

Regional Plan For the Public Safety 700 MHz Band Region 35 (Oregon)



Version 10
December 15, 2009

Plan Drafting Versions

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1	May 6 th , 2003	Based on National Template. Added By-laws and committee positions contact information.
2	June 23 rd , 2005	Joe Kuran assemble all meeting minutes and notes into one document
3	Sept 16 th , 2008	Joe Kuran revived plan and removed wide band reference.
4	January 29, 2009	Technical Committee of the 700 MHz RPC revision of Section 8
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7	April 21, 2009	Accept changes from previous versions. Reformat and Proof entire document, separate Appendices into separate document. Edit sections 6.2, 6.7, 6.8, 8. Remove references to CAPRAD pre-pack.
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1 SCOPE

The Region 35 700 MHz Regional Plan initially includes the following elements:

- 1) Region 35 is defined as the entire State of Oregon.
- 2) The broad classifications of entities eligible to apply for spectrum are defined in accordance with National Coordination Committee's (NCC) definitions.
- 3) Good faith attempts were made to contact all eligible agencies in order to assure their ability to participate in development and management of the Plan. These attempts are documented and attached as **Appendix A**.
- 4) The Regional Planning Committee worked with the Oregon SIEC to set Oregon's policies for the authorities and responsibilities of the Regional Planning Committee.
- 5) The Planning Committee worked with the Oregon SIEC to set up the methodology for the initial spectrum allocation.
- 6) The Planning Committee agreed on how the application process will be administered. This application process includes guidelines for spectrum use, application requirements, and the application review process and appeal/dispute resolution.
- 7) The Plan includes guidelines for future revisions and amendments of the Plan.

The statewide frequency allotment in this plan was developed by members of the Planning Committee. Once the FCC approves the Region 35 Plan, the allocation will be uploaded into the Computer Assisted Pre-Coordination Resource and Database (CAPRAD) database for Oregon's and adjacent states' actual allocation

Interoperability guidelines and usage must be in accordance with the requirements of the State Interoperability Executive Committee (SIEC). In the event of a conflict between the interoperability rules for National Calling and Tactical channels in this plan and Oregon SIEC guidelines, the SIEC guidelines will prevail.

1.1 INTRODUCTION TO THE REGION 35 REGIONAL PLANNING COMMITTEE

In order to help alleviate major wireless radio congestion, the Federal Communication Commission (FCC) released 60 MHz of television broadcast spectrum - channels 60-69 (746-805 MHz) for use by land mobile radios. In addition to alleviating the congestion for wireless radio systems, the FCC also hoped to provide public safety access to new technologies that may require additional use of bandwidth, and promote interoperability. To accomplish these goals, the FCC originally allocated 24 MHz of this spectrum with 12 MHz for narrowband voice and data applications and 12 MHz for broadband data applications. Subsequently, the FCC reallocated the 12 MHz of broadband spectrum to a single nationwide licensee to develop a nationwide broadband system on behalf of public safety. The remaining 12 MHz of narrowband voice and data paired spectrum is divided as follows:

Within the 12 MHz of paired spectrum (6 MHz of operational channels) for public safety, the following is a breakdown of how channels can be used:

- 475 kHz for interoperability
- 4 MHz for general use
- 1.2 MHz for state use
- 325 kHz reserved for future FCC allocation

The Region 35 (Oregon) Regional Planning Committee (RPC) is tasked with the administration and management of the 4 MHz of general use spectrum. The State of Oregon has a Statewide Interoperability Executive Council (Oregon SIEC), which is tasked with development of statewide interoperability policy and with developing a strategy for Oregon agencies to coordinate public safety communications in Oregon. The Oregon Wireless Interoperability Network (OWIN), currently housed in the Oregon Department of State Police is the agency responsible for setting policy and the administration of the state use spectrum. The PSST (Public Safety Spectrum Trust) will be responsible for licensing the 10 MHz of broadband spectrum.

1.2 REGION 35 700 MHZ RPC MISSION STATEMENT

- Through cooperation, and collaborative effort, develop a PLAN for the implementation of the 700 MHz Public Safety General Use Radio Band in the State of Oregon.
- Ensure that radio spectrum is available in order to facilitate the Oregon SIEC interoperability strategy between all public safety agencies and related support agencies in Oregon.
- Establish responsible management of the PLAN into the future.

1.3 GENERAL DESCRIPTION OF REGION 35 (OREGON)

The State of Oregon is a single planning region (Region 35) for both the 700 MHz and 800 MHz public safety bands. Region 35 is bordered by Washington (Region 43) on the North, the Pacific Ocean on the West, the State of Idaho (Region 12) to the East, the State of Nevada (Region 27), and Northern California (Region 6) to the South.

The Cascade Mountains divide the state into western and eastern halves of the state that have uniquely different topographies, population distributions, economic conditions and climates. While much of the state is composed of wilderness or rural areas, there are significant areas of urban and sub-urban development as well. Most of these urban and sub-urban areas are in the western portion of the state, and the most significant of these is in the Portland Metropolitan Area. Smaller urban communities, including Salem, Eugene, Medford, Grants

Pass and Ashland dot the Interstate 5 corridor down to the California border. Oregon has thirty-six counties.

Portland (Multnomah County) is the largest city in this region and along with the cities of Beaverton (Washington County), Gresham (Multnomah County) and Vancouver (Clark County, Washington State) makes up a metropolitan area that is the most significant economic engine in the state. The three county area (Clackamas, Multnomah, and Washington) includes over 42% of the current state population.

The eastern/central portion of the state is significantly more rural and agricultural in character than the western side of the state. The largest urban area in Central/Eastern Oregon is anchored by the city of Bend (Deschutes County).

2 REGIONAL PLANNING COMMITTEE LEADERSHIP

A board of elected officers leads the RPC. Elections are held in accordance with the RPC Bylaws.

2.1 OFFICERS (ELECTED 11-20-08)

Chair

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2.2 RPC STRUCTURE

The RPC has adopted bylaws that govern its operation, meeting schedule and membership. Officer requirements, voting procedures and membership attendance requirements are listed in the Region 35 Planning Committee bylaws. **Appendix B** contains the Region 35 bylaws.

From time to time, as described in the RPC By-Laws, officer positions will be subject to re-election. At any such time that one of these four positions is vacated and then refilled, the Chair will be responsible for taking the following actions:

- Providing notice to the FCC of the changes
- Providing notice to the NPSTC Support Office of the changes
- Modifying the Region 35 web site (www.region-35.org) to reflect the changes.

Such changes will not be considered Plan modifications, and will not require that this Plan be reissued to the FCC for public notice and comment cycles.

2.3 RPC MEMBERSHIP

Non-voting membership in the Region 35 Regional Planning Committee is open to any interested party. To become a voting member, a party must represent an eligible Oregon public safety or public service organization. Voting member eligibility is described in the bylaws. **Appendix C** lists the most recent roster of members. Voting and operating procedures are described in the by-laws.

3 REGIONAL PROFILE

Oregon covers 98,386 square miles, making it the 9th largest of the 50 states. The highest point in Oregon is Mount Hood, at 11,239 feet above sea level and the lowest point is sea level where Oregon meets the Pacific Ocean. The Mean Elevation of Oregon is 3,300 feet above sea level.

Oregon is known for its forests where about 1/10 of the nation's timber resides. In fact, Oregon is the leading provider of lumber in the United States.

Oregon's geography can be divided into six areas; the Coast Range, the Willamette Lowland, the Cascade Mountains, the Klamath Mountains, the Columbia Plateau, and the Basin and Range Region.

The **Coast Range** runs from north to south along the Pacific Ocean. Much of these low mountain ranges are forested with evergreens such as Spruce, Fir, and Hemlock. The average mountaintop in the Coast Range rises less than 2,000 feet above sea level, though Mary's Peak, southwest of Corvallis, Oregon, reaches 4,097 feet above sea level. Along the coast, cliffs rise almost 1,000 feet high over the Pacific Ocean. The Triangle Lake Valley was a very ancient lake. Many small coastal lakes are scattered throughout the Coast Range.

The **Willamette Lowlands** are a narrow strip of land to the east of the Coast Range along the Willamette River. The Willamette River flows north into the Columbia River. The soil is rich in the Willamette Lowlands and the climate is mild.

To the east of the Willamette Lowlands, the **Cascade Mountains** rise to 11,239 feet above sea level (Mount Hood). The Cascade Mountains provide a rugged landscape where many of the nation's highest peaks can be found. Mount Hood is the highest point in Oregon. Other high peaks include Mt. Jefferson at 10,497 feet above sea level, Three Sisters, over 10,000 feet above sea level, and Mount McLoughlin, 9,495 feet high. Many lakes can be found in the Cascade Mountains. Crater Lake is the deepest lake in the United States. It's 1,932 feet deep!

