. It is designed to obtain information which is vital to the planning process. We strongly urge you to complete and return this questionnaire. Without your input at this time, your needs for voice and data communications will not be known; thus, they will not be considered in our Regional Plan.

We realize that you may not have exact, detailed information about your current situation readily at hand. We also realize that it is difficult to project trends and needs for fifteen years in the future. But it is in your own best interest to obtain and report as accurate data as possible. Some suggested resources you might consult are your inventory and management information reports, as well as your local universities and planning organizations. In the event that you cannot obtain "hard statistics" for any item(s), you should report your "best estimates".

The questionnaire must be completed and returned to me no later than

Thank you,

Teddy F. Vratny

TFV:mjc
encl.

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMISSION

RADIO USER QUESTIONNAIRE

INSTRUCTIONS:

This questionnaire is designed to obtain information from potential users of newly available radio spectrum in the 821-824 and 866-869 megahertz ranges. It consists of four Sections and seven pages. Many of the items only require a choice or choices to be checked. Where blank lines are provided for longer answers, please **PRINT** the information asked for. If the space given is not enough to accommodate your answer, you may attach additional comments to the end of this survey.

Please print the name of your organization/agency at the top of each page in the space provided. When you have completed the questionnaire, return it to your State's representative for the Southern Lake Michigan Regional Planning Commission. His name and address are listed below, and again on the accompanying cover letter. Should you have any questions regarding this survey you may call him at: (312) 690-8088.

Remember, in order to have your needs considered in the Regional Plan, you must return this questionnaire within three weeks. Failure to do so may result in your experiencing difficulty in obtaining radio frequencies in the future.

Return this completed questionnaire to:

THE SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMISION

c/o:

Teddy F. Vratny
Representative for the State of Illinois
Du-Comm Central Dispatch
136 North County Farm Road
Wheaton, Illinois 60187

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMISSION

Carl R. Guse
Representative for the State of Wisconsin
Dodge County Sheriff
N5504 Highway E
Iron Ridge, Wisconsin 53035
(414) 485-4455

Dear Sir:

The Federal Communications Commission is making new portions of the radio spectrum available to Public Safety and Special Emergency Radio services. However, before the FCC will grant licenses in this new spectrum (821-824 & 866-869 MHz), a "Regional Plan" showing a coordinated approach to spectrum allocation among the various eligible users must be submitted.

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Thank you,

Carl R. Guse

CRG:mjc
encl.

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMISSION

RADIO USER QUESTIONNAIRE

INSTRUCTIONS:

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Return this completed questionnaire to:

THE SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMISION

c/o:

Carl R. Guse
Representative for the State of Wisconsin
Dodge County Sheriff
N5504 Highway E
Iron Ridge, Wisconsin 53035

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMISSION

Donald W. Kottlowski
Representive for the State of Indiana
Indiana State Police Communications
100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 899-8257

Dear Sir:

The Federal Communications Commission is making new portions of the radio spectrum available to Public Safety and Special Emergency Radio services. However, before the FCC will grant licenses in this new spectrum (821-824 & 866-869 MHz), a "Regional Plan" showing a coordinated approach to spectrum allocation among the various eligible users must be submitted.

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The questionnaire must be completed and returned to me no later than

Thank you,

Donald W. Kottlowski

DWK:mjc
encl.

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMISSION

RADIO USER QUESTIONNAIRE

INSTRUCTIONS:

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Remember, in order to have your needs considered in the Regional Plan, you must return this questionnaire within three weeks. Failure to do so may result in your experiencing difficulty in obtaining radio frequencies in the future.

Return this completed questionnaire to:

THE SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMISION

c/o:

Donald W. Kottlowski
Representative for the State of Indiana
Indiana State Police Communications
100 North Senate Avenue
Indianapolis, Indiana 46204

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMISSION

David H. Held
Representative for the State of Michigan
Michigan State Police
714 South Harrison Road
East Lansing, Michigan 48823
(517) 337-6240

Dear Sir:

The Federal Communications Commission is making new portions of the radio spectrum available to the Public Safety and Special Emergency Radio services. However, before the FCC will grant licenses in this new spectrum (821-824 & 866-869 MHz), a "Regional Plan" showing a coordinated approach to spectrum allocation among the various eligible users must be submitted.

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Thank you,

David H. Held

DHH:mjc
encl.

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMISSION

RADIO USER QUESTIONNAIRE

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Return this completed questionnaire to:

THE SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMISSION

c/o:

David H. Held
Representative for the State of Michigan
Michigan State Police
714 South Harrison Road
East Lansing, Michigan 48823

SECTION I

GENERAL INFORMATION

1. NAME OF AGENCY: _____

2. ADDRESS: _____

_____

_____

3. PHONE NUMBER: _____

4. CONTACT PERSON: _____

5. TITLE: _____

6. NAME OF PERSON COMPLETING QUESTIONNAIRE: _____

7. TYPE OF ORGANIZATION:

(A) [] Governmental (B) [] Private

8. TYPE(S) OF SERVICE: (Check all that apply)

(A) [] Law Enforcement

(B) [] Emergency Medical

(C) [] Forestry/Conservation

(D) [] Beach Patrol

(E) [] Handicapped Assistance

(F) [] Other (please specify):

_____

(G) [] Fire Fighting

(H) [] Highway Maintenance

(I) [] Civil Defense

(J) [] Disaster Relief

(K) [] School Bus

(L) [] Veterinarian

9. DOES YOUR AGENCY UTILIZE A MULTI-AGENCY DISPATCH SERVICE?

(A) [] Yes (B) [] No

10. IF YOUR ANSWER TO QUESTION 9 WAS "YES," PLEASE LIST THE NAME AND ADDRESS OF THE DISPATCH CENTER:

_____

_____

_____

AGENCY: _____

SECTION II

DEMOGRAPHIC INFORMATION

1. PLEASE CHECK THE STATE(S) IN WHICH YOU OPERATE:

   (A) [] WI (B) [] IL (C) [] IN (D) [] MI

2. DO YOU SERVICE THE ENTIRE STATE?

   (A) [] Yes (B) [] No

   IF YES, GO TO QUESTION #8.

3. DOES YOUR SERVICE AREA ENCOMPASS...

   (A) [] One County (B) [] Multiple Counties

4. PLEASE LIST THE COUNTY NAME(S):

   _____ _____ _____

   _____ _____ _____

5. DOES YOUR SERVICE AREA ENCOMPASS...

   (A) [] One City/Town (B) [] Multiple Cities/Towns

6. PLEASE LIST THE CITY/TOWN NAME(S):

   _____ _____ _____

   _____ _____ _____

7. IS YOUR SERVICE AREA:

   (A) [] Urban (B) [] Rural (C) [] Both

8. WHAT IS THE SIZE OF YOUR SERVICE AREA?

   _____ Square Miles

9. WHAT IS THE CURRENT POPULATION OF YOUR SERVICE AREA?

   _____

10. WHAT IS THE POPULATION PROJECTED TO BE IN THE YEARS...

    1995: _____ 2005: _____

AGENCY: _____

SECTION III

FREQUENCY NEEDS

1. IS YOUR PRESENT RADIO SYSTEM ADEQUATE TO MEET YOUR CURRENT NEEDS?

   (A) [ ] Yes (B) [ ] No

   YOUR 1995 NEEDS?

   (A) [ ] Yes (B) [ ] No

   YOUR 2005 NEEDS?

   (A) [ ] Yes (B) [ ] No

2. DO YOU HAVE PLANS TO ALTER YOUR RADIO SYSTEM IN THE FUTURE?

   (A) [ ] Yes (B) [ ] No

3. IF YOU DO, PLEASE GIVE A BRIEF DESCRIPTION OF YOUR PLANS:

   _____

   _____

   _____

4. HAVE YOU HAD TO USE ANY ALTERNATE METHODS OF DISPATCH BECAUSE OF AN INABILITY TO ACQUIRE SUFFICIENT RADIO SPECTRUM FOR EITHER FINANCIAL REASONS OR SPECTRUM UNAVAILABILITY?

   (A) [ ] Yes (B) [ ] No

5. IF YES, PLEASE EXPLAIN: _____

   _____

   _____

6. HAVE YOU HAD TO BORROW, SHARE, OR LEASE RADIO FREQUENCIES FROM OTHER AGENCIES IN ORDER TO MAINTAIN YOUR DISPATCH OPERATION?

   (A) [ ] Yes (B) [ ] No

7. IF YES, PLEASE EXPLAIN: _____

   _____

   _____

8. HOW OFTEN DOES YOUR AGENCY ENCOUNTER "WAIT TIME" TO ACCESS A RADIO CHANNEL FOR VOICE TRANSMISSIONS FROM THE FIELD?

   (A) [ ] Never (B) [ ] Seldom Less than once a week (C) [ ] Sometimes More than once a week (D) [ ] Often More than once a shift

AGENCY: _____

SECTION III
(CONT'D)

9. ON THE AVERAGE, HOW MANY VOICE TRANSMISSIONS DOES YOUR AGENCY MAKE PER HOUR?

_____

10. HOW MANY VOICE TRANSMISSIONS MIGHT OCCUR DURING YOUR BUSIEST HOUR?

_____

11. WHAT IS THE AVERAGE LENGTH OF AIR TIME USED PER VOICE TRANSMISSION?

_____

12. DO YOU HAVE ANY PLANS TO EXPAND YOUR USE OF RADIO FREQUENCIES FOR DATA TRANSMISSIONS?

(A) [] Yes (B) [] No

13. DO YOU HAVE ANY PLANS TO USE VOICE ENCRYPTION TECHNOLOGY TO PROVIDE PRIVATE AND SECURE RADIO TRANSMISSIONS?

(A) [] Yes (B) [] No

14. DO YOU HAVE ANY PLANS TO INCORPORATE "TELEPHONE INTERCONNECTS" WITH YOUR MOBILE OR PORTABLE RADIOS?

(A) [] Yes (B) [] No

15. IF YOU ANSWERED "YES" TO QUESTION 14, PLEASE INDICATE THE APPROXIMATE NUMBER:

Mobiles _____ Portables_____

16. LIST THE FREQUENCIES (CHANNELS) FOR WHICH YOU NOW HOLD A VALID FCC LICENSE: (List 800 MHz frequencies in #17)

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

17. ARE YOU PRESENTLY LICENSED ON EXISTING 800 MHz CHANNELS? IF YES, LIST THEM:

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

AGENCY: _____

SECTION III
(CONT'D)

18. IF YOU DO NOT HOLD A LICENSE FOR 800 MHz CHANNELS, DO YOU HAVE AN APPLICATION PENDING?

(A) [ ] Yes (B) [ ] No

19. DO YOU HAVE A FORMAL PLAN ON FILE TO CONSTRUCT A 800 MHz SYSTEM?

(A) [ ] Yes (Copy enclosed) (B) [ ] Plan incomplete. A copy will be forwarded by _____. (date) (C) [ ] No

20. DO YOU HAVE THE FUNDING AVAILABLE TO PROCEED WITH IMPLEMENTING THE SYSTEM?

(A) [ ] Yes (B) [ ] No (See next question)

21. IF NO, WHEN DO YOU ANTICIPATE FUNDING WILL BE AVAILABLE?

(A) [ ] 12 Months (B) [ ] 24 Months (C) [ ] 36 Months

(D) [ ] 48 Months (E) [ ] 60 Months or more

22. HOW MANY ADDITIONAL 800 MHz RADIO FREQUENCIES DO YOU EXPECT YOUR AGENCY WILL NEED... (If None, please indicate Zero)

Now	In 1995	In 2005

23. IF YOU ACQUIRE RADIO FREQUENCIES IN THE NEWLY ALLOCATED SPECTRUM, WHAT FREQUENCIES THAT YOU NOW HAVE WOULD YOU NO LONGER HAVE USE FOR? BE SPECIFIC:

Frequency	Frequency	Frequency

24. WHAT EXISTING FREQUENCIES WOULD YOU ATTEMPT TO RETAIN? BE SPECIFIC.

Frequency	Projected Use

AGENCY: _____

SECTION III
(CONT'D)

25. IF YOU ARE AWARDED THE ADDITIONAL FREQUENCIES YOU NEED IN THE 800 MHz SPECTRUM, UNLESS YOU ARE A CURRENT 800 MHz SYSTEM USER, YOU WILL HAVE TO PURCHASE A NEW COMMUNICATIONS SYSTEM. IF YOU COULD OBTAIN ADDITIONAL CHANNELS IN THE SPECTRUM YOU CURRENTLY USE, IT MAY BE POSSIBLE THAT A SIGNIFICANT PART OF YOUR CURRENT SYSTEM COULD CONTINUE TO BE USED. GIVEN THE OPTION, WHICH CHOICE WOULD YOU PREFER?

(Select one): (A) [] Additional channels in the 800 MHz spectrum

(B) [] Additional channels in my current spectrum []

26. IF YOU SELECTED "CURRENT SPECTRUM," INDICATE THE SPECTRUM YOU ARE NOW USING.

(A) [] 30-40 MHz (B) [] 40-50 MHz (C) [] 150-160 MHz (D) [] UHF

27. PLEASE LIST ANY OTHER AGENCIES/ORGANIZATIONS WITH WHOM YOU WOULD NEED RADIO COMMUNICATIONS IN THE EVENT OF A DISASTER OR LARGE SCALE EMERGENCY:

_____

_____

SECTION IV

EQUIPMENT

1. FOR THE FOLLOWING, PLEASE INDICATE THE **TOTAL NUMBER** THAT YOUR AGENCY **OWNS OR OPERATES** NOW, AND PROJECT FOR THE YEARS LISTED.

	Now	1995	2005
MOBILE RADIOS	_____	_____	_____
*VOICE ENCRYPTION MOBILES	_____	_____	_____
PORTABLE (HANDHELD) RADIOS	_____	_____	_____
**VOICE ENCRYPTION PORTABLES	_____	_____	_____
MOBILE COMPUTER TERMINALS	_____	_____	_____
AUTOMATIC VEHICLE LOCATORS	_____	_____	_____
RADIO CONTROL LINKS	_____	_____	_____
RADIO ALARM/CONTROL SYSTEMS	_____	_____	_____
VEHICULAR REPEATERS	_____	_____	_____
TRANSMITTERS/REPEATERS (BASE STATION)	_____	_____	_____

AGENCY: _____

SECTION IV
(CONT'D)

2. FOR THE FOLLOWING, PLEASE INDICATE THE **MAXIMUM NUMBER** IN USE AT ANY GIVEN TIME; AT PRESENT, AND PROJECT FOR THE YEARS LISTED.

	Now	1995	2005
MOBILE RADIOS	_____	_____	_____
*VOICE ENCRYPTION MOBILES	_____	_____	_____
PORTABLE (HANDHELD) RADIOS	_____	_____	_____
**VOICE ENCRYPTION PORTABLES	_____	_____	_____
MOBILE COMPUTER TERMINALS	_____	_____	_____
AUTOMATIC VEHICLE LOCATORS	_____	_____	_____
RADIO CONTROL LINKS	_____	_____	_____
RADIO ALARM/CONTROL SYSTEMS	_____	_____	_____
VEHICULAR REPEATERS	_____	_____	_____
TRANSMITTERS/REPEATERS (BASE STATION)	_____	_____	_____

*THE SUM OF MOBILES AND VOICE ENCRYPTION MOBILES SHOULD EQUAL THE TOTAL NUMBER OF MOBILES IN YOUR SYSTEM

**USE SAME METHODOLOGY NOTED ABOVE FOR MOBILES

APPENDIX

F

PROFESSIONAL ASSOCIATIONS RECEIVING ELIGIBLE USER SURVEY

STATE OF ILLINOIS

Metropolitan Ambulance Association
Secretary, Dick Golden
Reliable Ambulance
1733 W. Irving Park
Chicago, Il 60606

Illinois Chapter-American Ambulance Association
Attn: Chuck Engleman
Advanced Ambulance
4700 W. Diversey
Chicago, Il 60619

Illinois Association of Chiefs of Police
Chief Duke Gorris
Orland Park Police Department
14600 Ravinia Ave
Orland Park, Il 60462

Illinois Sheriffs Association
c/o Champaign County Sheriff's Office
204 E. Main Street
Urbana, Il 61801
Attn: Sheriff Joseph T. Brown, President

Forestry Conservation Communications Association
No current Illinois members
Dick DeMello, President

Illinois Association of Fire Protection Districts
120 Lageschulte St.
Barrington, Il 60010
Attn: Jennifer L. Burka, Administrative Secretary

A.A.S.H.T.O.
c/o John Eden
IDOT Springfield
2300 S. Dirksen Parkway
Springfield, Il 62764

Illinois County and Township Official
P.O. Box 455
Astoria, Il 61501
Attn: George Miller

Illinois Municipal League
1220 S. 7th Street
Springfield, Il 62706

Illinois Fire Chiefs Association
P.O. Box 7
Skokie, Il 60076
Attn: Jerry Burke, Executive Officer

PROFESSIONAL ASSOCIATIONS RECEIVING ELIGIBLE USER SURVEY

STATE OF ILLINOIS
(cont'd)

Illinois Emergency Services Management Association
c/o Lake County Office of Emergency Services
1303 N. Milwaukee Ave
Libertyville, Il 60048

Illinois Chapter of APCO
Sherill Ornberg, Secretary
Des Plaines Fire Department
405 S. River Road
Des Plaines, Il 60016

PROFESSIONAL ASSOCIATIONS RECEIVING ELIGIBLE USER SURVEY

STATE OF INDIANA

Cal Gilvan
Advanced Communications & Electronics, Inc.
2028 S. Franklin
South Bend, In 46613

Jim Hull
Emergency Radio Service
P.O. Box 110
Ligonier, In 46767

Wayne Kopec
Sharp Communications
1903 Lincolnway West
South Bend, In 46628

Allen Williams
Thompson's Communications
2400 West Ridge Road
Gary, In 46408

Ann Metheny
Lectracom, Inc.
15175 State Road
Bourbon, In 46504

Robert Shepard
General Electric company
Mobile Communications Division
5610 Crawfordsville Road, Suite 1202
Indianapolis, In 46224

Bill Clancy
General Electric Company
2015 Spring Road
Oakbrook, Il 60522

Ron Goeller
Motorola, Communications & Electronics, Inc.
9240 N Meridian Street, Suite 190
Indianapolis, In 46260

Mr. Donald Mockler, Director
Elkhart County Civil Defense
111 N. 3rd Street
Goshen, In 46526

Mr. William A. Dowell, Director
Jasper County Civil Defense
Courthouse
Rensselaer, In 47978

PROFESSIONAL ASSOCIATIONS RECEIVING ELIGIBLE USER SURVEY

STATE OF INDIANA
(cont'd)

Mr. Robert G. Lamprecht, Director
Lake County Civil Defense
2702 West 35th Ave
Gary, In 46408

Mr. Robert Bannwart, Director
LaPorte County Civil Defense
Courthouse
LaPorte, In 46350

Mr. Crayton Holderead, Director
Marshall County Civil Defense
Box 456
Plymouth, In 46563

Mr. Scott McCord, Director
Newton County Civil Defense
516 W. Main Street
Brook, In 47922

Mr. Ronald N. Stevens, Director
Porter County Civil Defense
154 Monroe Street
Valparaiso, In 46383

Mr. Alvin C. Hale, Director
Pulaski County Civil Defense
Courthouse
Winamac, In 46996

Mr. Donald H. Germann, Coordinator
St. Joseph County Civil Defense
Room 05, City-County Building
South Bend, In 46601

Mr. James Lange, Director
Starke County Civil Defense
812 S. Heaton Street
Knox, In 46534

Indiana Veterinarian Medical Association
4901 Seville Court
Indianapolis, In 46208

Indiana Department of Education
School Traffic Safety, Attn: Bob Russell
251 East Ohio, 2 Market Square Center
Indianapolis, In 46204

PROFESSIONAL ASSOCIATIONS RECEIVING ELIGIBLE USER SURVEY

STATE OF INDIANA
(cont'd)

Indiana Volunteer Fireman's Association
Lawrence Swartz, President
407 West Jackson Street
Rensselaer, In 47978

Indiana Association of Counties
Richard Cockrum, Executive Director
120 Monument Circle, Suite 217
Indianapolis, In 46204

Indiana Association of Cities and Towns
150 West Market Street, Suite 600
Indianapolis, In 46204

PROFESSIONAL ASSOCIATIONS RECEIVING ELIGIBLE USER SURVEY

STATE OF WISCONSIN

Badger Sheriff's Association
c/o Sheriff Leroy Klein
123 S. 5th Ave
Sturgeon Bay, Wi 54235

Law Enforcement Bulletin
Crime Information Bureau Director
P.O. Box 2718
Madison, Wi 53701-2718

Wisconsin Chiefs of Police
c/o Jerome Wolff
2000 N. Calhoun Rd
Brookfield, Wi 53005

Wisconsin Law Enforcement Officers Association
Tom Perschy
7202 Bergman Rd
Sauk City, Wi 53583

Wisconsin Sheriff's & Deputies Association
P.O. Box 145
Chippewa Falls, Wi 54729

Wisconsin County Police Association
Peter Tubbs
352 Shady Dr.
Oneida, Wi 54155

Wisconsin Police & Sheriff Communications Association
Walter Swiger
P.O. Box 125
Brookfield, Wi 53008=0125

Wisconsin State Fire Chiefs' Association
Secretary/Treasurer Cal Phillips
101 Court St
Oshkosh, Wi 54901

Wisconsin State Firefighters' Association
Wisconsin Fire Journal
Box 606, R. 3, Golf Course Road
Spring Green, Wi 53588

Badger Firemens Association
The Dispatcher
P.O. Box 911
Random Lake, Wi 53075

PROFESSIONAL ASSOCIATIONS RECEIVING ELIGIBLE USER SURVEY

STATE OF WISCONSIN
(cont'd)

Wisconsin Emergency Management Association
c/o Steve Golubic
410 S. Walnut St
Appleton, Wi 54911

League of Wisconsin Municipalities
The Municipality
122 Washington Ave
Madison, Wi 53703

Wisconsin Towns Association
Rte 4, Box 319
Shawano, Wi 54166

Crossroads, Transportation Information Center
UW-Madison
432 N. Lake St
Madison, Wi 53706

Wisconsin Counties Association
Madison, Wi

Wisconsin State Medical Society
330 E. Lakeside
Madison, Wi 53701

Wisconsin Emergency Medical Technician Association
Box 787
Chetek, Wi 54728

Wisconsin Association for Developmental Disabilities
5522 University Ave
Madison, Wi 53074

Wisconsin Veterinary Medical Association
Milwaukee District
President Michael Speas DVM
549 W. Grand Ave
Port Washington, Wi 53074

American Red Cross
Greater Milwaukee Chapter Headquarters
2600 W. Wisconsin Ave
Milwaukee, Wi

Wisconsin School Bus Association
P.O. Box 168
Sheboygan, Wi 53082-0168

PROFESSIONAL ASSOCIATIONS RECEIVING ELIGIBLE USER SURVEY

STATE OF WISCONSIN
(cont'd)

Wisconsin Bell Inc.
William M. Jermain Jr., General Manager
Network Planning & Engineering
14th Floor, 722 N. Broadway
Milwaukee, Wi 53202

Dan Eklof
Wisconsin Division of Health & Social Services
EMS Section
P.O. Box 309
Madison, Wi 53701-0309

Mike Vertanen
Motorola
1215 Washington St.
Two Rivers, Wi

PROFESSIONAL ASSOCIATIONS RECEIVING ELIGIBLE USER SURVEY

STATE OF MICHIGAN

Michigan Sheriff's Association
1410 E. Kalamazoo
Lansing, Mi 48912

Michigan Association of Chiefs of Police
2248 Mt. Hope
Okemos, Mi 48864

Michigan Association of Counties
319 W. Lenawee
Lansing, Mi 48933

Michigan Association of Emergency Medical Technicians
209 Seymore
Lansing, Mi 48933

Michigan Association of School Boards
421 W. Kalamazoo
Lansing, Mi 48933

Michigan Townships Association
3121 W. Saginaw
Lansing, Mi 48917

APPENDIX

G

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMITTEE

RADIO USER QUESTIONNAIRE RESULTS

OCTOBER 20, 1988

The body of this report contains TOTAL COUNTS of agencies responding to almost every question on the Radio User Survey. It is constructed in the same manner as the questionnaire itself. That is, the Section and Question numbers listed in this report correspond to the Section and Question numbers in the survey. Questions in the survey which asked for remarks, explanations, etc. are not contained in this report. However, the answers are stored on computer floppy diskettes should they need to be examined.

At the end of this report are several Attachments. These provide specific information for certain questions which I thought the Committee might want now. For example, Attachment "D" lists those agencies that said they are currently licensed on 800 MHz channels; Attachment "E" lists those agencies reporting that they have already filed an application for a license in the 800 MHz spectrum.

As you peruse the results contained in this report, make note of further questions that occur to you. Each returned questionnaire has been entered into the computer in DBase III, and the database can be searched in more detail.

Mike Celeski

Sergeant Michael J. Celeski
Administrative Subcommittee
SLM800MHzRPC
(312) 421-4803

SECTION I

1. AGENCIES SUBMITTING RESPONSES

From Wisconsin:	193
From Illinois:	189
From Indiana:	11
From Michigan:	99
TOTAL	492

Agency names and their city/town are listed in Attachment A

7. TYPE OF ORGANIZATION

Governmental: 452 Private: 40

8. TYPE OF SERVICE

Law Enforcement:	253	Fire Fighting:	249
Emergency Medical:	231	Highway Maintenance:	87
Forestry/Conservation:	24	Civil Defense:	133
Beach Patrol:	26	Disaster Relief:	36
Handicapped Assistance:	24	School Bus:	7
		Veterinarian:	10

9. USE A MULTI-AGENCY DISPATCH SERVICE

268

SECTION II

1. STATE(S) AGENCY OPERATES IN

WI: 193 IL: 189 IN: 11 MI: 99

WI/IL: 3 IL/IN: 1 IN/MI: 1

2. AGENCIES THAT PROVIDE SERVICE STATEWIDE

8

Agency names are listed in Attachment B

7. TYPE OF SERVICE AREA

URBAN: 185 RURAL: 72 BOTH: 213

8. SIZE OF SERVICE AREA

Up	to	5	Sq. Miles:	126
6	to	10	Sq. Miles:	63
11	to	50	Sq. Miles:	138
51	to	100	Sq. Miles:	33
101	to	200	Sq. Miles:	18
201	to	300	Sq. Miles:	16
301	to	500	Sq. Miles:	9
501	to	1000	Sq. Miles:	39
More than		1000	Sq. Miles:	14

9. CURRENT POPULATION OF SERVICE AREA

Up	to	5,000:	109
5,000	to	10,000:	73
10,000	to	25,000:	112
25,000	to	50,000:	55
50,000	to	100,000:	47
100,000	to	250,000:	29
250,000	to	500,000:	18
500,000	to	1,000,000:	6
More than		1,000,000:	8

10. PROJECTED POPULATION FIGURES

County population projections are listed in Attachment C

SECTION III

1. RADIO SYSTEM IS NOT ADEQUATE FOR THEIR NEEDS

Today:	176	(35.7%)
In 1995:	162	(67.1%)
In 2005:	378	(76.8%)

2. PLANS TO CHANGE THEIR RADIO SYSTEM IN THE FUTURE

283 (57.5%)

4. HAVE HAD TO USE AN ALTERNATIVE METHOD OF DISPATCH BECAUSE OF SPECTRUM UNAVAILABILITY

78 (15.8%)

6. HAVE HAD TO BORROW, SHARE, OR LEASE RADIO FREQUENCIES

121 (24.6%)

8. HOW OFTEN EXPERIENCE "WAIT TIME" TO ACCESS A RADIO CHANNEL FOR VOICE TRANSMISSIONS FROM THE FIELD

Never:	100	(20.3%)
Seldom:	117	(23.8%)
Sometimes:	96	(19.5%)
Often:	64	(33.3%)

9. AVERAGE VOICE TRANSMISSIONS PER NORMAL HOUR

Up	to	5:	137
6	to	10:	67
11	to	25:	81
26	to	50:	65
51	to	100:	35
101	to	200:	22
201	to	500:	17
501	to	1,000:	1
More	than	1,000:	2

SECTION III
(CONT'D)

10. POTENTIAL NUMBER OF VOICE TRANSMISSIONS IN BUSIEST HOUR

Up	to	5:	27
6	to	10:	39
11	to	25:	86
26	to	50:	93
51	to	100:	79
101	to	200:	48
201	to	500:	34
501	to	1,000:	16
More than		1,000:	4

11. AVERAGE LENGTH OF AIR TIME FOR VOICE TRANSMISSIONS

Up	to	5	Seconds:	63
6	to	10	Seconds:	104
11	to	15	Seconds:	83
16	to	20	Seconds:	41
21	to	25	Seconds:	7
26	to	30	Seconds:	63
31	to	35	Seconds:	2
36	to	40	Seconds:	4
41	to	45	Seconds:	7
46	to	50	Seconds:	1
51	to	55	Seconds:	1
56	to	60	Seconds:	38
More than		60	Seconds:	31

12. HAVE PLANS TO EXPAND THEIR USE OF RADIO FREQUENCIES FOR DATA TRANSMISSIONS

169 (34.3%)

13. HAVE PLANS TO USE VOICE ENCRYPTION TECHNOLOGY:

110 (22.3%)

14. PLANS TO INCORPORATE "TELEPHONE INTERCONNECTS" INTO THEIR RADIO SYSTEM:

130 (26.4%)

15. NUMBER OF UNITS TO BE EQUIPPED WITH TELEPHONE INTERCONNECTS

Mobiles: 2019 Portables: 2183

SECTION III
(CONT'D)

17. AGENCIES CURRENTLY LICENSED ON 800 MHz CHANNELS

40

Agency names are listed in Attachment D

18. HAVE AN APPLICATION FOR 800 MHz CHANNELS PENDING

4

Agency names are listed in Attachment E

19. HAVE A FORMAL PLAN ON FILE

Yes: 6 Plan Incomplete: 14 No: 418

Agency names for "Yes" & "Incomplete" are listed in Attachment F

20. HAVE FUNDS AVAILABLE NOW TO IMPLEMENT SYSTEM

30

Agency names are listed in Attachment G

21. ANTICIPATE FUNDING FOR NEW SYSTEM

In 12 Months: 12 In 24 Months: 26
In 36 Months: 28 In 48 Months: 9

60 Months or More: 129

Agency names for "12 Months & 24 Months" are listed in Attachment H

22. ADDITIONAL 800 MHz FREQUENCIES NEEDED

Now: 425 In 1995: 684 In 2005: 1017

Agencies needing 1 to 4 frequencies now---Attachment I
Agencies needing 5 to 10 frequencies now---Attachment J
Agencies needing 11 or more frequencies now--Attachment K

25. CHOICE OF ADDITIONAL CHANNELS

In 800 MHz spectrum: 96
In current spectrum: 281

Agencies requesting additional channels in 800 MHz spectrum are listed in Attachment L

26. CURRENT SPECTRUM RANGES BEING USED NOW

(A) 30 to 40 MHz:	10	(B) 40 to 50 MHz:	38
(C) 150 to 160 MHz:	209	(D) UHF:	33

(A) + (B) + (C) + (D):	1
(A) + (B) + (C):	2
(A) + (B) + (D):	0
(A) + (C) + (D):	1
(B) + (C) + (D):	3
(A) + (B):	2
(A) + (C):	4
(A) + (D):	0
(B) + (C):	19
(B) + (D):	3
(C) + (D):	21

