

BYLAWS OF THE ARIZONA REGIONAL REVIEW COMMITTEE

ARTICLE I - NAME AND PURPOSE OF ORGANIZATION

The name of this organization shall be the "Arizona Regional Review Committee", abbreviated "ARRC". This committee shall exist under authority of the Arizona Regional Public Safety Plan (ARPSP), as adopted by the Federal Communications Commission (FCC) under PR Docket 91-143, on September 4, 1991.

The purpose of this committee is to function as a frequency coordinating and advisory body for 800 MHz Public Safety channels approved by the FCC under the National Public Safety Advisory Committee, known as the NPSPAC plan. This plan was adopted by the FCC on November 24, 1987. It shall also function as a coordinator and clearinghouse for reallocated channels, known as "give backs" in other Public Safety spectrum outside the NPSPAC channels. All functions of this committee shall be in accordance with the ARPSP, as amended.

ARTICLE II - COMMITTEE MEMBERSHIP

A. Composition

First election of the 11 member ARRC was conducted at an organizational meeting held on August 21, 1991. These members shall remain on the Committee until resignation, removal for cause, or the member leaves their current public safety eligible agency. Removal for cause shall require a majority vote of the quorum at an open general meeting.

B. Member Replacement

A vacancy on the Committee shall be filled through nominations at the next regular scheduled, publicized, open public meeting, and voted upon thereat. A majority of votes of the voting agencies (one vote per eligible agency) shall be required to elect to the Committee.

C. Removal for Cause

Members may be removed for cause for non-participation under the following guidelines:

1. Removal

Members will be required to attend one-half of the meetings of the Committee or their respective subcommittee through the year. Attendance at fewer than one-half of these meetings shall be cause for review of participation by the Executive Committee during its meeting prior to the July ARRC meeting.

Should the Executive Committee find that a member has not been participating at the level

required the Excomm will report to the general committee at the July meeting and schedule an open public meeting to allow voting for the removal for cause of the non-participating member. Prior to this meeting the ARRC Chairperson shall correspond with the member in question, informing the member of the committee's intention to remove for cause and advising the member of the date of the meeting at which the action will take place.

2. **Filling the Vacancy**

The vacancy created by removal of a member for cause shall be filled, if possible, at the same open public meeting at which the removal is approved.

Nominations for the vacancy will be taken from the floor as stipulated in Article III.C.1.b.

ARTICLE III - OFFICERS OF THE ARRC

A. **Composition**

The officers of the ARRC shall consist of a Chairperson, Vice-Chairperson and combined Secretary/Treasurer.

B. **Election of Officers**

Elections shall be held annually at the regularly scheduled meeting of the ARRC in September. Nominations shall be made at the regular scheduled meeting in July.

C. **Election Procedures**

1. **Nominations**

a) **Nominations Committee**

A nomination sub-committee shall be appointed, with the immediate past chairperson of the ARRC as chairperson, or in the event of their unavailability, the previous past chairperson. If no past chairperson is available, the Executive Committee shall serve as the nominating subcommittee.

b) **Floor nominations**

Nominations may also be made from the floor at the nominations meeting. Nominees must be present at this meeting and have the commitment of their sponsor to fully participate.

2. Election Rules

The election shall be conducted openly, with a majority of ARRC quorum member votes required for election.

ARTICLE IV - OPERATING RULES OF THE ARRC

A. Meetings

Regular meetings of the ARRC shall be scheduled in coordination with the scheduled meetings of the Arizona APCO, Inc. chapter. In addition, two semi-annual meetings scheduled in conjunction with Arizona APCO shall be designated as "Open Public Meetings" with open participation from the public safety community. Each public safety entity shall be apportioned one vote at each open, public meeting. Designated alternatives and representatives shall be identified prior to the meeting.

B. Conduct of Meetings

1. Presiding

Meetings shall be conducted at the appointed time and place by the Chairperson, or in their absence, the Vice-Chairperson, or in their absence, the Secretary/Treasurer.

2. Procedural

Meetings shall be conducted according to Robert's Rules of Order.

3. Agenda

As a minimum, a financial statement shall be read to the membership, and subcommittee reports presented. Applications for NPSPAC frequencies which have been previously reviewed and approved by the appropriate subcommittees shall be voted upon, and approved by a two-thirds vote of the quorum present.

4. Quorum

The ARRC may conduct business at any publicized, scheduled meeting, with a quorum consisting of a minimum of six members present, which shall include at least one officer. Voting by proxy, with written authorization, shall be permitted.

5. Voting via Telecommunications

In special situations relating to license applications, vote by telephone and confirmed by fax or e-mail may be made provided ALL members are contacted by voice and fax or e-mail, and given a chance to respond with a vote. A two-thirds vote of all members is required for approval of the issue. Results of the telephone/fax/e-mail vote must be recorded in the minutes of the following meeting.

ARTICLE V - EXECUTIVE COMMITTEE

A. Composition

The Executive Committee, to be known as the "Excomm", shall consist of the current Chairperson, Vice-Chairperson, Secretary/Treasurer, and immediate past Chairperson. Subcommittee chairpersons may be asked to attend meetings of the Excomm as required.

B. Meetings

Meetings shall be called a minimum of three times annually for the purpose of conducting business of the ARRC, and for review of subcommittee operations and work. The meetings shall be called and scheduled by the ARRC chairperson.

ARTICLE VI - SUBCOMMITTEES

A. Composition of Standing Subcommittees

There shall be five (5)-standing subcommittees of the ARRC. These shall include:

1. 800 MHz NPSPAC Application Review
2. VHF/UHF/800 MHz Frequency Reassignment
3. Bylaw Review
4. Nomination Recommendations (See Article III.D.1.a)
5. Regional/Interregional Interoperability Coordination

B. 800 MHz NPSPAC Application Subcommittee

1. Function

The NPSPAC Application Subcommittee shall meet at least monthly if applications are pending. The subcommittee shall make recommendations on applications in a timely manner to the ARRC for voting upon at the next regularly scheduled ARRC meeting. Evaluations shall be performed in a manner consistent with the criteria established in the Arizona Regional Public Safety Plan (ARPS), as amended.

2. Necessary Delays

Application evaluations may be delayed if, in the subcommittee's opinion, insufficient information was provided to make a determination. In such case, the subcommittee chairperson shall draft a letter to the applicant within ten (10) days of the initial subcommittee review, of the insufficiency, and shall request specific information necessary to make a determination. If such requested information is not provided within thirty (30) days of the mailing of such letter, the application shall be deemed defective, and returned to

the applicant. Approval recommendations shall require a unanimous vote of the subcommittee members present at the evaluation meeting. Rejection of an application may be appealed within forty-five (45) days as per paragraph 7.7 of the ARPSP.

### 3. Mixed Frequency Applications

The subcommittee shall return applications for systems requiring both NPSPAC and non-NPSPAC frequencies with the suggestion that the applicant request only NPSPAC frequencies. The subcommittee shall actively work with the applicant agency to create a system utilizing NPSPAC frequencies.

### 4. Conflict of Interest

Any ARRC member shall be disqualified from evaluating and/or voting on an application submitted by their sponsor political subdivision, or non-political entity. In this case, the member-applicant shall act only as an advisor, providing necessary information upon which to make a recommendation, and shall not be considered a member of the subcommittee or the ARRC for voting purposes.

### 4. Approval

Recommendation of the subcommittee shall be voted upon at the next regularly scheduled meeting of the ARRC, and shall be approved with a two-thirds vote of the quorum.

## C. VHF/UHF/800 MHz Frequency Reassignment Subcommittee

### 1. Function

This subcommittee shall meet at least monthly if applications for "give back" frequencies are pending. The subcommittee shall keep a chronological listing of agency requests for "give back" channels. A statement of need shall accompany each request for channels. A separate list shall be maintained for each primary public safety frequency band.

### 2. Evaluations

The subcommittee shall evaluate such applications on their merits, in conformance with the ARPSP, and make a recommendation in a timely manner to the ARRC when frequencies become available. Where there are multiple applications with relatively equal merit, the subcommittee shall give preference to the longest standing application.