In the southwest corner of Oregon are the **Klamath Mountains**. The Klamath Mountains are covered by dense forests.

Covering most of eastern Oregon and extending into Idaho and Washington is the **Columbia Plateau**. Thousands of years ago, the Columbia Plateau was formed by lava flowing from cracks in the earth's crust. Oregon's Wheat farms are found on the Columbia Plateau. Much of the Columbia Plateau is quite rugged, however, and mountains such as the Blue Mountains and the Wallowa Mountains rise in the northeast. On the Oregon/Idaho border the Snake River has cut Hells Canyon deep into the earth. The average depth of this gorge, located between the Wallowa Mountains and the Seven Devils Mountains in Idaho, is 5,500 feet.

The **Basin and Range Region** covers a section of southeastern Oregon. The Basin and Range Region in Oregon is marked by high basins and a few steep mountains. Much of this region is semi desert.

The 2000 census placed the population of Oregon at 3,421,399 persons. Over 42% of this number resides in the three Portland Metropolitan area; including Clackamas, Multnomah, and Washington counties, as well as Clark County WA. The Portland Metropolitan area is immediately adjacent to the State of Washington and Clark County

Region 35 (State of Oregon) has four (4) adjacent regions. They are as follows:

- Northern California: Region 6
- Idaho: Region 12
- Nevada, Region: 27
- Washington: Region 43

In previous NPSPAC 821 MHz frequency allotments, spectrum amounts disproportionate to population densities were allocated due to differing methodologies used in adjacent NPSPAC Regions and the timing of adjacent regions plan approval. This resulted in what is today an inadequate number of channels available in the Portland Metropolitan area to meet the needs of public systems as population and the urban area expand.

Outside of the Portland Metropolitan Area, the 800 MHz spectrum is used in a countywide system in Oregon's Deschutes County and in the City of Salem in Marion County. A significant concern is the availability of 700 MHz and 800 MHz frequencies to support the statewide OWIN trunked radio system. Current estimates suggest upwards of 250 communications sites in all thirty-six counties with an average density of 10 talk paths per site.

In the 700 MHz band, county-like-region allotments have been developed based on the Portland Metropolitan Area's requirements, the OWIN statewide trunked radio system, and the population estimates of the counties and the major county-cities throughout Oregon. In all cases, the first step in Region 35's allotment process was to first protect all adjacent Regions. The allotment also recognizes the presence of existing regional efforts at joint-use regional systems. In promoting the spectral efficient use of simulcast, allotments include multiple county-like-regions where frequencies will be used in adjacent counties.

Region 35 defines a county-like-region as either a single Oregon county with an extension outside the boundary of that county by fifteen miles, or a grouping of adjacent Oregon counties that the collective boundary extends fifteen miles outside of those counties aggregated boundaries. This fifteen mile extension of a county's boundaries does not apply to boundaries that abut adjacent states.

3.1 ESTABLISHED MUTUAL AID SYSTEMS

There are a significant number of established Interoperability systems standards and policies in place within the State of Oregon. The listing below is relatively complete and provides users of this Plan information about non-700 MHz interoperability opportunities in the Region.

- **(OPEN)** – 155.475 MHz is a national law enforcement frequency available for use in police emergency communications networks operated under statewide law enforcement emergency communication plans.
- **STATE FIRE NET**- 154.280 MHz, is managed by the Oregon State Fire Marshall. Authorization to use STATE FIRE NET must be requested through the Fire Marshall. This is a nationwide, FCC designated mutual aid channel, which can be used by fire districts and departments for command, control, and coordination at the scene of an incident.
- **OREGON EMERGENCY MANAGEMENT (OEM) MANAGES SEARCH AND RESCUE (SAR) – 155.805 MHZ.** Authorization to use SAR must be requested through OEM. This is a mutual aid channel to be used only when conducting search and rescue operations using only mobiles and portables.
- **NPSPAC 800 MHz Interoperability Channels** – In addition to the nationally adopted 8CALL90 and 8TAC channels in the NPSPAC band, Region 35 further identified a set of five (5) channels that could be used for on-scene tactical purposes in a simplex mode or on temporary low-power repeaters for significant events. The Plan further identifies operational practices to be followed in using both the national channels and these regional channels. Full details should be read in the Region 35 NPSPAC plan, which can be found in the 800 MHz section of (www.region-35.org).

National Calling Channel (8CALL90):	806/851.0125 MHz
National Working Channel (8TAC91):	806/851.5125 MHz
National Working Channel (8TAC92):	807/852.0125 MHz
National Working Channel (8TAC93):	807/852.5125 MHz
National Working Channel (8TAC94):	808/853.0125 MHz

Note 1: The 8CALL90 channel shall be used to contact other users in the Region for the purpose of requesting incident related information and assistance. If necessary, the calling party will be asked to move to one of the 8TAC channels for continuing incident operations or other interoperability communication needs. This channel can be implemented in full repeat mode.

Note 2: The TAC channels are to be used primarily for coordination activity between different agencies in a mutual aid situation, or emergency activities of a single agency. Incidents

requiring multi-agency participation will be coordinated over these channels by the agency controlling the incident. These channels can be implemented in full repeat mode.

- **Region 35's Tactical Channels** are identified with intended primary uses but all channels are available for all public safety functions if incident conditions warrant.

OROPS-1 – Oregon Tactical	806/851.3250 MHz
OROPS-2 – Oregon Tactical	806/851.3875 MHz
OROPS-3 – Oregon Tactical	806/851.7500 MHz
OROPS-4 – Oregon Tactical	806/851.7750 MHz
OROPS-5 -- Oregon Tactical	806/851.8000 MHz

- **MEDNET** - The UHF MEDCOM channels are in use across Oregon State to support hospital to hospital, EMS medical control and aero medical communications, in addition to itinerant EMS operations. Systems implemented in the 700 MHz band should consider including these unique requirements into their system designs, and where possible provide cross patching to locally implement MED channels to meet these interoperability needs within their region.
- **Hospital Emergency Administrative Radio (HEAR)** – 155.340 and 155.280 MHz are common channels used by hospitals for communication with ambulance services for medical control. This channel can be used while at the scene or en route to the emergency medical facility. Licensing for use of this channel is requested through the FCC.

3.2 THE OREGON STATEWIDE INTEROPERABILITY EXECUTIVE COUNCIL (SIEC)

The Oregon Statewide Interoperability Executive Council (SIEC), was originally created in 2002 by Governor’s Executive Order 02-17. Subsequently the Oregon Legislature passed HB 2101, which creates the Oregon SIEC within the Oregon Emergency Management Department. (see **Appendix D** for the full text of the statute.) The SIEC is charged with improving and developing interoperable public safety communication systems in Oregon. Through the Governor, its advisory recommendations will form public safety communication policy in Oregon.

The 17 voting members of the SIEC represent a unique partnership of state and local public safety organizations that have a strong interest in the creation and operation of public safety communication systems. These partners are working hard to deliver tangible results because they understand that weaknesses in the current communication systems compromise their individual and collective ability to protect the public, and they are committed to solving Oregon’s interoperability problems.

The SIEC involves counties, cities, special districts, fire and law enforcement associations, 9-1-1 public safety telecommunications groups, state agencies, the Governor's Public Safety Advisor, and other public participants who are working together to create a blueprint for future communications coordination within Oregon. It is the ability of these different groups to work together that will allow the full and successful development of wireless radio interoperability in Oregon.

3.2.1 SIEC PURPOSE

The purposes of the SIEC are detailed in Oregon HB 2101 included as **Appendix D**.

The SIEC has completed the "Oregon Statewide Interoperable Communications Plan (SCIP)", "Short Term Interoperability Guidelines", and "Short-Term Physical Plant Guidelines".

The State of Oregon provides a SIEC web site where the above referenced documents and other SIEC information are maintained. (www.oregon.gov/SIEC/index.shtml).

3.2.2 SIEC ROLE IN REGIONAL PLAN

The SIEC may provide guidance to the RPC in matters of interoperability policy for statewide interoperability.