SECTION IV

1. TOTALS OF EQUIPMENT OWNED OR OPERATED

	NOW	1995	2005
Mobile Radios	37,219	42,886	49,062
Voice Encryption Mobiles	718	3,660	5,683
Portable (Handheld) Radios	29,061	35,692	41,517
Voice Encryption Portables	606	4,058	6,136
Mobile Computer Terminals	528	6,073	12,684
Automatic Vehicle Locators	30	3,307	10,785
Radio Control Links	201	656	1,036
Radio Alarm/Control Systems	504	980	1,788
Vehicular Repeaters	3,589	4,897	6,920
Transmitters/Repeaters (Base Station)	1,927	2,254	2,639

2. TOTALS OF EQUIPMENT POTENTIALLY IN USE AT ONE TIME

	NOW	1995	2005
Mobile Radios	21,606	23,245	25,820
Voice Encryption Mobiles	586	2,000	2,952
Portable (Handheld) Radios	18,030	19,074	23,927
Voice Encryption Portables	408	1,617	3,685
Mobile Computer Terminals	438	4,687	8,933
Automatic Vehicle Locators	42	2,203	3,923
Radio Control Links	197	589	936
Radio Alarm/Control Systems	479	746	1,468
Vehicular Repeaters	1,748	2,471	3,394
Transmitters/Repeaters (Base Station)	1,545	1,859	2,157

RESPONDING AGENCIES

AGENCY	CITY/TOWN
GURNEE POLICE DEPARTMENT	GURNEE
QUADCOM	CARPENTERSVILLE
LINCOLNWOOD POLICE DEPARTMENT	LINCOLNWOOD
VILLAGE OF CLARENDON HILLS	CLARENDON HILLS
CITY OF NAPERVILLE-ESDA	NAPERVILLE
FOREST PARK POLICE DEPARTMENT	FOREST PARK
LAGRANGE POLICE DEPARTMENT	LAGRANGE
HARVARD POLICE DEPARTMENT	HARVARD
WEST CHICAGO POLICE DEPARTMENT	WEST CHICAGO
TRI-COM CENTRAL DISPATCH SYSTEM	GENEVA
CITY OF MCHENRY POLICE DEPARTMENT	MCHENRY
RIVER FOREST POLICE DEPARTMENT	RIVER FOREST
VILLAGE OF FOX LAKE POLICE	FOX LAKE
RIVERDALE POLICE DEPARTMENT	RIVERDALE
SOUTH HOLLAND POLICE DEPARTMENT	SOUTH HOLLAND
WILL COUNTY SHERIFF'S DEPT.	JOLIET
DUPAGE COUNTY-OFFICE OF EMERGENCY MANAGEMENT	WHEATON
WILL COUNTY ESDA	JOLIET
ZION POLICE DEPARTMENT	ZION
GRUNDY COUNTY SHERIFF'S POLICE	MORRIS
SOMONAUK POLICE DEPT.	SOMONAUK
DEKALB COUNTY SHERIFF'S POLICE	SYCAMORE
BARRINGTON HILLS POLICE DEPT.	BARRINGTON HILLS
CRETE POLICE DEPT.	CRETE
HICKORY HILLS POLICE DEPT.	HICKORY HILLS
HINSDALE POLICE DEPT.	HINSDALE
SHOREWOOD POLICE DEPT.	SHOREWOOD
GLENDALE HEIGHTS POLICE DEPT.	GLENDALE HEIGHTS
NILES POLICE DEPT.	NILES
LINCOLNWAY POLICE COMM. CENTER	NEW LENOX
FRANKFORT POLICE DEPT.	FRANKFORT
NEW LENOX POLICE DEPT.	NEW LENOX
OAK PARK POLICE DEPT.	OAK PARK
CARY POLICE DEPARTMENT	CARY
AURORA POLICE DEPARTMENT	AURORA
CITY OF CRYSTAL LAKE (POLICE DEPT.)	CRYSTAL LAKE
MANHATTAN POLICE DEPARTMENT	MANHATTAN
BROOKFIELD POLICE DEPARTMENT	BROOKFIELD
HUNTLEY POLICE DEPARTMENT	HUNTLEY
WESTMONT POLICE DEPARTMENT	WESTMONT
WINNEBAGO COUNTY SHERIFF'S POLICE	ROCKFORD
VILLAGE OF KILDEEN	KILDEEN
COAL CITY POLICE DEPARTMENT	COAL CITY
YORKVILLE POLICE DEPARTMENT	YORKVILLE
MCHENRY COUNTY SHERIFF'S POLICE	WOODSTOCK
ELGIN PUBLIC SAFETY COMMUNICATIONS	ELGIN
BURR RIDGE POLICE DEPARTMENT	BURR RIDGE
WILMINGTON POLICE DEPARTMENT	WILMINGTON
SKOKIE POLICE & FIRE COMMUNICATIONS	SKOKIE
BARRINGTON POLICE DEPARTMENT	BARRINGTON

MORTON GROVE POLICE	MORTON GROVE
WHEELING POLICE DEPARTMENT	WHEELING
LYNWOOD POLICE DEPARTMENT	LYNWOOD
BURBANK POLICE DEPARTMENT	BURBANK
BELVIDERE POLICE/BOONE COUNTY SHERIFF	BELVIDERE
DUPAGE COUNTY SHERIFF'S DEPARTMENT	WHEATON
EVANSTON POLICE DEPARTMENT	EVANSTON
COUNTY OF LAKE, ILLINOIS RADIO DEPT.	LIBERTYVILLE
RIVERSIDE POLICE DEPARTMENT	RIVERSIDE
WARRENVILLE POLICE DEPARTMENT	WARRENVILLE
BOURBONNAIS POLICE DEPARTMENT	BOURBONNAIS
LYONS POLICE DEPARTMNET	LYONS
PALOS HILLS POLICE DEPARTMENT	PALOS HILLS
WOODSTOCK POLICE DEPARTMENT	WOODSTOCK
GOLF POLICE DEPARTMENT	GOLF
DEERFIELD POLICE DEPARTMENT	DEERFIELD
WOODRIDGE POLICE DEPARTMENT	WOODRIDGE
BOLINGBROOK POLICE DEPARTMENT	BOLINGBROOK
BEDFORD PARK POLICE DEPARTMENT	BEDFORD PARK
BLOOMINGDALE POLICE DEPARTMENT	BLOOMINGDALE
ALSIP POLICE DEPARTMENT	ALSIP
ROLLING MEADOWS POLICE DEPARTMENT	ROLLING MEADOWS
SOUTH ELGIN POLICE DEPARTMENT	SOUTH ELGIN
HAMPSHIRE POLICE DEPARTMENT	HAMPSHIRE
ITASCA POLICE DEPARTMENT	ITASCA
ORLAND HILLS POLICE DEPARTMENT	ORLAND HILLS
ROSELLE POLICE DEPARTMENT	ROSELLE
BRADLEY POLICE DEPARTMENT	BRADLEY
LAGRANGE PARK POLICE DEPARTMENT	LAGRANGE PARK
ADDISON POLICE DEPARTMENT	ADDISON
THORNTON POLICE DEPARTMENT	THORNTON
DU-COMM CENTRAL DISPATCH	WHEATON
ROSEMONT DEPARTMENT OF PUBLIC SAFETY	ROSEMONT
ELK GROVE VILLAGE POLICE/FIRE	ELK GROVE
WESTCHESTER POLICE DEPARTMENT	WESTCHESTER
VILLAGE OF WILMETTE FIRE DEPARTMENT	WILMETTE
BERWYN POLICE DEPARTMENT	BERWYN
RICHTON PARK POLICE DEPARTMENT	RICHTON PARK
BUFFALO GROVE FIRE DEPARTMENT	BUFFALO GROVE
ALGONQUIN-LAKE IN THE HILLS FIRE PROTECTION	ALGONQUIN
NORTH CHICAGO POLICE DEPARTMENT	NORTH CHICAGO
MONTGOMERY POLICE DEPARTMENT	MONTGOMERY
VILLAGE OF DOWNERS GROVE	DOWNERS GROVE
BOLINGBROOK FIRE DEPARTMENT	BOLINGBROOK
CITY OF ST. CHARLES FIRE DEPARTMENT	ST. CHARLES
VILLAGE OF SCHAUMBURG POLICE DEPARTMENT	SCHAUMBURG
ROLLING MEADOWS FIRE DEPARTMENT	ROLLING MEADOWS
WILLOWBROOK POLICE	WILLOWBROOK
WOODSTOCK CITY FIRE DEPARTMENT	WOODSTOCK
GURNEE FIRE DEPARTMENT	GURNEE
WINNETKA POLICE DEPARTMENT	WINNETKA
WEST DUNDEE FIRE DEPARTMENT	WEST DUNDEE
HOMETOWN FIRE PROTECTION DISTRICT	HOMETOWN
CHERRY VALLEY POLICE DEPARTMENT	CHERRY VALLEY
ELMWOOD PARK FIRE DEPARTMENT	ELMWOOD PARK

FOREST VIEW FIRE DEPARTMENT	FOREST VIEW
MCHENRY COUNTY ESDA	
UNIVERSITY PARK FIRE DEPARTMENT	UNIVERSITY PARK
VILLAGE OF BROOKFIELD FIRE DEPARTMENT	BROOKFIELD
NAPERVILLE POLICE DEPARTMENT	NAPERVILLE
NAPERVILLE FIRE DEPARTMENT	NAPERVILLE
BERKELEY POLICE DEPARTMENT	BERKELEY
LAKE BLUFF FIRE DEPARTMENT	LAKE BLUFF
LEYDEN FIRE PROTECTION DISTRICT	MELROSE PARK
GLENBROOK FIRE DEPARTMENT	GLENVIEW
DOWNERS GROVE FIRE DEPARTMENT	DOWNERS GROVE
PINGREE GROVE & COUNTRYSIDE FIRE PROTECTION	ELGIN
NORRIDGE POLICE DEPARTMENT	NORRIDGE
OAK FOREST POLICE DEPARTMENT	OAK FOREST
ELGIN FIRE DEPARTMENT	ELGIN
CARY FIRE PROTECTION DISTRICT	CARY
NEWARK FIRE PROTECTION DISTRICT	NEWARK
GLENWOOD FIRE DEPARTMENT	GLENWOOD
KANKAKEE COUNTY SHERIFF'S POLICE	KANKAKEE
VILLAGE OF WESTMONT EMERGENCY SERVICES	WESTMONT
NORTH RIVERSIDE FIRE DEPARTMENT	NORTH RIVERSIDE
CALUMET CITY POLICE DEPARTMENT	CALUMET CITY
PALOS HEIGHTS FIRE PROTECTION DISTRICT	PALOS HEIGHTS
CHICAGO HEIGHTS FIRE DEPARTMENT	CHICAGO HEIGHTS
ADDISON FIRE PROTECTION DISTRICT #1	ADDISON
CARPENTERSVILLE & COUNTRYSIDE FIRE PROTECTION	CARPENTERSVILLE
ILLINOIS STATE TOLL HIGHWAY AUTHORITY	OAK BROOK
BENSENVILLE ESDA	BENSENVILLE
NORWOOD PARK FIRE DEPARTMENT	HARWOOD HEIGHTS
BROADVIEW FIRE DEPARTMENT	BROADVIEW
NORTHLAKE FIRE DEPARTMENT	NORTHLAKE
FOREST PARK FIRE DEPARTMENT	FOREST PARK
BOURBONNAIS FIRE PROTECTION DISTRICT	BOURBONNAIS
MORTON GROVE FIRE DEPARTMENT	MORTON GROVE
ITASCA FIRE PROTECTION DISTRICT #1	ITASCA
CHICAGO HEIGHTS POLICE DEPARTMENT	CHICAGO HEIGHTS
HIGHLAND PARK FIRE DEPARMTENT	HIGHLAND PARK
CITY OF DARIEN	DARIEN
RICH TOWNSHIP ESDA	RICHTON PARK
GRAYSLAKE FIRE PROTECTION DISTRICT	GRAYSLAKE
DARIEN-WOODRIDGE FIRE PROTECTION DISTRICT	DARIEN
WAUKEGAN FIRE DEPARTMENT	WAUKEGAN
SOUTHWEST CENTRAL DISPATCH	PALOS HEIGHTS
VILLAGE OF BROOKFIELD EMERGENCY SERVICES DISP	BROOKFIELD
BRADLEY FIRE DEPARTMENT	BRADLEY
KANKAKEE FIRE DEPARTMENT	KANKAKEE
VILLAGE OF GLEN ELLYN	GLEN ELLYN
DEKALB CITY POLICE	DEKALB
NEW LENOX FIRE DEPARTMENT	NEW LENOX
WINNETKA FIRE DEPARTMENT	WINNETKA
ARGONNE NATIONAL LABORATORY	ARGONNE
CHICAGO POLICE DEPARTMENT	CHICAGO
HAINESVILLE POLICE DEPARTMENT	GRAYSLAKE
FLOSSMOOR POLICE DEPARTMENT	FLOSSMOOR
CHICAGO FIRE DEPARTMENT	CHICAGO

DEKALB FIRE DEPARTMENT	DEKALB
BRIDGEVIEW FIRE DEPARTMENT	BRIDGEVIEW
PROSPECT HEIGHTS FIRE PROTECTION DISTRICT	PROSPECT HEIGHTS
GLENCOE DEPARTMENT OF PUBLIC SAFETY	GLENCOE
FRANKFORT FIRE DEPT. & FIRE PROTECTION DIST.	FRANKFORT
HOMEWOOD POLICE DEPARTMENT	HOMEWOOD
RICHTON PARK FIRE DEPARTMENT	RICHTON PARK
VILLAGE OF TINLEY PARK	TINLEY PARK
PALATINE POLICE DEPARTMENT	PALATINE
WOOD DALE FIRE PROTECTION DISTRICT # 1	WOOD DALE
KANE COUNTY ESDA	GENEVA
BEDFORD PARK POLICE DEPARTMENT	BEDFORD PARK
OSWEGO FIRE PROTECTION DISTRICT	OSWEGO
LAKE COUNTY E.S.D.A.	LIBERTYVILLE
BENSENVILLE POLICE DEPARTMENT	BENSENVILLE
MORRIS POLICE DEPARTMENT	MORRIS
TRI-STATE FIRE PROTECTION DISTRICT	DARIEN
ITASCA POLICE DEPARTMENT	ITASCA
CHANNAHON FIRE PROTECTION DISTRICT	CHANNAHON
LAGRANGE PARK FIRE DEPARTMENT	LAGRANGE PARK
CITY OF JOLIET FIRE DEPARTMENT	JOLIET
FERMI NATIONAL ACCELERATOR LABORATORY	BATAVIA
STATE OF ILLINOIS	SPRINGFIELD
ILLINOIS STATE POLICE	SPRINGFIELD
ROSCOE POLICE DEPARTMENT	ROSCOE
CRESTWOOD FIRE DEPARTMENT	CRESTWOOD
CITY OF CHICAGO DEPARTMENT OF AVIATION	CHICAGO
VILLAGE OF DOLTON	DOLTON
CITY OF CHICAGO-STREETS & SANITATION	CHICAGO
LAPORTE COUNTY POLICE DEPARTMENT	LAPORTE
CITY OF SOUTH BEND-BUREAU OF COMMUNICATIONS	SOUTH BEND
HAMMOND POLICE DEPARTMENT	HAMMOND
INDIANA STATE POLICE	INDIANAPOLIS
INDIANA DEPT. OF HIGHWAYS-TOLL ROAD DIVISION	GRANGER
LAKE COUNTY SHERIFF'S DEPT.	CROWN POINT
ELKHART COUNTY PUBLIC SAFETY COMM. CENTER	GOSHEN
EAST CHICAGO POLICE DEPARTMENT	EAST CHICAGO
GARY FIRE DEPARTMENT	GARY
CITY OF GARY	GARY
MUNSTER POLICE DEPARTMENT	MUNSTER
ST.OF WIS. DEPT. OF HEALTH AND SOCIAL SER.	MADISON
WISCONSIN STATE CAPITOL POLICE	MADISON
DEFOREST FIRE DEPARTMENT	DEFOREST
MIDDLETON POLICE DEPARTMENT	MIDDLETON
CITY OF STOUGHTON FIRE DEPARTMENT	STOUGHTON
MONONA FIRE DEPARTMENT	MONONA
TOWN OF MADISON FIRE DEPARTMENT	MADISON
DANE COUNTY REGIONAL AIRPORT	MADISON
CITY OF MADISON FIRE DEPARTMENT	MADISON
DANE COUNTY SHERIFF	MADISON
COUNTY OF DANE	MADISON
CITY OF MADISON COMMUNICATIONS	MADISON
STOUGHTON POLICE DEPARTMENT	STOUGHTON
VILLAGE OF MAZOMANIE POLICE DEPARTMENT	MAZOMANIE
CITY OF MADISON POLICE	MADISON

DODGE COUNTY COMMUNICATIONS	JUNEAU
NEOSHA FIRE DEPARTMENT	NEOSHA
MAYVILLE POLICE DEPARTMENT	MAYVILLE
THERESA FIRE DEPARTMENT	THERESA
ASHIPPON HIGHWAY DEPARTMENT	ASHIPPON
BROWNSVILLE VETERINARY CLINIC	BROWNSVILL
THERESA POLICE DEPARTMENT	THERESA
KNOWLES FIRE DEPARTMENT	KNOWLES
BROWNSVILLE FIRE COMPANY	BROWNSVILLE
HUSTISFORD VOL. FIRE DEPARTMENT	HUSTISFORD
TOWN OF RUBICON	RUBICON
BEAVER DAM FIRE DEPARTMENT	BEAVER DAM
REESEVILLE FIRE DEPARTMENT	REESEVILLE
ASHIPPUN FIRE DEPARTMENT	ASHIPPUN
HORICON EMERGENCY MEDICAL SERVICES	HORICON
TOWN OF EMMET	WATERTOWN
JEFFERSON VETERINARY CLINIC	JEFFERSON
VILLAGE OF SULLIVAN	SULLIVVAN
IXONIA FIRE DEPT. & EMS SERVICE	IXONIA
JEFFERSON COUNTY SHERIFF	JEFFERSON
HELENVILLE FIRE DEPARTMENT	HELENVILLE
JEFFERSON POLICE DEPARTMENT	JEFFERSON
FORT ATKINSON POLICE DEPT.	FORT ATKINSON
FORT ATKINSON FIRE DEPARTMENT	FORT ATKINSON
WATERLOO FIRE DEPARTMENT	WATERLOO
KENOSHA WATER UTILITY	KENOSHA
KENOSHA COUNTY SHERIFF'S DEPT.	KENOSHA
CENTRAL HIGH SCHOOL/WESTOSHA	SALEM
TOWN OF SALEM	SALEM
MED-TECH AMBULANCE	KENOSHA
KENOSHA COUNTY FAIR POLICE, INC.	SALEM
KENOSHA HOSPITAL AND MEDICAL CENTER	KENOSHA
FOX POINT DEPT. OF PUBLIC SAFETY	MILWAUKEE
BELL AMBULANCE	MILWAUKEE
MILWAUKEE COUNTY HIGHWAY DEPT.	WAUWATOSA
MEQUON POLICE DEPARTMENT	MEQUON
SAUKVILLE FIRE DEPARTMENT	SAUKVILLE
CITY OF CEDARBURG EMERGENCY GOVT.	CEDARBURG
GRAFTON VOLUNTEER FIRE DEPARTMENT, INC.	GRAFTON
OZAUKEE COUNTY SHERIFF'S DEPARTMENT	PORT WASHINGTON
THIENSVILLE POLICE DEPARTMENT	THIENSVILLE
SUN PRAIRIE POLICE DEPARTMENT	SUN PRAIRIE
MARSHALL POLICE DEPARTMENT	MARSHALL
UNIVERSITY POLICE & SECURITY-MADISON	MADISON
BURLINGTON FIRE DEPARTMENT	BURLINGTON
RACINE UNIFIED SCHOOL DISTRICT	RACINE
CALEDONIA FIRE DEPARTMENT	CALEDONIA
CITY OF RACINE-DEPT. OF PUBLIC WORKS	RACINE
MILTON & MILTON TOWNSHIP FIRE DEPT.	MILTON
EVANSVILLE POLICE DEPARTMENT	EVANSVILLE
JANESVILLE FIRE DEPARTMENT	JANESVILLE
MERCY HOSPITAL OF JANESVILLE	JANESVILLE
CITY OF WHITEWATER	WHITEWATER
WHITEWATER POLICE DEPARTMENT	WHITEWATER
VILLAGE OF DARIEN POLICE DEPARTMENT	DARIEN

HARTLAND FIRE DEPARTMENT	HARTLAND
CITY OF BROOKFIELD FIRE DEPT.	BROOKFIELD
WAUKESHA COUNTY SHERIFF DEPARTMENT	WAUKESHA
CITY OF WAUKESHA, PUBLIC WORKS DEPT.	WAUKESHA
BIG BEND POLICE DEPT.	BIG BEND
WAUKESHA COUNTY PROGRAM ON AGING	WAUKESHA
TESS CORNERS FIRE DEPT.	MUSKEGO
VILLAGE OF BIG BEND	BIG BEND
CITY OF OCONOMOWCC-DPW	OCONOMOWOC
WAUKESHA WASTEWATER TREATMENT PLANT	WAUKESHA
BIG BEND-VERNON VOL. FIRE DEPT.	BIG BEND
NASHOTAH FIRE DEPT.	NASHOTAH
WAUKESHA POLICE DEPT.	WAUKESHA
WAUKESHA COUNTY	WAUKESHA
TOWN OF PEWAUKEE POLICE DEPT.	PEWAUKEE
TOWN OF PEWAUKEE HIGHWAY DEPT.	PEWAUKEE
SANITARY DISTRICT NO.3, TN. OF PEWAUKEE	PEWAUKEE
CITY OF BROOKFIELD POLICE DEPT.	BROOKFIELD
WAUKESHA COUNTY HIGHWAY DEPT.	WAUKESHA
NEW BERLIN POLICE DEPARTMENT	NEW BERLIN
VILLAGE OF BUTLER POLICE DEPARTMENT	BUTLER
WAUKESHA COUNTY PARK & PLANNING	WAUKESHA
WAUKESHA FIRE DEPT.	WAUKESHA
MERTON VOL. FIRE DEPT., INC.	MERTON
CITY OF WAUKESHA POLICE DEPT.	WAUKESHA
TOWN OF VERNON	BIG BEND
BAYSIDE POLICE/FIRE	
COUNTRY VETERINARY CLINIC	RUBICON
COLUMBUS COUNTRYSIDE VETERINARY CLINIC	COLUMBUS,
DODGELAND VETERINARY CLINIC	JUNEAU
LOMIRA FIRE DEPARTMENT	LOMIRA
TOWN OF LOWELL	JUNEAU
TOWN OF TRENTON	WAUPUM
CITY OF JUNEAU POLICE DEPARTMENT	JUNEAU
RANDOLPH POLICE DEPARTMENT	RANDOLPH
BEAVER DAM VETERINARY CLINIC	BEAVER DAM
EMERGENCY GOVERNMENT/PARKS	JEFFERSON
WATERTOWN POLICE DEPARTMENT	WATERTOWN
WATERTOWN MEMORIAL HOSPITAL	WATERTOWN
CITY OF LAKE MILLS POLICE DEPARTMENT	LAKE MILLS
WATERTOWN FIRE DEPARTMENT	WATERTOWN
WATERTOWN STREET DEPARTMENT	WATERTOWN
JEFFERSON COUNTY HIGHWAY DEPARTMENT	JEFFERSON
RUTZ AMBULANCE SERVICE	FORT ATKINSON
LAKE MILLS EMERGENCY MEDICAL SERVICE	LAKE MILLS
FORT ATKINSON MEMORIAL HOSPITAL	FORT ATKINSON
MILWAUKEE COUNTY TRANSIT SYSTEM	MILWAUKEE
MILWAUKEE COUNTY SHERIFF'S DEPARTMENT	MILWAUKEE
WEST ALLIS POLICE DEPARTMENT	WEST ALLIS
FRANKLIN POLICE DEPARTMENT	FRANKLIN
CITY OF CUDAHY DEPARTMENT OF PUBLIC WORKS	CUDAHY
WEST MILWAUKEE FIRE DEPARTMENT	MILWAUKEE
ST. FRANCIS POLICE DEPARTMENT	ST. FRANCIS
ST. FRANCIS FIRE DEPARTMENT	ST. FRANCIS
HALES CORNERS POLICE DEPARTMENT	HALES CORNERS

CUDAHY FIRE DEPARTMENT	CUDAHY
SOUTH MILWAUKEE FIRE DEPARTMENT	SOUTH MILWAUKEE
CITY OF WAUWATOSA	
AMERICAN MEDICAL TRANSPORT OF WISCONSIN	MILWAUKEE
VILLAGE OF SHOREWOOD	SHOREWOOD
SOUTH MILWAUKEE POLICE DEPARTMENT	SOUTH MILWAUKEE
CITY OF GLENDALE DEPARTMENT OF PUBLIC WORKS	GLENDALE
SUBURBAN SERVICES INC. (BESTWAY BUS CO.)	OAK CREEK
JOY FARM TRANSPORTATION	MILWAUKEE
VILLAGE OF WEST MILWAUKEE POLICE DEPARTMENT	MILWAUKEE
WHITEFISH BAY POLICE DEPARTMENT	WHITEFISH BAY
MEDA CARE AMBULANCE	MILWAUKEE
CITY OF GLENDALE FIRE DEPARTMENT	GLENDALE
CUDAHY POLICE DEPARTMENT	CUDAHY
GREENFIELD POLICE DEPARTMENT	GREENFIELD
OAK CREEK FIRE DEPARTMENT	OAK CREEK
WEST ALLIS FIRE DEPARTMENT	WEST ALLIS
BROWN DEER POLICE DEPARTMENT	BROWN DEER
SHOREWOOD POLICE AND FIRE DEPARTMENTS	SHOREWOOD
GRAFTON POLICE DEPARTMENT	GRAFTON
PORT WASHINGTON FIRE DEPARTMENT	PORT WASHINGTON
WAUBEKA FIRE DEPARTMENT	WAUBEKA
CEDARBURG POLICE DEPARTMENT	CEDARBURG
UNION GROVE-YORKVILLE FIRE AND RESCUE	UNION GROVE
RACINE FIRE DEPARTMENT	RACINE
BURLINGTON POLICE DEPARTMENT	BURLINGTON
RACINE POLICE DEPARTMENT	RACINE
TOWN OF WATERFORD POLICE DEPARTMENT	WATERFORD
RACINE COUNTY SHERIFF'S DEPARTMENT	RACINE
CALEDONIA POLICE DEPARTMENT	CALEDONIA
ST. LUKES MEMORIAL HOSPITAL INC.	RACINE
MOUNT PLEASANT POLICE DEPARTMENT	RACINE
MEMORIAL HOSPITAL CORPORATION OF BURLINGTON	BURLINGTON
STURTEVANT POLICE DEPARTMENT	STURTEVANT
OCONOMOWOC POLICE DEPARTMENT	OCONOMOWOC
WAUKESHA COUNTY MAINTENANCE DEPARTMENT	WAUKESHA
WAUKESHA PARK AND RECREATION	WAUKESHA
NEW BERLIN FIRE DEPARTMENT	NEW BERLIN
CITY OF DELAFIELD DEPARTMENT OF POLICE	DELAFIELD
VILLAGE OF CHENEQUA POLICE DEPARTMENT	HARTLAND
HARTLAND POLICE DEPARTMENT	HARTLAND
VILLAGE OF HARTLAND DEPT. OF PUBLIC WORKS	HARTLAND
CITY OF OCONOMOWOC FIRE DEPARTMENT	OCONOMOWOC
TROY CENTER VOLUNTEER FIRE DEPARTMENT	EAST TROY
VILLAGE OF PADDOCK LAKE	SALEM
LYONS TOWNSHIP FIRE DEPARTMENT	LYONS
VILLAGE OF BAYSIDE DEPT.OF PUBLIC WORKS	BAYSIDE
JOHNSON SCHOOL BUS SERVICES INC.	WEST BEND
VILLAGE OF EAST TROY POLICE DEPARTMENT	EAST TROY
GENOA CITY FIRE DEPARTMENT	GENOA CITY
PLEASANT PRAIRIE FIRE/RESCUE DEPARTMENT	KENOSHA
LAKE GENEVA POLICE DEPARTMENT	LAKE GENEVA
TOWN OF RANDALL FIRE DEPARTMENT	BASSETT
LAUDERDALE-LAGRANGE FIRE DEPARTMENT	WHITEWATER
DARIEN VOLUNTEER FIRE DEPARTMENT	DARIEN

ELKHORN POLICE DEPARTMENT	ELKHORN
JEFFERSON FIRE DEPARTMENT	JEFFERSON
GENOA CITY POLICE DEPARTMENT	GENOA CITY
WHEATLAND FIRE DEPARTMENT	BURLINGTON
VILLAGE OF BROWN DEER PUBLIC WORKS DEPARTMENT	BROWN DEER
WILLIAMS BAY POLICE DEPARTMENT	WILLIAMS BAY
TOWN OF LINN POLICE DEPARTMENT	LAKE GENEVA
BURNETT FIRE DEPARTMENT	BURNETT
WAUPUN VETERINARY SERVICE	WAUPUN
CITY OF JUNEAU FIRE DEPARTMENT	JUNEAU
WOODLAND FIRE DEPARTMENT	WOODLAND
MAYVILLE ANIMAL CLINIC	MAYVILLE
WALWORTH COUNTY JAIL	ELKHORN
VILLAGE OF RAVENNA	RAVENNA
PARK TOWNSHIP	THREE RIVERS
SOLON TOWNSHIP-KENT COUNTY	SAND LAKE
VILLAGE OF AUGUSTA	AUGUSTA
MUSKEGON CENTRAL DISPATCH	MUSKEGON
SAUGATUCK POLICE DEPARTMENT	SAUGATUCK
BANGOR POLICE DEPARTMENT	BANGOR
CITY OF BANGOR	BANGOR
COLOMA PUBLIC WORKS DEPARTMENT	COLOMA
ROBINSON TOWNSHIP FIRE DEPARTMENT	GRAND HAVEN
ROCKFORD FIRE DEPARTMENT	ROCKFORD
CENTRAL DISPATCH	DELTON
BUCHANAN TOWNSHIP	BUCHANAN
BRIDGMAN POLICE DEPARTMENT	BRIDGMAN
CHARTER TOWNSHIP OF COMSTOCK	COMSTOCK
MICHIGAN DEPARTMENT OF NATURAL RESOURCES	LANSING
ROYALTON TOWNSHIP	ST. JOSEPH
GALIEN TOWNSHIP FIRE DEPARTMENT	GALIEN
OTSEGO CITY POLICE	OTSEGO
RAVENNA AREA FIRE DEPARTMENT	RAVENNA
BERTRAND TOWNSHIP	NILES
CITY OF ALLEGAN	ALLEGAN
ALPINE CHARTER TOWNSHIP	COMSTOCK PARK
JAMESTOWN TOWNSHIP	JAMESTOWN
KALAMAZOO PUBLIC UTILITIES	KALAMAZOO
LAKE TOWNSHIP FIRE AND RESCUE	BRIDGMAN
CALEDONIA TOWNSHIP	CALEDONIA
TOWNSHIP OF KALAMAZOO POLICE DEPARTMENT	KALAMAZOO
CITY OF WHITEHALL POLICE DEPARTMENT	WHITEHALL
IRVING TOWNSHIP	HASTINGS
PORTAGE POLICE DEPARTMENT	PORTAGE
KENT COUNTY SHERIFF'S DEPARTMENT	GRAND RAPIDS
VILLAGE OF MARCELLUS	MARCELLUS
COOPERSVILLE POLICE DEPARTMENT	COOPERSVILLE
GALESBURG-CHARLESTON TOWNSHIP FIRE DEPARTMENT	GALESBURG
CITY OF NILES ENGINEERING/STREET DEPARTMENT	NILES
KALAMAZOO COUNTY ROAD COMMISSION	KALAMAZOO
CASS COUNTY ROAD COMMISSION	CASSOPOLIS
VAN BUREN COUNTY ROAD COMMISSION	LAWRENCE
BERRIEN COUNTY ROAD COMMISSION	BENTON HARBOR
PORTER VOLUNTEER FIRE DEPARTMENT	UNION
ST. JOSEPH POLICE DEPARTMENT	ST. JOSEPH