### 3. Necessary Delays

Recommendations from the Subcommittee to the ARRC may be delayed if there is insufficient data submitted to make a determination. The same procedure shall be followed as in Article VI.B.2. If insufficient information is forthcoming, an application for a "give back" channel may be dismissed and returned to the applicant.

4. Conflict of Interest

Any ARRC member shall be disqualified from evaluating and/or voting on an application submitted by their sponsor political subdivision, or non-political entity. In this case, the member-applicant shall act only as an advisor, providing necessary information upon which to make a recommendation, and shall not be considered a member of the subcommittee or the ARRC for voting purposes.

5. Approval

Recommendation for approval by the subcommittee shall be unanimous, and shall be voted upon at the next regularly scheduled meeting of the ARRC, and shall be approved by a two-thirds vote of the quorum.

D. Bylaw Review Subcommittee

The Bylaw Review Subcommittee shall meet at least semi-annually to review any needed changes to the Bylaws, and draft such changes for presentation to the Excomm.

E. Nominations Recommendation Subcommittee

The Nominations Recommendation Subcommittee shall meet annually prior to the nominations meeting for Excomm officers, and shall present a selected slate of candidates as nominees for Chairperson, Vice-Chairperson, and Secretary/Treasurer to the ARRC membership at the nominations meeting.

F. Regional/Interregional interoperability Subcommittee

1. Meetings

The Regional/Interregional interoperability Subcommittee shall meet monthly, if there is an application for NPSPAC channels pending.

2. Common Calling/Interoperability Recommendations

The subcommittee shall make a recommendation as to whether an applicant should be required to place in service "Common Calling" and/or "Interoperability" stations as a condition of application approval. Specific recommendations shall be made in writing to the ARRC Chairperson. Such recommendation shall be made a part of the final vote by the ARRC for approval of a NPSPAC application.

3. License Monitoring

The subcommittee shall monitor licensing activity in surrounding regions to ensure compatibility of frequency usage, and coordinate "Common Calling" and "Interoperability"

installation and monitoring.

#### 4. Border Compatibility

The subcommittee shall also monitor FCC Regulations and coordinate with the nation of Mexico to ensure compatibility of channel usage and "Common Calling" and "Interoperability" along the U.S./Arizona and Mexico border.

#### G. Subcommittee Chairpersons

The chairpersons of the standing subcommittees shall be appointed by the ARRC Chairperson, with concurrence of the majority of the Excomm present at a scheduled Executive Committee meeting.

#### H. Membership

There shall be a minimum of three (3) members on the "800 MHz NPSPAC Application Review" and "VHF/UHF/800 MHz Frequency Reassignment" standing subcommittees, including the chairperson. Other subcommittees shall consist of a chairperson and any other members the chairperson deems appropriate. Members of all standing committees may be chosen by the subcommittee chairperson, with the approval of the ARRC chairperson.

A minimum of two (2) members of the "800 MHz NPSPAC Application Review" and "VHF/UHF/800 MHz Frequency Reassignment" subcommittee, including the chairperson, are required to be in attendance at those subcommittee meetings. This shall constitute a quorum for those subcommittees.

#### I. Ad-Hoc Subcommittees

##### 1. Ad-Hoc Subcommittee Creation

Ad-Hoc subcommittees may be created at any time for such purpose as the Excomm deems necessary. Ad-Hoc subcommittees shall be appointed for a specific time period, but not to exceed one year in duration.

##### 2. Composition

Ad-Hoc subcommittee chairpersons shall be appointed by the ARRC chairperson, with the consent of a majority of the Excomm present at a regularly scheduled meeting. An Ad-Hoc subcommittee may consist of any number of members.

### ARTICLE VII - FUNDING

#### A. Funding Sources

The ARRC shall derive its funding indirectly from fees collected from applicants, distributed through the Arizona Chapter of APCO, Inc. In the event that such funding is not available, or is

insufficient for the ARRC to carry out its assigned function, voluntary contributions may be requested from pending applications desiring assignment of frequencies.

Arizona APCO, Inc. has pledged to fund the ARRC up to \$300 per fiscal year. Funds will be made available to the Secretary/Treasurer as needed by the APCO Treasurer.

**B. Unavailability of Funding**

Should there be an insufficiency of funds to carry out the functions of the ARRC, all applications pending shall be submitted to APCO without a recommendation and operations of the ARRC shall cease until adequate funding becomes available.

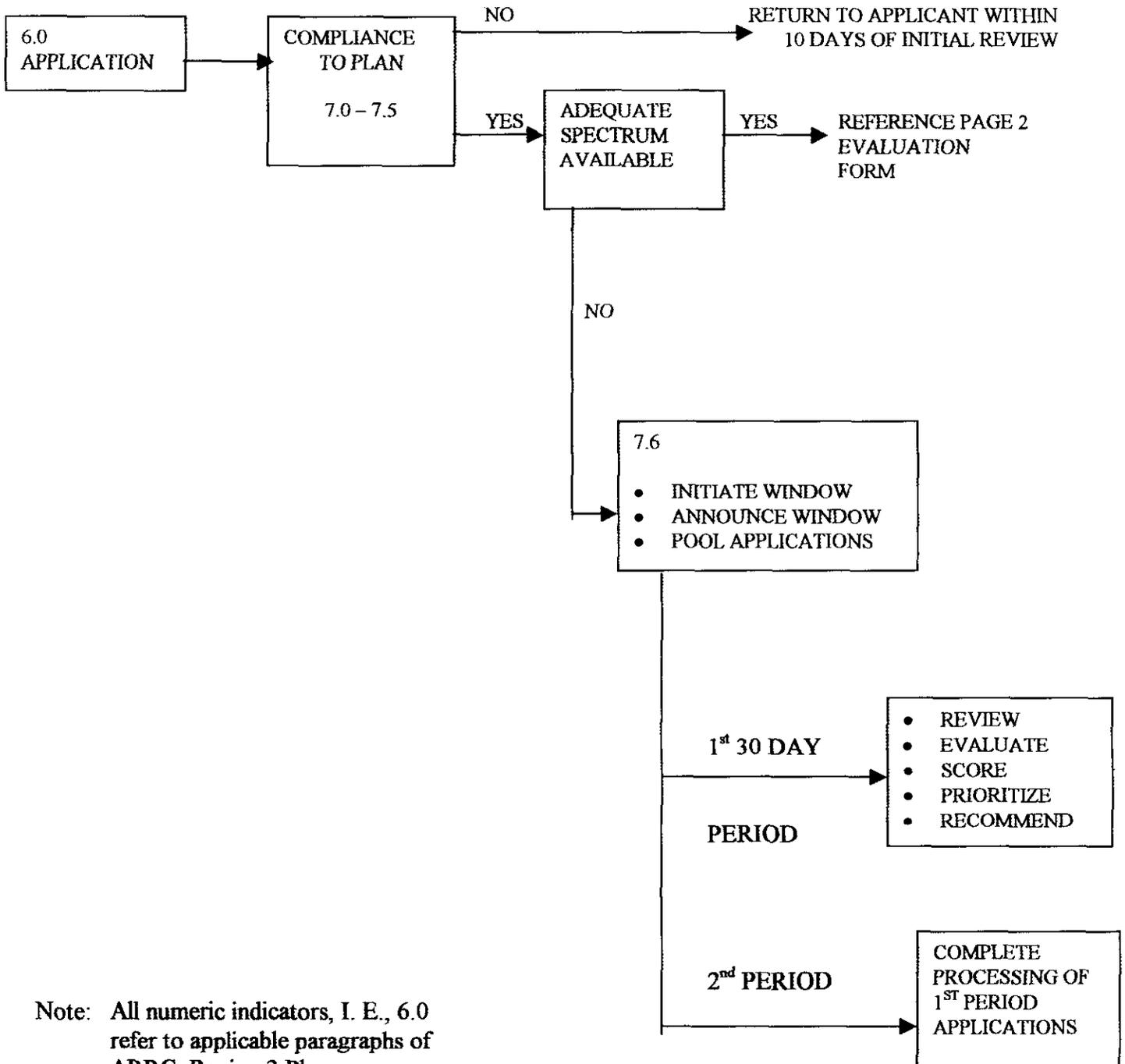
**ARTICLE VIII - MODIFICATION OF BYLAWS**

These Bylaws may be modified upon a two-thirds vote of the ARRC. Written copies of the proposed *Bylaw amendment shall be presented to all ARRC members at least thirty (30) days prior to the next regularly scheduled meeting. A statement of recommendation, including both a majority and minority report if necessary, from the Excomm, shall be included with the mailing.*

Voting on the proposed amendment shall take place at the next regularly scheduled meeting, provided a quorum is present. The Bylaw amendment shall become effective on the first day of the following month.