3.3 ANTICIPATED IMPACT OF ADDING 700 MHZ INTEROPERABILITY CHANNELS

Without question, many areas within Region 35 have a need for additional spectrum to meet their operational needs. We expect several areas, particularly the heavily populated Portland metro area, to make extensive use of this band as new or expanded systems are brought on line to meet pent-up demand. Moreover, current State system design indicates that the statewide OWIN trunked radio system and an OWIN statewide moderate speed mobile shared mobile data system will utilize the 700-800 MHz bands. The OWIN network will require some general use frequencies in addition to the State use frequencies to provide the capacity and coverage necessary for the OWIN effort. In many smaller communities, however, the addition of new systems in the new 700 MHz frequency band will likely add to overall interoperability challenges rather than lessen them. This added complexity is the result of the mandate for digital transmission in the 700 MHz band and the high number of small VHF systems throughout rural Oregon that bring many more interoperability challenges when 700 MHz systems are interleaved into this VHF analog legacy world. We expect that very few rural VHF systems will be replaced by 700 MHz systems; in many areas we expect to see 700 MHz systems added to the mix of communications options available in the area.

Therefore, it will be extremely important as new 700 MHz systems are planned and deployed, that the sponsors of those systems are well informed of other legacy systems in all other bands that are operating in their area, or in locations where they may be called upon to render mutual aid assistance. Since, for the foreseeable future, public safety communicators are likely to employ systems operating in all available public safety bands using dissimilar technology, only good collaboration, open inter-agency communication and good system planning will allow us to sustain reasonable levels of interoperability in an ever more complex environment.

It is important to note that the OWIN Project includes a statewide implementation of 150 MHz, 450 MHz, and 800 MHz nationwide interoperability channels throughout Oregon. In conjunction with an OWIN statewide internet protocol network, these interoperability channels will offer access points into a system of patching between operational and interoperability channels. OWIN expects that this interoperability system will achieve better than 50% geographic coverage and better than 80% population coverage in Oregon.

For the 700 MHz band, new systems will be expected to incorporate appropriate interoperability into their plans and designs, instead of expecting legacy systems to figure out how to operate with the newcomers. It is not enough for the new systems to meet the interoperability requirements within the Plan for that band (700 MHz or 800 MHz); they also need to provide mechanisms to interoperate with VHF and UHF users to a level that is appropriate for their operations.

Typically this is accomplished through some mix of fixed infrastructure or transportable equipment that can accomplish cross-band and cross-system patches. These approaches have proven to be effective in meeting interoperability needs within this region and across the country, and this Plan anticipates further deployment of these technologies as systems are implemented in the 700 MHz band.

The Oregon SIEC is the primary policy body addressing these cross-band interoperability issues. The 700 MHz RPC is actively involved in assisting and advising on interoperability issues, and works collaboratively with the SIEC technical committee, partnership committee and strategic planning committee.

3.4 OVERVIEW OF PUBLIC SAFETY ENTITIES IN THE REGION

The following is a brief description of the most predominant entities in the Region that will need to be accommodated by this Plan.

3.4.1 FEDERAL AGENCIES

The Region has the typical presence of federal public safety agencies. There is also some limited military presence in the Region. Due to the significant amount of state and federal forestlands and national parks in the Region, there is also a significant amount of interaction between state and local fire agencies and the various federal agencies involved in fire suppression activities. There is a federal Integrated Wireless Network (IWN) multiagency, shared law enforcement digital trunked radio system along the length of Oregon's Interstate 5 highway.

3.4.2 STATE AGENCIES

The Oregon State Police, Oregon Department of Transportation, Department of Corrections, and the Oregon Department of Forestry all play significant roles in providing public safety services. Additional state agencies have roles in providing public safety services to residents of the State of Oregon. The Emergency Management Division of the Military Department is responsible for providing statewide coordination of resources during extreme emergency or disaster conditions. The State of Oregon has established the Oregon Wireless Interoperability Network (OWIN) project to consolidate State communications into one system. OWIN is also planning and implementing a statewide interoperability layer of the OWIN system. This interoperability system will incorporate nationwide interoperability channels in the 150, 450, 700, and 800 MHz bands.

3.4.3 COUNTY AGENCIES

The most significant public safety function of each county is its Sheriff's Office. County Sheriffs are directly elected public officials in all 36 counties, and are generally responsible for law enforcement in the unincorporated areas of the counties and in some incorporated cities under contracted services arrangements. Counties are also responsible for operating public health programs and some extend this into providing basic and advanced life support services directly to the public.

There is also the normal array of other governmental services offered by counties that contribute to the public safety, including the operation of public works and roads agencies, surface water management functions, water systems, sewage and sewage treatment systems, bus and transportation systems, etc.

3.4.4 CITY AGENCIES

The police department is the most common public safety service provided by incorporated cities. Many cities also operate a fire department and typically these fire departments offer basic life support (and occasionally advanced life support) EMS services. Some cities have not formed fire departments and instead receive fire protection from fire protection districts

that often pre-date the formation of the city and have larger jurisdictional boundaries than the cities. Cities also often provide services such as roads and public works functions.

3.4.5 SPECIAL PURPOSE DISTRICTS

There are a considerable number of special purpose districts in Oregon State. The most common of these are fire protection districts, school districts, water districts, transit districts and sewer districts, but there are also hospital districts, port districts, electric districts, etc. These special districts often have jurisdictional boundaries that are quite large and often surround one or more incorporated cities. They are typically led by a 3 to 5 member board of commissioners who are directly elected by the public in the district.

3.4.6 TRIBAL NATIONS

There are several federally recognized tribes in the state of Oregon. Historically, all federally recognized tribes in the United States have been considered sovereign in their own lands, maintaining a government-to-government relationship with federal and state governments. Tribes residing on reservations are eligible to receive benefits and services from the Bureau of Indian Affairs (BIA) and the Indian Health service (IHS), such as assistance with the development of tribal governments and courts, resource management, educational grants and programs, housing programs and medical and dental care. Most tribes maintain an independent government with a constitution and bylaws. Tribal Councils establish laws, enforce tribal ordinances and may elect a business committee to manage real property and other assets. Many maintain a reservation police force and a tribal court including a chief judge and associate justices.

3.4.7 E-911 AND PSAP'S

For supporting 9-1-1 services, the State of Oregon has established a fully enhanced system which allows the public safety answering points (PSAP) to know the address and location of the 9-1-1 caller when making a call through the local exchange telephone network. There are 50 primary and secondary PSAP's within the state. The state is also addressing the need for wireless 9-1-1 service. Wireless enhanced 911 services are broken down into Phase I and Phase II service. With Phase I service the call back number and cell sector is displayed in the PSAP for 911 calls. Phase II service provides the call back number and the latitude and longitude of the 911 caller.

In addition to providing 9-1-1 service, designated PSAP's also serve as National Warning System (NAWAS) warning points and Emergency Alert System (EAS) entry points.

4 REGIONAL PLAN ADMINISTRATION

4.1 OPERATIONS OF THE REGIONAL PLAN COMMITTEE

This Committee will use Robert's Rules of Order to conduct meetings. All decisions will be by clear consensus vote with each eligible voting member having one vote. The meetings are open to all persons and a public input time is given for anyone to express a viewpoint or to have input to the planning. Operations of the Regional Planning Committee are described in the Region 35 By-Laws (**Appendix B**).

4.2 INFORMATION AND NOTIFICATION PROCESS

The Region 35 regional planning process for the 700 MHz band was officially convened on January 16, 2002 in, Portland, Oregon. Joel Harrington, Chair of the Region 35 NPSPAC 800 MHz Regional Review Committee, served as the Convener. This meeting was properly noticed by the FCC under DA 00-2250 published on October 31, 2001.

Since the National Coordination Committee (NCC) action was still underway at that time, the RPC realized it would only be engaging in fact-finding and information building until final NCC action was completed and FCC rules established. Therefore, subsequent meetings of the RPC were announced via various mechanisms, but few were put on Notice to the FCC. Established emailing lists for the Region 35 800 MHz process were all advised of 700 MHz meetings, as were known interested parties such as the state APCO Chapter, Police and Fire Chiefs Associations, etc.

A web site was established for the region (www.region-35.org) and all meeting agendas and minutes were posted on that web site, as well as key resource documents and links to other web sites and web documents. Further, an information sheet was developed that was posted on the web site and provided to vendor representatives to distribute while making sales visits to customers throughout the state. All of this was done in an effort to raise awareness of the availability of the 700 MHz band and the existence of a regional planning process.

Today, the web site provides a tool on the home page that allows any interested party to sign up for a list server function. Every meeting announcement, resource documents, discussion threads and other information are circulated through this list for the broadest possible transfer of information. A listing of the list server members at the time this Plan was filed with the FCC for approval is provided in **Appendix E**.