VICKSBURG FIRE DEPARTMENT	VICKSBURG
VICKSBURG AMBULANCE SERVICE	VICKSBURG
CITY OF KENTWOOD	KENTWOOD
TOWNSHIP OF DALTON	MUSKEGON
LOWELL POLICE DEPARTMENT	LOWELL
HARTFORD POLICE DEPARTMENT	HARTFORD
GRAND RAPIDS TOWNSHIP FIRE DEPARTMENT	GRAND RAPIDS
STURGIS POLICE DEPARTMENT	STURGIS
GEORGETOWN CHARTER TOWNSHIP	VENISON
TYRONE TOWNSHIP	KENT CITY
CHESHIRE TOWNSHIP	ALLEGAN
GRANDVILLE POLICE DEPARTMENT	GRANDVILLE
DECATUR TOWNSHIP	DECATUR
KALAMAZOO COUNTY SHERIFF'S DEPARTMENT	KALAMAZOO
HUDSONVILLE POLICE DEPARTMENT	HUDSONVILLE
VILLAGE OF CASSOPOLIS	CASSOPOLIS
LINCOLN TOWNSHIP	STEVENSVILLE
BALTIMORE TOWNSHIP	HASTINGS
SPRING LAKE POLICE DEPARTMENT	SPRING LAKE
PAW PAW POLICE DEPARTMENT	VILLAGE OF PAW PAW
BERRIEN COUNTY SHERIFF DEPARTMENT	ST. JOSEPH
CITY OF PLAINWELL	PLAINWELL
CITY OF PLAINWELL, DEPARTMENT OF POLICE	PLAINWELL
VAN BUREN COUNTY SHERIFF'S DEPARTMENT	PAW PAW
WHITE RIVER TOWNSHIP	MONTAGUE
CITY OF PARCHMENT	PARCHMENT
PAVILION TOWNSHIP FIRE DEPARTMENT	SCOTTS
NILES CITY POLICE DEPARTMENT	NILES
MIDDLEVILLE POLICE DEPARTMENT	MIDDLEVILLE
GOBLES POLICE DEPARTMENT	GOBLES
ALLEGAN COUNTY SHERIFF'S DEPARTMENT	ALLEGAN
HOLLAND POLICE DEPARTMENT	HOLLAND
SPARTA POLICE DEPARTMENT	SPARTA
DECATUR POLICE DEPARTMENT	DECATUR
ROCKFORD CITY POLICE DEPARTMENT	ROCKFORD
CEDAR SPRINGS POLICE DEPARTMENT	CEDAR SPRINGS
CITY OF WALKER	GRAND RAPIDS
WHITE PIGEON VILLAGE POLICE	WHITE PIDGEON
KALAMAZOO DEPARTMENT OF PUBLIC SAFETY	KALAMAZOO
DOWAGIAC POLICE DEPARTMENT	DOWAGIAC
NEW BUFFALO POLICE DEPARTMENT	NEW BUFFALO
MONTAGUE POLICE DEPARTMENT	MONTAGUE
BERRIEN SPRINGS ORONOKO TOWNSHIP POLICE	BERRIEN SPRINGS
BARRY COUNTY SHERIFF POLICE	HASTINGS
HAMILTON FIRE DEPARTMENT	HAMILTON
ALAMO TOWNSHIP	KALAMAZOO
CASS COUNTY SHERIFF'S DEPARTMENT	CASSOPOLIS
KENT COUNTY ROAD AND PARK COMMISSIONS	GRAND RAPIDS
ST. JOSEPH COUNTY COMMISSION	CENTREVILLE
MICHIGAN STATE POLICE	EAST LANSING
LOWELL TOWNSHIP	LOWELL
OTTAWA COUNTY SHERIFF'S DEPARTMENT	HUDSONVILLE
ZEELAND POLICE DEPARTMENT	ZEELAND
VILLAGE OF BURR OAK	BURR OAK
GRAND BEACH POLICE DEPARTMENT	GRAND BEACH

WYOMING POLICE DEPARTMENT
MICHIGAN DEPARTMENT OF CORRECTIONS

WYOMING

ATTACHMENT A

STATEWIDE AGENCIES

AGENCY	CITY/TOWN
STATE OF ILLINOIS	SPRINGFIELD
ILLINOIS STATE POLICE	SPRINGFIELD
INDIANA STATE POLICE	INDIANAPOLIS
ST.OF WIS. DEPT. OF HEALTH AND SOCIAL SER.	MADISON
MEDA CARE AMBULANCE	MILWAUKEE
MICHIGAN DEPARTMENT OF NATURAL RESOURCES	LANSING
MICHIGAN STATE POLICE	EAST LANSING
MICHIGAN DEPARTMENT OF CORRECTIONS	

COUNTY POPULATION ESTIMATES

	CURRENT [1]	1995 [2]	2005 [2]
WISCONSIN			
Kenosha	121,100	117,862	113,243
Racine	171,600	173,361	173,262
Milwaukee	937,500	890,453	844,791
Ozaukee	68,400	73,997	78,795
Washington	88,400	98,102	106,378
Waukesha	285,400	306,400	315,476
Dodge	75,900	80,078	81,504
Dane	341,400	360,961	377,383
Walworth	71,200	74,330	78,255
Rock	138,300	141,898	142,330
Jefferson	67,200	69,203	71,062
ILLINOIS			
Winnebago	250,800	250,345	246,472
Boone	29,100	30,017	30,690
McHenry	158,600	180,372	196,522
Lake	468,600	603,346	533,537
Cook	5,294,900	5,394,332	5,448,171
DuPage	716,200	828,757	884,683
Kane	299,000	344,672	379,274
De Kalb	73,600	73,111	75,073
Kendall	37,000	37,503	37,464
Will	334,100	367,757	402,451
Grundy	31,200	32,187	32,616
Kankakee	98,600	94,705	92,471
INDIANA			
Lake	496,900	481,920	466,720
Porter	122,900	131,210	135,840
La Porte	106,500	101,970	97,610
Newton	14,100	13,880	13,440
Jasper	26,500	27,420	27,800
Pulaski	13,400	14,410	14,980
Starke	21,200	21,320	21,190
Marshall	41,300	43,110	44,530
St. Joseph	241,500	240,930	243,760
Elkhart	145,300	154,450	160,460
MICHIGAN			
Ottawa	167,100	190,900	216,000
Muskegon	156,900	153,600	148,600
Kent	467,200	496,700	523,200
Allegan	85,200	95,000	106,900
Van Buren	66,400	77,200	85,000
Berrien	162,700	168,200	166,600
Kalamazoo	214,100	218,800	219,100
Cass	48,300	52,600	55,600
Barry	46,800	52,600	58,000
St. Joseph	58,300	65,100	72,500
TOTALS:	12,860,700	13,425,069	13,619,733

1. U.S. Census Bureau, Current Population Reports, 1985
2. WI.: State of Wisconsin Demographic Services Center
   IL.: State of Illinois, Bureau of the Budget
   IN.: Indiana State Data Center
   MI.: Michigan Dept. of Management and Budget

CURRENT 800 MHz LICENSEES

AGENCY	CITY/TOWN
GURNEE POLICE DEPARTMENT	GURNEE
LINCOLNWAY POLICE COMM. CENTER	NEW LENOX
FRANKFORT POLICE DEPT.	FRANKFORT
NEW LENOX POLICE DEPT.	NEW LENOX
ELGIN PUBLIC SAFETY COMMUNICATIONS	ELGIN
WHEELING POLICE DEPARTMENT	WHEELING
BURBANK POLICE DEPARTMENT	BURBANK
DUPAGE COUNTY SHERIFF'S DEPARTMENT	WHEATON
BOURBONNAIS POLICE DEPARTMENT	BOURBONNAIS
DEERFIELD POLICE DEPARTMENT	DEERFIELD
WOODRIDGE POLICE DEPARTMENT	WOODRIDGE
BEDFORD PARK POLICE DEPARTMENT	BEDFORD PARK
BLOOMINGDALE POLICE DEPARTMENT	BLOOMINGDALE
ALSIP POLICE DEPARTMENT	ALSIP
ROLLING MEADOWS POLICE DEPARTMENT	ROLLING MEADOWS
DU-COMM CENTRAL DISPATCH	WHEATON
VILLAGE OF SCHAUMBURG POLICE DEPARTMENT	SCHAUMBURG
NAPERVILLE POLICE DEPARTMENT	NAPERVILLE
NAPERVILLE FIRE DEPARTMENT	NAPERVILLE
CALUMET CITY POLICE DEPARTMENT	CALUMET CITY
ILLINOIS STATE TOLL HIGHWAY AUTHORITY	OAK BROOK
BROADVIEW FIRE DEPARTMENT	BROADVIEW
SOUTHWEST CENTRAL DISPATCH	PALOS HEIGHTS
CHICAGO POLICE DEPARTMENT	CHICAGO
CHICAGO FIRE DEPARTMENT	CHICAGO
PALATINE POLICE DEPARTMENT	PALATINE
STATE OF ILLINOIS	SPRINGFIELD
CITY OF CHICAGO DEPARTMENT OF AVIATION	CHICAGO
CITY OF CHICAGO-STREETS & SANITATION	CHICAGO
EAST CHICAGO POLICE DEPARTMENT	EAST CHICAGO
BROWNSVILLE VETERINARY CLINIC	BROWNSVILL
VILLAGE OF DARIEN POLICE DEPARTMENT	DARIEN
MEDA CARE AMBULANCE	MILWAUKEE
GREENFIELD POLICE DEPARTMENT	GREENFIELD
GRAFTON POLICE DEPARTMENT	GRAFTON
VILLAGE OF EAST TROY POLICE DEPARTMENT	EAST TROY
ELKHORN POLICE DEPARTMENT	ELKHORN
WILLIAMS BAY POLICE DEPARTMENT	WILLIAMS BAY
WALWORTH COUNTY JAIL	ELKHORN
KENT COUNTY ROAD AND PARK COMMISSIONS	GRAND RAPIDS

PENDING 800 MHz APPLICATIONS

AGENCY	CITY/TOWN
CARY POLICE DEPARTMENT	CARY
BOLINGBROOK POLICE DEPARTMENT	BOLINGBROOK
BOLINGBROOK FIRE DEPARTMENT	BOLINGBROOK
ASHIPPUN FIRE DEPARTMENT	ASHIPPUN

ATTACHMENT E

800 MHz SYSTEM PLAN FILED

AGENCY	CITY/TOWN
CARY POLICE DEPARTMENT	CARY
NAPERVILLE POLICE DEPARTMENT	NAPERVILLE
CITY OF MADISON COMMUNICATIONS	MADISON
WEST ALLIS POLICE DEPARTMENT	WEST ALLIS
WEST ALLIS FIRE DEPARTMENT	WEST ALLIS
GRAFTON POLICE DEPARTMENT	GRAFTON

PLANS INCOMPLETE
COPY TO BE FORWARDED

AGENCY	CITY/TOWN
WILL COUNTY SHERIFF'S DEPT.	JOLIET
BOLINGBROOK POLICE DEPARTMENT	BOLINGBROOK
ELK GROVE VILLAGE POLICE/FIRE	ELK GROVE
RICHTON PARK POLICE DEPARTMENT	RICHTON PARK
BOLINGBROOK FIRE DEPARTMENT	BOLINGBROOK
STATE OF ILLINOIS	SPRINGFIELD
ILLINOIS STATE POLICE	SPRINGFIELD
EAST CHICAGO POLICE DEPARTMENT	EAST CHICAGO
KENOSHA COUNTY SHERIFF'S DEPT.	KENOSHA
WAUKESHA COUNTY SHERIFF DEPARTMENT	WAUKESHA
WAUKESHA COUNTY	WAUKESHA
CITY OF BROOKFIELD POLICE DEPT.	BROOKFIELD
VILLAGE OF BUTLER POLICE DEPARTMENT	BUTLER
VILLAGE OF EAST TROY POLICE DEPARTMENT	EAST TROY

HAVE FUNDS NOW

AGENCY	CITY/TOWN
GLENDALE HEIGHTS POLICE DEPT.	GLENDALE HEIGHTS
CARY POLICE DEPARTMENT	CARY
CITY OF CRYSTAL LAKE (POLICE DEPT.)	CRYSTAL LAKE
BOLINGBROOK POLICE DEPARTMENT	BOLINGBROOK
MONTGOMERY POLICE DEPARTMENT	MONTGOMERY
BOLINGBROOK FIRE DEPARTMENT	BOLINGBROOK
VILLAGE OF SCHAUMBURG POLICE DEPARTMENT	SCHAUMBURG
NAPERVILLE POLICE DEPARTMENT	NAPERVILLE
NAPERVILLE FIRE DEPARTMENT	NAPERVILLE
BROADVIEW FIRE DEPARTMENT	BROADVIEW
BEDFORD PARK POLICE DEPARTMENT	BEDFORD PARK
ILLINOIS STATE POLICE	SPRINGFIELD
INDIANA DEPT. OF HIGHWAYS-TOLL ROAD DIVISION	GRANGER
ELKHART COUNTY PUBLIC SAFETY COMM. CENTER	GOSHEN
EAST CHICAGO POLICE DEPARTMENT	EAST CHICAGO
MUNSTER POLICE DEPARTMENT	MUNSTER
DANE COUNTY REGIONAL AIRPORT	MADISON
MED-TECH AMBULANCE	KENOSHA
BELL AMBULANCE	MILWAUKEE
CITY OF RACINE-DEPT. OF PUBLIC WORKS	RACINE
MILWAUKEE COUNTY TRANSIT SYSTEM	MILWAUKEE
WEST ALLIS POLICE DEPARTMENT	WEST ALLIS
WEST ALLIS FIRE DEPARTMENT	WEST ALLIS
GRAFTON POLICE DEPARTMENT	GRAFTON
VILLAGE OF EAST TROY POLICE DEPARTMENT	EAST TROY
WALWORTH COUNTY JAIL	ELKHORN
BERRIEN COUNTY ROAD COMMISSION	BENTON HARBOR
HOLLAND POLICE DEPARTMENT	HOLLAND
CASS COUNTY SHERIFF'S DEPARTMENT	CASSOPOLIS
OTTAWA COUNTY SHERIFF'S DEPARTMENT	HUDSONVILLE

WILL HAVE FUNDS IN 12 MONTHS

AGENCY	CITY/TOWN
RICHTON PARK POLICE DEPARTMENT	RICHTON PARK
CARY FIRE PROTECTION DISTRICT	CARY
NORTH RIVERSIDE FIRE DEPARTMENT	NORTH RIVERSIDE
CHICAGO POLICE DEPARTMENT	CHICAGO
INDIANA STATE POLICE	INDIANAPOLIS
CITY OF MADISON COMMUNICATIONS	MADISON
CITY OF RACINE-DEPT. OF PUBLIC WORKS	RACINE
WAUKESHA COUNTY SHERIFF DEPARTMENT	WAUKESHA
WAUKESHA COUNTY	WAUKESHA
CITY OF BROOKFIELD POLICE DEPT.	BROOKFIELD
OCONOMOWOC POLICE DEPARTMENT	OCONOMOWOC
CITY OF OCONOMOWOC FIRE DEPARTMENT	OCONOMOWOC

WILL HAVE FUNDS IN 24 MONTHS

AGENCY	CITY/TOWN
QUADCOM	CARPENTERSVILLE
WILL COUNTY SHERIFF'S DEPT.	JOLIET
WESTMONT POLICE DEPARTMENT	WESTMONT
BURR RIDGE POLICE DEPARTMENT	BURR RIDGE
ADDISON POLICE DEPARTMENT	ADDISON
ELK GROVE VILLAGE POLICE/FIRE	ELK GROVE
WEST DUNDEE FIRE DEPARTMENT	WEST DUNDEE
ELMWOOD PARK FIRE DEPARTMENT	ELMWOOD PARK
LAKE BLUFF FIRE DEPARTMENT	LAKE BLUFF
NORTHLAKE FIRE DEPARTMENT	NORTHLAKE
DEKALB FIRE DEPARTMENT	DEKALB
KANE COUNTY ESDA	GENEVA
CITY OF JOLIET FIRE DEPARTMENT	JOLIET
HAMMOND POLICE DEPARTMENT	HAMMOND
CITY OF STOUGHTON FIRE DEPARTMENT	STOUGHTON
KENOSHA COUNTY SHERIFF'S DEPT.	KENOSHA
MED-TECH AMBULANCE	KENOSHA
CALEDONIA FIRE DEPARTMENT	CALEDONIA
VILLAGE OF BUTLER POLICE DEPARTMENT	BUTLER
BEAVER DAM VETERINARY CLINIC	BEAVER DAM
WATERTOWN FIRE DEPARTMENT	WATERTOWN
LAKE GENEVA POLICE DEPARTMENT	LAKE GENEVA
GALESBURG-CHARLESTON TOWNSHIP FIRE DEPARTMENT	GALESBURG
CASS COUNTY SHERIFF'S DEPARTMENT	CASSOPOLIS
KENT COUNTY ROAD AND PARK COMMISSIONS	GRAND RAPIDS
OTTAWA COUNTY SHERIFF'S DEPARTMENT	HUDSONVILLE

NEED 1 TO 4 ADDITIONAL 800 MHz FREQUENCIES NOW

AGENCY	CITY/TOWN
QUADCOM	CARPENTERSVILLE
RIVER FOREST POLICE DEPARTMENT	RIVER FOREST
SOUTH HOLLAND POLICE DEPARTMENT	SOUTH HOLLAND
WILL COUNTY SHERIFF'S DEPT.	JOLIET
GLENDALE HEIGHTS POLICE DEPT.	GLENDALE HEIGHTS
OAK PARK POLICE DEPT.	OAK PARK
WESTMONT POLICE DEPARTMENT	WESTMONT
VILLAGE OF KILDEEN	KILDEEN
BURR RIDGE POLICE DEPARTMENT	BURR RIDGE
WHEELING POLICE DEPARTMENT	WHEELING
DUPAGE COUNTY SHERIFF'S DEPARTMENT	WHEATON
EVANSTON POLICE DEPARTMENT	EVANSTON
LYONS POLICE DEPARTMNET	LYONS
BOLINGBROOK POLICE DEPARTMENT	BOLINGBROOK
ADDISON POLICE DEPARTMENT	ADDISON
THORNTON POLICE DEPARTMENT	THORNTON
ELK GROVE VILLAGE POLICE/FIRE	ELK GROVE
BERWYN POLICE DEPARTMENT	BERWYN
RICHTON PARK POLICE DEPARTMENT	RICHTON PARK
BOLINGBROOK FIRE DEPARTMENT	BOLINGBROOK
WEST DUNDEE FIRE DEPARTMENT	WEST DUNDEE
CHERRY VALLEY POLICE DEPARTMENT	CHERRY VALLEY
ELMWOOD PARK FIRE DEPARTMENT	ELMWOOD PARK
BERKELEY POLICE DEPARTMENT	BERKELEY
OAK FOREST POLICE DEPARTMENT	OAK FOREST
CARY FIRE PROTECTION DISTRICT	CARY
VILLAGE OF WESTMONT EMERGENCY SERVICES	WESTMONT
NORTH RIVERSIDE FIRE DEPARTMENT	NORTH RIVERSIDE
CALUMET CITY POLICE DEPARTMENT	CALUMET CITY
ILLINOIS STATE TOLL HIGHWAY AUTHORITY	OAK BROOK
BROADVIEW FIRE DEPARTMENT	BROADVIEW
NORTHLAKE FIRE DEPARTMENT	NORTHLAKE
WAUKEGAN FIRE DEPARTMENT	WAUKEGAN
VILLAGE OF BROOKFIELD EMERGENCY SERVICES DISP	BROOKFIELD
HAINESVILLE POLICE DEPARTMENT	GRAYSLAKE
DEKALB FIRE DEPARTMENT	DEKALB
VILLAGE OF TINLEY PARK	TINLEY PARK
PALATINE POLICE DEPARTMENT	PALATINE
KANE COUNTY ESDA	GENEVA
BEDFORD PARK POLICE DEPARTMENT	BEDFORD PARK
TRI-STATE FIRE PROTECTION DISTRICT	DARIEN
CITY OF JOLIET FIRE DEPARTMENT	JOLIET
ROSCOE POLICE DEPARTMENT	ROSCOE
LAPORTE COUNTY POLICE DEPARTMENT	LAPORTE
HAMMOND POLICE DEPARTMENT	HAMMOND
INDIANA DEPT. OF HIGHWAYS-TOLL ROAD DIVISION	GRANGER
EAST CHICAGO POLICE DEPARTMENT	EAST CHICAGO
CITY OF STOUGHTON FIRE DEPARTMENT	STOUGHTON
MED-TECH AMBULANCE	KENOSHA
HARTLAND FIRE DEPARTMENT	HARTLAND

WAUKESHA COUNTY PROGRAM ON AGING	WAUKESHA
CITY OF BROOKFIELD POLICE DEPT.	BROOKFIELD
VILLAGE OF BUTLER POLICE DEPARTMENT	BUTLER
TOWN OF VERNON	BIG BEND
WATERTOWN FIRE DEPARTMENT	WATERTOWN
MILWAUKEE COUNTY SHERIFF'S DEPARTMENT	MILWAUKEE
WAUKESHA COUNTY MAINTENANCE DEPARTMENT	WAUKESHA
VILLAGE OF PADDOCK LAKE	SALEM
GENOA CITY FIRE DEPARTMENT	GENOA CITY
ELKHORN POLICE DEPARTMENT	ELKHORN
GENOA CITY POLICE DEPARTMENT	GENOA CITY
WILLIAMS BAY POLICE DEPARTMENT	WILLIAMS BAY
WALWORTH COUNTY JAIL	ELKHORN
VILLAGE OF MARCELLUS	MARCELLUS
PORTER VOLUNTEER FIRE DEPARTMENT	UNION
BERRIEN SPRINGS ORONOKO TOWNSHIP POLICE	BERRIEN SPRINGS

NEED 5 TO 10 ADDITIONAL 800 MHz FREQUENCIES NOW

AGENCY	CITY/TOWN
SKOKIE POLICE & FIRE COMMUNICATIONS	SKOKIE
WINNETKA POLICE DEPARTMENT	WINNETKA
NAPERVILLE POLICE DEPARTMENT	NAPERVILLE
NAPERVILLE FIRE DEPARTMENT	NAPERVILLE
GLENCOE DEPARTMENT OF PUBLIC SAFETY	GLENCOE
MUNSTER POLICE DEPARTMENT	MUNSTER
KENOSHA COUNTY SHERIFF'S DEPT.	KENOSHA
WAUKESHA COUNTY SHERIFF DEPARTMENT	WAUKESHA
WAUKESHA COUNTY	WAUKESHA
MILWAUKEE COUNTY TRANSIT SYSTEM	MILWAUKEE
WEST ALLIS POLICE DEPARTMENT	WEST ALLIS
WEST ALLIS FIRE DEPARTMENT	WEST ALLIS
OCONOMOWOC POLICE DEPARTMENT	OCONOMOWOC
CITY OF OCONOMOWOC FIRE DEPARTMENT	OCONOMOWOC
CITY OF KENTWOOD	KENTWOOD
ALLEGAN COUNTY SHERIFF'S DEPARTMENT	ALLEGAN

NEED MORE THAN 10 800 MHz FREQUENCIES NOW

AGENCY	CITY/TOWN
CHICAGO POLICE DEPARTMENT	CHICAGO
STATE OF ILLINOIS	SPRINGFIELD
ILLINOIS STATE POLICE	SPRINGFIELD
INDIANA STATE POLICE	INDIANAPOLIS
TESS CORNERS FIRE DEPT.	MUSKEGO
MICHIGAN STATE POLICE	EAST LANSING

PREFER ADDITIONAL 800 MHz OVER CURRENT SPECTRUM

AGENCY	CITY/TOWN
GURNEE POLICE DEPARTMENT	GURNEE
WILL COUNTY SHERIFF'S DEPT.	JOLIET
WILL COUNTY ESDA	JOLIET
GLENDALE HEIGHTS POLICE DEPT.	GLENDALE HEIGHTS
OAK PARK POLICE DEPT.	OAK PARK
CARY POLICE DEPARTMENT	CARY
HUNTLEY POLICE DEPARTMENT	HUNTLEY
VILLAGE OF KILDEEN	KILDEEN
ELGIN PUBLIC SAFETY COMMUNICATIONS	ELGIN
SKOKIE POLICE & FIRE COMMUNICATIONS	SKOKIE
MORTON GROVE POLICE	MORTON GROVE
WHEELING POLICE DEPARTMENT	WHEELING
DUPAGE COUNTY SHERIFF'S DEPARTMENT	WHEATON
BOLINGBROOK POLICE DEPARTMENT	BOLINGBROOK
BLOOMINGDALE POLICE DEPARTMENT	BLOOMINGDALE
ROLLING MEADOWS POLICE DEPARTMENT	ROLLING MEADOWS
ADDISON POLICE DEPARTMENT	ADDISON
BOLINGBROOK FIRE DEPARTMENT	BOLINGBROOK
GURNEE FIRE DEPARTMENT	GURNEE
WINNETKA POLICE DEPARTMENT	WINNETKA
WEST DUNDEE FIRE DEPARTMENT	WEST DUNDEE
NAPERVILLE POLICE DEPARTMENT	NAPERVILLE
LAKE BLUFF FIRE DEPARTMENT	LAKE BLUFF
CARY FIRE PROTECTION DISTRICT	CARY
CARPENTERSVILLE & COUNTRYSIDE FIRE PROTECTION	CARPENTERSVILLE
ILLINOIS STATE TOLL HIGHWAY AUTHORITY	OAK BROOK
BENSENVILLE ESDA	BENSENVILLE
BROADVIEW FIRE DEPARTMENT	BROADVIEW
CITY OF DARIEN	DARIEN
CHICAGO POLICE DEPARTMENT	CHICAGO
CHICAGO FIRE DEPARTMENT	CHICAGO
BEDFORD PARK POLICE DEPARTMENT	BEDFORD PARK
MORRIS POLICE DEPARTMENT	MORRIS
TRI-STATE FIRE PROTECTION DISTRICT	DARIEN
CITY OF JOLIET FIRE DEPARTMENT	JOLIET
STATE OF ILLINOIS	SPRINGFIELD
ILLINOIS STATE POLICE	SPRINGFIELD
LAPORTE COUNTY POLICE DEPARTMENT	LAPORTE
INDIANA STATE POLICE	INDIANAPOLIS
INDIANA DEPT. OF HIGHWAYS-TOLL ROAD DIVISION	GRANGER
EAST CHICAGO POLICE DEPARTMENT	EAST CHICAGO
GARY FIRE DEPARTMENT	GARY
CITY OF GARY	GARY
MUNSTER POLICE DEPARTMENT	MUNSTER
CITY OF STOUGHTON FIRE DEPARTMENT	STOUGHTON
COUNTY OF DANE	MADISON
CITY OF MADISON COMMUNICATIONS	MADISON
STOUGHTON POLICE DEPARTMENT	STOUGHTON
BROWNSVILLE VETERINARY CLINIC	BROWNSVILL
HORICON EMERGENCY MEDICAL SERVICES	HORICON

FORT ATKINSON FIRE DEPARTMENT	FORT ATKINSON
KENOSHA COUNTY SHERIFF'S DEPT.	KENOSHA
TOWN OF SALEM	SALEM
MED-TECH AMBULANCE	KENOSHA
KENOSHA HOSPITAL AND MEDICAL CENTER	KENOSHA
FOX POINT DEPT. OF PUBLIC SAFETY	MILWAUKEE
SAUKVILLE FIRE DEPARTMENT	SAUKVILLE
CITY OF BROOKFIELD FIRE DEPT.	BROOKFIELD
WAUKESHA COUNTY PROGRAM ON AGING	WAUKESHA
TESS CORNERS FIRE DEPT.	MUSKEGO
WAUKESHA WASTEWATER TREATMENT PLANT	WAUKESHA
BIG BEND-VERNON VOL. FIRE DEPT.	BIG BEND
WAUKESHA POLICE DEPT.	WAUKESHA
WAUKESHA COUNTY	WAUKESHA
WAUKESHA COUNTY HIGHWAY DEPT.	WAUKESHA
VILLAGE OF BUTLER POLICE DEPARTMENT	BUTLER
WAUKESHA COUNTY PARK & PLANNING	WAUKESHA
WAUKESHA FIRE DEPT.	WAUKESHA
CITY OF LAKE MILLS POLICE DEPARTMENT	LAKE MILLS
FORT ATKINSON MEMORIAL HOSPITAL	FORT ATKINSON
MILWAUKEE COUNTY TRANSIT SYSTEM	MILWAUKEE
WEST ALLIS POLICE DEPARTMENT	WEST ALLIS
WEST MILWAUKEE FIRE DEPARTMENT	MILWAUKEE
CITY OF WAUWATOSA	
MEDA CARE AMBULANCE	MILWAUKEE
GREENFIELD POLICE DEPARTMENT	GREENFIELD
WEST ALLIS FIRE DEPARTMENT	WEST ALLIS
GRAFTON POLICE DEPARTMENT	GRAFTON
TOWN OF WATERFORD POLICE DEPARTMENT	WATERFORD
WAUKESHA COUNTY MAINTENANCE DEPARTMENT	WAUKESHA
WAUKESHA PARK AND RECREATION	WAUKESHA
CITY OF DELAFIELD DEPARTMENT OF POLICE	DELAFIELD
VILLAGE OF CHENEQUA POLICE DEPARTMENT	HARTLAND
HARTLAND POLICE DEPARTMENT	HARTLAND
VILLAGE OF EAST TROY POLICE DEPARTMENT	EAST TROY
GENOA CITY FIRE DEPARTMENT	GENOA CITY
LAKE GENEVA POLICE DEPARTMENT	LAKE GENEVA
JEFFERSON FIRE DEPARTMENT	JEFFERSON
GENOA CITY POLICE DEPARTMENT	GENOA CITY
WILLIAMS BAY POLICE DEPARTMENT	WILLIAMS BAY
WALWORTH COUNTY JAIL	ELKHORN
BERRIEN COUNTY ROAD COMMISSION	BENTON HARBOR
KALAMAZOO COUNTY SHERIFF'S DEPARTMENT	KALAMAZOO
WHITE PIGEON VILLAGE POLICE	WHITE PIDGEON
KENT COUNTY ROAD AND PARK COMMISSIONS	GRAND RAPIDS
MICHIGAN STATE POLICE	EAST LANSING

APPENDIX

H

APPLICATION EVALUATION CRITERIA
CATEGORY WEIGHTS

1. SERVICE: 0 TO 100 POINTS

Eligible services have been grouped into the following three Priority Levels. Each Level has a predetermined maximum number of points associated with it. In the case of a "multiple-service" system being proposed, the application must state the number of mobiles assigned to each service. The percentages resulting from these totals will determine the total number of points awarded.