**APPENDIX III - NPSPAC APPLICATION PROCEDURE**

**800 MHz NPSPAC APPLICATION PROCEDURE**



Note: All numeric indicators, I. E., 6.0 refer to applicable paragraphs of ARRC, Region 3 Plan.

## EVALUATION FORM

Agency: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Date Received: \_\_\_\_\_

Date Reviewed: \_\_\_\_\_

Date Approved: \_\_\_\_\_

ARRC Chairperson: \_\_\_\_\_

## EVALUATION FORM PAGE 2

## RECOMMENDED APPROVAL TO ARRC:

- Regional inter-operability concur (4.0)
- Eligible for Arizona Channel 6 Common Calling Channel (4.5)
- Inter-regional inter-operability concur (5.0)
- Applicable coordination forms (6.0, 1)

## SYSTEM DESIGN INFORMATION (6.0, 2)

- Antenna height and power (9.1)
- Definition of service area (9.2)
- Calculation of service area (9.3)
- Service area map (9.5)
- Control station requirements (9.6)
- Adjacent channel design (9.8)
- Trunking requirements (9.10)
- System loading requirements (9.11)

## SYSTEM ENGINEERING EXHIBIT (9.12)

- Transmit output power
- I/M equipment and losses
- Transmission lines and losses
- Antenna model and gain
- Ground elevation above MSL
- Antenna centerline AGL
- HAAT of antenna centerline
- Effective radiated power
- Receiver only locations
- CTCSS coding information
- Cellular telephone use (9.14)
- Frequency allocation (9.15)
- Funding statement (6.0, 3)
- Proposed implementation schedule (6.0, 4)
- Justification of number of channels (6.0, 5)
- Existing frequency statement (6.0, 6)
- Statement of understanding (6.0, 7)
- Frequency re-use/givebacks (6.0, 8)
- Co-channel interference (App V)
- Adjacent-channel interference (App V)

## WHEN LICENSED:

- Track construction
- License data and call
- RFP deadline (12 mo)
- RFP award (12 mo)
- System turn-on
- System acceptance
- Channel loading (3-5 yrs)

**APPENDIX IV - FREQUENCY ALLOCATION LIST**

Revised 10/01

<b>Channel</b>	<b>Mobile Frequency</b>	<b>Base Frequency</b>	<b>Metro Phoenix User</b>	<b>Non Metro Phoenix User</b>
601	821.0125 MHz	866.0125 MHz	NTL. Calling (ICALL)	NTL. Calling (ICALL)
602	821.0375 MHz	866.0375 MHz	Arizona AZTAC	Arizona AZTAC
603	821.0500 MHz	866.0500 MHz	Guard Band	Guard Band
604	821.0625 MHz	866.0625 MHz	Maricopa Co.	
605	821.0750 MHz	866.0750 MHz	Maricopa Co.	Tucson, Pima Co.
606	821.0875 MHz	866.0875 MHz	Guard Band	Douglas, Flagstaff, Nogales
607	821.1000 MHz	866.1000 MHz	CAP	CAP
608	821.1125 MHz	866.1125 MHz	Guard Band	Douglas, Sierra Vista, Navajo
609	821.1250 MHz	866.1250 MHz	Maricopa Co.	
610	821.1375 MHz	866.1375 MHz	Maricopa Co.	Prescott, Yuma City, Tucson, Pima Co.
611	821.1500 MHz	866.1500 MHz	Maricopa Co.	Cochise Co.
612	821.1625 MHz	866.1625 MHz	Maricopa Co.	Tucson, Coconino Co.
613	821.1750 MHz	866.1750 MHz	Maricopa Co.	Santa Cruz, Lake Havasu
614	821.1875 MHz	866.1875 MHz	Maricopa Co.	Tucson
615	821.2000 MHz	866.2000 MHz	Maricopa Co.	
616	821.2125 MHz	866.2125 MHz	Maricopa Co.	Tucson
617	821.2250 MHz	866.2250 MHz	Maricopa Co.	
618	821.2375 MHz	866.2375 MHz	Maricopa Co.	Tucson
619	821.2500 MHz	866.2500 MHz	Maricopa Co.	
620	821.2625 MHz	866.2625 MHz	Maricopa Co.	Greenlee Co.
621	821.2750 MHz	866.2750 MHz	Maricopa Co.	
622	821.2875 MHz	866.2875 MHz	Maricopa Co.	Apache
623	821.3000 MHz	866.3000 MHz	Maricopa Co.	
624	821.3125 MHz	866.3125 MHz	Maricopa Co. Note 2	Tucson, Pima Co.
625	821.3250 MHz	866.3250 MHz	Maricopa Co.	
626	821.3375 MHz	866.3375 MHz	Maricopa Co.	Douglas
627	821.3500 MHz	866.3500 MHz	Maricopa Co.	
628	821.3625 MHz	866.3625 MHz	Maricopa Co.	Douglas, Navajo
629	821.3750 MHz	866.3750 MHz	Guard Band	
630	821.3875 MHz	866.3875 MHz	CAP	CAP
631	821.4000 MHz	866.4000 MHz	Guard Band	
632	821.4125 MHz	866.4125 MHz	CAP	CAP
633	821.4250 MHz	866.4250 MHz	Guard Band	
634	821.4375 MHz	866.4375 MHz	Maricopa Co.	Tucson
635	821.4500 MHz	866.4500 MHz	Maricopa Co.	Prescott
636	821.4625 MHz	866.4625 MHz	Maricopa Co. Note 1	Guard Band
637	821.4750 MHz	866.4750 MHz	Guard Band	State of Arizona
638	821.4875 MHz	866.4875 MHz	State of Arizona	Guard Band
639	821.5125 MHz	866.5125 MHz	ITAC1	ITAC1
640	821.5375 MHz	866.5375 MHz	State of Arizona	State of Arizona
641	821.5500 MHz	866.5500 MHz	Guard Band	Guard Band
642	821.5625 MHz	866.5625 MHz	Maricopa Co.	Tucson
643	821.5750 MHz	866.5750 MHz	Maricopa Co.	Mohave