Further efforts to increase awareness and visibility for the planning process included:

- Posting information and a web link on the web site of the Oregon Chapter of APCO (<http://www.oregonapconena.org>).
- Emailing the information flyer to the Oregon APCO list server as an attachment to an email message encouraging participation.
- Publishing notices of RPC meetings with the FCC (<http://wireless.fcc.gov/publicsafety/700MHz/regions/region35.html>).

- Sending these same notices to a broad distribution list including public safety and governmental associations across the state.

4.3 PROCEDURE FOR REQUESTING 700 MHZ SPECTRUM ALLOCATION

After plan approval, agencies desiring a spectrum allocation shall submit an application to the Chair of the Region 35 RPC in writing indicating their need for spectrum. The application will be considered, providing that harmful interference is not caused to existing users or incumbent broadcasters. The technical parameters to determine the extent of any possible interference are given in Section 5 of this Plan. Agencies will need to provide the Committee with a full justification for the requested spectrum. All applications will be considered on a first come, first served basis. To be considered the application must include the information detailed in Section 9.3 of this Plan.

When the Chair receives a request for spectrum, the request will be distributed to all parties on the listserv. Any disputes must be received within 30 calendar days. *Disputes will only be considered if an agency or the Chair can show harmful interference is likely based on the input submitted by the agency requesting the new allocation or if the allocation does not conform to plan criteria.*

If the parties cannot resolve the issues and so inform the Chair within 14 calendar days, then the dispute shall be resolved in accordance with the Regional Committee Appeal/Dispute Resolution Process as outlined in Section 13.5 herein. Absent a dispute, the allocation will be approved by the Chair and submitted to the FCC as a plan amendment.

4.4 PROCEDURE FOR FREQUENCY COORDINATION

The Region 35 Planning Committee will utilize and refer to the Region 35 Pre-Coordination 700 MHz Frequency Allotment. This Region 35 Pre-Coordination Allotment is contained in **Appendix F**. This pre-coordination allotment develops interference controlled, possible, channel “pre-coordination allotments” in each county-like region within Oregon, using criteria such as Oregon’s historical use of the 800 MHz band, current population, most current Census data, height above average terrain (HAAT) and historical Oregon public safety use to provide spectrally efficient frequency allotments. This pre-coordination frequency allotment considered the current heavy use of 800 MHz spectrum in the Portland Metropolitan area, and preplanned the additional heavy use of the 700 MHz band in the Metropolitan area. It also considered the addition of new 700/800 MHz systems for TriMet and the statewide OWIN system in the Portland Metropolitan area. This pre-loading of 700 MHz channels into the Portland Metropolitan area reflects the fact that over the past 20 years, there has been almost no use made of the 800 MHz band outside of the Portland Metropolitan area, the Salem area, Deschutes County and Benton County in Washington adjacent to the Oregon Counties of Gilliam, Morrow, and Umatilla.

The Region 35 Regional Planning Committee has the ability to accept recommendations and the authority to change the original frequency pre-coordination allotment to reflect subsequent actual need and actual systems' developments. Any changes to the regional pre-coordination allotments must be approved at a meeting of the full Regional Planning Committee. If approved, the Chair will file a Plan amendment indicating the approved changes with the FCC. If approved by the FCC, the changes will then be uploaded into the CAPRAD database for use by all frequency coordinators.

Applicants must submit their initial FCC application to the Regional Planning Committee so the committee can ensure the application complies with all elements of the regional plan. If approved, the Regional Planning Committee will make sufficient notification to the applicant's selected FCC certified Frequency Coordinators through the CAPRAD database. If applications are not in concurrence with the Regional Plan, the applicant must include all FCC rule waiver requests with their application package to the RPC. This process meets the requirements of Rule 90.176 (c).

To request channels from Region 35, the applicant must submit a copy of the FCC application to the RPC Chair for dissemination to the Region 35 Scoring Sub-Committee. The applicant must also submit an interference prediction map using the most recent version of TIA/EIA TSB 88 as the guideline. The map must show all that all required contours achieve the required separation and the system coverage limitations. If an application is objected to by an agency that holds co channel and/or adjacent channel license(s) or is within a similar pre-coordination allotment county-like-region that alleges interference, the applicant agency may provide an engineering study (conducted by or on behalf of) the applicant agency for review and approval or denial by the RPC. Additionally, the objecting agency may request documented field tests that are done to verify interference signal conformance or non-conformance with the required contour levels. If the objecting agency ultimately agrees, they shall issue a letter of concurrence to the applying agency. The final RPC authority will be the RPC whenever it is satisfied that the application is consistent with the required interference contour levels and with the requirements of the Regional Plan. In all cases, the FCC will be the final authority in approving applications.

Applicant agencies will need to fully document technical information, sites, tower heights, antenna height above ground level, area of coverage, transmitter ERP, along with any other technical information required for RPC sub-committee review and coordinator review. Applicant agencies are expected to construct systems with maximum signal levels in their coverage area and minimum signal levels in co-channel and adjacent channel user's coverage areas. Coverage area in the context of this plan will be defined as the geographical boundaries of agency(s) served by the system plus fifteen miles. The RPC realizes that radio signals don't stop at political borders. Our attempt is to maximize the use of the frequencies by packing as

many users as possible per channel while providing public safety grade of interference elimination.

4.5 ADJACENT REGION SPECTRUM ALLOCATION

Region 35 shares borders with Washington, Nevada, Idaho, and Northern California. Region 35 will coordinate channel allocations with all its bordering regions. This Plan requires adjacent state notification as well as FCC Certified Frequency Coordinator notification. The Region 35 RPC has very carefully included all adjacent regions' pre-coordination allotments into the Region 35 pre-coordination allotment.

Region 35 will provide data to the Association of Public Safety Communications Officials (APCO) Pre-coordination Data Base to assist with adjacent region coordination.

5 SYSTEM DESIGN/EFFICIENCY REQUIREMENTS

5.1 INTERFERENCE PROTECTION

The pre-coordination frequency allotment was based on an assumption that systems will be engineered on an interference-limited basis, not a noise floor-limited basis. Each allotment was based upon a minimum geographical separation of 75 miles to any other co-channel use. Agencies are expected to design their systems for maximum signal levels within their coverage area and minimum levels outside of their defined service area. Coverage area is normally the geographical boundaries of the Agency(s) served plus fifteen miles beyond the geographical boundary.

Systems should be designed to produce minimum signal strength of 40 dBu in the system coverage area while minimizing signal power out of the coverage area. TIA/EIA TSB88 (or latest version) will be used to determine harmful interference assuming 40 dBu, or greater, signal in all systems' coverage areas. This may require patterned antennas and extra sites compared to a design that assumes noise limited coverage.

5.2 ORPHANED CHANNELS

The General Use pool allotments within Region 35 have a channel allotment bandwidth of 25 kHz. These 25 kHz allotments have been characterized as "Technology Neutral" and flexible enough to accommodate multiple technologies utilizing multiple bandwidths. If agencies choose a technology that requires less than 25 kHz channel bandwidth for their system, there is the potential for residual, "orphaned channels" of 6.25 kHz or 12.5 kHz bandwidth immediately adjacent to the assigned channel within a given county area.

The Region 35 RPC encourages applicants to use both half of the 25 kHz channel. Using Project 25 digital technology and modern equipment the 12.5 kHz channels that are adjacent to each other may be used with as little as 2 miles of geographic separation. An orphan channel may be used at another location within the county-like region area where it was originally approved, if it meets co- and adjacent channel interference criteria. Region 35 will utilize **“county-like areas”** as guidelines for channel implementation with the area of Region 35. The definition of **“county-like area”** in this plan is the geographical/political boundaries of a given county, plus a distance of up to 15 miles outside of the county. These county-like areas may also be comprised of multiple counties and the 15 mile area outside of those multiple counties.

If the channel, or a portion of a channel, is being moved into a “county-like area” that is within 30 miles of an adjacent region, Region 35 will require concurrence from the affected region. By extending the “county-like area” by a designated distance, it is anticipated this will increase the possibility that orphaned channel remainders will still be able to be utilized within the “county-like area”, and reduce the potential for orphaned channels to lay dormant. All pre-coordination allotments and subsequent allocations will be documented on the CAPRAD database.

If the “orphaned channel” remainder does not meet co-channel and adjacent channel interference criteria by moving it within the “county-like area” as listed above, and it is determined by the region that the “orphaned channel” cannot be utilized in the region without exceeding the distance described in the “county-like area” listed above, Region 35 will submit a plan amendment to the FCC to repack the channel to a location where its potential use will maintain maximum spectral efficiency. This FCC plan amendment will require affected region concurrence.