PRIORITY LEVEL I: Maximum of 100 points

Public Safety Radio Service Licensees providing protection of life and property.

PRIORITY LEVEL II: Maximum of 65 points

Public Safety Radio Service Licensees providing protection of property only.

PRIORITY LEVEL III: Maximum of 35 points

Special Emergency Radio Service Licensees.

2. SYSTEM TYPE: 0 TO 50 POINTS

From 0 to 50 points can be earned in this category, based on the degree of spectrum efficiency demonstrated for the system. The more spectrum efficient a proposed system is, the more points the application will earn. A higher standard will be used to evaluate applications from agencies located within a Primary Zone.

Information relating to the system's technology such as trunked or conventional operation, and voice or data transmission (or voice/data combination) must be provided. The narrative should also discuss how utilization of these features will result in an efficient use of the spectrum. Furthermore, details regarding any other enhancements to the system must be provided. The application must also state whether the system is being proposed as a single agency-single service, multiple agency-single service or multiple agency-multiple service operation.

3. INTERSYSTEM INTEROPERABILITY: 0 TO 100 POINTS

An application will be awarded from 0 to 50 points in this category based on its description of how the 800 MHz mobile radios will maintain, and/or increase, mutual aid capabilities. Since they are mandated by the National Plan, inclusion of the five Common Channels in mobile equipment is not rated. However, an applicant may earn up to 50 additional points (for the maximum of 100) in this category, on the initial and all subsequent applications, for providing fixed equipment necessary for the operation of Common Channels in a specific area(s) of the Region.

4. CHANNEL LOADING FACTORS: 10 TO 50 POINTS

Applications will receive between 10 and 50 points for proposing a number of mobile units that meet the Channel Loading requirements mandated by this Plan. Consideration will take into account the feasibility of operating the number of mobiles per channel being proposed.

5. COVERAGE AREA: 10 TO 50 POINTS

Scoring in this category will be based on two factors: (1) Compliance with the parameters described on pages 14, 15, and 18 of this Plan, as evidenced by the submission of a map of the service area depicting jurisdictional boundaries, proposed transmitter sites, and minimum coverage areas of those transmitter site; and (2) Channel reuse potential.

6. VACATED FREQUENCIES RETURNED: O TO 100 POINTS

The application will earn from 0 to 100 points in this category depending on the number of vacated frequencies being proposed for return, in relation to the total number of frequencies used by the agency (including those being applied for); and, the availability of the returned frequencies for use by other agencies in the region.

7. IMPLEMENTATION SCHEDULE: 0 TO 50 POINTS

The degree of budgetary commitment to the system being proposed, and the specificity of implementation dates will be the bases for scoring an application in this category. The more explicit an application is with respect to these topics, the more points it will earn in this category.

APPENDIX

J

INITIAL SPECTRUM ALLOCATION

FREQUENCY SORTING METHODOLOGY

INTRODUCTION

The initial spectrum allocation for the Region was determined by a computerized frequency sorting process performed by C.E.T., Inc. of New Smyrna Beach, Florida. The purpose of the computer program which assigns frequencies to specific eligibles and to pools for future assignment is two-fold:

A) The assignments must be made in a manner which results in a high degree of spectrum efficiency, and

B) The assignments must be made in a manner which results in a low probability of co-channel and adjacent channel interference.

Since the desired output is a geographic sorting of frequencies, a method of defining geography must be part of the input. A list of the number of channels to be assigned in each geographic area is also required, along with the name of the eligible or pool.

Acceptable interference probabilities are determined for the Region. Frequency assignments are then made using a computer program which satisfies the goals of spectrum efficiency and interference protection. The following describes the factors and process used by the computer program.

GEOGRAPHIC AREA

For the purpose of this frequency sort, a geographic area is defined as one or more circles of equal radius. To the degree practical, this circle(s) should include the entire area of the eligible's geopolitical boundary, but not exceed the boundary by more than three (3) miles.

Thus the procedure is to gather maps of sufficient detail, outline the areas to be defined, determine the coordinates and radius of the circles which define each area, and tabulate the data.

DEFINE THE ENVIRONMENT

The environment of each system is defined according to the following criteria:

(1) URBAN --- a built up city crowded with large buildings, or closely interspersed with houses and thickly-grown trees. This would include the downtown area of a major city.

(2) SUBURBAN --- a city or highway scattered with trees, houses and buildings. This would include the non-downtown area of a major city.

(3) OPEN --- an area where there are no obstacles such as tall trees or buildings in the propagation path, or a plot of land which is cleared of anything for 300-400 meters ahead. This would include farm land, open fields, etc.

(4) QUASI-OPEN --- an area between suburban and open areas. This includes areas outside of city limits that have few buildings and houses.

BLOCKED CHANNELS

In the Region there are five mutual aid channels which must be blocked out to prevent the computer from making assignments on these channels. (Since the mutual aid channels are spaced at 0.5 MHz and placed adjacent to the mutual aid channels. This procedure reduces the impact of blocked adjacent channels by virtue of the fact that the channel plan already has protection spacing on each side of the mutual aid channels).

These region-wide blocked channels are identified by FCC channel number, tabulated and they become input to the computer program.

TRANSMITTER COMBINING

The computer program is designed to provide a minimum frequency separation between any two channels assigned to the same eligible at the same site. This separation is provided in order to enable more efficient combining of multiple transmitters to a single antenna. These separated blocks of frequencies also have a maximum size. That is, if the eligible has more frequencies than the maximum size of the combining block, then a new compatible block is created.

Each of these parameters is adjustable in the program on a global basis. The parameters chosen are 0.25MHz minimum spacing and five channel blocks.

SPECIAL CONSIDERATIONS

There are existing licensees in the 806-821/852-866 MHz spectrum who plan to expand existing systems into the 821-824/866-869 MHz bands. Existing radio units are unable to operate on 12.5 KHz separated carrier frequencies. The result is that these radios can only operate on "even" FCC numbered channels in the 821-824/866-869 MHz band. The computer program is able to take this into account when making assignments.

PROTECTION RATIOS

There are two interference protection ratios built into the computer program. One is for the co-channel case, and the other is for the adjacent channel case. The ratios provide 35dB Desired/Undesired signal ratio for co-channel assignments, and 15dB Desired/Un-desired ratios provide an acceptable probability of interference for Public Safety Services.

WHAT THE PROGRAM DOES

1. Input data for the Region
   - ..Name (entity-county)
   - ..Coordinates
   - ..Range
   - ..Environment
   - ..Blocked/protected channels
   - ..Even/Odd channel requirements

2. Select parameters
   - ..Combiner spacing
   - ..Maximum spectrum to be used
   - ..Number of iterations allowed
   - ..Protection ratios for co-channel and adjacent channels

3. Computer determines an ERP/Antenna Height combination which places the 40dBu point at the range specified, in the environment specified, for each system.

4. Computer calculates distances between all possible combinations of single site, and multiple site, systems.

5. The computer uses its input tables to determine compatible assignments such that the signal strength at a co-channel assignees' boundary is <+5dBu, and the signal strength at an adjacent channel assignees' boundary is <+25dBu.

6. If the maximum spectrum allowed is filled before all systems are assigned channels, then the list is re-ordered according to the difficulty of assignments, and another iteration is made.

7. If the maximum number of iterations is reached before all assignments are satisfied, the maximum spectrum allowed is increased and the process begins again. The maximum spectrum allowed is initially set at a value which will fail to find a solution. By incrementing its value on successive attempts, the first successful run should be the most spectrum efficient solution this program will ever find, for this case.

APPENDIX

K

SOUTHERN LAKE MICHIGAN PLANNING REGION

SPECTRUM ALLOCATION
(INITIAL SORT)

CHANNEL NUMBER	FREQUENCIES MOBILE/BASE	ASSIGNEE (COUNTY)
601	821.0125/866.0125	MUTUAL AID*
602	821.0375/866.0375	OZAUKEE, WI
602	821.0375/866.0375	KANE, IL
602	821.0375/866.0375	NEWTON, IN
602	821.0375/866.0375	BERRIEN,MI
603	821.0500/866.0500	COOK, IL (D)
603	821.0500/866.0500	OTTAWA, MI
603	821.0500/866.0500	ROCK, WI
604	821.0625/866.0625	PULASKI, IN
604	821.0625/866.0625	VAN BUREN, MI
604	821.0625/866.0625	KANE, IL
605	821.0750/866.0750	OTTAWA, MI
605	821.0750/866.0750	JEFFERSON, WI
605	821.0750/866.0750	LAKE, IN
606	821.0875/866.0875	NAPERVILLE, IL*
606	821.0875/866.0875	ELKHART, IN
606	821.0875/866.0875	MILWAUKEE, WI
607	821.1000/866.1000	STARKE, IN
607	821.1000/866.1000	MUSKEGON, MI
607	821.1000/866.1000	BOONE, IL
608	821.1125/866.1125	KALAMAZOO, MI
608	821.1125/866.1125	DANE, WI
608	821.1125/866.1125	WILL, IL
609	821.1250/866.1250	MARSHALL, IN
609	821.1250/866.1250	MUSKEGON, MI
609	821.1250/866.1250	WAUKESHA, WI
610	821.1375/866.1375	COOK, IL (A)
610	821.1375/866.1375	KALAMAZOO, MI
610	821.1375/866.1375	DANE, WI
610	821.1375/866.1375	JASPER, IN
611	821.1500/866.1500	ELKHART, IN
611	821.1500/866.1500	MILWAUKEE, WI
611	821.1500/866.1500	KENT, MI
612	821.1625/866.1625	TOLLWAY, IL*
613	821.1750/866.1750	BARRY, MI
613	821.1750/866.1750	MILWAUKEE, WI

614	821.1875/866.1875	COOK, IL (A)
614	821.1875/866.1875	ST. JOSEPH, IN
614	821.1875/866.1875	DODGE, WI
615	821.2000/866.2000	DEKALB, IL
615	821.2000/866.2000	PORTER, IN
615	821.2000/866.2000	KENT, MI
616	821.2125/866.2125	CHICAGO, IL*
616	821.2125/866.2125	WAUKESHA, WI
617	821.2250/866.2250	MCHENRY, IL
617	821.2250/866.2250	ST. JOSEPH, IN
617	821.2250/866.2250	KENT, MI
618	821.2375/866.2375	NAPERVILLE, IL*
618	821.2375/866.2375	MILWAUKEE, WI
619	821.2500/866.2500	LAKE, IL
619	821.2500/866.2500	CASS, MI
620	821.2625/866.2625	WINNEBAGO, IL
620	821.2625/866.2625	WASHINGTON, WI
620	821.2625/866.2625	KENT, MI
621	821.2750/866.2750	ST. JOSEPH, IN
621	821.2750/866.2750	DANE, WI
621	821.2750/866.2750	WILL, IL
622	821.2875/866.2875	OZAUKEE, WI
622	821.2875/866.2875	LAPORTE, IN
623	821.3000/866.3000	LAKE, IL
623	821.3000/866.3000	OTTAWA, MI
623	821.3000/866.3000	NEWTON, IN
624	821.3125/866.3125	COOK, IL (D)
624	821.3125/866.3125	VAN BUREN, MI
624	821.3125/866.3125	ROCK, WI
625	821.3250/866.3250	PULASKI, IN
625	821.3250/866.3250	OTTAWA, MI
625	821.3250/866.3250	KANE, IL
626	821.3375/866.3375	COOK, IL (D)
626	821.3375/866.3375	ELKHART, IN
626	821.3375/866.3375	JEFFERSON, WI
627	821.3500/866.3500	MCHENRY, IL
627	821.3500/866.3500	STARKE, IN
627	821.3500/866.3500	MUSKEGON, MI
628	821.3625/866.3625	STATE GOVT(ALL 4)*
629	821.3750/866.3750	STATE GOVT (WI, IN)*
630	821.3875/866.3875	STATE GOVT (IL, MI)*
631	821.4000/866.4000	STATE GOVT (WI, IN)*
632	821.4125/866.4125	STATE GOVT (IL, MI)*
633	821.4250/866.4250	STATE GOVT (WI, IN)*
634	821.4375/866.4375	STATE GOVT (IL, MI)*
635	821.4500/866.4500	STATE GOVT (WI, IN)*
636	821.4625/866.4625	STATE GOVT (IL, MI)*
637	821.4750/866.4750	STATE GOVT (WI, IN)*
638	821.4875/866.4875	STATE GOVT (IL, MI)*
639	821.5125/866.5125	MUTUAL AID*

640	821.5375/866.5375	COOK, IL (A)
640	821.5375/866.5375	MARSHALL, IN
640	821.5375/866.5375	MILWAUKEE, WI
640	821.5375/866.5375	KENT, MI
641	821.5500/866.5500	KALAMAZOO, MI
641	821.5500/866.5500	DODGE, WI
641	821.5500/866.5500	DEKALB, IL
641	821.5500/866.5500	LAKE, IN
642	821.5625/866.5625	COOK, IL (A)
642	821.5625/866.5625	ST. JOSEPH, IN
642	821.5625/866.5625	MILWAUKEE, WI
643	821.5750/866.5750	OTTAWA, MI
643	821.5750/866.5750	BOONE, IL
643	821.5750/866.5750	KANKAKEE, IL
644	821.5875/866.5875	CHICAGO, IL*
644	821.5875/866.5875	KALAMAZOO, MI
644	821.5875/866.5875	MILWAUKEE, WI
645	821.6000/866.6000	KENDALL, IL
645	821.6000/866.6000	PULASKI, IN
645	821.6000/866.6000	DANE, WI
645	821.6000/866.6000	KENT, MI
646	821.6125/866.6125	LAKE, IL
646	821.6125/866.6125	ST. JOSEPH, IN
647	821.6250/866.6250	NAPERVILLE, IL*
647	821.6250/866.6250	BARRY, MI
647	821.6250/866.6250	JEFFERSON, WI
647	821.6250/866.6250	JASPER, IN
648	821.6375/866.6375	LAKE, IL
648	821.6375/866.6375	CASS, MI
649	821.6500/866.6500	WINNEBAGO, IL
649	821.6500/866.6500	COOK, IL (D)
649	821.6500/866.6500	MILWAUKEE, WI
649	821.6500/866.6500	KENT, MI
650	821.6625/866.6625	ST. JOSEPH, IN
650	821.6625/866.6625	KANE, IL
651	821.6750/866.6750	WINNEBAGO, IL
651	821.6750/866.6750	COOK, IL (D)
651	821.6750/866.6750	WASHINGTON, WI
651	821.6750/866.6750	KENT, MI
652	821.6875/866.6875	LAKE, IL
652	821.6875/866.6875	LAPORTE, IN
653	821.7000/866.7000	ALLEGAN, MI
654	821.7125/866.7125	TOLLWAY, IL*
655	821.7250/866.7250	PRIMARY ZONE POOL*
656	821.7375/866.7375	MCHENRY, IL
656	821.7375/866.7375	LAKE, IN
657	821.7500/866.7500	WAUKESHA, WI
657	821.7500/866.7500	BERRIEN, MI
658	821.7625/866.7625	WILL, IL
659	821.7750/866.7750	WALWORTH, WI

660	821.7875/866.7875	COOK, IL (A)
660	821.7875/866.7875	MARSHALL, IN
661	821.8000/866.8000	KALAMAZOO, MI
661	821.8000/866.8000	DEKALB, IL
661	821.8000/866.8000	LAKE, IN
662	821.8125/866.8125	COOK, IL (A)
662	821.8125/866.8125	DANE, WI
662	821.8125/866.8125	BERRIEN, MI
663	821.8250/866.8250	GRUNDY, IL
663	821.8250/866.8250	KENOSHA, WI
664	821.8375/866.8375	DUPAGE, IL
664	821.8375/866.8375	DANE, WI
664	821.8375/866.8375	PORTER, IN
665	821.8500/866.8500	RACINE, WI
665	821.8500/866.8500	KANKAKEE, IL
665	821.8500/866.8500	KENT, MI
666	821.8625/866.8625	STATE GOVT (ALL 4)*
667	821.8750/866.8750	STATE GOVT (WI,IN)*
668	821.8875/866.8875	STATE GOVT (IL,MI)*
669	821.9000/866.9000	STATE GOVT (WI,IN)*
670	821.9125/866.9125	STATE GOVT (IL,MI)*
671	821.9250/866.9250	STATE GOVT (WI,IN)*
672	821.9375/866.9375	STATE GOVT (IL,MI)*
673	821.9500/866.9500	STATE GOVT (WI,IN)*
674	821.9625/866.9625	STATE GOVT (IL,MI)*
675	821.9750/866.9750	STATE GOVT (WI,IN)*
676	821.9875/866.9875	STATE GOVT (IL,MI)*
677	822.0125/867.0125	MUTUAL AID*
678	822.0375/867.0375	WINNEGAGO, IL
678	822.0375/867.0375	NAPERVILLE, IL*
678	822.0375/867.0375	ST. JOSEPH, IN
678	822.0375/867.0375	MILWAUKEE, WI
679	822.0500/867.0500	LAKE, IL
679	822.0500/867.0500	BARRY, IL
680	822.0625/867.0625	MILWAUKEE, WI
681	822.0750/867.0750	TOLLWAY, IL*
681	822.0750/867.0750	KENT, MI
682	822.0875/867.0875	WASHINGTON, WI
683	822.1000/867.1000	CHICAGO, IL*
683	822.1000/867.1000	DANE, WI
683	821.1000/867.1000	ALLEGAN, MI
684	822.1125/867.1125	KENDALL, IL
684	822.1125/867.1125	WAUKESHA, WI
685	822.1250/867.1250	LAKE, IL
685	822.1250/867.1250	BERRIEN, MI
686	822.1375/867.1375	DEKALB, IL
687	822.1500/867.1500	WILL, IL
688	822.1625/867.1625	WALWORTH, WI
689	822.1750/867.1750	CHICAGO, IL*

690	822.1875/867.1875	GRUNDY, IL
690	822.1875/867.1875	KENOSHA, WI
691	822.2000/867.2000	DUPAGE, IL
691	822.2000/867.2000	DANE, WI
692	822.2125/867.2125	RACINE, WI
692	822.2125/867.2125	PORTER, IN
693	822.2250/867.2250	COOK, IL (A)
693	822.2250/867.2250	JEFFERSON, WI
694	822.2375/867.2375	RACINE, WI
694	822.2375/867.2375	JASPER, IN
695	822.2500/867.8500	KANE, IL
696	822.2625/867.2625	WAUKESHA, WI
697	822.2750/867.2750	KANE, IL
698	822.2875/867.2875	ROCK, WI
699	822.3000/867.3000	LAKE, IL
700	822.3125/867.3125	PRIMARY ZONE POOL*
701	822.3250/867.3250	MCHENRY, IL
702	822.3375/867.3375	PRIMARY ZONE POOL*
703	822.3500/867.3500	CHICAGO, IL*
703	822.3500/867.3500	ALLEGAN, MI
704	822.3625/867.3625	STATE GOVT (ALL 4)*
705	822.3750/867.3750	STATE GOVT (WI,IN)*
706	822.3875/867.3875	STATE GOVT (IL,MI)*
707	822.4000/867.4000	STATE GOVT (WI,IN)*
708	822.4125/867.4125	STATE GOVT (IL,MI)*
709	822.4250/867.4250	STATE GOVT (WI,IN)*
710	822.4375/867.4375	STATE GOVT (IL,MI)*
711	822.4500/867.4500	STATE GOVT (WI,IN)*
712	822.4625/867.4625	STATE GOVT (IL,MI)*
713	822.4750/867.4750	STATE GOVT (WI,IN)*
714	822.4875/867.4875	STATE GOVT (IL,MI)*
715	822.5125/867.5125	MUTUAL AID*
716	822.5375/867.5375	CHICAGO, IL*
716	822.5375/867.5375	WAUKESHA, WI
717	822.5500/867.5500	MCHENRY, IL
718	822.5625/867.5625	PORTER, IN
719	822.5750/867.5750	NAPERVILLE, IL*
720	822.5875/867.5875	WALWORTH, WI
720	822.5875/867.5875	LAKE, IN
721	822.6000/867.6000	DEKALB, IL
722	822.6125/867.6125	KANKAKEE, IL
723	822.6250/867.6250	KANE, IL
724	822.6375/867.6375	COOK, IL (D)
725	822.6500/867.6500	COOK, IL (A)
726	822.6625/867.6625	GRUNDY, IL
727	822.6750/867.6750	CHICAGO, IL*
728	822.6875/867.6875	ROCK, WI
729	822.7000/867.7000	WILL, IL

730	822.7125/867.7125	PRIMARY ZONE POOL*
731	822.7250/867.7250	MCHENRY, IL
731	822.7250/867.7250	JASPER, IN
732	822.7375/867.7375	CHICAGO, IL*
732	822.7375/867.7375	DANE, WI
733	822.7500/867.7500	KENDALL, IL
733	822.7500/867.7500	RACINE, WI
734	822.7625/867.7625	CHICAGO, IL*
734	822.7625/867.7625	DODGE, WI
734	822.7625/867.7625	NEWTON, IN
735	822.7750/867.7750	KENOSHA, WI
736	822.7875/867.7875	DANE, WI
736	822.7875/867.7875	WILL, IL
736	822.7875/867.7875	BERRIEN, MI
737	822.8000/867.8000	WAUKESHA, WI
738	822.8125/867.8125	LAKE, IL
738	822.8125/867.8125	PORTER, IN
738	822.8125/867.8125	ALLEGAN, MI
739	822.8250/867.8250	NAPERVILLE, IL*
739	822.8250/867.8250	ST. JOSEPH, MI
739	822.8250/867.8250	WAUKESHA, WI
740	822.8375/867.8375	WINNEBAGO, IL
740	822.8375/867.8375	LAKE, IN
740	822.8375/867.8375	KENT, MI
741	822.8500/867.8500	DUPAGE, IL
741	822.8500/867.8500	CASS, MI
741	822.8500/867.8500	MILWAUKEE. WI
742	822.8625/867.8625	STATE GOVT (ALL 4)*
743	822.8750/867.8750	STATE GOVT (WI,IN)*
744	822.8875/867.8875	STATE GOVT (IL,MI)*
745	822.9000/867.9000	STATE GOVT (WI,IN)*
746	822.9125/867.9125	STATE GOVT (IL,MI)*
747	822.9250/867.9250	STATE GOVT (WI,IN)*
748	822.9375/867.9375	STATE GOVT (IL,MI)*
749	822.9500/867.9500	STATE GOVT (WI,IN)*
750	822.9625/867.9625	STATE GOVT (IL,MI)*
751	822.9750/867.9750	STATE GOVT (WI,IN)*
752	822.9875/867.9875	STATE GOVT (IL,MI)*
753	823.0125/868.0125	MUTUAL AID*
754	823.0375/868.0375	MCHENRY, IL
754	823.0375/868.0375	ST. JOSEPH, IN
754	823.0375/868.0375	OZAUKEE, WI
755	823.0500/868.0500	CHICAGO, IL*
756	823.0625/868.0625	MILWAUKEE, WI
756	823.0625/868.0625	BOONE, IL
756	823.0625/868.0625	KANKAKEE, IL
756	823.0625/868.0625	BERRIEN, IL
757	823.0750/868.0750	LAKE, IL

758	823.0875/868.0875	GRUNDY, IL
758	823.0875/868.0875	STARKE, IN
759	823.1000/868.1000	CHICAGO, IL*
759	823.1000/868.1000	ELKHART, IN
759	823.1000/868.1000	WAUKESHA, WI
759	823.1000/868.1000	KENT, MI
760	823.1125/868.1125	KENDALL, IL
760	823.1125/868.1125	PORTER, IN
761	823.1250/868.1250	COOK, IL (A)
761	823.1250/868.1250	DANE, WI
762	823.1375/868.1375	COOK, IL (D)
762	823.1375/868.1375	WAUKESHA, WI
763	823.1500/868.1500	DUPAGE, IL
763	823.1500/868.1500	DANE, WI
763	823.1500/868.1500	LAPORTE, IN
764	823.1625/868.1625	COOK, IL (D)
764	823.1625/868.1625	MILWAUKEE, WI
764	823.1625/868.1625	ALLEGAN, MI
765	823.1750/868.1750	ST. JOSEPH, MI
765	823.1750/868.1750	KANE, IL
766	823.1875/868.1875	KENOSHA, WI
766	823.1875/868.1875	LAKE, IN
766	823.1875/868.1875	KENT, MI
767	823.2000/868.2000	CASS, MI
767	823.2000/868.2000	KANE, IL
768	823.2125/868.2125	WINNEBAGO, IL
768	823.2125/868.2125	BARRY, MI
768	823.2125/868.2125	MILWAUKEE, IL
768	823.2125/868.2125	LAKE, IN
769	823.2250/868.2250	CHICAGO, IL*
769	823.2250/868.2250	DANE, WI
770	823.2375/868.2375	WINNEBAGO, IL
770	823.2375/868.2375	VAN BUREN, MI
770	823.2375/868.2375	MILWAUKEE, WI
771	823.2500/868.2500	DODGE, WI
771	823.2500/868.2500	WILL, IL
771	823.2500/868.2500	KENT, MI
772	823.2625/868.2625	WALWORTH, WI
772	823.2625/868.2625	ST. JOSEPH, IN
773	823.2750/868.2750	MUSKEGON, MI
773	823.2750/868.2750	WASHINGTON, WI
773	823.2750/868.2750	WILL, IL
774	823.2875/868.2875	ST. JOSEPH, IN
774	823.2875/868.2875	RACINE, WI
775	823.3000/868.3000	CHICAGO, IL*
775	823.3000/868.3000	KALAMAZOO, MI
775	823.3000/868.3000	OZAUKEE, WI
776	823.3125/868.3125	MCHENRY, IL
776	823.3125/868.3125	MARSHALL, IN
776	823.3125/868.3125	KENT, MI

777	823.3250/868.3250	CHICAGO, IL*
777	823.3250/868.3250	KALAMAZOO, MI
777	823.3250/868.3250	MILWAUKEE, WI
778	823.3375/868.3375	STARKE, IN
778	823.3375/868.3375	BOONE, IL
779	823.3500/868.3500	CHICAGO, IL*
779	823.3500/868.3500	ELKHART, IN
779	823.3500/868.3500	WAUKESHA, WI
779	823.3500/868.3500	NEWTON, IN
779	823.3500/868.3500	KENT, MI
780	823.3625/868.3625	STATE GOVT (ALL 4)*
781	823.3750/868.3750	STATE GOVT (WI,IN)*
782	823.3875/868.3875	STATE GOVT (IL,MI)*
783	823.4000/868.4000	STATE GOVT (WI,IN)*
784	823.4125/868.4125	STATE GOVT (IL,MI)*
785	823.4250/868.4250	STATE GOVT (WI,IN)*
786	823.4375/868.4375	STATE GOVT (IL,MI)*
787	823.4500/868.4500	STATE GOVT (WI,IN)*
788	823.4625/868.4625	STATE GOVT (IL,MI)*
789	823.4750/868.4750	STATE GOVT (WI,IN)*
790	823.4875/868.4875	STATE GOVT (IL,MI)*
791	823.5000/868.5000	PRIMARY ZONE POOL*
792	823.5125/868.5125	TOLLWAY, IL*
793	823.5250/868.5250	PULASKI, IN
793	823.5250/868.5250	MUSKEGON, MI
793	823.5250/868.5250	MILWAUKEE, WI
794	823.5375/868.5375	VAN BUREN, MI
794	823.5375/868.5375	KANE, IL
795	823.5500/868.5500	COOK, IL (D)
795	823.5500/868.5500	OTTAWA, MI
795	823.5500/868.5500	MILWAUKEE, WI
796	823.5625/868.5625	LAKE, IL
796	823.5625/868.5625	LAPORTE, IN
797	823.5750/868.5750	CHICAGO, IL*
797	823.5750/868.5750	OTTAWA, MI
797	823.5750/868.5750	ROCK, WI
798	823.5875/868.5875	RACINE, IL
798	823.5875/868.5875	BERRIEN, MI
799	823.6000/868.6000	WILL, IL
799	823.6000/868.6000	KENT, MI
800	823.6125/868.6125	WINNEBAGO, IL
800	823.6125/868.6125	ST. JOSEPH, MI
800	823.6125/868.6125	MILWAUKEE, WI
801	823.6250/868.6250	COOK, IL (A)
801	823.6250/868.6250	KENT, MI
802	823.6375/868.6375	WINNEBAGO, IL
802	823.6375/868.6375	COOK, IL (D)
802	823.6375/868.6375	CASS, MI
802	823.6375/868.6375	MILWAUKEE, WI

803	823.6500/868.6500	DUPAGE, IL
803	823.6500/868.6500	DODGE, WI
803	823.6500/868.6500	JASPER, IN
803	823.6500/868.6500	KENT, MI
804	823.6625/868.6625	WALWORTH, WI
804	823.6625/868.6625	GRUNDY, IL
804	823.6625/868.6625	ST. JOSEPH, IN
805	823.6750/868.6750	CHICAGO, IL*
805	823.6750/868.6750	KENT, MI
806	823.6875/868.6875	ST. JOSEPH, IN
806	823.6875/868.6875	WAUKESHA, WI
807	823.7000/868.7000	BARRY, MI
807	823.7000/868.7000	DANE, WI
807	823.7000/868.7000	WILL, IL
808	823.7125/868.7125	MARSHALL, IL
808	823.7125/868.7125	WAUKESHA, WI
809	823.7250/868.7250	CHICAGO, IL*
809	823.7250/868.7250	KALAMAZOO, MI
809	823.7250/868.7250	NEWTON, IN
810	823.7375/868.7375	KENDALL, IL
810	823.7375/868.7375	STARKE, IN
810	823.7375/868.7375	ROCK, WI
811	823.7500/868.7500	LAKE, IL
811	823.7500/868.7500	ELKHART, IN
811	823.7500/868.7500	KENT, MI
812	823.7625/868.7625	KALAMAZOO, MI
812	823.7625/868.7625	DANE, WI
812	823.7625/868.7625	LAKE, IN
813	823.7750/868.7750	PULASKI, IN
813	823.7750/868.7750	MUSKEGON, MI
813	823.7750/868.7750	WASHINGTON, WI
813	823.7750/868.7750	KANE, IL
814	823.7850/868.7850	VAN BUREN, MI
814	823.7875/868.7875	KENOSHA, WI
814	823.7875/868.7875	LAKE, IN
815	823.8000/868.8000	CHICAGO, IL*
815	823.8000/868.8000	OTTAWA, MI
815	823.8000/868.8000	DANE, WI
816	823.8125/868.8125	OZAUKEE, WI
816	823.8125/868.8125	BOONE, IL
816	823.8125/868.8125	KANKAKEE, IL
816	823.8125/868.8125	LAPORTE, IN
817	823.8250/868.8250	CHICAGO, IL*
817	823.8250/868.8250	ELKHART, IL
817	823.8250/868.8250	OTTAWA, MI
817	823.8250/868.8250	RACINE, WI
818	823.8375/868.8375	PRIMARY ZONE POOL*
819	823.8500/868.8500	PRIMARY ZONE POOL*
820	823.8625/868.8625	STATE GOVT (ALL 4)*

821	823.8750/868.8750	STATE GOVT (WI,IN)*
822	823.8875/868.8875	STATE GOVT (IL,MI)*
823	823.9000/868.9000	STATE GOVT (WI,IN)*
824	823.9125/868.9125	STATE GOVT (IL,MI)*
825	823.9250/868.9250	STATE GOVT (WI,IN)*
826	823.9375/868.9375	STATE GOVT (IL,MI)*
827	823.9500/868.9500	STATE GOVT (WI,IN)*
828	823.9625/868.9625	STATE GOVT (IL,MI)*
829	823.9750/868.9750	STATE GOVT (WI,IN)*
830	823.9875/868.9875	STATE GOVT (IL,MI)*

* Non-County

APPENDIX

L

GLOSSARY

(Definitions of terms, abbreviations, and acronyms as they are used in this document)

ADJACENT CHANNELS	Channels which are separated by 12.5 KHz in the 821-824 band
AGL	Above Ground Level; altitude
APCO	Associated Public Safety Communications Officers, Incorporated
AVL	Automatic Vehicle Locator; a data transmission device used to determine where a field unit is
CALLING CHANNEL	FCC Channel 601; use of this channel is restricted to establishing contact among individual agencies for mutual aid purposes
CHANNEL	An assigned band of frequencies of sufficient width to permit its use for radio communication
CHANNEL LOADING	The number of mobile transmitters authorized to operate on a particular channel within the same service area
CO-CHANNEL	Utilization of the same channel by two or more licensees

CONVENER	The individual charged with organizing a Planning Region's initial meeting
THE COMMISSION	The Federal Communications Commission; also, the FCC
THE COMMITTEE	The Southern Lake Michigan 800 MHz Regional Planning Committee
COMMITTEE OF THE WHOLE	All members present at a monthly regional planning meeting
COMMON CHANNELS	The five (5) channels specified in the National Plan which are reserved for mutual inter-agency communication; a Calling Channel and four Tactical Channels
CONVENTIONAL OPERATION	A method of operation in which one or more radio frequency channels are assigned to mobile and base stations but are not employed as a trunked group
CROSS SYSTEM PATCH	A means of linking disparate radio systems
FILING WINDOW	A period of time beginning and ending on specific dates, designated and announced by the RCRC, during which applications for licenses in the 821-824/866-869 band may be submitted for evaluation
FREQUENCY ADVISORY COMMITTEE CHAIRMAN	An APCO designated individual charged with managing spectrum usage within a State

INTEROPERABILITY	Communication between, or among, radio units of different agencies
MDT	Mobile Data Terminal; a field communications device used to transmit and receive data impulses over radio frequencies
MOBILE RELAY STATION	A base station in the mobile service authorized to retransmit automatically on a mobile service frequency communications which originate on the transmitting frequency of the mobile station
MUTUAL AID INCIDENT	A situation posing a threat to the public safety which requires the services of agencies from differing jurisdictions or services
NPSPAC	National Public Safety Planning Advisory Committee
THE PLAN	The Public Safety Communications plan for Region 54, the Southern Lake Michigan Region
PRIMARY DISPATCH CENTER	A Public Safety Communications Center designated as a controller of the Common Channels
PRIMARY ZONE	Counties in the Region which have high population density and a large number of public safety entities

RCRC	The Regional Conformance Review Committee; a standing body of individuals charged with administering the Plan within the Region
THE REGION	The Southern Lake Michigan 800 MHz Planning Region; forty-three counties throughout Wisconsin, Illinois, Indiana, and Michigan surrounding the southern end of the Lake
REPEAT DISABLE	The means of inhibiting Mobile Relay
SECONDARY ZONE	All counties of the Region not designated as a Primary Zone
SLMRPC	The Southern Lake Michigan Regional Planning Committee
TACTICAL CHANNELS	The four Common Channels on which inter-agency communications will be conducted during a mutual aid incident
TRUNKED OPERATION	A method of operation in which a number of radio frequency channel pairs are assigned to mobile and base stations in the system for use as a trunk group
VACATED FREQUENCIES	Those frequencies returned for re-allocation

PROCEDURE FOR DETERMINING SERVICE AREA CONTOUR

1. Convert effective radiated power from watts to dBk using the formula: P {(dBk) = (10 x Log P (Watts)} -30 (B-1)

2. SUBTRACT this NEGATIVE number (in other words, convert it to positive and add) from 41 dBu.

3. In the look-up tables, determine the two height columns that correspond most closely with your HAAT (for example, if your HAAT is 300 feet, use the 200 and 500 columns).