644	821.5875 MHz	866.5875 MHz	Maricopa Co.	Tucson
645	821.6000 MHz	866.6000 MHz	Maricopa Co.	Coconino Co.
646	821.6125 MHz	866.6125 MHz	Maricopa Co.	Tucson, Lake Havasu
647	821.6250 MHz	866.6250 MHz	Maricopa Co. Note 2	
648	821.6375 MHz	866.6375 MHz	Maricopa Co.	Douglas
649	821.6500 MHz	866.6500 MHz	Maricopa Co.	Apache
650	821.6625 MHz	866.6625 MHz	Maricopa Co.	Cochise
651	821.6750 MHz	866.6750 MHz	Maricopa Co.	Navajo, Tucson, Pima Co.
652	821.6875 MHz	866.6875 MHz	Maricopa Co.	
653	821.7000 MHz	866.7000 MHz	Maricopa Co.	Graham
654	821.7125 MHz	866.7125 MHz	Maricopa Co.	
655	821.7250 MHz	866.7250 MHz	Maricopa Co.	Mohave
656	821.7375 MHz	866.7375 MHz	Maricopa Co.	
657	821.7500 MHz	866.7500 MHz	Maricopa Co.	
658	821.7625 MHz	866.7625 MHz	Maricopa Co.	
659	821.7750 MHz	866.7750 MHz	Maricopa Co.	
660	821.7875 MHz	866.7875 MHz	Maricopa Co.	
661	821.8000 MHz	866.8000 MHz	Maricopa Co.	
662	821.8125 MHz	866.8125 MHz	Maricopa Co.	Tucson
663	821.8250 MHz	866.8250 MHz	Maricopa Co.	
664	821.8375 MHz	866.8375 MHz	Maricopa Co.	
665	821.8500 MHz	866.8500 MHz	Maricopa Co.	La Paz
666	821.8625 MHz	866.8625 MHz	Maricopa Co.	Tucson
667	821.8750 MHz	866.8750 MHz	Guard Band	
668	821.8875 MHz	866.8875 MHz	CAP	CAP
669	821.9000 MHz	866.9000 MHz	Guard Band	
670	821.9125 MHz	866.9125 MHz	Phoenix, Mesa Note 3	
671	821.9250 MHz	866.9250 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
672	821.9375 MHz	866.9375 MHz	Phoenix, Mesa Note 3	
673	821.9500 MHz	866.9500 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
674	821.9625 MHz	866.9625 MHz	Phoenix, Mesa Note 3	
675	821.9750 MHz	866.9750 MHz	Phoenix, Mesa Note 3	
676	821.9875 MHz	866.9875 MHz	Phoenix, Mesa Note 3	
677	822.0125 MHz	867.0125 MHz	ITAC2	ITAC2
678	822.0375 MHz	867.0375 MHz	Phoenix, Mesa Note 3	
679	822.0500 MHz	867.0500 MHz	Phoenix, Mesa Note 3	
680	822.0625 MHz	867.0625 MHz	Phoenix, Mesa Note 3	
681	822.0750 MHz	867.0750 MHz	Phoenix, Mesa Note 3	
682	822.0875 MHz	867.0875 MHz	Phoenix, Mesa Note 3	
683	822.1000 MHz	867.1000 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
684	822.1125 MHz	867.1125 MHz	Phoenix, Mesa Note 3	
685	822.1250 MHz	867.1250 MHz	Phoenix, Mesa Note 3	Yavapai, Tucson, Pima Co.
686	822.1375 MHz	867.1375 MHz	Phoenix, Mesa Note 3	
687	822.1500 MHz	867.1500 MHz	Phoenix, Mesa Note 3	
688	822.1625 MHz	867.1625 MHz	Phoenix, Mesa Note 3	
689	822.1750 MHz	867.1750 MHz	Phoenix, Mesa Note 3	
690	822.1875 MHz	867.1875 MHz	Phoenix, Mesa Note 3	

691	822.2000 MHz	867.2000 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
692	822.2125 MHz	867.2125 MHz	Phoenix, Mesa Note 3	
693	822.2250 MHz	867.2250 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
694	822.2375 MHz	867.2375 MHz	Phoenix, Mesa Note 3	
695	822.2500 MHz	867.2500 MHz	Phoenix, Mesa Note 3	
696	822.2625 MHz	867.2625 MHz	Phoenix, Mesa Note 3	
697	822.2750 MHz	867.2750 MHz	Phoenix, Mesa Note 3	
698	822.2875 MHz	867.2875 MHz	Phoenix, Mesa Note 3	
699	822.3000 MHz	867.3000 MHz	Phoenix, Mesa Note 3	
700	822.3125 MHz	867.3125 MHz	Phoenix, Mesa Note 3	
701	822.3250 MHz	867.3250 MHz	Phoenix, Mesa Note 3	
702	822.3375 MHz	867.3375 MHz	Phoenix, Mesa Note 3	
703	822.3500 MHz	867.3500 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
704	822.3625 MHz	867.3625 MHz	Phoenix, Mesa Note 3	
705	822.3750 MHz	867.3750 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
706	822.3875 MHz	867.3875 MHz	Phoenix, Mesa Note 3	
707	822.4000 MHz	867.4000 MHz	Phoenix, Mesa Note 3	
708	822.4125 MHz	867.4125 MHz	Phoenix, Mesa Note 3	
709	822.4250 MHz	867.4250 MHz	Phoenix, Mesa Note 3	
710	822.4375 MHz	867.4375 MHz	Phoenix, Mesa Note 3	
711	822.4500 MHz	867.4500 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
712	822.4625 MHz	867.4625 MHz	Phoenix, Mesa Note 1, 3	Guard Band
713	822.4750 MHz	867.4750 MHz	Guard Band	State of Arizona
714	822.4875 MHz	867.4875 MHz	State of Arizona	Guard Band
715	822.5125 MHz	867.5125 MHz	ITAC3	ITAC3
716	822.5375 MHz	867.5375 MHz	State of Arizona	
717	822.5500 MHz	867.5500 MHz	Guard Band	
718	822.5625 MHz	867.5625 MHz	CAP	CAP
719	822.5750 MHz	867.5750 MHz	Guard Band	
720	822.5875 MHz	867.5875 MHz	Phoenix, Mesa Note 3	
721	822.6000 MHz	867.6000 MHz	Phoenix, Mesa Note 3	
722	822.6125 MHz	867.6125 MHz	Phoenix, Mesa Note 3	
723	822.6250 MHz	867.6250 MHz	Phoenix, Mesa Note 3	
724	822.6375 MHz	867.6375 MHz	Phoenix, Mesa Note 3	
725	822.6500 MHz	867.6500 MHz	Phoenix, Mesa Note 3	
726	822.6625 MHz	867.6625 MHz	Phoenix, Mesa Note 3	
727	822.6750 MHz	867.6750 MHz	Phoenix, Mesa Note 3	
728	822.6875 MHz	867.6875 MHz	Phoenix, Mesa Note 3	
729	822.7000 MHz	867.7000 MHz	Phoenix, Mesa Note 3	
730	822.7125 MHz	867.7125 MHz	Phoenix, Mesa Note 3	
731	822.7250 MHz	867.7250 MHz	Phoenix, Mesa Note 3	
732	822.7375 MHz	867.7375 MHz	Phoenix, Mesa Note 3	
733	822.7500 MHz	867.7500 MHz	Phoenix, Mesa Note 3	
734	822.7625 MHz	867.7625 MHz	Phoenix, Mesa Note 3	
735	822.7750 MHz	867.7750 MHz	Phoenix, Mesa Note 3	
736	822.7875 MHz	867.7875 MHz	Phoenix, Mesa Note 3	
737	822.8000 MHz	867.8000 MHz	Phoenix, Mesa Note 3	