When in the best interest of public safety communications and efficient spectrum use within the Region, the Region 35 Regional Planning Committee shall have the authority to move orphan channel allotments, and/or co-/adjacent-channel allotments affected by the movement of orphan channels, within its “county-like areas”, which are defined above. This is to retain spectrum efficiency and/or minimize co-channel or adjacent channel interference between existing allocations within the region utilizing disparate bandwidths and technologies.

6 700 MHZ TACTICAL MUTUAL AID AND INTEROPERABILITY

6.1 INTRODUCTION

The ability of agencies to effectively respond to mutual aid requests directly depends on their ability to communicate with each other. The state of Oregon is subject to natural disasters such as the geological activity at numerous still active Cascade Mountain range volcano

locations, Tsunamis, on shore and off shore earthquakes, and wild land fires, and mutual aid is common among agencies. This plan seeks to facilitate the communications necessary for effective mutual aid.

The state of Oregon will administer the 700 MHz Interoperability (I/O) channels via its SIEC under National Coordination Committee's (NCC) guidelines.

6.2 GUIDELINE FOR INTEROPERABILITY CHANNELS

In order to obtain 700 MHz channels, all agencies requesting General Use spectrum from this Plan will be required to implement the Interoperability Channels' Plan adopted by the Oregon SIEC. Policies for implementation of interoperability channels will be set by the Oregon SIEC.

7 ADDITIONAL SPECTRUM SET ASIDE FOR INTEROPERABILITY IN THE REGION

No additional I/O channels are defined at this time within Region 35. Should the RPC reallocate general use channels for I/O use in the future, these additional I/O channels will comply with the same policies as the nationally defined I/O channels and Section 6 of this Plan.

8 ALLOCATION OF NARROWBAND "GENERAL USE" SPECTRUM

8.1 INTRODUCTION

The FCC adopted channel plan for the 700 MHz public safety spectrum is shown in **Appendix G**. The largest portion of this spectrum is characterized as general use. The initial allotment of general use narrowband spectrum in Region 35 (**See Appendix F**; "Region 35 Frequency Allotment Plan") was done on a county-area basis and takes into consideration county-area population, the OWIN trunked radio and interoperability system design, and hypothetical spectrum coverage predictions. This packing has also been done with coordination with neighboring Region 12 (Idaho), Region 6 (Northern California), Region 27 (Nevada) and Region 43 (Washington). However, this allotment is only a starting point for the initial licensing application windows, and it is acknowledged by the RPC that the desired allotments may change as the band becomes more populated over time.

As applications by eligible licensees (as defined by Part 90 rules) are made to the RPC, it will assign specific channels based on the most efficient spectrum utilization possible and as further described in other sections of this document. All such assignments will be maintained in the CAPRAD database and that is the only database neighboring regions and frequency coordinators should use to determine channel utilization in Region 35.

8.2 NARROWBAND SPECTRUM USE

The Region 35 Technical Sub-Committee recommends that allotments be made on the basis of one 25 KHz channel for every two (2) voice channel requests and one 12.5 KHz channel for each narrowband data channel request. This recommendation is approved by the full Committee and is part of this plan. Allotments will be made in 25 KHz groups to allow for various digital technologies to be implemented. All eligible agencies requesting spectrum will be allocated channels, providing channels are available, if plan requirements are met. Agencies using Frequency Division Multiplexing (FDMA) will be expected to maintain 12.5 KHz equivalency when developing systems and will be expected to utilize both 12.5 KHz portions of the 25 KHz block. In most cases, this will require the geographic separation of each 12.5 KHz adjacent channel. In order to promote spectrum efficiency, Region 35 will recommend that systems allocated 25 KHz channel blocks will utilize the entire channel and not "orphan" any portions of a system designated channel (See Section 5.2).

8.3 LOW POWER SECONDARY OPERATIONS

To facilitate portable operation by any licensee, and to provide channels for such operation without impacting the use of primary channels, certain low power secondary use will be permitted. Any public safety entity otherwise licensed to use one or more channels under this Plan may receive authorization to license any additional channel for secondary use, subject to the following criteria:

- All operation of units on such authorized channels will be considered secondary to other licenses on both co-channel and adjacent channels,
- No channels on or adjacent to, those designated in the Plan for wide area operation and/or mutual aid use will be authorized,
- Channels will be authorized for use in specific areas only, such areas to be within the licensees authorized operational area,
- Maximum power will be limited to 6 watts ERP,
- Use aboard aircraft is prohibited,
- Applications for channels may be submitted to the Committee for consideration at any time and must be accompanied by a showing of need. The Committee may select and authorize licensing of these secondary use channels after consideration of potential interference to co-channel and adjacent channel allotments, allocations and licensees. Authorization may be granted for use of any suitable channel, without prior allotment or allocation to the requesting agency,

In the event the channels authorized for low power secondary operation are needed by others during any window opening for reassignment, no protection will be afforded to the licensed secondary user, and they may be required to change frequencies or surrender licenses to prevent interference to primary use channels.

8.4 LOW POWER CHANNELS

The FCC in the 700 MHz band plan set aside channels 1 - 8 paired with 961-968 for low power use for on-scene incident response purposes using mobiles and portables subject to Commission-approved regional planning committee regional plans. Transmitter power must not exceed 2 watts (ERP).

Channels 9 -12 paired with 969-972 paired are licensed nationwide for itinerant operation. Transmitter power must not exceed 2 watts (ERP).

These channels may operate using analog operation. To facilitate analog modulation this plan will allow aggregation of two channels for 12.5 kHz bandwidth. On scene temporary base and mobile relay stations are allowed (to the extent FCC rules allow) with an antenna height limit of 6.1 meter (20 feet) above the ground. However, users are encouraged to operate in simplex mode whenever possible. This plan does not limit use to only analog operations; these channels are intended for use in a wide variety of applications that may require digital modulation types.

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

Whereas advantages exist in not making assignments, the reverse is also true. If, for example, firefighters operate on a specific frequency or set of frequencies in one area, there is some logic in replicating that template throughout the region for firefighter equipment. If there are no assignments, such a replication is unlikely.

In seeking the middle ground with positive attributes showing up both for assignments and no assignments, we recommend the following regarding assignments associated with the eight narrowband channels for which the RPC's have responsibility.

Channel #'s 1-4/949-952 are set aside as generic channels for use by public safety agencies operating within Region 35.

Channel #'s 5-6/953-954 are designated as Fire Protection channels for licensing and exclusive use by the Fire Protection discipline.

Channel #'s 7-8/955-956 are set aside as Law Enforcement channels exclusive use by the Law Enforcement discipline.

Simplex operations may occur on either the base or mobile channels. Users are cautioned to coordinate on scene use among all agencies involved. Users should license multiple channels and be prepared to operate on alternate channels at any given operational area.

8.5 SYSTEM IMPLEMENTATION

Because no Broadcast Television stations operate within this band in Oregon, Region 35 will not be affected by interference potential from existing television stations operating in the 700 MHz spectrum. A notification, in writing, has already been issued to secondary television station operators / licensees in this band that would be affected of the intended use of 700 MHz spectrum in the State of Oregon (**Appendix H**). This allows for an applicant to have an immediate review of their application package and, when approved, meet intended construction timeframes identified within the application submittal.

After the RPC assignment of channels the agency must submit its FCC application for license, and an implementation plan within one year of the channel allocation. If the agency does not implement in the timeframes specified, that agency's assigned channels may be removed from the list of assigned channels. The applicant agency may file a request with the Region Chair for an extension of time to implement. The request should include all details describing why the agency has not implemented and a new implementation schedule. The Committee Chair will advertise this request and set a date for the full committee to vote on the request. If no request for extension is received or the Committee votes not to extend implementation, the Committee Chair will advertise this action and to give other agencies a chance to request an assignment for use of that spectrum.

Should system implementation not take place within FCC timelines and guidelines for licensing, the channels will be returned for re-assignment to others. A one (1) year extension may be supported by the RPC, if it can be shown that circumstances are beyond the control of the applicant. The applicant will be responsible for contacting the FCC to request an extension. Applicants must be acting to the extent of their power to implement the project within their authority.

Semi-Annual system implementation status reports are required from all agencies receiving assignments from the RPC. If progress is made and the system is ultimately implemented the system can be determined "complete" and no further status reports are required.

8.6 MINIMUM CHANNEL LOADING

In order to ensure efficient use of allocated channels, the RPC will evaluate loading information as presented by applicants. The RPC will make an approval of appropriate channels based upon verifiable loading.