4. Interpolate between the listings under the two columns to determine where the figure arrived at the Step 2 falls.

5. Read the mileage at the extreme left-hand column of the row.

EXAMPLE:

To determine the service area of a UHF base station with an ERP of 125 watts and an antenna height above average terrain of 400 feet:

$$P\ (dBk) = 10 \times \log\ (135) - 30$$
$$P\ (dBk) = 21 - 30$$
$$P\ (dBk) = -3$$

Subtracting:

$$F\ (dBu) = 41 - (-3)$$
$$F\ (dBu) = 50$$

From the look-up table, 50 falls between 45.6 and 53.3 as 400 is interpolated between 200 and 500. Corresponding mileage is 12.

UHF	F(50,50)	dBu,kW		erp
MILES	100	200	500	1000
5	60.8	66.0	72.9	79.0
6	56.9	61.7	68.7	74.6
7	53.4	58.2	65.1	71.0
8	50.2	55.1	62.0	68.0
9	47.4	52.4	59.4	65.4
10	44.8	49.9	57.0	63.1
11	42.4	47.7	54.9	60.9
12	40.2	45.6	52.9	59.0
13	38.2	43.7	51.1	57.2
14	36.3	41.9	49.5	55.4
15	34.6	40.1	47.9	53.8
16	33.0	38.5	46.3	52.2
17	31.5	37.0	44.9	50.7
18	30.0	35.6	43.5	49.2
19	28.7	34.3	42.1	47.9
20	27.5	33.0	40.8	46.5
21	26.4	31.7	39.5	45.3
22	25.3	30.6	38.3	44.1
23	24.3	29.5	37.1	42.9
24	23.3	28.4	35.9	41.8
25	22.4	27.4	34.8	40.7
26	21.5	26.4	33.8	39.7
27	20.7	26.4	32.7	38.7
28	19.9	24.5	31.7	37.7
29	19.1	23.6	30.7	36.8
30	18.4	22.7	29.8	35.9
31	17.6	21.8	28.9	35.0
32	16.9	21.0	28.0	34.1
33	16.2	20.1	27.1	33.2
34	15.6	19.3	26.3	32.4
35	14.9	18.6	25.5	31.5

36	14.3	17.8	24.6	30.7
37	13.7	17.1	23.8	29.9
38	13.0	16.4	23.0	29.1
39	12.4	15.7	22.3	28.3
40	11.8	15.0	21.5	27.6
41	11.2	14.3	20.7	26.8
42	10.6	13.7	20.0	26.0
43	10.1	13.1	19.2	25.3
44	9.5	12.5	18.5	24.5
45	8.9	11.9	17.8	23.8
46	8.4	11.3	17.0	23.1
47	7.9	10.7	16.3	22.3
48	7.3	10.7	16.3	22.3
49	6.8	9.5	15.0	20.9
50	6.3	8.9	14.3	20.2
51	5.8	8.4	13.6	19.5
52	5.3	7.8	13.0	18.8
53	4.9	7.3	12.4	18.1
54	4.4	6.8	11.8	17.5
55	4.0	6.2	11.2	16.8
56	3.6	5.2	10.6	16.1
57	3.2	5.2	10.0	15.5
58	2.8	4.8	9.5	14.9
59	2.4	4.3	9.0	14.3
60	2.0	3.9	8.4	13.7
61	1.7	3.5	7.9	13.1
62	1.3	3.1	7.4	12.5
63	1.0	2.7	6.9	12.0
64	.7	2.3	6.4	11.4
65	.3	1.9	5.5	10.3
66	0.0	1.6	5.5	10.3
67	-.3	1.2	5.0	9.8
68	-.7	.9	4.5	9.3
69	-1.0	.5	4.1	8.8
70	-1.4	.2	3.7	8.3
71	-1.7	-.2	3.2	7.8

72	-2.0	-.5	2.8	7.3
73	-2.4	-.9	2.4	6.9
74	-2.7	-1.2	2.0	6.4
75	-3.0	-1.5	1.7	6.0
76	-3.3	-1.9	1.3	5.6
77	-3.5	-2.1	.9	5.3
78	-3.8	-2.4	.5	4.8
79	-4.0	-2.7	.1	4.4
80	-4.3	-3.1	-.3	3.9

CO-CHANNEL INTERFERENCE PROCEDURE

1. Determine distance from the proposed station to the existing station.
2. If not previously known, determine service area boundary of existing station (this method is detailed in Appendix B).
3. Find distance from proposed station to closest point of service area boundary of the existing station. (subtract #2 from #1)
4. Based on mileage from 3 (above), ERP and HAAT of the proposed station, consult look-up tables for dBu level at the service area boundary of the existing station.
5. Subtract this dBu level from 41. If result is greater than 25, the proposed system will conform with the interference parameters. If the result is less than 25, the proposed system must be redesigned by lowering power, antenna height, or both until the 25dB protection ratio is met.

NOTE: If the terrain between the two systems would provide additional protection that would not be evident from using the normalized HAAT's, it will be permissible to calculate the HAAT of both existing and proposed systems along the radial line directly connecting the two stations. The resulting service area boundary of the existing station and the dBu level of the proposed station at that point would then be used to calculate the protection ratio.

EXAMPLE:

STATION A (proposed)	Station X (existing)
ERP: 100W (-10dBk)	200W (-7dBk)
HAAT: 500 feet, AMSL	300 feet, AMSL
Distance from A to X: 45 miles	
Service Area -	
Boundary: 13 mi.	11 mi.

46 miles - 11 miles = 35 miles, distance from proposed to service area boundary of existing station.

From look-up tables, dBu level at 35 miles from a station with an ERP of 100 watts and HAAT of 500 feet is:

25.5 - 10 = 15.5 dBu

Subtracting this amount from the defined 41 dBu level at the service area boundary of the existing station gives 25.5 dB of protection, 0.5 dB more than the minimum we require.

THE SOUTHERN LAKE MICHIGAN 800 MHZ PLANNING REGION

REGION 54

GENERAL MEETING NOTICE

MARCH 25, 1992 AT 2:00 P.M. CST

A general meeting of the Southern Lake Michigan 800 Mhz Planning Region will take place at Lake Lawn Lodge in Delevan, Wisconsin, in a meeting room to be posted, on March 25, 1992 at 2:00 P.M. All Public Safety users in Illinois, Indiana, Michigan and Wisconsin, as defined in the Region 54 plan, are invited to participate.

The Chairman elect of Region 54, due to his relocation to another State outside the Region, resigned and the selection of a new Chairman will be in the order of business. Also, consideration will be in the offering for the selection of a new Recording Secretary of the Region. A general review of the "Region 54 Plan", its progress since inception, and the state of the Region's remaining 800 Mhz frequency resource will be discussed.

For information relative to the "Region 54 Plan" contact your State Frequency advisor. The respective Coordinators are:

STATE	NAME	TELEPHONE NUMBER
Illinois	Clarence Peecher	217-782-7345
Indiana	Donald Kottlowski	317-899-8257
Michigan	David Held	517-336-6240
Wisconsin	Carl Guse	414-885-4450

As a reminder to the public safety agencies requesting frequencies, the Regional Conformance Review Committee (RCRC) usually meets twice each year, in the spring and the fall, to review and evaluate applications for frequencies. Filings are accepted until approximately 30 days before the meeting of the RCRC. The closure date for this spring is March 1, 1992. The RCRC will meet on March 24, 1992 to consider applications for the Spring filing. The fall filing window will close on 1 September 1992 with the RCRC expected to meet, as is the usual practice, on the first Wednesday in November. The exact time and location will be determined at the March RCRC business meeting.

William T. Corbett
Secretary and Interim
Chairman - Region #54

ADDENDUM

All changes to the Southern Lake Michigan 800 Mhz Regional Plan, Region 54, will be amended or expanded through actions by the Regional Conformance Review Committee (RCRC). The segment of the "Plan" in which the edits appear will be specified and titled to aid in the review of the Plan. At the end of the edited statement(s), all changes will be referenced by date of ratification by the RCRC and where necessary approval date of the FCC. The source document, if in existence, from which change in the Plan has been fostered will be cited.

APPLICATION REVIEW AMENDMENT - PAGE 14 OF "PLAN"
FILING WINDOWS - RELATED PROCEDURES

The Regional Conformance Review Committee (RCRC) meets twice each year to facilitate frequency requests. Filing of requests, by Public Safety eligibles, may be submitted to the requestor's State Frequency Advisor at any time. However, a filing window closure of March 1st is specified for action on frequency matters for consideration before each year's initial meeting of the RCRC. October 1st is the filing date closure for actions to be considered for the last RCRC meeting of each year. The meeting of the RCRC, for action on filings, will occur approximately 30 days from the date of filing closure. Filings received between the closure date and the respective RCRC meeting will be deferred until the following RCRC meeting.

Ratified by RCRC January 5, 1990; Ref: Summary of Procedures dated January 8, 1990

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PREFACE

In December 1983, the United States Congress directed the Federal Communications Commission (FCC) to establish a plan to ensure that the communications needs of state and local public safety authorities would be met for the future. The Commission issued a Notice of Inquiry on March 7, 1984 and evaluated over three hundred comments from the public safety community and other interested parties.

These comments formed the basis for a Staff Report issued by the Commission's Private Radio Bureau on August 1, 1985. This report suggested various methods of meeting the communications needs of public safety. One option included was the allocation of additional frequencies at 821-825 MHz and 866-870 MHz.

The Commission issued an allocation order on September 19, 1986. Six megahertz of spectrum were selected in the 821-824 MHz and 866-869 MHz bands, since they were adjacent to frequencies already being used for public safety purposes. However, while the Commission made this allocation, it also stipulated that the frequencies could not be used until a National Plan for spectrum utilization was adopted.

The Commission then established the National Public Safety Planning Advisory Committee (NPSPAC) in December, 1986. This committee had open membership and all interested parties were invited to participate in its meetings.

The Commission charged NPSPAC with the following tasks:

(1.) Identify communications requirements of public safety agencies.

(2.) Develop a scheme for efficient use of the new frequencies.

(3.) Develop a scheme to increase the utility of existing public

(4.) Recommend the manner in which new technologies can be applied to public safety frequencies.

(5.) Recommend guidelines to ensure compliance with the National Plan.

NPSPAC submitted its Initial Report to the Commission in March, 1987. On May 15, 1987 the Commission issued a Notice of Proposed Rule making proposing policies and rules for the National Plan. NPSPAC then issued its Final Report in September, 1987. On December 18, 1987 the Commission released a Report and Order regarding the development and implementation of a Public Safety National Plan: General Docket No. 87-112.

In its introductory comments the Commission expresses its belief that "while certain technical concerns must be addressed at the national level, the great diversity of needs in different areas of the country demand that input also be obtained at the State and Local levels." Thus, the United States was divided into Regions, primarily along State boundaries. A few large metropolitan areas were designated as independent Planning Regions.

Prior to the Report and Order, NPSPAC's Final Report had recommended a total of fifty-four (54) Planning Regions. The Chicagoland megalopolis was one of these. However, when the Report and Order was released, the Commission had established only forty-eight (48) Planning Regions. The multi-state Chicago megalopolis was specifically excluded from the list, as were other densely populated metropolitan areas around the country. A Petition for Limited Reconsideration was filed by NPSPAC on February 12, 1988 asking that additional planning regions be established, as previously recommended. The Commission subsequently granted this Petition and established fifty-five regions, including the Chicago Metro area.

This document constitutes the Public Safety Communications Plan for Region No. 54: The Southern Lake Michigan Planning Region. It addresses the unique spectrum allocation requirements of the public safety and governmental authorities throughout this multi-state area. It is respectfully submitted to the Commission this ---- day of ------ -------- under the umbrella of the National Plan.

Teddy F. Vratny, Chairman

THE REGION

ESTABLISHMENT OF REGIONAL BOUNDARIES

For Public Safety Communications purposes, the Southern Lake Michigan Region (the Region) is the geographic area surrounding the southern tip of Lake Michigan. The Region is comprised of forty-three counties within the four States of Wisconsin, Illinois, Indiana, and Michigan. Its approximately thirteen million people represents more than five percent of the Nation's population.

Protecting the lives and property of these persons is a function of hundreds of Public Safety and Special Emergency agencies which are operated or regulated by a multitude of various political jurisdictions. Personal mobility andthe proximity of communities in today's metropolitan areas demand cooperation and coordination among these agencies. Whether the activity is search and rescue across Lake Michigan, or the pursuit of a criminal offender along the Tri-State Tollway, mobile and portable radios provide the means for the myriad agencies involved to communicate with each other.

Radio communications also provide the means for each agency to accomplish its own individual, day-to-day operations. These communications must be reliable, and free from interference from neighboring agencies. Therefore, frequencies must be assigned to agencies throughout a given area in a manner that makes inter-agency communication possible, but prevents inter-agency interference.

Other issues to be considered when determining what area should comprise a Planning Region are: the continuing urbanization of outlying counties; the sophistication of radio technology; and most importantly, the amount of radio spectrum available to public safety agencies throughout the area.

Since agencies from around the southern tip of Lake Michigan affect <u>each other</u> more on these issues than they affect agencies in other parts of their own States, the decision to form a multi-state planning region was made.

The initial boundaries of the Southern Lake Michigan Region were determined by drawing a circle on a midwestern map, using downtown Chicago as the center and a 110 mile radius. Tangents were then drawn to this circle. The result was a densely populated area with a history of radio frequency problems covering 40,000 square miles. These boundaries were adopted as the starting point for definition of the Region on December 10, 1987.

Final boundaries for the Region, along county lines, were drawn in February, 1988 when the Petition was filed with the Commission. The forty-three counties which comprise the Southern Lake Michigan 800 MHz Planning Region are listed in Table 1, as shown in Figure 1.

PRELIMINARY ORGANIZATION

Monthly meetings for the planning process began in September of 1987. Deliberations on administrative and technical questions began at that time, using the Regional Planning Tasks published by NPSPAC as a functional basis for organizing small work groups. Much of the groundwork thus had already been done prior to the formal creation of the Region.

In March, 1988 four individuals were designated by the Associated Public-Saftey Communications Officers, Inc. (APCO) as Co-Convenors for the Region: Teddy F. Vratny (Illinois); Donald Kottlowski (Indiana); David Held (Michigan); and Carl Guse (Wisconsin). They then prepared and published an announcement of the first official meeting for persons interested in participating in the planning process.

NOTIFICATION OF ELIGIBLES

In General Docket No. 87-112, the FCC declared that since the Public Safety Radio Service and the Special Emergency Radio Service both play important roles in public safety, it is necessary to make both services eligible to operate in the 821-824/866-869 MHz bands. While recognizing that it may not be possible to grant requests for assignments to everyone, the Commission did conclude that membership on regional planning committees must be open to representatives from all potential user groups.

In accordance with the Report & Order, the Southern Lake Michigan Planning Region took the below listed steps to ensure that its membership was open to as broad a range of eligible participants as possible. (Referenced materials are all contained in Appendix A).

1. On March 8, 1988 the announcement of the Initial Meeting was mailed to individual public safety agencies as well as professional organizations/associations of all eligible user groups, the National Communication System, and the Federal Emergency Management Agency.

2. On March 24, 1988 the FCC issued a Public Notice announcing the initial meeting.

3. On May 2, 1988 a reminder notice was sent out through the Law Enforcement Agency Data System (LEADS).

4. The Announcement was posted in County Courthouses throughout the Region from March through May, 1988.

FORMATION OF THE PLANNING COMMITTEE

On May 12, 1988 the first official meeting of the Southern Lake Michigan 800 MHz Regional Planning Committee (the Committee) was held in Arlington Heights, Illinois. Mr. Teddy F. Vratny was elected Chairman of the Committee; Lieutenant William T. Corbett was elected Secretary.

The Summary of Proceedings of this meeting (and of all meetings preceeding and succeeding it) are available for inspection at the office of the Secretary.

Appendix B contains the names, affiliations, mailing addresses and phone numbers of the officers of the Region. Appendix C contains this information for all persons who have participated in the Southern Lake Michigan 800 MHz Regional Planning Committee.

REGIONAL CONFORMANCE REVIEW COMMITTEE (RCRC)

The Committee realizes that its work does not end with the submission of this Plan. Future modifications to the Plan may be required; applications for radio systems proposed within the Region will need to be reviewed for compatibility with the Plan; implementation of these systems will require monitoring; coordination with the National Plan will continue. Obviously, there must be a mechanism by which future tasks can be accomplished.

To provide this mechanism, the Committee of the Whole has established the Regional Conformance Review Committee (RCRC) (See Appendix D). This committee will be composed of the Frequency Advisory Committee Chairman and another representative from each State within the Region, plus the Regional Planning Committe Chairman. The RCRC will convene upon the Commission's approval of this Plan.

COORDINATION WITH ADJACENT REGIONS

There are four planning regions which are adjacent to the Southern Lake Michigan Region. They consist of the remaining portions of each of the four States. A combination of three historical facts has created an excellent opportunity for coordinating this Plan with those of the regions adjacent to it:

(1) Among the five regions, the Southern Lake Michigan Region was the first to organize a planning committee.

(2) From its beginnings in 1987, this Region has had as members, the Frequency Advisors and Regional Planning Convenors of each encompassing State.

(3) As of this date, two members of the SLMRPC have been elected Chairman of their home state's regional planning committees (Illinois and Indiana).

Communication among regions has thus been ever present during the drafting of this Plan. Implementation of each of the five plans will likewise be coordinated through the mutual membership and cooperation of the planning committees.

CONFORMITY WITH THE NATIONAL PLAN

It is the expressed intent of the Committee to conform with the requirements of the National Plan as defined in paragraphs 11 - 40 of General Docket No. 87-112. This Plan is submitted to the Commission subject to the review process described in the Report and Order.

REVIEW PRIOR TO SUBMISSION

As work progressed on the Regional Planning Tasks the original small groups were organized into three Subcommittees: Administrative, Technical, and Operational. They codified their suggestions, and wrote draft proposals on individual topics. After reaching a consensus, the subcommittees then presented their proposals to the Committee of the Whole for review and comment.

Upon acceptance of its content by the Committee, each draft was then forwarded to the Administrative subcommittee for collation. The complete final draft was then presented to the Committee of the Whole for page by page review.

AUTHORITY

The Southern Lake Michigan 800 MHz Regional Planning Committee derives its authority to carry out the activities required for composition and implementation of this Plan from the Commission's Report and Order General Docket No. 87-112 released on December 18, 1987 and the Petition for Limited Reconsideration as a multi-state region granted by the Commission on March 30, 1988.

NEEDS ANALYSIS

The Report & Order specifies that regional plans explain how the requirements of all eligible entities were considered. This section of the Plan describes how this specification has been met.

QUESTIONNAIRE DEVELOPMENT

It was decided that the best means of identifying the radio spectrum needs of the Region as a whole was to survey the potential users individually. To this end, work began on drafting a questionnaire in February, 1988. Sample documents were prepared and given to Committee members for comment during the ensuing three months. This review process resulted in the final survey instrument which is contained in Appendix E: The Southern Lake Michigan 800 MHz Regional Planning Committee Radio User Questionnaire.

Distribution to potential eligibles began in May, 1988. Over 1500 copies of the questionnaire were mailed to both individual public safety agencies and professional organizations/associations. Appendix F contains a listing of the professional organizations contacted. These organizations were requested to photocopy the survey and distribute it to their members. Because of this extended process the exact number of questionnaire recipients cannot be determined.

The questionnaire was designed to elicit meaningful information detailing current, as well as future, radio frequency needs. The years 1995 and 2005 were used for future projections. Information was requested in four topical sections:

(I) "General Information" asked the respondents to provide agency identification information including the type of service supplied to the public.

(II) "Demographic Information" asked specific questions regarding the agency's service area.

(III) "Frequency Needs" asked questions regarding the agency's use of radio frequencies for voice and data transmissions.

(IV) "Equipment" asked the respondents to project their agency's inventory of several radio equipment items.

QUESTIONNAIRE RESULTS

Section (I)

Four hundred and ninety-two (492) usable surveys were returned, compiled, and analyzed using the computer program DBASE III Plus. The objective of including both Public Safety and Special Emergency Service agencies was achieved. Surveys were received from all types of governmental and non-governmental organizations (i.e., Law Enforcement, Fire Fighting, Emergency Medical, Forestry, Veterinary, School Bus, etc.).

Section (II)

Eight agencies reported that their service area encompassed their entire state and five agencies reported that their service areas cross state lines. 389 of the agencies service an area that is urban, or both urban and rural. This statistic reflects the continuing urbanization of the outlying areas in the Southern Lake Michigan Region.

Section (III)

35.7% of the agencies reported that their radio system is not adequate for their needs today. This percentage increases to over two -thirds and more than three-fourths for the years of 1995 and 2005, respectively. One third of the respondents reported that their field units "often" have to wait for access to a voice channel. When asked if they planned to expand their use of radio frequencies for data transmission, 34.3% of the respondents said that they did.

Two other statistics found in this section of the questionnaire bear directly on issues raised in the Report and Order: prioritization of eligibles and frequency give-backs.

First, the total number of new 800 MHz frequencies reported to be needed now is 425; this total increases to 684 in 1995; by 2005, responding agencies expect to need over one thousand new 800 MHz frequencies in the Region. Secondly, given a choice between additional frequencies in the 800 MHz spectrum or additional frequencies in their current spectrum, 74.5% preferred the latter. The first statistic demonstrates the need for this Region to prioritize agencies applying for the new spectrum, according to their degree of involvement in providing for the protection of life and property. The second statistic supports the assumption that public safety entities in the Region are "waiting in line" for lower band frequencies. As licensees move up to the new spectrum they will be expected to make every effort to give up their lower band frequencies, as described in the Report and Order.

While the number of frequencies projected to be needed by the respondents appears to exceed the number available in the new spectrum, it should be noted that actual applications for them are few at this time. When asked if an application for 800 MHz channels was pending, only four (4) agencies responded affirmatively. Only one (Naperville, Illinois) has forwarded a frequency coordination request to the Committee. Prioritization is therefore expected to satisfy the needs of all public safety eligibles in the Region at this time of filing.

Section (IV)

This last section of the survey gathered figures relating to the amount of radio equipment in the Region. Mobile and portable radios constitute the largest portion of this equipment (approximately 67,000 owned now, over 100, units projected to be owned by 2005). The largest growth categories of equipment are mobile data terminals and automatic vehile locators. These categories are projected to increase from 528 (MDT) now to 12,684 in 2005; and from 30 (AVL) now to 10,785 in 2005, respectively. The need to include data transmissions when planning spectrum allocations becomes obvious when confronted with these numbers.

For the sake of brevity, this section of the Plan has presented selected items of information as evidence to the Commission of the Planning Committee's efforts to identify the radio frequency needs of this Region's potential eligible users. More detailed results are contained in Appendix G. It is anticipated that the information collected with this questionnaire will prove as useful to future planning and coordinating activities within the Region as it has proven to be in the development of this Plan.

APPLICATIONS

This section of the Plan describes the procedures for applying for a license to operate a radio system in the new spectrum, as well as the process by which that application will be evaluated. Applications shall be submitted during specific periods of time known as "filing windows". Said filing windows will be designated by the RCRC, be opened at least once annually, and be announced in advance. It is the intention of the RCRC to announce the dates of the first filing window within thirty (30) days of the date of the Commission's approval of this Plan.

APPLICATION REVIEW

Applications for licenses in the 821-824/866-869 MHz band will be subject to review by the RCRC at the closing of each filing window. This review is required prior to formal submission of the application to the national APCO frequency coordination office. Applications may be rejected at the Regional level for non-conformance with this Plan. Also, any application received outside of the designated "filing window" will be returned to the applicant for re-submission during the next filing window.

APPLICATION PROCEDURES

Applications will be submitted to the local Frequency Advisory Committee Chairman. The Frequency Advisory Committee Chairman will peruse the application packet for completeness, and the eligibility of the applying organization. Incomplete applications, or applications from agencies which are not considered by this Plan to be eligible for the limited spectrum, will be returned to the applicant with the appropriate remarks. Copies of complete applications received from eligible public safety entities will be forwarded to the RCRC for evaluation.

INFORMATION REQUIRED

The current standardized APCO Frequency Coordination and FCC License Application forms will be used. In addition, the applicant will be required to furnish supplemental information in specific categories. These categories are enumerated (and briefly defined) on the following page. Each category has been assigned a numerical weight for application evaluation purposes. Category weights are contained in Appendix H. Where further comments affecting a category are made elsewhere in this Plan, the appropriate page number(s) are also specified.

1. Service --- What tasks or duties the agency is charged with accomplishing.

2. System Type --- In narrative form, a description of the radio system being proposed (trunked, conventional, voice, data, voice/data combined, etc.) (page 20).

3. Intersystem Interoperability --- How agents of the applying organization will communicate with agents of different organizations. (pages 24, 28-32).

4. Channel Loading Factors --- Equipment inventory totals, and the maximum number of mobile radios potentially in use at a given time. (pages 21, 22, 25).

5. Coverage Area --- Details of an engineering survey showing the radio coverage required for minimum coverage of jurisdictional boundaries. (pages 20, 21, 25).

6. Vacated Frequencies Returned --- Which frequencies the agency will release. (pages 22, 23).

7. Implementation Schedule --- An explanation of any budgetary commitment and a propsed time frame for putting equipment into service.

The RCR may request additional information at the time of review to assist in evaluation.

APPLICATION EVALUATION

The Regional Conformance Review Committee (RCRC) will review each application for its conformity to this Plan. Evaluations will be based upon the seven factors mentioned above. A final point total will be determined by adding the points earned in each category as listed in Appendix H. The RCRC will base their recommendation for approval or rejection of the application upon the final point total.

Once an application has been reviewed it will be returned to the applicant for the appropriate action (e.g., filing, additional information required, modification, etc.).

ELIGIBILITY

Agencies applying for frequencies in the 821-824 and 866-869 MHz band will be prioritized according to the degree that the service(s) they provide is fundamental to the protection of life and property. Only Public Safety and Special Emergency Radio Service agencies are eligible to apply for a license in the 821-824/866-869 MHz band.

APPEAL PROCESS

Throughout the frequency allocation process, applicants are given opportunities to appeal decisions which have caused rejection of their application. The appeal process has two levels, APCO and the FCC. An applicant who decides to appeal a rejection should initiate that appeal immediately upon notification of the rejection. In the event that an appeal reaches the second level (the FCC), the Commission's decision will be final and binding upon all parties.

SPECTRUM UTILIZATION

This portion of the Plan lays the foundation for the efficient and effective utilization of the spectrum. Its purpose is to guide the RCRC in the task of evaluating new applications for the use of radio frequencies in the 821-824/866-869 MHz bands.

PRIMARY AND SECONDARY ZONES

The demand for frequencies varies depending on population of the area. Dense urban areas contain many individual public safety agencies, all making their own demands for frequencies. This problem is not as intense in more rural areas where the number of individual agencies is fewer. To differentiate between such areas of the Region, Primary and Secondary "zones" have been designated. A Primary zone contains jurisdictions which are severely impacted as a result of an excess demand for scarce spectrum. A Secondary zone contains jurisdictions which are impacted to a lesser degree. The requirements for system implementation in a Primary zone will be more restrictive than in a Secondary zone.

At this time the Primary zones are defined as the following six counties: Cook, DuPage, Lake, and Kane (Illinois); Lake (Indiana); Milwaukee (Wisconsin). The remaining 37 counties of the Region are all defined as Secondary zones.

TRUNKING

Applicants requesting licenses for five (5) or more channels will be required to trunk those channels. Exceptions to the rule will not be allowed unless an equally spectrum efficient technology is proposed, or, the applicant can otherwise demonstrate that trunking will not meet the specific operational requirements of the agency.