738	822.8125 MHz	867.8125 MHz	Phoenix, Mesa Note 3	
739	822.8250 MHz	867.8250 MHz	Phoenix, Mesa Note 3	
740	822.8375 MHz	867.8375 MHz	Phoenix, Mesa Note 3	
741	822.8500 MHz	867.8500 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
742	822.8625 MHz	867.8625 MHz	Phoenix, Mesa Note 3	
743	822.8750 MHz	867.8750 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
744	822.8875 MHz	867.8875 MHz	Phoenix, Mesa Note 3	
745	822.9000 MHz	867.9000 MHz	Phoenix, Mesa Note 3	
746	822.9125 MHz	867.9125 MHz	Phoenix, Mesa Note 3	
747	822.9250 MHz	867.9250 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
748	822.9375 MHz	867.9375 MHz	Phoenix, Mesa Note 3	La Paz
749	822.9500 MHz	867.9500 MHz	Phoenix, Mesa Note 3	
750	822.9625 MHz	867.9625 MHz	Phoenix, Mesa Note 3	Mohave
751	822.9750 MHz	867.9750 MHz	Phoenix, Mesa Note 3	
752	822.9875 MHz	867.9875 MHz	Phoenix, Mesa Note 3	
753	823.0125 MHz	868.0125 MHz	ITAC4	ITAC4
754	823.0375 MHz	868.0375 MHz	Phoenix, Mesa Note 3	
755	823.0500 MHz	868.0500 MHz	Phoenix, Mesa Note 3	
756	823.0625 MHz	868.0625 MHz	Phoenix, Mesa Note 3	
757	823.0750 MHz	868.0750 MHz	Phoenix, Mesa Note 3	
758	823.0875 MHz	868.0875 MHz	Phoenix, Mesa Note 3	
759	823.1000 MHz	868.1000 MHz	Guard Band	
760	823.1125 MHz	868.1125 MHz	CAP	CAP
761	823.1250 MHz	868.1250 MHz	Guard Band	
762	823.1375 MHz	868.1375 MHz	Phoenix, Mesa Note 3	
763	823.1500 MHz	868.1500 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
764	823.1625 MHz	868.1625 MHz	Phoenix, Mesa Note 3	
765	823.1750 MHz	868.1750 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
766	823.1875 MHz	868.1875 MHz	Phoenix, Mesa Note 3	
767	823.2000 MHz	868.2000 MHz	Phoenix, Mesa Note 2, 3	Tucson, Pima Co.
768	823.2125 MHz	868.2125 MHz	Phoenix, Mesa Note 3	
769	823.2250 MHz	868.2250 MHz	Phoenix, Mesa Note 3	
770	823.2375 MHz	868.2375 MHz	Phoenix, Mesa Note 3	
771	823.2500 MHz	868.2500 MHz	Phoenix, Mesa Note 3	Cochise
772	823.2625 MHz	868.2625 MHz	Phoenix, Mesa Note 3	
773	823.2750 MHz	868.2750 MHz	Phoenix, Mesa Note 3	Mohave
774	823.2875 MHz	868.2875 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
775	823.3000 MHz	868.3000 MHz	Phoenix, Mesa Note 3	
776	823.3125 MHz	868.3125 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
777	823.3250 MHz	868.3250 MHz	Phoenix, Mesa Note 3	
778	823.3375 MHz	868.3375 MHz	Phoenix, Mesa Note 3	Apache
779	823.3500 MHz	868.3500 MHz	Phoenix, Mesa Note 3	
780	823.3625 MHz	868.3625 MHz	Phoenix, Mesa Note 3	Coconino
781	823.3750 MHz	868.3750 MHz	Phoenix, Mesa Note 3	Tucson
782	823.3875 MHz	868.3875 MHz	Phoenix, Mesa Note 3	
783	823.4000 MHz	868.4000 MHz	Phoenix, Mesa Note 3	Navajo
784	823.4125 MHz	868.4125 MHz	Phoenix, Mesa Note 3	

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785	823.4250 MHz	868.4250 MHz	Phoenix, Mesa Note 3	Tucson, Douglas
786	823.4375 MHz	868.4375 MHz	Phoenix, Mesa Note 3	
787	823.4500 MHz	868.4500 MHz	Phoenix, Mesa Note 2, 3	Tucson, Pima Co.
788	823.4625 MHz	868.4625 MHz	Phoenix, Mesa Note 3	
789	823.4750 MHz	868.4750 MHz	Phoenix, Mesa Note 3	
790	823.4875 MHz	868.4875 MHz	Phoenix, Mesa Note 3	
791	823.5000 MHz	868.5000 MHz	Phoenix, Mesa Note 3	Cochise
792	823.5125 MHz	868.5125 MHz	Phoenix, Mesa Note 3	
793	823.5250 MHz	868.5250 MHz	Phoenix, Mesa Note 3	Florence
794	823.5375 MHz	868.5375 MHz	Phoenix, Mesa Note 3	Tucson
795	823.5500 MHz	868.5500 MHz	Guard Band	
796	823.5625 MHz	868.5625 MHz	CAP	CAP
797	823.5750 MHz	868.5750 MHz	Guard Band	
798	823.5875 MHz	868.5875 MHz	Guard Band	Apache, Lake Havasu
799	823.6000 MHz	868.6000 MHz	CAP	CAP
800	823.6125 MHz	868.6125 MHz	Guard Band	
801	823.6250 MHz	868.6250 MHz	Phoenix, Mesa Note 3	Tucson
802	823.6375 MHz	868.6375 MHz	Phoenix, Mesa Note 3	Florence
803	823.6500 MHz	868.6500 MHz	Phoenix, Mesa Note 3	Tucson, Douglas, Yuma City
804	823.6625 MHz	868.6625 MHz	Phoenix, Mesa Note 3	
805	823.6750 MHz	868.6750 MHz	Phoenix, Mesa Note 3	Tucson, Douglas, Flagstaff, Yuma City
806	823.6875 MHz	868.6875 MHz	Phoenix, Mesa Note 3	Navajo
807	823.7000 MHz	868.7000 MHz	Phoenix, Mesa Note 3	
808	823.7125 MHz	868.7125 MHz	Phoenix, Mesa Note 2, 3	Tucson, Pima Co.
809	823.7250 MHz	868.7250 MHz	Phoenix, Mesa Note 3	
810	823.7375 MHz	868.7375 MHz	Phoenix, Mesa Note 3	Tucson, Pima Co.
811	823.7500 MHz	868.7500 MHz	Guard Band	
812	823.7625 MHz	868.7625 MHz	Maricopa Co.	Mohave
813	823.7750 MHz	868.7750 MHz	Maricopa Co.	
814	823.7875 MHz	868.7875 MHz	Maricopa Co.	Tucson, Pima Co.
815	823.8000 MHz	868.8000 MHz	Maricopa Co.	
816	823.8125 MHz	868.8125 MHz	Maricopa Co.	
817	823.8250 MHz	868.8250 MHz	Maricopa Co.	Cochise
818	823.8375 MHz	868.8375 MHz	Maricopa Co.	Apache
819	823.8500 MHz	868.8500 MHz	Maricopa Co.	Tucson
820	823.8625 MHz	868.8625 MHz	Maricopa Co.	
821	823.8750 MHz	868.8750 MHz	Maricopa Co.	Tucson, Yuma City
822	823.8875 MHz	868.8875 MHz	Maricopa Co.	
823	823.9000 MHz	868.9000 MHz	Maricopa Co.	Tucson, Douglas, Yuma City
824	823.9125 MHz	868.9125 MHz	Maricopa Co.	Sierra Vista
825	823.9250 MHz	868.9250 MHz	Maricopa Co.	Tucson, Douglas, Flagstaff, Lake Havasu, Nogales, Greenlee
826	823.9375 MHz	868.9375 MHz	Maricopa Co.	
827	823.9500 MHz	868.9500 MHz	Maricopa Co.	
828	823.9625 MHz	868.9625 MHz	Guard Band	Guard Band
829	823.9750 MHz	868.9750 MHz	State of Arizona	State of Arizona
830	823.9875 MHz	868.9875 MHz	Guard Band	Guard Band

## Notes:

Note 1: These channels will require specific coordination with the State of Arizona.

Note 2: Channels 624, 647, 767, 787, and 808 were allocated to Scottsdale. Their 5 channels are incorporated in the allocations for Maricopa County by an agreement with Maricopa County.

Note 3: The proposed Phoenix/Mesa allocation is to be considered a design pool, which includes the existing Phoenix MDT system and the new P25 trunked radio network. The participants in the P25 trunked radio network will include (but is not limited to): Phoenix, Mesa, Glendale, Peoria, Tempe, Goodyear, Apache Junction, Gilbert, Salt River, Gila River, Avondale, El Mirage, Guadalupe, Laveen, Daisey Mtn., Surprise, Tolleson, The Sun Cities, Sun Lakes, and Buckeye.