8.7 APPLICATION FILING AND PROCESSING

Complete applications received by the RPC will be processed as follows: The RPC will make every effort to process applications for channels within 90 days of receipt. The RPC will meet at least quarterly when applications are pending. Only complete applications in hand forty-five days prior to the next scheduled RPC meeting will be added to the agenda to be considered for assignment. Applications that are incomplete or not received 45 days prior to the RPC meeting will be held until the next meeting or returned to the applicant (if incomplete).

Channel assignments will only be made to agencies within the channel allocations for the county-like area where they operate until all available channels are licensed. The only exception to this would be for agencies that operate across multiple county areas, in which case channel assignments may be made by the RPC from those multiple county areas. The allocation will be based on the most efficient utilization of spectrum.

Following assignment of channels by the RPC, the CAPRAD database will be updated to indicate the specific channel assignments to the specific agencies, and further frequency coordination and licensing efforts can rely on the CAPRAD database as the single-point source of information on specific channel assignments in the Region.

8.8 PRIORITY FOR RECEIVING SPECTRUM ALLOCATIONS

Priority for channel allocations will be made on a first come first served basis. Cooperative multi-agency system implementations will be given priority over non-shared single agency systems.

When applying for the new 700 MHz channels, the RPC expects applicants to relinquish any amount of any currently used spectrum and make that spectrum available for use by other agencies in Region 35 upon beneficial use of an implemented 700 MHz radio system. This currently licensed spectrum may be in any public safety band.

Agencies with a primary voice communication system operating under a NPSPAC band 800 MHz license, which are requesting 700 MHz channels for system expansion, are not asked to relinquish this spectrum but will be asked to include this spectrum that is already licensed into the loading requirements for a radio system as defined in this plan. The reason for this requested inclusion is that most, if not all, radio equipment developed for the 700 MHz band is expected to be also capable of operation on any existing 800 MHz NPSPAC licensed

systems already in use and will likely to be included in justification of the loading of NPSPAC channels. Without this inclusion, it would theoretically be possible for an agency to double its frequency spectrum allocations by applying for an equivalent number of 700 MHz channels, for each 800 MHz channel that it has already licensed and justified loading criteria for, and reuse the same mobile or portable users for both bands, to both planning committees, in Region 35. Although separated in FCC rules and regulations, Region 35 will work with NPSPAC planning committees to attempt to make the most efficient use of spectrum for Public Safety in Region 35.

Agencies are encouraged to relinquish frequencies that will no longer be used as soon as possible in accordance with FCC rules and regulations.

The number of channels an applicant should retain would be an amount required to provide minimum interoperable communications to surrounding jurisdictions. In order to promote the interests of agencies that will benefit from an applicant submitting a request for 700 MHz spectrum, it is requested that the applicant submit a list of all channels and licenses held on existing public safety channels, and those channels that will be expected to be unlicensed when full beneficial use of 700 MHz channels are realized. The RPC will only distribute this information, and not decide if it is sufficient or not. It must be stressed that the Region 35 Regional Planning Committee supports and promotes multi-agency systems that allow for regional/wide area coverage within the region.

8.9 APPLICATION SCORING COMMITTEE

Upon approval of the plan by the RPC, the RPC Chair shall appoint a Scoring Committee consisting of the RPC Chair and at least two other RPC members who are not applicants for licenses.

This Scoring Committee will develop an application evaluation methodology for each scoring category contained in Section 9. The Scoring Committee shall determine the minimum number of points each application must receive in each category to qualify for further consideration. The evaluation methodology and minimum number of points each application must receive shall be made available to all potential applicants.

If there are competing applications for channel assignments, the scoring methodology will be used to evaluate competing applications for channels filed in the same time frame within the applicable county-like area allocations. The applications receiving the highest number of points will receive the channels.

In the event of otherwise irresolvable problems during application processing, the Regional Committee Appeal/Dispute Resolution Process outlined in Section 13.5 herein shall be followed.

9 APPLICANT REQUIREMENTS AND EVALUATION

9.1 INTRODUCTION

All requests will be considered on a first come, first served basis. In cases, where specific frequency allotments are required by numerous applicants at the same time, the applicant evaluation matrix point system will be utilized to determine the successful applicant. In all cases, area of coverage, technical requirements, and channel loading criteria will be applied. Exceptions may apply upon unique circumstances, after review and approval by the RPC. Deviations from FCC rules are not to be approved unless a fully justified waiver request has been presented to the RPC. The Region 35 Scoring Sub-Committee will evaluate and process applications within thirty (30) days after notified of receipt by CAPRAD. It shall be responsibility of the RPC to evaluate each situation on its own merit.

9.2 CHANNEL LOADING REQUIREMENTS

Each applicant for a trunked system shall certify that a minimum of 70 field radios for each 12.5 kHz equivalent channel will be placed in service within five (5) years of the initial plan approval date. If that is not the case, then less than fully loaded channels shall be returned to the allotment pool and the licensee shall modify their license accordingly. Conventional channels shall be loaded to 70 mobile units per channel. Where an applicant does not load a channel to 70 radio/subscriber units, the channel will be available for assignment to other licensees. Mobile, portable and control stations will be considered as mobile units.

9.3 APPLICATION REQUIREMENTS

Each application must contain the following:

1. FCC ULS 601 Form(s),
2. A short description of the proposed system,
3. A justification for the additional spectrum,
4. An interference prediction map using the current version of TIA/EIA TSB 88 guidelines, Maps showing all interference predicted in the proposed system,
5. Documents indicating agency-funding commitments sufficient to fund the development of the proposed system(s)
6. An indication as to when they will migrate from their existing system to the new system, if applicable.
7. A list of all channels and licenses held on existing public safety channels, and those channels that will be unlicensed when full beneficial use of 700 MHz channels are realized.

8. A statement that notice of the application for spectrum has been provided to the PSAP managers of the affected “county-like” regions of the state that may be impacted to ensure that affected communities have knowledge of the application.
9. Explanation of the systems future growth for all agencies involved in the system, including how the system will be loaded and what equipment type and quantity is planned to be purchased to load the system,
10. State of compliance the applicant’s agency will conform with interoperability requirements of the SIEC plan,
11. Documentation that will assist the evaluation of the application against the Point Matrix system identified in Section 9.4.

After approval by the RPC the applicant may then forward the application with the RPC letter of approval to the Applicant’s designated coordinator for technical review. The coordinator will provide appropriate information to CAPRAD. Upon approval by the coordinator the Applicant may submit to the FCC for licensure.

9.4 EVALUATION MATRIX POINT SYSTEM

If the number of channels being requested exceeds the number of channels in the county area allocation, or if multiple applicants have filed in the same window for more channels than exist in the allocation to a single county area, the RPC Scoring Committee will evaluate the competing applications by assigning points to each application using the scoring categories below. In this event, the Scoring Committee will conduct the detailed analysis of the competing applications and prepare a scoring report. That report will be presented to the voting membership and a majority vote by the voting members present at the meeting will determine the final channel distribution to each applicant. The RPC may request that the FCC release reserve frequencies if, in their view, this is the most efficient resolution of competing applications.

9.5 SCORING CATEGORIES

The following scoring categories will be used by the Scoring Committee to create the scoring methodology used in each filing window:

9.5.1 SERVICE (MAXIMUM 350 POINTS)

Police, fire, local government, combined systems, multi-jurisdictional systems, etc.

9.5.2 INTERSYSTEM & INTRA-SYSTEM INTEROPERABILITY (MAXIMUM 100 POINTS)

This category will be scored considering how well the proposed system will be able to communicate with other levels of government and services during an emergency on “regular” channels, not the I/O channels. Interoperability must exist among many agencies to successfully accomplish the highest level of service delivery to the public during a major incident, accident, natural disaster or terrorist attack. Applicants requesting 700 MHz spectrum shall inform the region of how and with whom they have been achieving interoperability in their present system.

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

- A. Disaster and extreme emergency operation for mutual aid and interagency communications.
- B. Emergency or urgent operation involving imminent danger to life or property.
- C. Special event control, generally of a preplanned nature (including task force operations).
- D. Single agency secondary communications. This is the default priority when no other priority is declared and includes routine day to day (non-emergency) operations.

9.5.3 LOADING (MAXIMUM 150 POINTS)

This category will be scored considering how many individual user devices and user organizations are served divided by the number of channels to be licensed. Points will be awarded for an application to use channels as part of a cooperative, multi-organization system. Where the channel application is for expansion of an existing 800 MHz system, evaluators will consider whether all available 800 MHz channels been assigned (where technically feasible). A showing of maximum efficiency or a demonstration of the system’s mobile usage pattern could be required in addition to loading information.