Applicants requesting licenses for four (4) or less channels within the Secondary zone may be permitted conventional operation. In the Primary zone, conventional operations with four (4) or less channels will only be allowed when all efforts to consolidate communications with other agencies are proven to be infeasible.

COVERAGE AREA

The desired coverage of a system is considered to be a maximum of three (3) miles outside of the boundary of the applicant's jurisdiction. The maximum designed mean signal strength at this contour shall not exceed 40 dbu (+40dB above one microvolt per meter) measured with an antenna mounted no less than five feet (5') above ground. Petitions to provide coverage exceeding these parameters will be examined on a case by case basis. Overlap or extended coverage must be minimized even where agencies are proposing to intermix systems for cooperative and/or mutual aid purposes.

ADJACENT CHANNEL ASSIGNMENTS

Adjacent channel assignments will be made when it is determined that the two or more systems will create a signal strength of +25dbu or less, anywhere within their partners' boundary.

CO-CHANNEL ASSIGNMENTS

Co-channel assignments will be made when it is determined that the two or more systems will create a signal strength of +5 dbu or less, anywhere within their co-channel partners' boundary.

To achieve the most efficient use of the spectrum, distances between transmitters for co-channel reuse will not be held to a seventy (70) mile separation in this Plan. Separation of co-channel transmitters will be determined by the coverage needs of the applicant, natural barriers for separation, antennae patterning, and limited ERP's where possible.

CHANNEL LOADING CRITERIA

In this Plan, existing loading standards will be applied for Priority Level I voice communications: 70 mobiles per conventional channel, 100 mobiles per trunked channel. For all data only systems and Priority Level II and III voice (or voice/data combined) systems, the loading criteria will increase: 100 mobiles per conventional channel, and 150 mobiles per trunked channel.

Agencies that support interoperability by permitting Federal use of their frequencies through S-160 (or equivalent) agreements, may augment their channel requirements by a maximum of 2% to account for the increased number of mobile units. Written documentation detailing the expected number of Federal radios involved will be required at the time of application.

In order to conserve spectrum, agencies must demonstrate that the number of radios potentially in use at one time meet these loading criteria. Agencies which cannot demonstrate this potential may be denied exclusive use of the allocated channel(s). Petitions to deviate from these criteria will be considered by the RCRC on an individual basis.

VACATED FREQUENCIES

It is anticipated that as public safety agencies implement 800MHz radio systems, they will be able to vacate the VHF and UHF frequencies on which they previously operated. The RCRC will apply the three conditions governing frequency give-backs described in the Report and Order:

(1) The new system fully replaces the functions of the old one.

(2) The licensee has no other communications requirements that could be met through the use of the lower frequencies.

(3) The new system has operated satisfactorily for long enough to allow a smooth transition from former operations, and to demonstrate its reliability.

Vacated frequencies will be returned to their respective pools to be re-assigned by the FCC approved Frequency Advisory Committee Chairman, with recommendations by the RCRC, in order to provide the most beneficial use to public safety.

INITIAL SPECTRUM ALLOCATION

The methodology used to determine the spectrum allocations at the time of filing this Plan is contained in Appendix J. The allocation itself is contained in Appendix K.

TECHNICAL DESIGN CONSIDERATIONS

This section of the Plan discusses topics which must be considered when engineering a new system.

CHANNELING PLAN

The 25 KHz offset channeling plan established by the National Plan will be required of all systems to be licensed in the 821-824/866-869 MHz bands.

INTEROPERABILITY WITH ADJACENT LOWER BANDS

There are several hundred agencies in the Region currently operating on frequencies in the 806-821/851-866 MHz bands. While most of these agencies may continue operating in these frequencies for several years, many of them will be looking to expand their systems into the new spectrum. Any application submitted under the auspices of this Plan must demonstrate technical ability to provide communication between new and existing systems. Waivers for technical specifications on existing 800 MHz will be considered on an individual basis.

SYSTEM DESIGN

When designing a system, engineers will be required to minimize the distance between transmitter sites by using a combination of limited Effective Radiated Power (ERP), tower height, type of terrain, or any other factors which are technically feasible to minimize adjacent and co-channel interference. Information detailing the methodologies used (including calculations) must be included in the application.

DATA TRANSMISSION

The SLMRPC user survey revealed the use of radio frequencies for data transmissions as the largest "growth" category among responding agencies in the Region. As stated in the Loading Criteria section of this Plan, data only transmissions, whether for emergency or routine messages, will demand a higher loading standard.

CELLULAR RADIO TECHNOLOGY

Trunking technology is presently considered the most spectrum efficient use of radio transmissions for public safety. Cellular radio technology has so far proven useful only for telephone communications. However, it may, with future technological improvements, prove useful for public safety. Agencies are cautioned that any proposal of the use of cellular radio as an alternative to a trunked radio system must demonstrate that it can provide the same or greater degree of spectrum efficiency as trunking, and handle communications in an emergency situation.

MOBILE SATELLITE SERVICE (MSS)

During incidents of major proportions such as airliner crashes, earthquakes, tornadoes, floods, forest fires or nuclear reactor calamities, public safety requirements might include the need for long-range communications in and out of a disaster area. The planned Mobile Satellite Service (MSS) may prove to be a viable alternative to land based systems in these situations, once technical innovations are developed which will provide uni-directed or corridor-driven communications over a lengthy distance. This service should be restricted to frequencies above 960 MHz, however, and licensing in the Public Safety spectrum shall be limited to public safety eligibles only.

AIRCRAFT TO GROUND COMMUNICATIONS

The use of any 800 MHz radio in an aircraft shall be restricted. Air to ground transmissions shall be limited to a maximum effective radiated power (ERP) of one (1) Watt.* Unless system design dictates, otherwise, tactical transmissions shall be on the mobile relay output or talk-around frequencies only. Co-channel and adjacent channel users are not required to provide protection to airborne users. No transmissions on limited area channels are allowed above 2,000 feet AGL, and no transmissions are allowed above 5,000 feet AGL, even on wide area mutual aid channels.

* Aircraft will be permitted to utilize additional power under 500 feet AGL.

INTEROPERABILITY CONSIDERATIONS

This section of the Plan outlines the steps taken by the Committee to permit Federal, State and Local agenices to coordinate their activities during an emergency or disaster situation.

INTERSYSTEM INTEROPERABILITY

The intent of this Plan is to enhance interagency communication. Extensive mutual aid communication networks already exist throughout the Region. The National Plan has now set aside five (5) channels in the new spectrum for mutual aid. Agencies applying for licenses in the 821-824 and 866-869 MHz bands will be required to explain how they will implement the new Common Channels. They will also be required to explain how they will maintain intercommunication with their neighboring agencies who do not implement the Common Channels, but still are dependent upon the applying agency for assistance in an emergency.

COMMON CHANNELS

The Common Channels used in this Region comply with the National Plan, and consist of one (1) calling channel and four (4) tactical channels (Tac 1 through Tac 4). (See Table 2).

SOUTHERN LAKE MICHIGAN 800 MHz PLANNING REGION

COMMON CHANNEL FREQUENCY DESIGNATIONS

USAGE	FREQUENCY
Calling Channel	821.0125 MHz *
	866.0125 MHz **
Tactical Channel 1	821.5125 MHz *
	866.5125 MHz **
Tactical Channel 2	822.0125 MHz *
	867.0125 MHz **
Tactical Channel 3	822.5125 MHz *
	867.5125 MHz **
Tactical Channel 4	823.0125 MHz *
	868,0125 MHz **

* - MOBILE

** - BASE

TABLE 2

Communications on Common Channels use a two-tier structure: initial contact (calling), and working (tactical) channels. These channels are not to be used for daily operations, nor for inter-agency communications that do not involve an emergency situation. The Tactical Channels shall cover the entire Regional area, with mobile relay stations normally operating in the "repeat disable" mode.

The Common Channels are restricted to required intercommunications among agencies that do not have access to other compatible communications channels. A "Primary Dispatch Center" will assign one or more tactical channels for the duration of a specific emergency or incident requiring multi-agency communications.

Because of the wide variance of voice codes among agencies ("ten" signals, alpha-numeric codes, etc.), agencies will use plain English on the Common Channels. The Primary Dispatch Center, with full support of the Regional Committee, will monitor radio traffic discipline, and resolve serious or chronic infractions.

APPLICATIONS

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APPLICATION REVIEW

Applications for licenses in the 821-824/866-869 MHz band will be subject to review by the RCRC at the closing of each filing window. This review is required prior to formal submission of the application to the national APCO frequency coordination office. Applications may be rejected at the Regional level for non-conformance with this Plan. Also, any application received outside of the designated "filing window" will be returned to the applicant for re-submission during the next filing window.

1. Service --- What tasks or duties the agency is charged with accomplishing.

2. System Type --- In narrative form, a description of the radio system being proposed (trunked, conventional, voice, data, voice/data combined, etc.) (page 20).

3. Intersystem Interoperability --- How agents of the applying organization will communicate with agents of different organizations. (pages 24, 28-32).

4. Channel Loading Factors --- Equipment inventory totals, and the maximum number of mobile radios potentially in use at a given time. (pages 21, 22, 25).

5. Coverage Area --- Details of an engineering survey showing the radio coverage required for minimum coverage of jurisdictional boundaries. (pages 20, 21, 25).

6. Vacated Frequencies Returned --- Which frequencies the agency will release. (pages 22, 23).

7. Implementation Schedule --- An explanation of any budgetary commitment and a propsed time frame for putting equipment into service.

APPLICATION EVALUATION

The Regional Conformance Review Committee (RCRC) will review each application for its conformity to this Plan. Evaluations will be based upon the seven factors mentioned above. A final point total will be determined by adding the points earned in each category as listed in Appendix H. The RCRC will base their recommendation for approval or rejection of the application upon the final point total.

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ELIGIBILITY

Agencies applying for frequencies in the 821-824 and 866-869 MHz band will be prioritized according to the degree that the service(s) they provide is fundamental to the protection of life and property. Only Public Safety and Special Emergency Radio Service agencies are eligible to apply for a license in the 821-824/866-869 MHz band.

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APPENDIX

F

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMITTEE

AGENCY/PHONE LISTING

NAME	AGENCY	PHONE
Adler, James	Jefferson County Sheriff	(414) 674-2306
Anderson, Kenneth	Deerfield Police Dept.	(312) 945-8636
Antonacci, Ralph	State of Illinois EMS	(217) 785-2080
Barlog, Gene	I.S.P. Lowell Communications	(219) 838-3184
Barnes, Larry W.	Highland Police Dept.	(219) 838-3184
Bartz, Darrell R.	Illinois State Police	(217) 782-7345
Bishop, Gregory B.	Chicago Fire Dept.	(312) 744-8635
Bottando, James O.	City of Gary	(219) 886-0066
Brown, James H.	Illinois APCO FAC	(309) 788-0581
Buggs, Dick	Walworth County Sheriff's Department	(414) 741-4425
Burlison, Jack R.	Indiana State Police	(317) 899-8259
Celeski, Michael J.	Chicago Police Dept.	(312) 421-4803
Chase, James	Waukesha County	(414) 548-7125
Cima, Michael D.	Illinois State Police	(217)

		782-7345
Clancy, Bill	General Electric Co.	(312) 573-3650
Corbett, William T.	Chicago Police Dept.	(312) 421-4803
Cox, Raymond R.	Hoffman Estates Police Dept.	(312) 882-9100
De Mello, Dick	Michigan Dept. of Natural Resources	(517) 373-1190
DeWitt, Ray	Indiana Toll Road	(219) 674-8836
Edmonds, Doug	Northwest Central Dispatch	(312) 398-1130
Eisenbrandt, Ralph A.	Frankfort Fire Dept.	(815) 469-1700
Eklof, Daniel W.	State of Wisconsin-Div. of Health	(608) 266-0471
Fasano, Pat	Motorola, Inc.	(312) 350-3718
Finch, Richard L.	Indiana DNR-Radio Communications	
Fitzsimmons, Robert G.	Chicago Police Dept.	(312) 744-6351
Fleissner, Robert	Motorola, Inc.	(201) 447-7618
Flores, Gus	Emergency Communications Center	(219) 391-8493
Flynn, John	Bolingbrook Fire Dept.	(312) 759-0443
Galas, Jeff	Illinois Dept. of Transportation	(312) 705-4376
Garcia, John	Emergency Communications Center	(219) 391-8493
Gorris, Chief Duke	Orland Park Police Dept.	(312) 349-4111

Graves, William B.	Racine Police Department	
Gray, Gary D.	APCO	(714) 938-4311
Guse, Carl R.	Dodge County Sheriff	(414) 485-4455
Hajek, Robert J.	Melrose Park ESDA	(312) 294-3285
Hallman Jr., Donald E.	Hallman Electronics, Inc	(616) 926-1555
Haney, Gene T.	Racine Police Department	(414) 554-7802
Heine, Warren A.	Elgin Police Department	(312) 695-6500
Held, David H.	Michigan State Police	(517) 337-6240
Heller, Wallace P.	Lake County Radio Dept.	(312) 362-1960
Henrici, Charles	Elk Grove Fire Dept.	(312) 364-2673
Hermes, Michael	Wheeling Police Dept.	(312) 459-2600
Hoyer, Charles R.	Naperville Police Dept.	(312) 420-6721
Hugg, Roger	Illinois Fire Chiefs Assn.	(312) 397-3352
Israel, Fred K.	DuPage County Sheriff's Dept.	(312) 682-7265
Jautokas, Victor	Chicago Police Dept.	(312) 744-5422
Johnston, Paul F.	E.F. Johnson Co.	(815) 623-6088
Kottlowski, Donald W.	Indiana State Police Communications	(317) 899-8257
Kurt, Erick	Ogden Dunes Fire Dept.	(219)

		762-4125
Marshall, Paul E.	Motorola, Inc	(312) 350-3714
Maxin, Gus	City of Gary, C&E Dept.	(219) 886-0066
McCune, Duane J.	G.E. Mobile Radio	(312) 573-3650
Mieure, T.G.	Gurnee Police Dept.	(312) 244-1132
Moeller, Bruce J.	Naperville Fire Dept.	(312) 420-4198
Novy, Phyllis	Orland Park Police Dept.	(312) 349-4111
O'Neill, Timothy	City of Delavan Police	(414) 728-6311
Opanasenko, Mitchell	Michigan Dept. of Trans.	(517) 373-2719
Payne, Stanley A.	Motorola, Inc.	(312) 350-3538
Pestikas, Steve J.	Munster Police Department	(219) 836-8131
Pickett, Ross	State of Illinois ESDA	(217) 782-6818
Race, Charles	Waukesha Co. Emergency Govt.	(414) 548-7580
Riddle, Greg	Elk Grove Fire Dept.	(312) 364-2672
Rimicci, John R.	Chicago Police Dept.	(312) 744-5444
Robinson, Russ	RAM Communication Consultants	(313) 569-2337
Rutili, Julius J.	Cook County Sheriff's Dept.	(312) 865-4808
Schoenfeld, Roger J.	Kenosha County Sheriff's Dept	(414) 656-7300

Schuld, Al	Barrington Hills Police Dept.	(312) 551-3006
Schwoegler, Alan	City of Madison	(608) 266-4767
Sepic, Frank	Milwaukee Police Dept.	(414) 344-5656
Shulak, Richard	Wisconsin State Patrol, BOC	(608) 267-9799
Shulock, George	Emergency Communications Center	(219) 391-8493
Smolynsky, Jerry	Illinois Dept. of Transportation	(312) 705-4378
Sperling, William	Woodridge Police Dept.	(312) 852-7000
Springer, William	Illinois Tollway Authority	(312) 574-2000
Stouffer, Dale	National Communication System	(703) 746-1242
Strauss, Richard	Milwaukee County	(414) 278-4858
Swan, David G.	City of Peoria	(309) 672-8769
Szymczak, Lud	Illinois Tollway Authority	(312) 574-2000
Tiegs, William A.	Greenfield Police Dept.	(414) 281-9480
Tinsman Jr, Maynard J.	Federal Emergency Mgmt Agency	(202) 646-3065
Toscas, John Z.	Cook County Sheriffs Dept.	(312) 865-4808
Vogel, Emil	Motorola, Inc.	(201) 447-4000
Vratny, Teddy F.	Du-Comm Central Dispatch	(312) 690-8088
Wackowski, Edward	Gary Fire Department	(219)

		886-0727
Walstra, Rick	Porter County EMS	(219) 464-9663
Watson, Jack T.	Illinois Tollway Authority	(312) 574-2000
Watson, Mike	Mishawaka Fire Dept.	(219) 258-1673
Williams, Donald C.	Illinois State Police	(217) 782-7345
Williams, Allen	E.F. Johnson Co.	(219) 583-7890
Witzke, Neal	Tri-Electronics	(219) 931-6895
Zubler, Glenn W.	City of South Bend	(219) 284-9295

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMITTEE

MAILING ADDRESSES

James A. Adler	P.O. Box 297	Jefferson	WI	53549
Kenneth S Anderson	850 Waukegan Road	Deerfield	IL	60015
Ralph Antonacci	525 W. Jefferson St	Springfield	IL	62761
Gene Barlog	1550 W. 181st Ave	Lowell	IN	46356
Larry W. Barnes	3333 Ridge Rd	Highland	IN	46322
Darrell R. Bartz	601 Sangamon Ave	Springfield	IL	62702
Gregory B. Bishop	543 W. Taylor St	Chicago	IL	60607
James O. Bottando	1128 Massachusetts	Gary	IN	46407
James H. Brown	1510 46 Ave	Rock Island	IL	61201
Dick Buggs	Courthouse Bldg - County Jail	Elkhorn	WI	53121
Jack R. Burlison	100 N. Senate Ave	Indianapolis	IN	46204
Michael J. Celeski	1202 W. Madison St	Chicago	IL	60607
James Chase	P.O. Box 1488	Waukesha	WI	53187
Michael D. Cima	601 Sangamon Ave	Springfield	IL	62702
Bill Clancy	2015 Spring Rd	Oak Brook	IL	60522
William T. Corbett	1202 W. Madison St	Chicago	IL	60607
Raymond R. Cox	1200 N. Gannon Dr	Hoffman Estates	IL	60196
Dick De Mello	Procurement P.O. 30028	Lansing	MI	48909
Ray DeWitt	P.O. Box 1	Granger	IN	46530
Doug Edmonds	33 S Arlington Hts Rd	Arlington Hts	IL	60005
Ralph Eisenbrandt	333 W. Nebraska St	Frankfort	IL	60423
Daniel W. Eklof	P.O. Box 309	Madison	WI	53701
Pat Fasano	1000 Mittel Dr	Wood Dale	IL	60191

Richard Finch	613 State Office Bldg	Indianapolis	IN	46204
Robert Fitzsimmons	1121 S. State St	Chicago	IL	60605
Robert Fleissner	85 Harristown Rd	Glen Rock	NJ	07452
Gus Flores	2201 E. Columbus Dr	East Chicago	IN	46312
John Flynn	375 W. Briarcliff	Bolingbrook	IL	60439
Jeff Galas	201 W. Center Ct	Schaumburg	IL	60196
John Garcia	2201 E. Columbus Dr	East Chicago	IN	46312
Chief Duke Gorris	14600 Ravinia Ave	Orland Park	IL	60462
William B. Graves	730 Center	Racine	WI	
Gary D. Gray	481 the City Dr South	Orange	CA	92668
Carl R. Guse	N5504 Hwy E	Iron Ridge	WI	53035
Robert J. Hajek	P.O. Box H	Riverside	IL	60546
Donald E. Hallman Jr.	276 Colfax Ave	Benton Harbor	MI	49022
Gene T. Haney	2507 S. Green Bay Rd	Racine	WI	53406
Warren A. Heine	150 Dexter Court	Elgin	IL	60120
David H. Held	714 S. Harrison Rd	East Lansing	MI	48823
Wallace P. Heller	1303 N. Milwaukee Ave	Libertyville	IL	60048
Charles Henrici	101 Biesterfield Rd	Elk Grove Vlge	IL	60007
Michael Hermes	255 W. Dundee Rd, Box V	Wheeling	IL	60090
Charles R. Hoyer	131 W. Jefferson	Naperville	IL	60540
Roger Hugg	2455 Plumb Grove Rd	Rolling Meadows	IL	60008
Fred K. Israel	501 N. County Farm Rd	Wheaton	IL	60190
Victor Jautokas	1121 S. State St	Chicago	IL	60605
Paul F. Johnston	P.O. Box 588	Roscoe	IL	61073
Donald W. Kottlowski	100 N. Senate Ave	Indianapolis	IN	46204
Erick Kurt	111 Hillcrest Rd	Odgen Dunes	IN	46368
Paul E. Marshall	1000 Mittel Dr	Wood Dale	IL	60191
Gus Maxin	1128 Massachusetts St	Gary	IN	46407

Duane J. McCune	2015 Spring Rd	Oak Brook	IL	60522
T.G. Mieure	1014 Massena	Waukegan	IL	60085
Bruce J. Moeller	133 W. Jefferson	Naperville	IL	60540
Phyllis Novy	14600 Ravinia Ave	Orland Park	IL	60462
Timothy O'Neill	123 S. 2nd St	Delavan	WI	53115
Mitchell Opanasenko	425 W. Ottawa St	Lansing	WI	48933
Stanley A. Payne	1000 Mittel Dr	Wood Dale	IL	60191
Steve J. Pestikas	1001 Ride Road	Munster	IN	46321
Ross Pickett	110 E. Adams St	Springfield	IL	62706
Charles Race	515 W. Moreland Blvd	Waukesha	WI	53188
Greg Riddle	101 Biesterfield	Elk Grove Vlge	IL	60007
John R. Rimicci	1121 S. State St	Chicago	IL	60605
Russ Robinson	18311 W Ten Mile Rd	Southfield	MI	48075
Julius J. Rutili	1401 S. Maybrook Dr	Maywood	IL	60153
Roger J. Schoenfeld	1000 - 55th St	Kenosha	WI	53140
Al Schuld	112 Algonquin Rd	Barrington	IL	60010
Alan Schwoegler	1120 Sayle St	Madison	WI	53715
Frank Sepic	749 State St	Milwaukee	WI	53233
Richard Shulak	4802 Shebboygan Ave	Madison	WI	53707
George Shulock	2201 E. Columbus Dr	East Chicago	IN	46312
Jerry Smolynsky	200 W. Center Ct	Schaumburg	IL	60196
William Sperling	One Plaza Drive	Woodridge	IL	60517
William Springer	2001 W. 22nd St.	Oak Brook	IL	60521
Dale Stouffer	Ace & So Courthouse Rd	Arlington	VA	22204
Richard Strauss	907 N. 10th St, Rm 313	Milwaukee	WI	53233
David G. Swan	6526 N. Sheridan Rd	Peoria	IL	61614
Lud Szymczak	2001 W. 22nd St.	Oak Brook	IL	60521
William A. Tiegs	5300 W. Layton Ave	Greenfield	WI	53220

Maynard Tinsman, Jr.	Office of Emergency Management	Washington	DC	20472
John Z. Toscas	1401 S. Maybrook Dr	Maywood	IL	60153
Emil Vogel	85 Harristown Rd	Glen Rock	NJ	07452
Teddy F. Vratny	136 N. County Farm Rd	Wheaton	IL	60187
Edward Wackowski	200 East 5th Ave	Gary	IN	46402
Rick Walstra	2206 LaPorte Ave	Valparaiso	IN	46385
Jack T. Watson	2001 W. 22nd St.	Oak Brook	IL	60521
Mike Watson	600 E. Third St	Mishawaka	IN	46544
Donald C. Williams	601 Sangamon Ave	Springfield	IL	62702
Allen Williams	P.O. Box 595	Monticello	IN	47960
Neal Witzke	6231 Calumet	Hammond	IN	46324
Glenn W. Zubler	701 Sample St	South Bend	IN	46625

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APPEAL PROCESS

Throughout the frequency allocation process, applicants are given opportunities to appeal decisions which have caused rejection of their application. The appeal process has two levels, APCO and the FCC. An applicant who decides to appeal a rejection should initiate that appeal immediately upon notification of the rejection. In the event that an appeal reaches the second level (the FCC), the Commission's decision will be final and binding upon all parties.

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6. Vacated Frequencies Returned --- Which frequencies the agency will release.

7. Implementation Schedule --- An explanation of any budgetary commitment and a propsed time frame for putting equipment into service.

The RCR may request additional information at the time of review to assist in evaluation.

APPLICATION EVALUATION

The Regional Conformance Review Committee (RCRC) will review each application for its conformity to this Plan. Evaluations will be based upon the seven factors mentioned above. A final point total will be determined by adding the points earned in each category as listed in Appendix H. The RCRC will base their recommendation for approval or rejection of the application upon the final point total.

Once an application has been reviewed it will be returned to the applicant for the appropriate action (e.g., filing, additional information required, modification, etc.).

ELIGIBILITY

Agencies applying for frequencies in the 821-824 and 866-869 MHz band will be prioritized according to the degree that the service(s) they provide is fundamental to the protection of life and property. Only Public Safety and Special Emergency Radio Service agencies are eligible to apply for a license in the 821-824/866-869 MHz band.

APPEAL PROCESS

Throughout the frequency allocation process, applicants are given opportunities to appeal decisions which have caused rejection of their application. The appeal process has two levels, APCO and the FCC. An applicant who decides to appeal a rejection should initiate that appeal immediately upon notification of the rejection. In the event that an appeal reaches the second level (the FCC), the Commission's decision will be final and binding upon all parties.

APPLICATIONS

This section of the Plan describes the procedures for applying for a license to operate a radio system in the new spectrum, as well as the process by which that application will be evaluated. Applications shall be submitted during specific periods of time known as "filing windows". Said filing windows will be designated by the RCRC, be opened at least once annually, and be announced in advance. It is the intention of the RCRC to announce the dates of the first filing window within thirty (30) days of the date of the Commission's approval of this Plan.

APPLICATION REVIEW

Applications for licenses in the 821-824/866-869 MHz band will be subject to review by the RCRC at the closing of each filing window. This review is required prior to formal submission of the application to the national APCO frequency coordination office. Applications may be rejected at the Regional level for non-conformance with this Plan. Also, any application received outside of the designated "filing window" will be returned to the applicant for re-submission during the next filing window.

APPLICATION PROCEDURES

Applications will be submitted to the local Frequency Advisory Committee Chairman. The Frequency Advisory Committee Chairman will peruse the application packet for completeness, and the eligibility of the applying organization. Incomplete applications, or applications from agencies which are not considered by this Plan to be eligible for the limited spectrum, will be returned to the applicant with the appropriate remarks. Copies of complete applications received from eligible public safety entities will be forwarded to the RCRC for evaluation.

INFORMATION REQUIRED

The current standardized APCO Frequency Coordination and FCC License Application forms will be used. In addition, the applicant will be required to furnish supplemental information in specific categories. These categories are enumerated (and briefly defined) on the following page. Each category has been assigned a numerical weight for application evaluation purposes. Category weights are contained in Appendix H. Where further comments affecting a category are made elsewhere in this Plan, the appropriate page number(s) are also specified.

1. Service --- What tasks or duties the agency is charged with accomplishing.

2. System Type --- In narrative form, a description of the radio system being proposed (trunked, conventional, voice, data, voice/data combined, etc.)

3. Intersystem Interoperability --- How agents of the applying organization will communicate with agents of different organizations.

4. Channel Loading Factors --- Equipment inventory totals, and the maximum number of mobile radios potentially in use at a given time.

5. Coverage Area --- Details of an engineering survey showing the radio coverage required for minimum coverage of jurisdictional boundaries.

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1. Service --- What tasks or duties the agency is charged with accomplishing.

2. System Type --- In narrative form, a description of the radio system being proposed (trunked, conventional, voice, data, voice/data combined, etc.) (page 20).

3. Intersystem Interoperability --- How agents of the applying organization will communicate with agents of different organizations. (pages 24, 28-32).

4. Channel Loading Factors --- Equipment inventory totals, and the maximum number of mobile radios potentially in use at a given time. (pages 21, 22, 25).

5. Coverage Area --- Details of an engineering survey showing the radio coverage required for minimum coverage of jurisdictional boundaries. (pages 20, 21, 25).

6. Vacated Frequencies Returned --- Which frequencies the agency will release. (pages 22, 23).

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PRIMARY DISPATCH CENTER

The four (4) State governments of the Region will be responsible for the implementation and operation of the National Calling Channel, Tactical Channels, and Primary Dispatch Centers. They will ensure that interoperable tactical channel mobile relays exist in specific areas of the Region. The mobile relay stations will provide the required number of working channels within the Region necessary to assure interoperable communications between Federal, State and Local Government agencies involved in an emergency. Other services shall participate as required, to ensure the public safety.

Agencies involved in an incident will be subject to the Regional rules on inter-agency communication. Radio transmissions will be made in accordance with the directions of the Primary Dispatch Center or controlling agency.

CALLING CHANNEL

Calling Channel base stations will be configured as mobile relays, strategically located to assure complete regional coverage, and connected by a suitable network to Primary Dispatch Centers. Mobile "talk around" is permitted on the Calling Channel to establish initial contact between agencies, for the purpose of determining which Tactical Channel(s) to use for the duration of an incident.

Depending on geographical size and population density, several networks may be necessary to cover the outer areas of the Region. Primary Dispatch Centers, and agencies operating base/control stations in the area shall monitor the Calling Channel to provide assistance and/or assign a Tactical Channel to requesting field units.

The Calling Channel shall be used only to make initial contact with other agencies in the Region, or with the Primary Dispatch Center in that section of the Region. After contact is established, a tactical or other mutual aid channel shall be expeditiously agreed upon, or be assigned by the Primary Dispatch Center. The Calling Channel shall not be used as a working channel for continued communications. It shall be vacated as soon as possible, to free it up for the next initial contact.

TACTICAL CHANNELS (TAC 1 THROUGH TAC 4)

Tactical Channels are reserved for agencies involved in multi-agency communications during emergencies or other occurrences requiring interoperable communications. Tactical channels, like the Calling Channel, will be strategically located to provide maximum coverage throughout the Region. Design criteria will limit Tac Channel coverage to permit multiple re-use of the channels within the Region as requiredm in coordination with adjacent regions to prevent or minimize interference.

Tac Channel coverage design shall ensure that at least one channel is available for each section of the Region. Multi-agency communications events will be coordinated by the Primary Dispatch Center, or assigned to the controlling agency. The coordinating agency shall relinquish control of the channels when the incident is cleared.

CROSS SYSTEMS PATCHES

Cross system patches to existing day to day systems, other mutual aid channels, or long range communications systems must be manually controlled. Automatic patches are not permitted. Cross system pathches are normally handled by the Primary Dispatch Center in the section of the Region involved.