**Allocated Channels by User****PHOENIX/MESA**

670	671	672	673	674	675	676	678	679	680	681	682
683	684	685	686	687	688	689	690	691	692	693	694
695	696	697	698	699	700	701	702	703	704	705	706
707	708	709	710	711	712	720	721	722	723	724	725
726	727	728	729	730	731	732	733	734	735	736	737
738	739	740	741	742	743	744	745	746	747	748	749
750	751	752	754	755	756	757	758	762	763	764	765
766	767	768	769	770	771	772	773	774	775	776	777
778	779	780	781	782	783	784	785	786	787	788	789
790	791	792	793	794	801	802	803	804	805	806	807
808	809	810									

**TUCSON**

605	610	612	614	616	618	624	634	642	644	646	651
662	666	671	673	683	685	691	693	703	705	711	741
743	747	763	765	767	774	776	781	785	787	794	801
803	805	808	810	814	819	821	823	825			

**DOUGLAS**

606	608	626	628	648	785	803	805	823	825		
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FLAGSTAFF

606 805 825

LAKE HAVASU

613 646 798 825

NOGALES

606 825

PRESCOTT

610 635

SIERRA VISTA

608 824

YUMA CITY

610 803 805 821 823

FLORENCE

793 802

SANTA CRUZ

613

GREENLEE

620 825

APACHE

622 649 778 798 818

NAVAJO

608 628 651 783 806

GRAHAM

653

MOHAVE

643 655 750 773 812

LA PAZ

665 748

COCHISE

611 650 771 791 817

COCONINO

612 645 780

YAVAPAI

685

MARICOPA COUNTY

604	605	609	610	611	612	613	614	615	616	617	618
619	620	621	622	623	624	625	626	627	628	634	635
636	642	643	644	645	646	647	648	6449	650	651	652
653	654	655	656	657	658	659	660	661	662	663	664
665	666	812	813	814	815	816	817	818	819	820	821
822	823	824	825	826	827						

**PIMA**

605	610	624	651	671	673	683	685	691	693	703	705
711	741	743	747	763	765	767	774	776	787	808	810
814											

**CAWCD (CAP)**

607	630	632	668	718	760	796	799
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**STATE OF ARIZONA**

637	638	640	713	714	716	829
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**NOT ASSIGNABLE**

603	641	717	828	830
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**APPENDIX V - PROCEDURE FOR DETERMINING SERVICE AREA**

**RECOMMENDED PROCEDURE FOR DETERMINING SERVICE AREA**

1. Convert proposed BASE STATION power ERP to dB below 1 kW ERP.
2. Subtract value in step 1 from 41 dBu.
3. In look-up table 1 determine the two- (2) height columns that correspond most closely to proposed BASE STATION H.A.A.T.
4. Interpolate between the listings under the two- (2) columns to determine where the value in step 2 falls.
5. Read the mileage from the "MILES" column. This is the radius of the proposed service area.

**EXAMPLE**

The service area of a 100-watt ERP station with an antenna height above average terrain of 450 feet would be calculated as follows:

$$\begin{aligned}
 P \text{ (dBk)} &= 10 \times \log (100) - 30 \\
 &= 10 \times 2 - 30 \\
 &= -10
 \end{aligned}$$

$$\begin{aligned}
 F \text{ (dBu)} &= 41 - (-10) \\
 &= 51 \text{ dBu}
 \end{aligned}$$

From the look-up tables, 51 falls between 50.5 in the 400 ft. column and 52.9 in the 500 ft. column. The corresponding mileage would be 12.

**INTERFERENCE PROTECTION**

1. Convert proposed BASE STATION ERP to dB below 1 kW ERP.
2. Subtract value in step 1 from 16 dBu.
3. In look-up table 2 determine the two (2) height columns that correspond most closely to the proposed BASE STATION H.A.A.T.
4. Interpolate between the listings under the two- (2) columns to determine where the value in step 2 falls.

5. Read the mileage from the column "MILES". This value is the minimum distance between the proposed BASE STATION and the nearest point of another co-channel service area. (Service area may be obtained from the co-channel user or by calculations used in "PROCEDURE FOR DETERMINING SERVICE AREA".)

#### ADJACENT CHANNEL INTERFERENCE PROTECTION

1. Convert proposed BASE STATION ERP to dB below 1 kW ERP.
2. Subtract value in step 1 from 26 dBu.
3. In look-up table 2 determine the two (2) height columns that correspond most closely to the proposed BASE STATION H.A.A.T.
4. Interpolate between the two listings to determine where the value in step 2 falls.
5. Read the mileage from the "MILES" column. This value is the minimum distance between the proposed BASE STATION and the nearest point of the adjacent channel service area.

**LOOK UP TABLE 1**

<b>UHF F(50,50)</b>		<b>dBu/kW ERP</b>								
<b>MILES</b>	<b>100'</b>	<b>200'</b>	<b>300'</b>	<b>400'</b>	<b>500'</b>	<b>600'</b>	<b>700'</b>	<b>800'</b>	<b>900'</b>	<b>1000'</b>
5	60.8	66.0	68.3	70.6	72.9	74.1	75.3	76.6	77.8	79.0
6	56.9	61.7	64.0	66.4	68.7	69.9	71.1	72.2	73.4	74.6
7	53.4	58.2	60.5	62.8	65.1	66.3	67.5	68.6	69.8	71.0
8	50.2	55.1	57.4	59.7	62.0	63.2	64.4	65.6	66.8	68.0
9	47.4	52.4	54.7	57.1	59.4	60.9	61.8	63.0	64.2	65.4
10	44.8	49.9	52.3	54.6	57.0	58.2	59.4	60.7	61.9	63.1
11	42.4	47.7	50.1	52.5	54.9	56.1	57.3	58.5	59.7	60.9
12	40.2	45.6	48.0	50.5	52.9	54.1	55.3	56.6	57.8	59.0
13	38.2	43.7	46.2	48.6	51.1	52.3	53.5	54.8	56.0	57.2
14	36.2	41.9	44.4	47.0	49.5	50.7	51.9	53.0	54.2	55.4
15	34.6	40.1	42.7	45.3	47.9	49.1	50.3	51.4	52.6	53.8
16	33.0	38.5	41.1	43.7	46.3	47.5	48.7	49.8	51.0	52.2
17	31.5	37.0	39.6	42.3	44.9	46.1	47.2	48.4	49.5	50.7
18	30.0	35.6	38.2	40.9	43.5	44.6	45.8	46.9	48.1	49.2
19	28.7	34.3	36.9	39.5	42.1	43.3	44.4	45.6	46.7	47.9
20	27.5	33.0	35.6	38.2	40.8	41.9	43.1	44.2	45.4	46.5
21	26.4	31.7	34.3	36.9	39.5	40.7	41.8	43.0	44.1	45.3
22	25.3	30.6	33.2	35.7	38.3	39.5	40.6	41.8	42.9	44.1
23	24.3	29.5	32.0	34.6	37.1	38.3	39.4	40.6	41.7	42.9
24	23.3	28.4	30.9	33.4	35.9	37.1	38.3	39.4	40.6	41.8
25	22.4	27.4	29.9	32.3	34.8	36.0	37.2	38.3	39.5	40.7
26	21.5	26.4	28.9	31.3	33.8	35.0	36.2	37.3	38.5	39.7
27	20.7	25.4	27.8	30.3	32.7	33.9	35.1	36.3	37.5	38.7
28	19.9	24.5	26.9	29.3	31.7	32.9	34.1	35.3	36.5	37.7
29	19.1	23.6	26.0	28.3	30.7	31.9	33.1	34.4	35.6	36.8
30	18.4	22.7	25.1	27.4	29.8	31.0	32.2	33.5	34.7	35.9

**REFERENCE:**

**BASE ON 50% OF THE SIGNALS FALLING INTO THE CHARTED SIGNAL LEVELS 50% OF THE TIME AT THE DISTANCES LISTED.**

## HARMFUL INTERFERENCE - LOOK UP TABLE II

UHF F (50,10)