9.5.4 SPECTRUM EFFICIENT TECHNOLOGY (MAXIMUM 350 POINTS)

This category will be scored based on how spectrally efficient the system’s technology is. Trunked systems are considered efficient as well as any technological systems feature, which is designed to enhance the efficiency of the system and provide for the efficient use of the spectrum. Spectral efficiency that achieves the equivalent of one voice channel in 6.25 kHz of bandwidth also achieves the highest efficiency criterion.

9.5.5 SYSTEMS IMPLEMENTATION FACTORS (MAXIMUM 100 POINTS)

This category will be scored based on funding and system planning details as well as construction and implementation schedule. For instance, the criteria could consider the rate of growth of the system. A document stipulating what the agency is planning to implement signed by an official within the organization with budget authority should be provided.

9.5.6 GEOGRAPHIC EFFICIENCY (MAXIMUM 100 POINTS)

This category will be scored based on the ratio of subscriber units to area covered and the channel reuse potential. The higher the ratio (mobiles divided by square miles of coverage) the more efficient the use of the frequencies. Those systems which cover large geographic areas will have a greater potential for channel reuse and will therefore receive a high score in this subcategory.

9.5.7 GIVEBACKS (MAXIMUM 200 POINTS)

This category will be scored based on the number of channels given back and the extent of availability and usability of those channels to others.

10 AN EXPLANATION OF HOW ALL THE REGION'S ELIGIBLES NEEDS WERE CONSIDERED, AND TO THE EXTENT POSSIBLE MET

As described elsewhere in this Plan, the initial allocation of channels in the narrowband general use category in Region 35 was made using a combination of historical data derived from two decades of 800 MHz band usage within the Region, by population, by geography and by signal propagation parameters to determine channel distribution. Over the course of several meetings of the RPC during the drafting of the textual portions of this plan, participants were asked to comment on the spectrum needs of their agencies in the 700 MHz band and any agencies they were aware of in their geographic area. These comments are recorded in the Minutes of the meetings of the RPC. Consistently, the comments received indicated that the attached Region 35 Frequency Allotment Plan (**Appendix F**) provided adequate spectrum distribution across the Region to meet the foreseeable needs of the eligible users.

11 EVIDENCE THAT THE PLAN HAS BEEN SUCCESSFULLY COORDINATED WITH ADJACENT REGIONS

The Final Draft of this Plan was formally transmitted to Region 6 (Northern California), Region 12 (Idaho), Region 27 (Nevada) and Region 43 (Washington) for formal review and consent. Consent letters or further suggested edits were requested. Copies of the consent letters are attached in **Appendix I**.

12 DETAILED DESCRIPTION OF HOW THE PLAN PUTS SPECTRUM TO THE BEST POSSIBLE USE

This plan provides generous allocations in all regions of the State, including the most rural areas, where generally, the entire 800 MHz band remains available for licensing. It also considers the adjacent States, to ensure that interference can be avoided. Finally, the maximum numbers of general use channels are assigned in the most populous regions of the State. The committee is confident that the approach used provides the most efficient allocations, and will serve the needs of all public safety communications users and radio system managers.

As described elsewhere in this Plan, the initial allocation of channels in Region 35 was made through a pre-packing process that utilized a combination of historical 800 MHz band usage information, population, geography and signal propagation parameters to determine channel distribution. Population is the most significant driver in predicting call for service demands on public safety agencies, and call for service demand is one of the largest drivers in the need for spectrum. Therefore, the melding of propagation influences across population aggregations on a county-area basis provides a distribution model that most closely reflects the spectrum demands of the public safety agencies within those areas.

The RPC believes that utilizing the pre-packing for initial channel allocation of the narrowband spectrum, on a county-like area basis, and the subsequent first-come, first-served processing of applications for channel assignments, will result in the most efficient use of the spectrum as well as meeting the broadest set of needs of the eligible users of the spectrum.

13 FUTURE PLANNING PROCESS

13.1 FUTURE PLANNING & MINUTES

Region 35 will maintain a website (www.region-35.org) on which all plan documents, Bylaws, meeting schedules, meeting minutes and application filing procedures will be maintained. The RPC anticipates that two types of Plan modifications will be made in the future; administrative changes that do not alter spectrum allocations in the Plan, and spectrum changes that do alter spectrum allocations in the Plan. Each of these types of changes will be handled through a different process.

13.2 ADMINISTRATIVE PLAN CHANGES

From time to time, the RPC may need to make changes to the Plan or Bylaws that are purely administrative in nature and that do not alter spectrum allocations within the county-area

allocations. Examples of such changes include changes in officer positions, changes in meeting schedules, changes in application processing procedures, etc.

Administrative changes to the Plan or Bylaws will be offered to the RPC at a properly scheduled meeting and adopted at that meeting if possible. At the option of the RPC, the change may be held over for subsequent meetings to allow further information to be collected or further debate to occur. Once the change is adopted by the RPC, the amended Plan or Bylaws will be filed with the FCC for formal ratification. Copies will also be provided to neighbor regions (Region 6 (Northern California), Region 12 (Idaho), Region 27 (Nevada) and Region 43 (Washington)) so they are aware of the administrative change.

13.3 SPECTRUM ALLOCATION CHANGES

From time to time the RPC may need to make changes to the Plan that alters the geographic area-allocation of channels between county-like areas or the strategy of distributing channels across the region,

Changes of this nature will be offered to the RPC at properly scheduled meetings. They will be discussed and debated by a quorum of the membership at that meeting and at least one subsequent meeting. Once the change is approved by the RPC, notification of the change will be sent to neighbor regions (Washington, Idaho, Nevada, and Northern California) for coordination and concurrence. Neighbor regions will be requested to provide comments and concerns, or consent, within 45 calendar days of receiving notice of the change.

Once neighbor region comments or consent is received, or following the 45 calendar day comment period, the RPC will again consider the changes at the next scheduled meeting, incorporate any further changes needed, and vote to approve the change and submit it to the FCC for ratification.

13.4 DATABASE MAINTENANCE

Region 35 will use the APCO International (CAPRAD) database, specifically designed for use in the 769-775/799-805 MHz public safety band. This database will contain frequency availability and pre-allotment. The Regional Committees shall use the CAPRAD database to review pending and/or complete pre-allotments for the adjacent regions to assist in completing their respective plans.

The FCC's designated public safety frequency advisors will use the CAPRAD database during the application process (pre-coordination). Frequency advisors, as well as RPCs, will be required to maintain the database as the applications are processed and granted by the Commission.

13.5 REGIONAL COMMITTEE APPEAL / DISPUTE RESOLUTION PROCESS

13.5.1 INTRODUCTION

The RPC is established under section 90.527 of the FCC's rules and regulations. It is an independent Committee apart from the FCC with authority to evaluate applications for public safety uses of the spectrum allocated under FCC Docket 96-86. In addition, appeals and disputes from decisions made with respect to a variety of matters regulated by the RPC will be heard. The formal requirements of the appeal/dispute process are set out below.

In order to ensure that the appeal/dispute process is open and understandable to the public, the RPC has developed this procedure. Those involved in the appeal/dispute process can expect the RPC and its members to follow the procedures (as may be amended from time to time). Where any matter arises during the course of an appeal/dispute that is not dealt with in this document, the RPC will do whatever is necessary to enable it to adjudicate fairly, effectively and completely on the appeal/dispute. Any changes made to the procedure will require a modification to the Regional Plan and will be made available to the public.

The RPC will make every effort to process appeals and disputes in a timely fashion and issue decisions expeditiously. Initially the RPC Chair will attempt to resolve appeals and disputes on an informal basis. If a party to the appeal/dispute employs the Chair, then the Vice Chair will attempt resolution.

13.5.2 APPEAL/DISPUTE SUB-COMMITTEE

13.5.2.1 Members

The RPC Chair may organize the RPC into Sub-Committees, each comprised of one or more members; the Appeal/Dispute Sub-Committee is one of those.

The RPC Chair (or Vice Chair in the case of conflict of interest) will appoint a Dispute Resolution Sub-Committee consisting of at least three Voting Members of the RPC. All appointees must not be employed or retained by the disputing agency or any party to the appeal/dispute. That Sub-Committee will select a Chair and a secretary to document the proceedings.

13.5.2.2 Process

The RPC Chair (or Vice Chair in the case of conflict of interest) will represent the Region in presentations to the Dispute Resolution Sub-Committee. The Sub-Committee will hear input from the appealing/disputing agency, any affected agencies and the RPC Chair (or Vice Chair). The Committee will then meet within 30 calendar days to prepare a decision on the appeal/dispute. The decision of the Sub-Committee shall be binding upon the RPC.