APPENDIX

C

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMITTEE

AGENCY/PHONE LISTING

NAME	AGENCY	PHONE
Adler, James	Jefferson County Sheriff	(414) 674-2306
Anderson, Kenneth	Deerfield Police Dept.	(312) 945-8636
Antonacci, Ralph	State of Illinois EMS	(217) 785-2080
Barlog, Gene	I.S.P. Lowell Communications	(219) 838-3184
Barnes, Larry W.	Highland Police Dept.	(219) 838-3184
Bartz, Darrell R.	Illinois State Police	(217) 782-7345
Bishop, Gregory B.	Chicago Fire Dept.	(312) 744-8635
Bottando, James O.	City of Gary	(219) 886-0066
Brown, James H.	Illinois APCO FAC	(309) 788-0581
Buggs, Dick	Walworth County Sheriff's Department	(414) 741-4425
Burlison, Jack R.	Indiana State Police	(317) 899-8259
Celeski, Michael J.	Chicago Police Dept.	(312) 421-4803
Chase, James	Waukesha County	(414) 548-7125
Cima, Michael D.	Illinois State Police	(217) 782-7345

Clancy, Bill	General Electric Co.	(312) 573-3650
Corbett, William T.	Chicago Police Dept.	(312) 421-4803
Cox, Raymond R.	Hoffman Estates Police Dept.	(312) 882-9100
De Mello, Dick	Michigan Dept. of Natural Resources	(517) 373-1190
DeWitt, Ray	Indiana Toll Road	(219) 674-8836
Edmonds, Doug	Northwest Central Dispatch	(312) 398-1130
Eisenbrandt, Ralph A.	Frankfort Fire Dept.	(815) 469-1700
Eklof, Daniel W.	State of Wisconsin-Div. of Health	(608) 266-0471
Fasano, Pat	Motorola, Inc.	(312) 350-3718
Finch, Richard L.	Indiana DNR-Radio Communications	
Fitzsimmons, Robert G.	Chicago Police Dept.	(312) 744-6351
Fleissner, Robert	Motorola, Inc.	(201) 447-7618
Flores, Gus	Emergency Communications Center	(219) 391-8493
Flynn, John	Bolingbrook Fire Dept.	(312) 759-0443
Galas, Jeff	Illinois Dept. of Transportation	(312) 705-4376
Garcia, John	Emergency Communications Center	(219) 391-8493
Gorris, Chief Duke	Orland Park Police Dept.	(312) 349-4111
Graves, William B.	Racine Police Department	

Gray, Gary D.	APCO	(714) 938-4311
Guse, Carl R.	Dodge County Sheriff	(414) 485-4455
Hajek, Robert J.	Melrose Park ESDA	(312) 294-3285
Hallman Jr., Donald E.	Hallman Electronics, Inc	(616) 926-1555
Haney, Gene T.	Racine Police Department	(414) 554-7802
Heine, Warren A.	Elgin Police Department	(312) 695-6500
Held, David H.	Michigan State Police	(517) 337-6240
Heller, Wallace P.	Lake County Radio Dept.	(312) 362-1960
Henrici, Charles	Elk Grove Fire Dept.	(312) 364-2673
Hermes, Michael	Wheeling Police Dept.	(312) 459-2600
Hoyer, Charles R.	Naperville Police Dept.	(312) 420-6721
Hugg, Roger	Illinois Fire Chiefs Assn.	(312) 397-3352
Israel, Fred K.	DuPage County Sheriff's Dept.	(312) 682-7265
Jautokas, Victor	Chicago Police Dept.	(312) 744-5422
Johnston, Paul F.	E.F. Johnson Co.	(815) 623-6088
Kottlowski, Donald W.	Indiana State Police Communications	(317) 899-8257
Kurt, Erick	Ogden Dunes Fire Dept.	(219) 762-4125

Marshall, Paul E.	Motorola, Inc	(312) 350-3714
Maxin, Gus	City of Gary, C&E Dept.	(219) 886-0066
McCune, Duane J.	G.E. Mobile Radio	(312) 573-3650
Mieure, T.G.	Gurnee Police Dept.	(312) 244-1132
Moeller, Bruce J.	Naperville Fire Dept.	(312) 420-4198
Novy, Phyllis	Orland Park Police Dept.	(312) 349-4111
O'Neill, Timothy	City of Delavan Police	(414) 728-6311
Opanasenko, Mitchell	Michigan Dept. of Trans.	(517) 373-2719
Payne, Stanley A.	Motorola, Inc.	(312) 350-3538
Pestikas, Steve J.	Munster Police Department	(219) 836-8131
Pickett, Ross	State of Illinois ESDA	(217) 782-6818
Race, Charles	Waukesha Co. Emergency Govt.	(414) 548-7580
Riddle, Greg	Elk Grove Fire Dept.	(312) 364-2672
Rimicci, John R.	Chicago Police Dept.	(312) 744-5444
Robinson, Russ	RAM Communication Consultants	(313) 569-2337
Rutili, Julius J.	Cook County Sheriff's Dept.	(312) 865-4808
Schoenfeld, Roger J.	Kenosha County Sheriff's Dept	(414) 656-7300
Schuld, Al	Barrington Hills Police Dept.	(312)

		551-3006
Schwoegler, Alan	City of Madison	(608) 266-4767
Sepic, Frank	Milwaukee Police Dept.	(414) 344-5656
Shulak, Richard	Wisconsin State Patrol, BOC	(608) 267-9799
Shulock, George	Emergency Communications Center	(219) 391-8493
Smolynsky, Jerry	Illinois Dept. of Transportation	(312) 705-4378
Sperling, William	Woodridge Police Dept.	(312) 852-7000
Springer, William	Illinois Tollway Authority	(312) 574-2000
Stouffer, Dale	National Communication System	(703) 746-1242
Strauss, Richard	Milwaukee County	(414) 278-4858
Swan, David G.	City of Peoria	(309) 672-8769
Szymczak, Lud	Illinois Tollway Authority	(312) 574-2000
Tiegs, William A.	Greenfield Police Dept.	(414) 281-9480
Tinsman Jr, Maynard J.	Federal Emergency Mgmt Agency	(202) 646-3065
Toscas, John Z.	Cook County Sheriffs Dept.	(312) 865-4808
Vogel, Emil	Motorola, Inc.	(201) 447-4000
Vratny, Teddy F.	Du-Comm Central Dispatch	(312) 690-8088
Wackowski, Edward	Gary Fire Department	(219) 886-0727

Walstra, Rick	Porter County EMS	(219) 464-9663
Watson, Jack T.	Illinois Tollway Authority	(312) 574-2000
Watson, Mike	Mishawaka Fire Dept.	(219) 258-1673
Williams, Donald C.	Illinois State Police	(217) 782-7345
Williams, Allen	E.F. Johnson Co.	(219) 583-7890
Witzke, Neal	Tri-Electronics	(219) 931-6895
Zubler, Glenn W.	City of South Bend	(219) 284-9295

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMITTEE

MAILING ADDRESSES

James A. Adler	P.O. Box 297	Jefferson	WI	53549
Kenneth S Anderson	850 Waukegan Road	Deerfield	IL	60015
Ralph Antonacci	525 W. Jefferson St	Springfield	IL	62761
Gene Barlog	1550 W. 181st Ave	Lowell	IN	46356
Larry W. Barnes	3333 Ridge Rd	Highland	IN	46322
Darrell R. Bartz	601 Sangamon Ave	Springfield	IL	62702
Gregory B. Bishop	543 W. Taylor St	Chicago	IL	60607
James O. Bottando	1128 Massachusetts	Gary	IN	46407
James H. Brown	1510 46 Ave	Rock Island	IL	61201
Dick Buggs	Courthouse Bldg - County Jail	Elkhorn	WI	53121
Jack R. Burlison	100 N. Senate Ave	Indianapolis	IN	46204
Michael J. Celeski	1202 W. Madison St	Chicago	IL	60607
James Chase	P.O. Box 1488	Waukesha	WI	53187
Michael D. Cima	601 Sangamon Ave	Springfield	IL	62702
Bill Clancy	2015 Spring Rd	Oak Brook	IL	60522
William T. Corbett	1202 W. Madison St	Chicago	IL	60607
Raymond R. Cox	1200 N. Gannon Dr	Hoffman Estates	IL	60196
Dick De Mello	Procurement P.O. 30028	Lansing	MI	48909
Ray DeWitt	P.O. Box 1	Granger	IN	46530
Doug Edmonds	33 S Arlington Hts Rd	Arlington Hts	IL	60005
Ralph Eisenbrandt	333 W. Nebraska St	Frankfort	IL	60423
Daniel W. Eklof	P.O. Box 309	Madison	WI	53701
Pat Fasano	1000 Mittel Dr	Wood Dale	IL	60191

Richard Finch	613 State Office Bldg	Indianapolis	IN	46204
Robert Fitzsimmons	1121 S. State St	Chicago	IL	60605
Robert Fleissner	85 Harristown Rd	Glen Rock	NJ	07452
Gus Flores	2201 E. Columbus Dr	East Chicago	IN	46312
John Flynn	375 W. Briarcliff	Bolingbrook	IL	60439
Jeff Galas	201 W. Center Ct	Schaumburg	IL	60196
John Garcia	2201 E. Columbus Dr	East Chicago	IN	46312
Chief Duke Gorris	14600 Ravinia Ave	Orland Park	IL	60462
William B. Graves	730 Center	Racine	WI	
Gary D. Gray	481 the City Dr South	Orange	CA	92668
Carl R. Guse	N5504 Hwy E	Iron Ridge	WI	53035
Robert J. Hajek	P.O. Box H	Riverside	IL	60546
Donald E. Hallman Jr.	276 Colfax Ave	Benton Harbor	MI	49022
Gene T. Haney	2507 S. Green Bay Rd	Racine	WI	53406
Warren A. Heine	150 Dexter Court	Elgin	IL	60120
David H. Held	714 S. Harrison Rd	East Lansing	MI	48823
Wallace P. Heller	1303 N. Milwaukee Ave	Libertyville	IL	60048
Charles Henrici	101 Biesterfield Rd	Elk Grove Vlge	IL	60007
Michael Hermes	255 W. Dundee Rd, Box V	Wheeling	IL	60090
Charles R. Hoyer	131 W. Jefferson	Naperville	IL	60540
Roger Hugg	2455 Plumb Grove Rd	Rolling Meadows	IL	60008
Fred K. Israel	501 N. County Farm Rd	Wheaton	IL	60190
Victor Jautokas	1121 S. State St	Chicago	IL	60605
Paul F. Johnston	P.O. Box 588	Roscoe	IL	61073
Donald W. Kottlowski	100 N. Senate Ave	Indianapolis	IN	46204
Erick Kurt	111 Hillcrest Rd	Odgen Dunes	IN	46368
Paul E. Marshall	1000 Mittel Dr	Wood Dale	IL	60191
Gus Maxin	1128 Massachusetts St	Gary	IN	46407

Duane J. McCune	2015 Spring Rd	Oak Brook	IL	60522
T.G. Mieure	1014 Massena	Waukegan	IL	60085
Bruce J. Moeller	133 W. Jefferson	Naperville	IL	60540
Phyllis Novy	14600 Ravinia Ave	Orland Park	IL	60462
Timothy O'Neill	123 S. 2nd St	Delavan	WI	53115
Mitchell Opanasenko	425 W. Ottawa St	Lansing	WI	48933
Stanley A. Payne	1000 Mittel Dr	Wood Dale	IL	60191
Steve J. Pestikas	1001 Ride Road	Munster	IN	46321
Ross Pickett	110 E. Adams St	Springfield	IL	62706
Charles Race	515 W. Moreland Blvd	Waukesha	WI	53188
Greg Riddle	101 Biesterfield	Elk Grove Vlge	IL	60007
John R. Rimicci	1121 S. State St	Chicago	IL	60605
Russ Robinson	18311 W Ten Mile Rd	Southfield	MI	48075
Julius J. Rutili	1401 S. Maybrook Dr	Maywood	IL	60153
Roger J. Schoenfeld	1000 - 55th St	Kenosha	WI	53140
Al Schuld	112 Algonquin Rd	Barrington	IL	60010
Alan Schwoegler	1120 Sayle St	Madison	WI	53715
Frank Sepic	749 State St	Milwaukee	WI	53233
Richard Shulak	4802 Shebboygan Ave	Madison	WI	53707
George Shulock	2201 E. Columbus Dr	East Chicago	IN	46312
Jerry Smolynsky	200 W. Center Ct	Schaumburg	IL	60196
William Sperling	One Plaza Drive	Woodridge	IL	60517
William Springer	2001 W. 22nd St.	Oak Brook	IL	60521
Dale Stouffer	Ace & So Courthouse Rd	Arlington	VA	22204
Richard Strauss	907 N. 10th St, Rm 313	Milwaukee	WI	53233
David G. Swan	6526 N. Sheridan Rd	Peoria	IL	61614
Lud Szymczak	2001 W. 22nd St.	Oak Brook	IL	60521
William A. Tiegs	5300 W. Layton Ave	Greenfield	WI	53220

Maynard Tinsman, Jr.	Office of Emergency Management	Washington	DC	20472
John Z. Toscas	1401 S. Maybrook Dr	Maywood	IL	60153
Emil Vogel	85 Harristown Rd	Glen Rock	NJ	07452
Teddy F. Vratny	136 N. County Farm Rd	Wheaton	IL	60187
Edward Wackowski	200 East 5th Ave	Gary	IN	46402
Rick Walstra	2206 LaPorte Ave	Valparaiso	IN	46385
Jack T. Watson	2001 W. 22nd St.	Oak Brook	IL	60521
Mike Watson	600 E. Third St	Mishawaka	IN	46544
Donald C. Williams	601 Sangamon Ave	Springfield	IL	62702
Allen Williams	P.O. Box 595	Monticello	IN	47960
Neal Witzke	6231 Calumet	Hammond	IN	46324
Glenn W. Zubler	701 Sample St	South Bend	IN	46625

APPENDIX

F

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Brown, James H.	Illinois APCO FAC	(309) 788-0581
Buggs, Dick	Walworth County Sheriff's Department	(414) 741-4425
Burlison, Jack R.	Indiana State Police	(317) 899-8259
Celeski, Michael J.	Chicago Police Dept.	(312) 421-4803
Chase, James	Waukesha County	(414) 548-7125
Cima, Michael D.	Illinois State Police	(217)

		782-7345
Clancy, Bill	General Electric Co.	(312) 573-3650
Corbett, William T.	Chicago Police Dept.	(312) 421-4803
Cox, Raymond R.	Hoffman Estates Police Dept.	(312) 882-9100
De Mello, Dick	Michigan Dept. of Natural Resources	(517) 373-1190
DeWitt, Ray	Indiana Toll Road	(219) 674-8836
Edmonds, Doug	Northwest Central Dispatch	(312) 398-1130
Eisenbrandt, Ralph A.	Frankfort Fire Dept.	(815) 469-1700
Eklof, Daniel W.	State of Wisconsin-Div. of Health	(608) 266-0471
Fasano, Pat	Motorola, Inc.	(312) 350-3718
Finch, Richard L.	Indiana DNR-Radio Communications	
Fitzsimmons, Robert G.	Chicago Police Dept.	(312) 744-6351
Fleissner, Robert	Motorola, Inc.	(201) 447-7618
Flores, Gus	Emergency Communications Center	(219) 391-8493
Flynn, John	Bolingbrook Fire Dept.	(312) 759-0443
Galas, Jeff	Illinois Dept. of Transportation	(312) 705-4376
Garcia, John	Emergency Communications Center	(219) 391-8493
Gorris, Chief Duke	Orland Park Police Dept.	(312) 349-4111

Graves, William B.	Racine Police Department	
Gray, Gary D.	APCO	(714) 938-4311
Guse, Carl R.	Dodge County Sheriff	(414) 485-4455
Hajek, Robert J.	Melrose Park ESDA	(312) 294-3285
Hallman Jr., Donald E.	Hallman Electronics, Inc	(616) 926-1555
Haney, Gene T.	Racine Police Department	(414) 554-7802
Heine, Warren A.	Elgin Police Department	(312) 695-6500
Held, David H.	Michigan State Police	(517) 337-6240
Heller, Wallace P.	Lake County Radio Dept.	(312) 362-1960
Henrici, Charles	Elk Grove Fire Dept.	(312) 364-2673
Hermes, Michael	Wheeling Police Dept.	(312) 459-2600
Hoyer, Charles R.	Naperville Police Dept.	(312) 420-6721
Hugg, Roger	Illinois Fire Chiefs Assn.	(312) 397-3352
Israel, Fred K.	DuPage County Sheriff's Dept.	(312) 682-7265
Jautokas, Victor	Chicago Police Dept.	(312) 744-5422
Johnston, Paul F.	E.F. Johnson Co.	(815) 623-6088
Kottlowski, Donald W.	Indiana State Police Communications	(317) 899-8257
Kurt, Erick	Ogden Dunes Fire Dept.	(219)

		762-4125
Marshall, Paul E.	Motorola, Inc	(312) 350-3714
Maxin, Gus	City of Gary, C&E Dept.	(219) 886-0066
McCune, Duane J.	G.E. Mobile Radio	(312) 573-3650
Mieure, T.G.	Gurnee Police Dept.	(312) 244-1132
Moeller, Bruce J.	Naperville Fire Dept.	(312) 420-4198
Novy, Phyllis	Orland Park Police Dept.	(312) 349-4111
O'Neill, Timothy	City of Delavan Police	(414) 728-6311
Opanasenko, Mitchell	Michigan Dept. of Trans.	(517) 373-2719
Payne, Stanley A.	Motorola, Inc.	(312) 350-3538
Pestikas, Steve J.	Munster Police Department	(219) 836-8131
Pickett, Ross	State of Illinois ESDA	(217) 782-6818
Race, Charles	Waukesha Co. Emergency Govt.	(414) 548-7580
Riddle, Greg	Elk Grove Fire Dept.	(312) 364-2672
Rimicci, John R.	Chicago Police Dept.	(312) 744-5444
Robinson, Russ	RAM Communication Consultants	(313) 569-2337
Rutili, Julius J.	Cook County Sheriff's Dept.	(312) 865-4808
Schoenfeld, Roger J.	Kenosha County Sheriff's Dept	(414) 656-7300

Schuld, Al	Barrington Hills Police Dept.	(312) 551-3006
Schwoegler, Alan	City of Madison	(608) 266-4767
Sepic, Frank	Milwaukee Police Dept.	(414) 344-5656
Shulak, Richard	Wisconsin State Patrol, BOC	(608) 267-9799
Shulock, George	Emergency Communications Center	(219) 391-8493
Smolynsky, Jerry	Illinois Dept. of Transportation	(312) 705-4378
Sperling, William	Woodridge Police Dept.	(312) 852-7000
Springer, William	Illinois Tollway Authority	(312) 574-2000
Stouffer, Dale	National Communication System	(703) 746-1242
Strauss, Richard	Milwaukee County	(414) 278-4858
Swan, David G.	City of Peoria	(309) 672-8769
Szymczak, Lud	Illinois Tollway Authority	(312) 574-2000
Tiegs, William A.	Greenfield Police Dept.	(414) 281-9480
Tinsman Jr, Maynard J.	Federal Emergency Mgmt Agency	(202) 646-3065
Toscas, John Z.	Cook County Sheriffs Dept.	(312) 865-4808
Vogel, Emil	Motorola, Inc.	(201) 447-4000
Vratny, Teddy F.	Du-Comm Central Dispatch	(312) 690-8088
Wackowski, Edward	Gary Fire Department	(219)

		886-0727
Walstra, Rick	Porter County EMS	(219) 464-9663
Watson, Jack T.	Illinois Tollway Authority	(312) 574-2000
Watson, Mike	Mishawaka Fire Dept.	(219) 258-1673
Williams, Donald C.	Illinois State Police	(217) 782-7345
Williams, Allen	E.F. Johnson Co.	(219) 583-7890
Witzke, Neal	Tri-Electronics	(219) 931-6895
Zubler, Glenn W.	City of South Bend	(219) 284-9295

SOUTHERN LAKE MICHIGAN 800 MHz REGIONAL PLANNING COMMITTEE

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Kenneth S Anderson	850 Waukegan Road	Deerfield	IL	60015
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James Chase	P.O. Box 1488	Waukesha	WI	53187
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Ray DeWitt	P.O. Box 1	Granger	IN	46530
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Charles Henrici	101 Biesterfield Rd	Elk Grove Vlge	IL	60007
Michael Hermes	255 W. Dundee Rd, Box V	Wheeling	IL	60090
Charles R. Hoyer	131 W. Jefferson	Naperville	IL	60540
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Gus Maxin	1128 Massachusetts St	Gary	IN	46407

Duane J. McCune	2015 Spring Rd	Oak Brook	IL	60522
T.G. Mieure	1014 Massena	Waukegan	IL	60085
Bruce J. Moeller	133 W. Jefferson	Naperville	IL	60540
Phyllis Novy	14600 Ravinia Ave	Orland Park	IL	60462
Timothy O'Neill	123 S. 2nd St	Delavan	WI	53115
Mitchell Opanasenko	425 W. Ottawa St	Lansing	WI	48933
Stanley A. Payne	1000 Mittel Dr	Wood Dale	IL	60191
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Ross Pickett	110 E. Adams St	Springfield	IL	62706
Charles Race	515 W. Moreland Blvd	Waukesha	WI	53188
Greg Riddle	101 Biesterfield	Elk Grove Vlge	IL	60007
John R. Rimicci	1121 S. State St	Chicago	IL	60605
Russ Robinson	18311 W Ten Mile Rd	Southfield	MI	48075
Julius J. Rutili	1401 S. Maybrook Dr	Maywood	IL	60153
Roger J. Schoenfeld	1000 - 55th St	Kenosha	WI	53140
Al Schuld	112 Algonquin Rd	Barrington	IL	60010
Alan Schwoegler	1120 Sayle St	Madison	WI	53715
Frank Sepic	749 State St	Milwaukee	WI	53233
Richard Shulak	4802 Shebboygan Ave	Madison	WI	53707
George Shulock	2201 E. Columbus Dr	East Chicago	IN	46312
Jerry Smolynsky	200 W. Center Ct	Schaumburg	IL	60196
William Sperling	One Plaza Drive	Woodridge	IL	60517
William Springer	2001 W. 22nd St.	Oak Brook	IL	60521
Dale Stouffer	Ace & So Courthouse Rd	Arlington	VA	22204
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Neal Witzke	6231 Calumet	Hammond	IN	46324
Glenn W. Zubler	701 Sample St	South Bend	IN	46625

APPENDIX

H

APPLICATION EVALUATION CRITERIA

CATEGORY WEIGHTS

1. SERVICE: 0 TO 100 POINTS

Eligible services have been grouped into the following three Priority Levels. Each Level has a predetermined maximum number of points associated with it. In the case of a "multiple-service" system being proposed, the application must state the number of mobiles assigned to each service. The percentages resulting from these totals will determine the total number of points awarded.

PRIORITY LEVEL I: Maximum of 100 points

Public Safety Radio Service Licensees providing protection of life and property.

PRIORITY LEVEL II: Maximum of 65 points

Public Safety Radio Service Licensees providing protection of property only.

PRIORITY LEVEL III: Maximum of 35 points

Special Emergency Radio Service Licensees.

2. SYSTEM TYPE: 0 TO 50 POINTS

From 0 to 50 points can be earned in this category, based on the degree of spectrum efficiency demonstrated for the system. The more spectrum efficient a proposed system is, the more points the application will earn. A higher standard will be used to evaluate applications from agencies located within a Primary Zone.

Information relating to the system's technology such as trunked or conventional operation, and voice or data transmission (or voice/data combination) must be provided. The narrative should also discuss how utilization of these features will result in an efficient use of the spectrum. Furthermore, details regarding any other enhancements to the system must be provided. The application must also state whether the system is being proposed as a single agency-single service, multiple agency-single service or multiple agency-multiple service operation.

3. INTERSYSTEM INTEROPERABILITY: 0 TO 100 POINTS

An application will be awarded from 0 to 50 points in this category based on its description of how the 800 MHz mobile radios will maintain, and/or increase, mutual aid capabilities. Since they are mandated by the National Plan, inclusion of the five Common Channels in mobile equipment is not rated. However, an applicant may earn up to 50 additional points (for the maximum of 100) in this category, on the initial and all subsequent applications, for providing fixed equipment necessary for the operation of Common Channels in a specific area(s) of the Region.

4. CHANNEL LOADING FACTORS: 10 TO 50 POINTS

Applications will receive between 10 and 50 points for proposing a number of mobile units that meet the Channel Loading requirements mandated by this Plan. Consideration will take into account the feasibility of operating the number of mobiles per channel being proposed.

5. COVERAGE AREA: 10 TO 50 POINTS

Scoring in this category will be based on two factors: (1) Compliance with the parameters described on pages 20, 21, and 25 of this Plan, as evidenced by the submission of a map of the service area depicting jurisdictional boundaries, proposed transmitter sites, and minimum coverage areas of those transmitter site; and (2) Channel reuse potential.

6. VACATED FREQUENCIES RETURNED: 0 TO 100 POINTS

The application will earn from 0 to 100 points in this category depending on the number of vacated frequencies being proposed for return, in relation to the total number of frequencies used by the agency (including those being applied for); and, the availability of the returned frequencies for use by other agencies in the region.

7. IMPLEMENTATION SCHEDULE: 0 TO 50 POINTS

The degree of budgetary commitment to the system being proposed, and the specificity of implementation dates will be the bases for scoring an application in this category. The more explicit an application is with respect to these topics, the more points it will earn in this category.

APPENDIX

J

INITIAL SPECTRUM ALLOCATION

FREQUENCY SORTING METHODOLOGY

INTRODUCTION

The initial spectrum allocation for the Region was determined by a computerized frequency sorting process performed by C.E.T., Inc. of New Smyrna Beach, Florida. The purpose of the computer program which assigns frequencies to specific eligibles and to pools for future assignment is two-fold:

A) The assignments must be made in a manner which results in a high degree of spectrum efficiency, and

B) The assignments must be made in a manner which results in a low probability of co-channel and adjacent channel interference.

Since the desired output is a geographic sorting of frequencies, a method of defining geography must be part of the input. A list of the number of channels to be assigned in each geographic area is also required, along with the name of the eligible or pool.

Acceptable interference probabilities are determined for the Region. Frequency assignments are then made using a computer program which satisfies the goals of spectrum efficiency and interference protection. The following describes the factors and process used by the computer program.

GEOGRAPHIC AREA

For the purpose of this frequency sort, a geographic area is defined as one or more circles of equal radius. To the degree practical, this circle(s) should include the entire area of the eligible's geopolitical boundary, but not exceed the boundary by more than three (3) miles.

Thus the procedure is to gather maps of sufficient detail, outline the areas to be defined, determine the coordinates and radius of the circles which define each area, and tabulate the data.

DEFINE THE ENVIRONMENT

The environment of each system is defined according to the following criteria:

(1) URBAN --- a built up city crowded with large buildings, or closely interspersed with houses and thickly-grown trees. This would include the downtown area of a major city.

(2) SUBURBAN --- a city or highway scattered with trees, houses and buildings. This would include the non-downtown area of a major city.

(3) OPEN --- an area where there are no obstacles such as tall trees or buildings in the propagation path, or a plot of land which is cleared of anything for 300-400 meters ahead. This would include farm land, open fields, etc.

(4) QUASI-OPEN --- an area between suburban and open areas. This includes areas outside of city limits that have few buildings and houses.

BLOCKED CHANNELS

In the Region there are five mutual aid channels which must be blocked out to prevent the computer from making assignments on these channels. (Since the mutual aid channels are spaced at 0.5 MHz and placed adjacent to the mutual aid channels. This procedure reduces the impact of blocked adjacent channels by virtue of the fact that the channel plan already has protection spacing on each side of the mutual aid channels).

These region-wide blocked channels are identified by FCC channel number, tabulated and they become input to the computer program.

TRANSMITTER COMBINING

The computer program is designed to provide a minimum frequency separation between any two channels assigned to the same eligible at the same site. This separation is provided in order to enable more efficient combining of multiple transmitters to a single antenna. These separated blocks of frequencies also have a maximum size. That is, if the eligible has more frequencies than the maximum size of the combining block, then a new compatible block is created.

Each of these parameters is adjustable in the program on a global basis. The parameters chosen are 0.25MHz minimum spacing and five channel blocks.

SPECIAL CONSIDERATIONS

There are existing licensees in the 806-821/852-866 MHz spectrum who plan to expand existing systems into the 821-824866-869 MHz bands. Existing radio units are unable to operate on 12.5 KHz separated carrier frequencies. The result is that these radios can only operate on "even" FCC numbered channels in the 821-824/866-869 MHz band. The computer program is able to take this into account when making assignments.

PROTECTION RATIOS

There are two interference protection ratios built into the computer program. One is for the co-channel case, and the other is for the adjacent channel case. The ratios provide 35dB Desired/Undesired signal ratio for co-channel assignments, and 15dB Desired/Undesired ratios provide an acceptable probability of interference for Public Safety Services.

WHAT THE PROGRAM DOES

1. Input data for the Region

    ..Name (entity-county)

    ..Coordinates

    ..Range

    ..Environment

    ..Blocked/protected channels

    ..Even/Odd channel requirements

2. Select parameters

    ..Combiner spacing

    ..Maximum spectrum to be used

    ..Number of iterations allowed

    ..Protection ratios for co-channel and adjacent channels

3. Computer determines an ERP/Antenna Height combination which places the 40dBu point at the range specified, in the environment specified, for each system.

4. Computer calculates distances between all possible combinations of single site, and multiple site, systems.

5. The computer uses its input tables to determine compatible assignments such that the signal strength at a co-channel assignees' boundary is <+5dBu, and the signal strength at an adjacent channel assignees' boundary is <+25dBu.

6. If the maximum spectrum allowed is filled before all systems are assigned channels, then the list is re-ordered according to the difficulty of assignments, and another iteration is made.

7. If the maximum number of iterations is reached before all assignments are satisfied, the maximum spectrum allowed is increased and the process begins again. The maximum spectrum allowed is initially set at a value which will fail to find a solution. By incrementing its value on successive attempts, the first successful run should be the most spectrum efficient solution this program will ever find, for this case.