dBu/KW ERP

MILES	100'	200'	300'	400'	500'	600'	700'	800'	900'	1000'
10	43.8	50.1	52.5	54.9	57.4	58.6	59.8	61.0	62.2	63.3
11	41.7	47.6	50.1	52.5	54.9	56.2	57.5	58.7	60.0	61.2
12	39.6	45.8	48.4	51.0	53.6	54.7	55.8	56.9	58.0	59.2
13	37.4	43.4	46.2	49.0	51.8	52.9	54.0	55.2	56.3	57.4
14	35.7	42.0	44.7	47.4	50.1	51.2	52.4	53.6	54.8	56.0
15	33.9	40.3	42.8	45.4	47.9	49.2	50.5	51.7	53.0	54.3
16	32.2	38.5	41.2	43.9	46.6	47.7	48.9	50.1	51.3	52.5
17	31.2	37.1	39.8	42.5	45.2	46.3	47.5	48.7	49.9	51.1
18	29.7	35.7	38.3	40.8	43.4	44.7	46.1	47.4	48.7	50.1
19	28.7	34.7	37.2	39.8	42.3	43.6	44.9	46.1	47.4	48.7
20	27.7	33.3	35.7	38.2	40.6	41.9	43.3	44.6	45.9	47.3
21	27.0	32.2	34.5	36.9	39.2	40.5	41.9	43.2	44.5	45.8
22	25.9	30.8	33.3	35.7	38.2	39.4	40.7	41.9	43.2	44.4
23	25.2	29.7	32.1	34.4	36.8	38.1	39.4	40.7	42.1	43.4
24	24.5	29.0	31.3	33.5	35.7	37.0	38.4	39.7	41.0	42.3
25	23.8	28.0	30.2	32.4	34.7	36.0	37.3	38.6	40.0	41.3
26	23.1	27.3	29.4	31.5	33.6	34.9	36.3	37.6	38.9	40.3
27	22.4	26.3	28.5	30.7	32.9	34.2	35.4	36.7	37.9	39.2
28	21.7	25.5	27.5	29.5	31.5	32.8	34.2	35.5	36.8	38.2
29	21.0	24.8	26.8	28.8	30.8	32.1	33.3	34.6	35.8	37.1
30	20.3	24.2	26.0	27.9	29.7	31.0	32.3	33.5	34.8	36.1
31	19.6	23.5	25.3	27.2	29.0	30.3	31.6	32.8	34.1	35.3
32	19.1	22.8	24.6	26.5	28.3	29.5	30.7	31.9	33.1	34.1
33	18.5	22.6	24.3	26.0	27.7	28.8	29.9	31.0	32.1	33.3
34	18.0	21.7	23.5	25.2	27.0	28.1	29.2	30.3	31.4	32.6
35	17.5	21.2	22.9	24.6	26.3	27.4	28.5	29.6	30.7	31.8
36	17.2	20.7	22.3	23.9	25.5	26.7	27.8	28.9	30.0	31.2
37	16.8	20.3	21.9	23.6	25.2	26.3	27.3	28.3	29.4	30.5
38	16.5	19.6	21.2	22.9	24.5	25.6	26.6	27.7	28.7	29.7
39	16.1	19.3	20.7	22.0	23.5	24.5	25.6	26.6	27.7	28.7
40	15.7	18.9	20.3	21.7	23.1	24.2	25.2	26.2	27.3	28.3
41	15.4	18.2	19.7	21.2	22.8	23.7	24.7	25.7	26.7	27.7
42	15.0	17.8	19.3	20.7	22.0	23.0	24.0	25.0	26.0	27.0
43	14.7	17.5	18.9	20.3	21.7	22.6	23.5	24.4	25.3	26.3

**HARMFUL INTERFERENCE - LOOK UP TABLE II (Cont.)**

MILES	100'	200'	300'	400'	500'	600'	700'	800'	900'	1000'
44	14.4	17.2	18.4	19.7	21.0	21.9	22.8	23.7	24.6	25.5
45	14.0	16.8	18.1	19.4	20.7	21.6	22.5	23.4	24.3	25.2
46	13.6	16.1	17.4	18.7	20.0	20.9	21.8	22.7	23.6	24.5
47	13.3	15.4	16.6	17.7	18.9	19.8	20.7	21.6	22.5	23.5
48	13.0	15.4	16.6	17.7	18.9	19.8	20.7	21.6	22.5	23.5
49	12.6	15.0	16.3	17.5	18.7	19.5	20.3	21.1	21.9	22.8
50	12.3	14.7	15.9	17.0	18.2	19.0	19.9	20.7	21.6	22.4
51	11.9	14.4	15.5	16.7	17.8	18.6	19.4	20.2	20.9	21.7
52	11.5	14.0	15.0	16.1	17.2	18.0	18.8	19.7	20.5	21.3
53	11.2	13.5	14.6	15.7	16.8	17.6	18.5	19.3	20.2	21.0
54	10.9	13.0	14.1	15.3	16.5	17.2	18.0	18.8	19.5	20.3
55	10.5	12.6	13.6	14.7	15.7	16.6	17.4	18.3	19.1	20.0
56	10.1	12.4	13.4	14.4	15.4	16.2	17.0	17.8	18.6	19.4
57	9.8	11.9	13.0	14.0	15.0	15.8	16.6	17.4	18.1	18.9
58	9.5	11.5	12.6	13.6	14.7	15.5	16.2	17.0	17.8	18.5
59	9.1	11.2	12.3	13.3	14.4	15.1	15.9	16.7	17.4	18.2
60	8.8	10.9	11.9	13.0	14.0	14.8	15.5	16.3	17.1	17.8
61	8.4	10.5	11.4	12.4	13.3	14.1	14.8	15.6	16.4	17.2
62	8.0	10.1	11.1	12.0	13.0	13.6	14.4	15.0	15.8	16.5
63	7.7	9.8	10.7	11.7	12.6	13.3	14.0	14.7	15.4	16.1
64	7.4	9.5	10.4	11.3	12.3	13.0	13.6	14.4	15.0	15.7
65	7.0	9.1	10.0	11.0	11.9	12.6	13.3	14.0	14.7	15.4
66	6.6	8.8	9.7	10.6	11.5	12.2	13.0	13.6	14.4	15.0
67	6.3	8.4	9.3	10.3	11.2	11.9	12.6	13.3	14.0	14.7
68	5.9	8.0	9.0	9.9	10.9	11.5	12.3	13.0	13.7	14.4
69	5.6	7.7	8.6	9.6	10.5	11.2	11.9	12.6	13.3	14.0
70	5.3	7.4	8.3	9.2	10.1	10.8	11.5	12.2	13.0	13.6

**REFERENCE:**

**BASE ON 50% OF THE SIGNALS FALLING INTO THE CHARTED SIGNAL LEVELS 10% OF THE TIME AT THE DISTANCES LISTED.**

**APPENDIX VI - ADJACENT REGION CONCURRENCE**

*(Copies of concurrence letters are available through the ARRC)*

**APPENDIX VII - CELLULAR NOTIFICATIONS**

*(Copies of concurrence letters are available through the ARRC)*

**APPENDIX VIII - INTERAGENCY RADIO SYSTEM PLAN**

**ARIZONA PUBLIC SAFETY STATEWIDE NETWORK INTER-AGENCY RADIO SYSTEM  
STATE PLAN**

January 1996

**A. PURPOSE**

The Arizona Inter-Agency Radio System (IARS) is designed to provide a supplemental communications capability to police, and other personnel of municipal, county, state, or federal agencies performing public safety activities. The system assists agencies requiring a radio contact with another agency's unit concerning a public safety activity in which the nature of the emergency or activity dictates that the use of regular radio channels would not adequately provide the communications capability necessary to successfully complete the operation. Matters relating to life threatening situations will have priority in the use of this system. Agencies participating in IARS shall render a communications service to itinerant law enforcement vehicles and other public safety users having emergency communications needs. This system operates on designated Police Channel frequencies.

The Arizona Chapter of the Associated Public Safety Communications Officials (A.P.C.O.) shall serve as the state plan governing entity.

**B. ELIGIBILITY FOR PARTICIPATION**

1. Public Safety Emergency response agencies, utilizing mobile and portable two-way radios, operated by personnel actively engaged in these related activities, are eligible to apply for operating authority.
2. Requests for permission to utilize the frequency shall be submitted in writing to the AZ APCO IARS Committee. Only police agencies are permitted to license and operate base/mobile relay stations on the IARS frequency.
3. Non-police public safety agencies may also apply to the AZ APCO IARS committee for operating permission. The application shall include justification for use of the frequency and a letter from a sponsoring police agency that is authorizing the applicant to operate under that (sponsoring) agency's police mobile license.
4. Each participating police agency shall be responsible for maintaining the mobile radio FCC license for operation on the appropriate IARS frequency. Each sponsoring police agency also shall maintain current records of other public safety agencies authorized to operate under that sponsoring agency's FCC mobile license.
5. By federal statute, Federal agencies are required to obtain permission to use the IARS frequencies through the National Telecommunication and Information Administration, unless a supporting agency provides all the mobile radios for the

federal agency's use.