13.5.2.3 Correspondence (Communicating) with the Sub-Committee

To ensure the appeal/dispute process is kept open and fair to the participants, any correspondence to the Sub-Committee must be sent to the Sub-Committee Chair and be copied to all other Sub-Committee members and other parties to the appeal/dispute, if applicable. Sub-Committee members will not contact a party on any matter relevant to the merits of the appeal/dispute, unless that member puts all other parties on notice and gives them an opportunity to participate. The appeal/dispute process is public in nature and all meetings regarding the appeal/dispute will be open to the public.

13.5.3 THE APPEAL/DISPUTE PROCESS

13.5.3.1 What can be appealed/disputed

The Sub-Committee hears appeals/disputes from a determination or allocation by the RPC and shall include the following: number of channels assigned, ranking in the assignment matrix, interference, or any other criteria that the region shall establish.

13.5.3.2 Who can appeal/dispute

- An official of the entity who filed the original application to the RPC must be the person who files the appeal/dispute on behalf of the entity.
- An official of an entity who is eligible to file an application to the RPC and would be directly affected by the matter being appealed or disputed.

13.5.3.3 How to appeal/dispute

A notice of appeal/dispute must be served upon the RPC Chair. The notice of appeal/dispute may be "delivered" via US mail, courier, fax, or e-mail (the notice must be on the appealing entity's official letterhead and include the originator's signature, such as using a scanned image in Portable Document Format (PDF) of an original letter), to the Chair of the RPC. The Chair will, in-turn, transmit notice of the appeal/dispute to RPC members via the list server within five working days of receipt.

To be accepted for consideration the notice of appeal/dispute **must** include:

1. The name and address of the appellant;
2. The name of the person, if any, making the request for an appeal/dispute on behalf of the appellant;
3. The address for service of the appellant;

4. The grounds for an appeal/dispute (a detailed explanation of the appellant's objections to the determination - describe errors in the decision);
5. A description of the relief requested (What the appellant wants the RPC to do at the end of the appeal/dispute.);
6. The signature of the appellant or the appellant's representative.

13.5.3.4 Time limit for filing the appeal/dispute

To appeal/dispute a determination or allocation the appeal/dispute must deliver a notice of appeal/dispute **within thirty (30) calendar days** after the enactment date of the decision. If a notice of appeal/dispute is not delivered within the time required, the right to an appeal/dispute is lost.

13.5.3.5 Extension of time to appeal/dispute

The RPC has the discretion to extend the time to appeal/dispute before the thirty (30) calendar day deadline. A request for an extension should be made to the RPC, in writing, and include the reasons for the delay in filing the notice of appeal/dispute and any other reasons which the requester believes support the granting of an extension of time to file the appeal/dispute. A request for an extension should accompany the notice of appeal/dispute.

In deciding whether to grant an extension, the RPC will consider whether fairness requires an extension. The RPC will take into account the length of the delay, the adequacy of the reasons for the delay, the prejudice to those affected by the delay and any impacts that may result from an extension. Other factors not identified could be relevant depending on the circumstances of the particular case.

The Officers of the RPC and one Voting Member at large chosen by the Officers shall determine if the extension shall be granted. Officers or the Voting Member must not be employed or retained by the appealing/disputing agency or any party to the appeal/dispute.

13.5.3.6 Rejection of a notice of appeal/dispute

The RPC may reject a notice of appeal/dispute if:

- (a) It is determined that the appellant does not have standing to appeal/dispute; or
- (b) The RPC does not have jurisdiction over the subject matter or the relief requested.

The Officers of the RPC and one Voting Member at large chosen by the Officers shall determine if the appeal/dispute will be rejected. Officers or the Voting Member must not be employed or retained by the appealing/disputing agency or any party to the appeal/dispute. The RPC will notify the appellant of the rejection within fifteen (15) calendar days.

13.5.3.7 Adding parties to the appeal

In addition to the parties mentioned above, the RPC has the discretion to add any other person who may be “affected” by the appeal/dispute as a party to the appeal/dispute. Anyone wanting to obtain party status should make a written request to the RPC as early as possible. The written request should contain the following information:

- a. The name, address, telephone number and email address (if any), of the person submitting the request;
- b. A detailed description of how the person is “affected” by the notice of appeal/dispute and
- c. The reasons why the person should be included in the appeal/dispute; and
- d. The signature of the person submitting the request.

13.5.3.8 Intervener status

The RPC may also invite or permit someone to participate in a hearing as an intervener. Interveners are generally individuals or groups that do not meet the criteria to become a party (i.e. “may be affected by the appeal”) but have sufficient interest in, or some relevant expertise or view in relation to the subject matter of the appeal/dispute.

Someone wanting to take part in an appeal/dispute as an intervener should send a written request to the RPC. The written request should contain information that qualifies the intervener’s interest and expertise to assist in the matter while also demonstrating that they should not be considered a party.

Prior to inviting or permitting a person to participate in a proceeding as an intervener, or deciding on the extent of that participation, the RPC will provide all parties with an opportunity to make representations if they wish to do so.

13.5.3.9 Type of appeal/dispute (written or oral) hearing

An appeal may be conducted by way of written submissions, oral hearing or a combination of both. The Appeal/Dispute Sub-Committee will determine the appropriate type of appeal/dispute after a complete notice of appeal/dispute has been received.

The Sub-Committee will normally conduct an oral hearing although it may order that a hearing proceed by way of written submissions in certain cases. Where a hearing by written submissions is being considered, the Sub-Committee may request input from the parties.

13.5.3.10 Burden of proof

The general rule is that the burden or responsibility for proving a fact is on the person who asserts it.

13.5.3.11 Notification of expert evidence

Any party that intends to present expert evidence at a hearing will be required to provide the Sub-Committee, and all other parties to the appeal/dispute, with reasonable advance notice that an expert will be called to give an opinion. The notice should include a brief statement of the expert's qualifications and areas of expertise.

If a party intends to produce, at a hearing, a written statement or report prepared by an expert, a copy of the statement or report should be provided to the Sub-Committee and all parties to the appeal/dispute within a reasonable time before the statement or report is given in evidence. Unless there are compelling reasons for later admission, expert reports should be distributed thirty (30) calendar days prior to the hearing date.

13.5.3.12 Documents

If a party will be referring to a document that was not provided to the Sub-Committee and all parties prior to the hearing, sufficient copies of the document must be brought to the hearing for the Sub-Committee and all other parties.

13.5.3.13 Sub-Committee Decision

The Sub-Committee shall issue its decision of the appeal/dispute in a timely manner, after considering all documentation and testimony provided by the parties to the appeal/dispute. Unless extenuating circumstances require additional time, the Sub-Committee shall issue its decision, in writing, no later than thirty (30) days after the hearing date on the appeal/dispute.

13.5.4 APPEALING THE APPEALS SUB-COMMITTEE'S DECISION

Should the decision of the Appeal/Dispute Sub-Committee not be acceptable to the appealing/disputing agency/agencies, the appeal/dispute and all written documentation from the dispute may be forwarded to the Oregon SIEC for review and a hearing. The review of the SIEC may be initiated by any party to the dispute, including the appellant and the RPC. A written request for SIEC review and recommendation shall be delivered to the Chair of the Oregon SIEC and the Chair of the RPC within fifteen (15) calendar days following the date of the Sub-Committee decision. The SIEC, if it decides to make a recommendation in the matter, shall provide its written recommendation on how the Sub-Committee should resolve the matter within forty five (45) calendar days.

The Sub-Committee shall review the Oregon SIEC's written recommendation in a timely manner. Upon completion of that review, the Sub-Committee may either amend or uphold

its original decision within fifteen (15) calendar days of receipt of the SIEC recommendation. The Sub-Committee's decision shall then be the final decision of the RPC, and may not be appealed further to the RPC or the SIEC.

13.5.4.1 Further Recourse after Appeal

Should the final decision from the Appeal/Dispute Sub-Committee not be acceptable to the appealing/disputing agency/agencies, the appellant has the right to forward an appeal/dispute to the National Regional Planning Oversight Committee for review. As a last resort, the appellate may forward its dispute to the Federal Communications Commission for final resolution.

14 CERTIFICATION BY THE CHAIR THAT REGIONAL PLANNING PROCESS WAS OPEN TO THE PUBLIC

I hereby certify that all Region 35 Regional Planning Committee meetings, including sub-committee or executive committee meetings were open to the public.

Signed _____
Region 35 Chairperson

Witnessed _____
Region 35 Vice Chairperson