APPENDIX

K

SOUTHERN LAKE MICHIGAN PLANNING REGION

SPECTRUM ALLOCATION
(INITIAL SORT)

CHANNEL NUMBER	FREQUENCIES MOBILE/BASE	ASSIGNEE (COUNTY)
601	821.0125/866.0125	MUTUAL AID*
602	821.0375/866.0375	OZAUKEE, WI
602	821.0375/866.0375	KANE, IL
602	821.0375/866.0375	NEWTON, IN
602	821.0375/866.0375	BERRIEN,MI
603	821.0500/866.0500	COOK, IL (D)
603	821.0500/866.0500	OTTAWA, MI
603	821.0500/866.0500	ROCK, WI
604	821.0625/866.0625	PULASKI, IN
604	821.0625/866.0625	VAN BUREN, MI
604	821.0625/866.0625	KANE, IL
605	821.0750/866.0750	OTTAWA, MI
605	821.0750/866.0750	JEFFERSON, WI
605	821.0750/866.0750	LAKE, IN
606	821.0875/866.0875	NAPERVILLE, IL*
606	821.0875/866.0875	ELKHART, IN
606	821.0875/866.0875	MILWAUKEE, WI
607	821.1000/866.1000	STARKE, IN
607	821.1000/866.1000	MUSKEGON, MI
607	821.1000/866.1000	BOONE, IL
608	821.1125/866.1125	KALAMAZOO, MI
608	821.1125/866.1125	DANE, WI
608	821.1125/866.1125	WILL, IL
609	821.1250/866.1250	MARSHALL, IN
609	821.1250/866.1250	MUSKEGON, MI
609	821.1250/866.1250	WAUKESHA, WI
610	821.1375/866.1375	COOK, IL (A)
610	821.1375/866.1375	KALAMAZOO, MI
610	821.1375/866.1375	DANE, WI
610	821.1375/866.1375	JASPER, IN
611	821.1500/866.1500	ELKHART, IN
611	821.1500/866.1500	MILWAUKEE, WI
611		KENT, MI
612	821.1625/866.1625	TOLLWAY, IL*
613	821.1750/866.1750	BARRY, MI

613	821.1750/866.1750	MILWAUKEE, WI
614	821.1875/866.1875	COOK, IL (A)
614	821.1875/866.1875	ST. JOSEPH, IN
614	821.1875/866.1875	DODGE, WI
615	821.2000/866.2000	DEKALB, IL
615	821.2000/866.2000	PORTER, IN
615	821.2000/866.2000	KENT, MI
616	821.2125/866.2125	CHICAGO, IL*
616	821.2125/866.2125	WAUKESHA, WI
617	821.2250/866.2250	MCHENRY, IL
617	821.2250/866.2250	ST. JOSEPH, IN
617	821.2250/866.2250	KENT, MI
618	821.2375/866.2375	NAPERVILLE, IL*
618	821.2375/866.2375	MILWAUKEE, WI
619	821.2500/866.2500	LAKE, IL
619	821.2500/866.2500	CASS, MI
620	821.2625/866.2625	WINNEBAGO, IL
620	821.2625/866.2625	WASHINGTON, WI
620	821.2625/866.2625	KENT, MI
621	821.2750/866.2750	ST. JOSEPH, IN
621	821.2750/866.2750	DANE, WI
621	821.2750/866.2750	WILL, IL
622	821.2875/866.2875	OZAUKEE, WI
622	821.2875/866.2875	LAPORTE, IN
623	821.3000/866.3000	LAKE, IL
623	821.3000/866.3000	OTTAWA, MI
623	821.3000/866.3000	NEWTON, IN
624	821.3125/866.3125	COOK, IL (D)
624	821.3125/866.3125	VAN BUREN, MI
624	821.3125/866.3125	ROCK, WI
625	821.3250/866.3250	PULASKI, IN
625	821.3250/866.3250	OTTAWA, MI
625	821.3250/866.3250	KANE, IL
626	821.3375/866.3375	COOK, IL (D)
626	821.3375/866.3375	ELKHART, IN
626	821.3375/866.3375	JEFFERSON, WI
627	821.3500/866.3500	MCHENRY, IL
627	821.3500/866.3500	STARKE, IN
627	821.3500/866.3500	MUSKEGON, MI
628	821.3625/866.3625	STATE GOVT(ALL 4)*
629	821.3750/866.3750	STATE GOVT (WI, IN)*
630	821.3875/866.3875	STATE GOVT (IL, MI)*
631	821.4000/866.4000	STATE GOVT (WI, IN)*
632	821.4125/866.4125	STATE GOVT (IL, MI)*
633	821.4250/866.4250	STATE GOVT (WI, IN)*
634	821.4375/866.4375	STATE GOVT (IL, MI)*
635	821.4500/866.4500	STATE GOVT (WI, IN)*

636	821.4625/866.4625	STATE GOVT (IL, MI)*
637	821.4750/866.4750	STATE GOVT (WI, IN)*
638	821.4875/866.4875	STATE GOVT (IL, MI)*
639	821.5125/866.5125	MUTUAL AID*
640	821.5375/866.5375	COOK, IL (A)
640	821.5375/866.5375	MARSHALL, IN
640	821.5375/866.5375	MILWAUKEE, WI
640	821.5375/866.5375	KENT, MI
641	821.5500/866.5500	KALAMAZOO, MI
641	821.5500/866.5500	DODGE, WI
641	821.5500/866.5500	DEKALB, IL
641	821.5500/866.5500	LAKE, IN
642	821.5625/866.5625	COOK, IL (A)
642	821.5625/866.5625	ST. JOSEPH, IN
642	821.5625/866.5625	MILWAUKEE, WI
643	821.5750/866.5750	OTTAWA, MI
643	821.5750/866.5750	BOONE, IL
643	821.5750/866.5750	KANKAKEE, IL
644	821.5875/866.5875	CHICAGO, IL*
644	821.5875/866.5875	KALAMAZOO, MI
644	821.5875/866.5875	MILWAUKEE, WI
645	821.6000/866.6000	KENDALL, IL
645	821.6000/866.6000	PULASKI, IN
645	821.6000/866.6000	DANE, WI
645	821.6000/866.6000	KENT, MI
646	821.6125/866.6125	LAKE, IL
646	821.6125/866.6125	ST. JOSEPH, IN
647	821.6250/866.6250	NAPERVILLE, IL*
647	821.6250/866.6250	BARRY, MI
647	821.6250/866.6250	JEFFERSON, WI
647	821.6250/866.6250	JASPER, IN
648	821.6375/866.6375	LAKE, IL
648	821.6375/866.6375	CASS, MI
649	821.6500/866.6500	WINNEBAGO, IL
649	821.6500/866.6500	COOK, IL (D)
649	821.6500/866.6500	MILWAUKEE, WI
649	821.6500/866.6500	KENT, MI
650	821.6625/866.6625	ST. JOSEPH, IN
650	821.6625/866.6625	KANE, IL
651	821.6750/866.6750	WINNEBAGO, IL
651	821.6750/866.6750	COOK, IL (D)
651	821.6750/866.6750	WASHINGTON, WI
651	821.6750/866.6750	KENT, MI
652	821.6875/866.6875	LAKE, IL
652	821.6875/866.6875	LAPORTE, IN
653	821.7000/866.7000	ALLEGAN, MI
654	821.7125/866.7125	TOLLWAY, IL*

655	821.7250/866.7250	PRIMARY ZONE POOL*
656	821.7375/866.7375	MCHENRY, IL
656	821.7375/866.7375	LAKE, IN
657	821.7500/866.7500	WAUKESHA, WI
657	821.7500/866.7500	BERRIEN, MI
658	821.7625/866.7625	WILL, IL
659	821.7750/866.7750	WALWORTH, WI
660	821.7875/866.7875	COOK, IL (A)
660	821.7875/866.7875	MARSHALL, IN
661	821.8000/866.8000	KALAMAZOO, MI
661	821.8000/866.8000	DEKALB, IL
661	821.8000/866.8000	LAKE, IN
662	821.8125/866.8125	COOK, IL (A)
662	821.8125/866.8125	DANE, WI
662	821.8125/866.8125	BERRIEN, MI
663	821.8250/866.8250	GRUNDY, IL
663	821.8250/866.8250	KENOSHA, WI
664	821.8375/866.8375	DUPAGE, IL
664	821.8375/866.8375	DANE, WI
664	821.8375/866.8375	PORTER, IN
665	821.8500/866.8500	RACINE, WI
665	821.8500/866.8500	KANKAKEE, IL
665	821.8500/866.8500	KENT, MI
666	821.8625/866.8625	STATE GOVT (ALL 4)*
667	821.8750/866.8750	STATE GOVT (WI,IN)*
668	821.8875/866.8875	STATE GOVT (IL,MI)*
669	821.9000/866.9000	STATE GOVT (WI,IN)*
670	821.9125/866.9125	STATE GOVT (IL,MI)*
671	821.9250/866.9250	STATE GOVT (WI,IN)*
672	821.9375/866.9375	STATE GOVT (IL,MI)*
673	821.9500/866.9500	STATE GOVT (WI,IN)*
674	821.9625/866.9625	STATE GOVT (IL,MI)*
675	821.9750/866.9750	STATE GOVT (WI,IN)*
676	821.9875/866.9875	STATE GOVT (IL,MI)*
677	822.0125/867.0125	MUTUAL AID*
678	822.0375/867.0375	WINNEGAGO, IL
678	822.0375/867.0375	NAPERVILLE, IL*
678	822.0375/867.0375	ST. JOSEPH, IN
678	822.0375/867.0375	MILWAUKEE, WI
679	822.0500/867.0500	LAKE, IL
679	822.0500/867.0500	BARRY, IL
680	822.0625/867.0625	MILWAUKEE, WI
681	822.0750/867.0750	TOLLWAY, IL*
681	822.0750/867.0750	KENT, MI
682	822.0875/867.0875	WASHINGTON, WI
683	822.1000/867.1000	CHICAGO, IL*

683	822.1000/867.1000	DANE, WI
683	821.1000/867.1000	ALLEGAN, MI
684	822.1125/867.1125	KENDALL, IL
684	822.1125/867.1125	WAUKESHA, WI
685	822.1250/867.1250	LAKE, IL
685	822.1250/867.1250	BERRIEN, MI
686	822.1375/867.1375	DEKALB, IL
687	822.1500/867.1500	WILL, IL
688	822.1625/867.1625	WALWORTH, WI
689	822.1750/867.1750	CHICAGO, IL*
690	822.1875/867.1875	GRUNDY, IL
690	822.1875/867.1875	KENOSHA, WI
691	822.2000/867.2000	DUPAGE, IL
691	822.2000/867.2000	DANE, WI
692	822.2125/867.2125	RACINE, WI
692	822.2125/867.2125	PORTER, IN
693	822.2250/867.2250	COOK, IL (A)
693	822.2250/867.2250	JEFFERSON, WI
694	822.2375/867.2375	RACINE, WI
694	822.2375/867.2375	JASPER, IN
695	822.2500/867.8500	KANE, IL
696	822.2625/867.2625	WAUKESHA, WI
697	822.2750/867.2750	KANE, IL
698	822.2875/867.2875	ROCK, WI
699	822.3000/867.3000	LAKE, IL
700	822.3125/867.3125	PRIMARY ZONE POOL*
701	822.3250/867.3250	MCHENRY, IL
702	822.3375/867.3375	PRIMARY ZONE POOL*
703	822.3500/867.3500	CHICAGO, IL*
703	822.3500/867.3500	ALLEGAN, MI
704	822.3625/867.3625	STATE GOVT (ALL 4)*
705	822.3750/867.3750	STATE GOVT (WI,IN)*
706	822.3875/867.3875	STATE GOVT (IL,MI)*
707	822.4000/867.4000	STATE GOVT (WI,IN)*
708	822.4125/867.4125	STATE GOVT (IL,MI)*
709	822.4250/867.4250	STATE GOVT (WI,IN)*
710	822.4375/867.4375	STATE GOVT (IL,MI)*
711	822.4500/867.4500	STATE GOVT (WI,IN)*
712	822.4625/867.4625	STATE GOVT (IL,MI)*
713	822.4750/867.4750	STATE GOVT (WI,IN)*
714	822.4875/867.4875	STATE GOVT (IL,MI)*
715	822.5125/867.5125	MUTUAL AID*
716	822.5375/867.5375	CHICAGO, IL*
716	822.5375/867.5375	WAUKESHA, WI
717	822.5500/867.5500	MCHENRY, IL
718	822.5625/867.5625	PORTER, IN

719	822.5750/867.5750	NAPERVILLE, IL*
720	822.5875/867.5875	WALWORTH, WI
720	822.5875/867.5875	LAKE, IN
721	822.6000/867.6000	DEKALB, IL
722	822.6125/867.6125	KANKAKEE, IL
723	822.6250/867.6250	KANE, IL
724	822.6375/867.6375	COOK, IL (D)
725	822.6500/867.6500	COOK, IL (A)
726	822.6625/867.6625	GRUNDY, IL
727	822.6750/867.6750	CHICAGO, IL*
728	822.6875/867.6875	ROCK, WI
729	822.7000/867.7000	WILL, IL
730	822.7125/867.7125	PRIMARY ZONE POOL*
731	822.7250/867.7250	MCHENRY, IL
731	822.7250/867.7250	JASPER, IN
732	822.7375/867.7375	CHICAGO, IL*
732	822.7375/867.7375	DANE, WI
733	822.7500/867.7500	KENDALL, IL
733	822.7500/867.7500	RACINE, WI
734	822.7625/867.7625	CHICAGO, IL*
734	822.7625/867.7625	DODGE, WI
734	822.7625/867.7625	NEWTON, IN
735	822.7750/867.7750	KENOSHA, WI
736	822.7875/867.7875	DANE, WI
736	822.7875/867.7875	WILL, IL
736	822.7875/867.7875	BERRIEN, MI
737	822.8000/867.8000	WAUKESHA, WI
738	822.8125/867.8125	LAKE, IL
738	822.8125/867.8125	PORTER, IN
738	822.8125/867.8125	ALLEGAN, MI
739	822.8250/867.8250	NAPERVILLE, IL*
739	822.8250/867.8250	ST. JOSEPH, MI
739	822.8250/867.8250	WAUKESHA, WI
740	822.8375/867.8375	WINNEBAGO, IL
740	822.8375/867.8375	LAKE, IN
740	822.8375/867.8375	KENT, MI
741	822.8500/867.8500	DUPAGE, IL
741	822.8500/867.8500	CASS, MI
741	822.8500/867.8500	MILWAUKEE. WI
742	822.8625/867.8625	STATE GOVT (ALL 4)*
743	822.8750/867.8750	STATE GOVT (WI,IN)*
744	822.8875/867.8875	STATE GOVT (IL,MI)*
745	822.9000/867.9000	STATE GOVT (WI,IN)*
746	822.9125/867.9125	STATE GOVT (IL,MI)*
747	822.9250/867.9250	STATE GOVT (WI,IN)*
748	822.9375/867.9375	STATE GOVT (IL,MI)*

749	822.9500/867.9500	STATE GOVT (WI,IN)*
750	822.9625/867.9625	STATE GOVT (IL,MI)*
751	822.9750/867.9750	STATE GOVT (WI,IN)*
752	822.9875/867.9875	STATE GOVT (IL,MI)*
753	823.0125/868.0125	MUTUAL AID*
754	823.0375/868.0375	MCHENRY, IL
754	823.0375/868.0375	ST. JOSEPH, IN
754	823.0375/868.0375	OZAUKEE, WI
755	823.0500/868.0500	CHICAGO, IL*
756	823.0625/868.0625	MILWAUKEE, WI
756	823.0625/868.0625	BOONE, IL
756	823.0625/868.0625	KANKAKEE, IL
756	823.0625/868.0625	BERRIEN, IL
757	823.0750/868.0750	LAKE, IL
758	823.0875/868.0875	GRUNDY, IL
758	823.0875/868.0875	STARKE, IN
759	823.1000/868.1000	CHICAGO, IL*
759	823.1000/868.1000	ELKHART, IN
759	823.1000/868.1000	WAUKESHA, WI
759	823.1000/868.1000	KENT, MI
760	823.1125/868.1125	KENDALL, IL
760	823.1125/868.1125	PORTER, IN
761	823.1250/868.1250	COOK, IL (A)
761	823.1250/868.1250	DANE, WI
762	823.1375/868.1375	COOK, IL (D)
762	823.1375/868.1375	WAUKESHA, WI
763	823.1500/868.1500	DUPAGE, IL
763	823.1500/868.1500	DANE, WI
763	823.1500/868.1500	LAPORTE, IN
764	823.1625/868.1625	COOK, IL (D)
764	823.1625/868.1625	MILWAUKEE, WI
764	823.1625/868.1625	ALLEGAN, MI
765	823.1750/868.1750	ST. JOSEPH, MI
765	823.1750/868.1750	KANE, IL
766	823.1875/868.1875	KENOSHA, WI
766	823.1875/868.1875	LAKE, IN
766	823.1875/868.1875	KENT, MI
767	823.2000/868.2000	CASS, MI
767	823.2000/868.2000	KANE, IL
768	823.2125/868.2125	WINNEBAGO, IL
768	823.2125/868.2125	BARRY, MI
768	823.2125/868.2125	MILWAUKEE, IL
768	823.2125/868.2125	LAKE, IN
769	823.2250/868.2250	CHICAGO, IL*
769	823.2250/868.2250	DANE, WI
770	823.2375/868.2375	WINNEBAGO, IL

770	823.2375/868.2375	VAN BUREN, MI
770	823.2375/868.2375	MILWAUKEE, WI
771	823.2500/868.2500	DODGE, WI
771	823.2500/868.2500	WILL, IL
771	823.2500/868.2500	KENT, MI
772	823.2625/868.2625	WALWORTH, WI
772	823.2625/868.2625	ST. JOSEPH, IN
773	823.2750/868.2750	MUSKEGON, MI
773	823.2750/868.2750	WASHINGTON, WI
773	823.2750/868.2750	WILL, IL
774	823.2875/868.2875	ST. JOSEPH, IN
774	823.2875/868.2875	RACINE, WI
775	823.3000/868.3000	CHICAGO, IL*
775	823.3000/868.3000	KALAMAZOO, MI
775	823.3000/868.3000	OZAUKEE, WI
776	823.3125/868.3125	MCHENRY, IL
776	823.3125/868.3125	MARSHALL, IN
776	823.3125/868.3125	KENT, MI
777	823.3250/868.3250	CHICAGO, IL*
777	823.3250/868.3250	KALAMAZOO, MI
777	823.3250/868.3250	MILWAUKEE, WI
778	823.3375/868.3375	STARKE, IN
778	823.3375/868.3375	BOONE, IL
779	823.3500/868.3500	CHICAGO, IL*
779	823.3500/868.3500	ELKHART, IN
779	823.3500/868.3500	WAUKESHA, WI
779	823.3500/868.3500	NEWTON, IN
779	823.3500/868.3500	KENT, MI
780	823.3625/868.3625	STATE GOVT (ALL 4)*
781	823.3750/868.3750	STATE GOVT (WI,IN)*
782	823.3875/868.3875	STATE GOVT (IL,MI)*
783	823.4000/868.4000	STATE GOVT (WI,IN)*
784	823.4125/868.4125	STATE GOVT (IL,MI)*
785	823.4250/868.4250	STATE GOVT (WI,IN)*
786	823.4375/868.4375	STATE GOVT (IL,MI)*
787	823.4500/868.4500	STATE GOVT (WI,IN)*
788	823.4625/868.4625	STATE GOVT (IL,MI)*
789	823.4750/868.4750	STATE GOVT (WI,IN)*
790	823.4875/868.4875	STATE GOVT (IL,MI)*
791	823.5000/868.5000	PRIMARY ZONE POOL*
792	823.5125/868.5125	TOLLWAY, IL*
793	823.5250/868.5250	PULASKI, IN
793	823.5250/868.5250	MUSKEGON, MI
793	823.5250/868.5250	MILWAUKEE, WI
794	823.5375/868.5375	VAN BUREN, MI
794	823.5375/868.5375	KANE, IL

795	823.5500/868.5500	COOK, IL (D)
795	823.5500/868.5500	OTTAWA, MI
795	823.5500/868.5500	MILWAUKEE, WI
796	823.5625/868.5625	LAKE, IL
796	823.5625/868.5625	LAPORTE, IN
797	823.5750/868.5750	CHICAGO, IL*
797	823.5750/868.5750	OTTAWA, MI
797	823.5750/868.5750	ROCK, WI
798	823.5875/868.5875	RACINE, IL
798	823.5875/868.5875	BERRIEN, MI
799	823.6000/868.6000	WILL, IL
799	823.6000/868.6000	KENT, MI
800	823.6125/868.6125	WINNEBAGO, IL
800	823.6125/868.6125	ST. JOSEPH, MI
800	823.6125/868.6125	MILWAUKEE, WI
801	823.6250/868.6250	COOK, IL (A)
801	823.6250/868.6250	KENT, MI
802	823.6375/868.6375	WINNEBAGO, IL
802	823.6375/868.6375	COOK, IL (D)
802	823.6375/868.6375	CASS, MI
802	823.6375/868.6375	MILWAUKEE, WI
803	823.6500/868.6500	DUPAGE, IL
803	823.6500/868.6500	DODGE, WI
803	823.6500/868.6500	JASPER, IN
803	823.6500/868.6500	KENT, MI
804	823.6625/868.6625	WALWORTH, WI
804	823.6625/868.6625	GRUNDY, IL
804	823.6625/868.6625	ST. JOSEPH, IN
805	823.6750/868.6750	CHICAGO, IL*
805	823.6750/868.6750	KENT, MI
806	823.6875/868.6875	ST. JOSEPH, IN
806	823.6875/868.6875	WAUKESHA, WI
807	823.7000/868.7000	BARRY, MI
807	823.7000/868.7000	DANE, WI
807	823.7000/868.7000	WILL, IL
808	823.7125/868.7125	MARSHALL, IL
808	823.7125/868.7125	WAUKESHA, WI
809	823.7250/868.7250	CHICAGO, IL*
809	823.7250/868.7250	KALAMAZOO, MI
809	823.7250/868.7250	NEWTON, IN
810	823.7375/868.7375	KENDALL, IL
810	823.7375/868.7375	STARKE, IN
810	823.7375/868.7375	ROCK, WI
811	823.7500/868.7500	LAKE, IL
811	823.7500/868.7500	ELKHART, IN
811	823.7500/868.7500	KENT, MI
812	823.7625/868.7625	KALAMAZOO, MI

812	823.7625/868.7625	DANE, WI
812	823.7625/868.7625	LAKE, IN
813	823.7750/868.7750	PULASKI, IN
813	823.7750/868.7750	MUSKEGON, MI
813	823.7750/868.7750	WASHINGTON, WI
813	823.7750/868.7750	KANE, IL
814	823.7850/868.7850	VAN BUREN, MI
814	823.7875/868.7875	KENOSHA, WI
814	823.7875/868.7875	LAKE, IN
815	823.8000/868.8000	CHICAGO, IL*
815	823.8000/868.8000	OTTAWA, MI
815	823.8000/868.8000	DANE, WI
816	823.8125/868.8125	OZAUKEE, WI
816	823.8125/868.8125	BOONE, IL
816	823.8125/868.8125	KANKAKEE, IL
816	823.8125/868.8125	LAPORTE, IN
817	823.8250/868.8250	CHICAGO, IL*
817	823.8250/868.8250	ELKHART, IL
817	823.8250/868.8250	OTTAWA, MI
817	823.8250/868.8250	RACINE, WI
818	823.8375/868.8375	PRIMARY ZONE POOL*
819	823.8500/868.8500	PRIMARY ZONE POOL*
820	823.8625/868.8625	STATE GOVT (ALL 4)*
821	823.8750/868.8750	STATE GOVT (WI,IN)*
822	823.8875/868.8875	STATE GOVT (IL,MI)*
823	823.9000/868.9000	STATE GOVT (WI,IN)*
824	823.9125/868.9125	STATE GOVT (IL,MI)*
825	823.9250/868.9250	STATE GOVT (WI,IN)*
826	823.9375/868.9375	STATE GOVT (IL,MI)*
827	823.9500/868.9500	STATE GOVT (WI,IN)*
828	823.9625/868.9625	STATE GOVT (IL,MI)*
829	823.9750/868.9750	STATE GOVT (WI,IN)*
830	823.9875/868.9875	STATE GOVT (IL,MI)*

* Non-County

APPENDIX

L

PROCEDURE FOR DETERMINING

SERVICE AREA CONTOUR

1. Convert effective radiated power from watts to dBk using theformula:

P (dBk) = (10 x log P (Watts)) -30 (B-1)

2. SUBTRACT this NEGATIVE number (in other words, convert it to positive and add) from 41 dBu.

3. In the look-up tables, determine the two height columns that correspond most closely with your H.A.A.T. (for example, if your H.A.A.T. is 300 feet, use the 200 and 500 columns).

4. Interpolate between the listings under the two columns to determine where the figure arrived at the Step 2 falls.

5. Read the mileage at the extreme left-hand column of the row.

EXAMPLE

To determine the service area of a UHF base station with an ERP of 125 wats and an antenna height above average terrain of 400 feet:

$$P\ (dBk) = 10 \times \log\ (135) - 30$$

$$P\ (dBk) = 21 - 30$$

$$P\ (dBk) = -3$$

Subtracting:

$$F\ (dBu) = 41 - (-3)$$

$$F\ (dBu) = 50$$

From the look-up table, 50 falls between 45.6 and 53.3 as 400 is interpolated between 200 and 500. Corresponding mileage is 12.

UHF F(50,50) dBu,kW erp

MILES	100	200	500	1000
5	60.8	66.0	72.9	79.0
6	56.9	61.7	68.7	74.6
7	53.4	58.2	65.1	71.0
8	50.2	55.1	62.0	68.0
9	47.4	52.4	59.4	65.4
10	44.8	49.9	57.0	63.1
11	42.4	47.7	54.9	60.9
12	40.2	45.6	52.9	59.0
13	38.2	43.7	51.1	57.2
14	36.3	41.9	49.5	55.4
15	34.6	40.1	47.9	53.8
16	33.0	38.5	46.3	52.2
17	31.5	37.0	44.9	50.7
18	30.0	35.6	43.5	49.2
19	28.7	34.3	42.1	47.9
20	27.5	33.0	40.8	46.5
21	26.4	31.7	39.5	45.3
22	25.3	30.6	38.3	44.1
23	24.3	29.5	37.1	42.9
24	23.3	28.4	35.9	41.8
25	22.4	27.4	34.8	40.7
26	21.5	26.4	33.8	39.7
27	20.7	26.4	32.7	38.7
28	19.9	24.5	31.7	37.7
29	19.1	23.6	30.7	36.8
30	18.4	22.7	29.8	35.9

31	17.6	21.8	28.9	35.0
32	16.9	21.0	28.0	34.1
33	16.2	20.1	27.1	33.2
34	15.6	19.3	26.3	32.4
35	14.9	18.6	25.5	31.5
36	14.3	17.8	24.6	30.7
37	13.7	17.1	23.8	29.9
38	13.0	16.4	23.0	29.1
39	12.4	15.7	22.3	28.3
40	11.8	15.0	21.5	27.6
41	11.2	14.3	20.7	26.8
42	10.6	13.7	20.0	26.0
43	10.1	13.1	19.2	25.3
44	9.5	12.5	18.5	24.5
45	8.9	11.9	17.8	23.8
46	8.4	11.3	17.0	23.1
47	7.9	10.7	16.3	22.3
48	7.3	10.7	16.3	22.3
49	6.8	9.5	15.0	20.9
50	6.3	8.9	14.3	20.2
51	5.8	8.4	13.6	19.5
52	5.3	7.8	13.0	18.8
53	4.9	7.3	12.4	18.1
54	4.4	6.8	11.8	17.5
55	4.0	6.2	11.2	16.8
56	3.6	5.2	10.6	16.1
57	3.2	5.2	10.0	15.5
58	2.8	4.8	9.5	14.9
59	2.4	4.3	9.0	14.3
60	2.0	3.9	8.4	13.7
61	1.7	3.5	7.9	13.1

62	1.3	3.1	7.4	12.5
63	1.0	2.7	6.9	12.0
64	.7	2.3	6.4	11.4
65	.3	1.9	5.5	10.3
66	0.0	1.6	5.5	10.3
67	-.3	1.2	5.0	9.8
68	-.7	.9	4.5	9.3
69	-1.0	.5	4.1	8.8
70	-1.4	.2	3.7	8.3
71	-1.7	-.2	3.2	7.8
72	-2.0	-.5	2.8	7.3
73	-2.4	-.9	2.4	6.9
74	-2.7	-1.2	2.0	6.4
75	-3.0	-1.5	1.7	6.0
76	-3.3	-1.9	1.3	5.6
77	-3.5	-2.1	.9	5.3
78	-3.8	-2.4	.5	4.8
79	-4.0	-2.7	.1	4.4
80	-4.3	-3.1	-.3	3.9

CO-CHANNEL INTERFERENCE PROCEDURE

1. Determine distance from the proposed station to the existing station.
2. If not previously known, determine service area boundary of existing station. (method is detailed in Appendix B)
3. Find distance from proposed station to closest point of service area boundary of the existing station. (subtract #2 from #1)
4. Based on mileage from 3 (above), E.R.P. and H.A.A.T. of the propsed station, consult look-up tables for dBu level at the service area boundary of the existing station.
5. Subtract this dBu level from 41. If result is greater than 25, the proposed system will conform with the interference parameters. If the result is less than 25, the proposed system must be redesigned by lowering power, antenna height, or both until the 25dB protection ratio is met.

NOTE: If the terrain between the two systems would provide additional protection that would not be evident from using the normalized H.A.A.T.'s, it will be permissible to calculate the H.A.A.T. of both existing and proposed systems along the radial line directly connecting the two stations. The resulting service area boundary of the existing station and the dBu level of the proposed station at that point would then be used to calculate the protection ratio.

EXAMPLE

STATION A (proposed)	Station X (existing)
ERP: 100W (-10dBk)	200W (-7dBk)
HAAT: 500 feet, AMSL	300 feet, AMSL

Distance from A to X: 45 miles

Service Area

Boundary: 13 mi. 11 mi.

46 miles - 11 miles = 35 miles, distance from proposed to service area boundary of existing station.

From look-up tables, dBu level at 35 miles from a station with an ERP of 100 watts and HAAT of 500 feet is:

25.5 - 10 = 15.5 dBu

Subtracting this amount from thee defined 41 dBu level at the service area boundary of the existing station gives 25.5 dB of protection, 0.5 dB more than the minimum we require.

GLOSSARY

(Definitions of terms, abbreviations, and acronyms as they are used in this document)

ADJACENT CHANNELS	Channels which are separated by 12.5 KHz in the 821-824 band
AGL	Above Ground Level; altitude
APCO	Associated Public Safety Communications Officers, Incorporated
AVL	Automatic Vehicle Locator; a data transmission device used to determine where a field unit is
CALLING CHANNEL	FCC Channel 601; use of this channel is restricted to establishing contact among individual agencies for mutual aid purposes
CHANNEL	An assigned band of frequencies of sufficient width to permit its use for radio communication
CHANNEL LOADING	The number of mobile transmitters authorized to operate on a particular channel within the same service area
CO-CHANNEL	Utilization of the same channel by two or

	more licensees
CONVENOR	The individual charged with organizing a Planning Region's initial meeting
THE COMMISSION	The Federal Communications Commission; also, the FCC
THE COMMITTEE	The Southern Lake Michigan 800 MHz Regional Planning Committee
COMMITTEE OF THE WHOLE	All members present at a monthly regional planning meeting
COMMON CHANNELS	The five (5) channels specified in the National Plan which are reserved for mutual inter-agency communication; a Calling Channel and four Tactical Channels
CONVENTIONAL OPERATION	A method of operation in which one or more radio frequency channels are assigned to mobile and base stations but are not employed as a trunked group
CROSS SYSTEM PATCH	A means of linking disparate radio systems
FILING WINDOW	A period of time beginning and ending on specific dates, designated and announced by the RCRC, during which applications for licenses in the 821-824/866-869 band may be submitted for evaluation

FREQUENCY ADVISORY COMMITTEE CHAIRMAN	An APCO designated individual charged with managing spectrum usage within a State
INTEROPERABILITY	Communication between, or among, radio units of different agencies
MDT	Mobile Data Terminal; a field communications device used to transmit and receive data impulses over radio frequencies
MOBILE RELAY STATION	A base station in the mobile service authorized to retransmit automatically on a mobile service frequency communications which originate on the transmitting frequency of the mobile staion
MUTUAL AID INCIDENT	A situation posing a threat to the public safety which requires the services of agencies from differing jurisdictions or services
NPSPAC	National Public Safety Planning Advisory Committee
THE PLAN	The Public Safety Communications plan for Region 54, the Southern Lake Michigan Region
PRIMARY DISPATCH CENTER	A Public Safety Communications Center designated as a controller of the Common Channels

PRIMARY ZONE	Counties in the Region which have high population density and a large number of public safety entities
RCRC	The Regional Conformance Review Committee; a standing body of individuals charged with administering the Plan within the Region
THE REGION	The Southern Lake Michigan 800 MHz Planning Region; forty-three counties throughout Wisconsin, Illinois, Indiana, and Michigan surrounding the southern end of the Lake
REPEAT DISABLE	The means of inhibiting Mobile Relay
SECONDARY ZONE	All counties of the Region not designated as a Primary Zone
SLMRPC	The Southern Lake Michigan Regional Planning Committee
TACTICAL CHANNELS	The four Common Channels on which inter-agency communications will be conducted during a mutual aid incident
TRUNKED OPERATION	A method of operation in which a number of radio frequency channel pairs are assigned to mobile and base stations in the system for use as a trunk group
VACATED FREQUENCIES	Those frequencies returned for re-allocation

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