6. In any instance where eligibility is questioned, the AZ APCO IARS Committee shall make the final determination.

**C. TERMINATION**

1. Any participant desiring to withdraw from the IARS operation is requested to notify the AZ APCO IARS Committee.
2. The expiration of the participant's FCC license for the frequency will automatically revoke operating permission.
3. Any negligent, willful, or continued misuse of the emergency frequency will result in a recommendation from the AZ APCO IARS Committee for revocation of the operating authority granted by the FCC, or the sponsoring police agency.

**D. DEFINITIONS**

**AZ APCO** AZ Chapter of the Associated Public-Safety Communications Officials, Inc.

**CTCSS** Continuous Tone Coded Sub-audible Squelch: PL, CG, Etc.

**FCC** Federal Communications Commission

**IARS** Inter-Agency Radio System

**IARS UHF** Mobile receive 460.375 MHz 100 Hz currently supported.  
Mobile transmit 465.375 MHz 100 Hz currently supported.  
This police frequency chosen in Arizona for system use.  
\*\* CTCSS requirements see below.

**IARS VHF** Mobile receive 155.475 MHz no PL required.  
Mobile transmit 155.475 MHz no PL required \*\*  
This frequency is designated by the FCC as the National Police Emergency Channel.

\*\* CTCSS will be added to protect base stations from interference. A tone frequency of 156.7 Hz (as used in the 800 MHz national plan) is the currently chosen tone frequency for VHF, the UHF channel will continue to utilize the current 100 Hz tone frequency. A second CTCSS tone may be added for system/site selection. Mobiles will be required to transmit the CTCSS but will operate carrier squelch on receive. VHF base stations will then no longer transmit a CTCSS to protect other base stations from interference.

**Simplex:** Transmit and receive on the same frequency, i.e., 155.475 MHz.  
**Duplex:** Allow for repeater operation, i.e., 465.375/460.375 MHz.

**Operation Control:** Mobile unit requesting interagency radio operation.

**Sponsoring Agency:** A police agency which authorizes another public safety agency to operate under their FCC police mobile radio license for the purposes of emergency communications on the IARS channels.

**Support Control:** Designated agency controlling a system base/mobile relay station. Usually the County's Sheriffs Office, or, in special cases, the largest participating law enforcement agency in the area.

**Base Station:** A fixed station, which communicates with mobile units on IARS, channels, usually with high power and high elevation for wide area coverage.

**Mobile Relay Station:** A base station authorized to retransmit automatically on the IARS channels.

**Control Station:** A fixed station whose transmissions are used to control the emissions or operation of an IARS base/mobile relay station.

**E. MONITORING**

Each support control agency shall monitor the IARS channel(s) at all times. The monitoring system should have a range comparable to that of the agency's own mobile-to-base radio receiver.

**F. DISCIPLINE**

In order to assure the availability of the channel in times of emergency, strict discipline **MUST BE MAINTAINED**. This can be accomplished by: 1) good operating procedures, and 2) adherence to FCC rules and the rules of the IARS Committee as herein stated or hereafter amended.

**G. CHANNEL USE**

1. Channel Use Priorities

The established priority use levels for the system are described below. When a higher priority of use is required, all lower priority use must cease in ANY area where interference could occur.

The four priority levels are:

- PRIORITY 1: Disaster and extreme emergency operations of large scale; for mutual aid and interagency communications.
- PRIORITY 2: Emergency or urgent operations involving imminent safety of life or property.
- PRIORITY 3: Special event control activities, generally of a pre-planned nature, and generally involving joint participation of two or more agencies.
- PRIORITY 4: Drill, maintenance, and test exercises of a civil defense or disaster nature.

2. SUMMARY

Generally, any action requiring **emergency communications coordination** between mobile units that the individual agency's regular radio facilities could not adequately provide is acceptable traffic. **SELF-DISCIPLINE AND SELF-POLICING BY THE PARTICIPANTS SHOULD SUFFICIENTLY CONTROL THE SYSTEM SO THAT IT WILL BE AVAILABLE IN TIMES OF EMERGENCY.**

3. CALLING/NOTIFICATION PROCEDURES

- a. The call-up message should contain sufficient information to enable the monitoring unit or agency that is in the best position to provide assistance, to respond.
- b. Use plain language on the IARS channel(s).
- c. If a response is not immediately received to the initial call, repeat the message. This would allow a monitoring agency to alert one of its units that may be in a near-by location. Also, if the call-up were by an itinerant reporting an accident, or other incident requiring action by the local agency, the monitoring agency would dispatch the necessary assistance.
- d. Methods of notification and coordination between agencies may be accomplished by the use of any of the following methods:

- I. Direct telephone "hotline" between agencies.
- II. Public Telephone Switched Network.
- III. Arizona Law Enforcement Telecommunications System.

Under normal conditions, the unit initiating the request for interagency assistance shall assume operational control at the scene, and the local support control agency shall assume support control. Should the initial unit become unable to continue operational control, the control will then pass to the support control agency that will designate the new operational control unit.

- e. When all communications relative to the particular operation have been completed, the station call sign and time of day shall be announced. This identifies the licensee, as required by FCC rules, and also indicates end of transmission.

**APPENDIX A****OPERATIONAL GUIDELINES****FREQUENCIES**

IARS operates on VHF, 155.475 MHz, as designated by the FCC as the Nationwide Police Emergency frequency. UHF operation is on 460.375/465.375 MHz, the frequency pair designated by the AZ IARS Committee and the Arizona APCO Frequency Advisory Committee, and licensed by FCC, assigned in Arizona for that use. Most of the transmitter sites have the provision to cross-patch the VHF and UHF radios for cross-band operation. The UHF mobile relay station also supports car-to-car repeat through the selected site. In general, this crosspatch and repeat function is automatic upon receipt of a signal from a mobile or control station. Operation on VHF and UHF is complemented by the Inter-Agency channel operation designated in the Arizona Regional 800 MHz Plan. Agencies with 800 MHz systems may support cross-band operation through console crosspatch options.

**OPERATIONS**

A mobile unit calling with emergency traffic should use one of the following sequence examples. NOTE: All broadcasts will be in plain language only. (No Ten-code etc, i.e. DCSO is CODE 10-23?).

- a. Mobile-to-mobile: Any M.C.S.O. unit, El Mirage 4, in pursuit northbound on U.S. 60, approaching the Morristown overpass, armed robbery suspects, white over blue '75 Chevy, 3 occupants, shots fired.
- b. Mobile-to-base station: M.C.S.O. radio, Buckeye 12 (wait for acknowledgment) 2-vehicle accident with injuries, need DPS, an ambulance and traffic control.
- c. Mobile-to-base station: Roswell, New Mexico PD 6, (wait for acknowledgment), we are westbound on I-10 at the county line, en route to M.C.S.O. jail with three prisoners, will advise when clear.

**APPENDIX B****OPERATIONAL FACILITIES**

April 1993

COUNTY	SITE	MONITORED BY	COMMENTS
Apache	Greens Peak	Navajo S.O.	
Cochise	Mule Mtn.	Cochise S.O.	backup at Tucson DPS
Coconino	Mt. Elden Bill Williams Mtn.	Coconino S.O. Coconino S.O.	
Gila	none		
Graham	Heliograph Peak		backup at UofA P.D.
Greenlee	Guthrie Peak		backup at Tucson DPS
La Paz	none		
Maricopa	South Mountain White Tanks Mtn Thompson Peak Towers Mtn	Maricopa S.O. Maricopa S.O. Maricopa S.O. Maricopa S.O.	part of MCSO system part of MCSO system part of MCSO system part of MCSO system
Mohave	Hualapai Mtn	Mohave S.O.	
Navajo	Greens Peak	Navajo S.O.	
Pima	none		
Pinal	none		
Santa Cruz	Nogales Hill	Santa Cruz S.O.	backup at Tucson DPS
Yavapai	Towers Mtn	Maricopa S.O.	part of MCSO system
Yuma	Telegraph Pass Oatman Mtn. Childs Mtn.	Yuma S.O. Yuma S.O. Yuma S.O.	