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Director

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STATE OF WASHINGTON
WASHINGTON STATE PARKS AND RECREATION COMMISSION
*7150 Cleanwater Lane KY-11 • P.O. Box 42650 • Olympia, Washington 98504-2650 • (206) 753-5755*

February 3, 1993



**PLEASE PROVIDE EACH COMMISSIONER WITH A COPY**

Federal Communications Commission
Office of the Secretary (FCC)
Washington, DC 20554

Reference PR Docket No. 92-235

Dear Sir or Madame,

Please accept this response to reference docket:

**INTRODUCTION:**

The Washington State Parks and Recreation Commission (WSP&RC) operates 107 parks, and several hundred miles of ski trails.

In order to accomplish our assigned maintenance and enforcement responsibilities, we use in excess of 400 two way radios. The agency communicates primarily on the Department of Natural Resources State Radio Network consisting of 19 mobile relays placed in strategic locations throughout the State. Additionally, we operate on a statewide simplex frequency and have numerous channel use agreements to operate on various law enforcement agencies frequencies statewide, i.e. the Washington State Patrol VHF statewide radio communications system, county sheriff's systems, city police systems, and various federal radio systems.

We welcome new technology and spectrum efficiency to allow our radio system to meet the future needs of the radio users. We believe that any future initiative should be directed towards addressing wide area public safety radio systems such as those used by WSP&RC. Refarming will represent the largest single change in radio systems since the 1930's and we would like it to be a positive change and one that we have input in.

**GENERAL CONCERNS:**

Our concern with the refarming initiative starts with not allowing a reasonable time to depreciate existing radio equipment and replacing the FCCA with a single Public Safety Coordinator. Of even more concern is the proposal to reduce effective radiated power at high elevations and transmitter deviation in January of 1996. Additionally, interoperability and migration is an immediate planning concern.

**SPECIFIC PROBLEMS:**

Based on the general concerns above, please accept the following responses to PR Docket 92-46:

Comment #1 - Reference page 414410, Introduction, Paragraph 2:

Problem:

The proposal indicates that the commission is sensitive to the need for a reasonable transition period for users to convert their radio systems to newer more spectrum efficient technology. We estimate a serious radio interference problem with the first transition due January 1, 1996.

Turning the deviation down on land mobile radio equipment to 3 KHz will reduce the transmitted bandwidth, however, the receivers will remain fixed at the current bandwidth. Unless the receivers are modified, they will not be protected from the on-rush of new adjacent channel activity. The interference from the adjacent channel will be critical to our public safety radio systems using existing equipment.

Recommendation:

Eliminate the first transition and start in the year 2004 with a single transition. In the interim new licensee would be able to use adjacent channels provided they can gain approval of existing channel users.

Comment #2 - Reference page 414414, C - Radio Services, Paragraph 14 - Consolidation of PLMRSs:

Problem:

We have been satisfied with the custom coordination service offered by the FCCA over the years. We are concerned that this service could be lost with other coordinators working with the same spectrum especially if they do not share a common database.

The FCCA has been successful in handling disputes and interference problems among various agencies. They sponsor annual training sessions for radio system design and management where various radio frequency coordination and potential radio interference problems are solved. We attribute their success and efficiency over the past 30 years to the fact that they are small enough to be manageable and specialized enough to be effective.

In addition, the FCCA coordinators are familiar with the radio systems we use, issues affecting parks and recreation agencies and potential radio interference problems that go beyond the normal frequency application processing procedure. Also, the FCCA has an excellent response time on applications and typically offers a successful consultant service to applicants. It's not likely that this partnership between coordinator and applicant will continue unless the FCCA remains a separate service or at least has the same guaranteed status in a public safety service.

Recommendation:

Maintain the FCCA as a coordinating radio service and assign the new channels from the FCCA block to this service. Allow licensees to work with the FCCA on problems with interservice sharing. In addition, let the radio community know where the problems are with interservice sharing and enlist their support in solving the problems.

Comment #3 - Reference page 414415, C - Radio Services, Paragraph 17 - ... consolidation...:

Problem:

As an agency that has received excellent radio frequency coordination and cooperation from the existing FCCA channel allocation we are concerned over the change to a Public Safety Coordination Service and channel pools.

With decreased State revenues and budget cutbacks likely we will not be in a position to completely change-out our radio system. This puts us at a big disadvantage competing for radio channels in a public safety pool and an even greater disadvantage in a general category pool. Our fear is that by the time we are able to secure funds for a system change the pool will be empty.

Recommendation:

Assign all new channels from the FCCA existing allocation to the FCCA and require them to distribution using strict technical guidelines.

Comment #4 - Reference page 414417, D - Technical and Operational Rule Changes, Paragraph 20 - Adopt Reduced ERP and HAAT Limits:

Problem:

This proposed rule which would impose unreasonable and unworkable restrictions on the WSP&R's radio communication and for no good reason. As indicated above the we use radio systems that cover the State at strategic locations with base stations and mobile relays at mountain top peaks operating at approximately 300 watts ERP. Using the above 590 feet reference in Table C-3 on page 414517 the ERP would have to be reduced to 5 watts under the proposal.

I estimate that the number of mobile relays and base stations on the radio systems we use would have to be tripled to cover the same area with the reduced power. This would dramatically increase our costs without a single spectrum benefit for anyone.

Also, simply turning down the power on our existing base station equipment as proposed in 1996 will cause spurious emissions as a lot of the equipment is now designed to operate on low power.

Recommendation:

Recognize public safety radio systems in the West such as use operate with base stations and mobile relays on mountain tops and cover vast sparsely populated areas. Either use signal strength based on service area contours as suggested by many public safety agencies for cochannel and adjacent channel separation or exempt public safety agencies operating wide area radio systems from ERP and HAAT limits.

Comment #5 - Reference page 414417, D - Technical and Operational Rule Changes, Paragraph 22 - Promotion of Interoperability:

Problem:

As indicated above, interoperability is extremely important to the us. In recent years, with existing wideband programmable radios, interoperability has reached an all time high. The result is an improved multi-agency initial public safety response, sharing of specialists and equipment, and improved coordination on-scene.

Interoperability is part of our plans and we would be seriously impacted if interoperability were not included in setting standards for new technology. The commission needs to go much further than eventually proposing mutual aid channels as indicated in the initiative. For obvious reasons we need to communicate by radio at public safety incidents with other agencies across-the-board as part of the radio system rather than at arms length over mutual aid channels.

The thought of cooperative agencies operating with incompatible equipment while manufacturers compete with exclusive protocols for market share is simply unacceptable.

Recommendation:

Adopt APCO 25 as the public safety standard and if necessary, add to it in order to ensure compatibility between radios and forestry conservation public safety radio systems. In short, require that all public safety agencies (including federal, state and local) remain compatible in the new digital narrow band technology.

Comment #6 - Reference page 414417, D -Technical and Operational Rule Changes, Paragraph 23, Designation of Channels ... Shared Use:

Problem:

Using a lottery system to distribute innovative shared use channels would leave logical use of the spectrum to chance. As a public safety agency that relies heavily on land mobile radio communications we take exception to this approach. While this may be an common practice in the business community where various companies and fixed assets are merged, distributed, bought and sold, and put to use on an opportunity basis we believe some other more serious method should be used when dealing with public safety.

Considering the experience with 220 MHz lottery where the Commission was flooded with applications for channels by speculators for profit, we believe that it would not be advisable to allow the same to happen with this initiative. We also believe that business and public safety will have different migration strategies and should not operate out of a common channel pool.

Recommendation:

Distribute the VHF channels on an innovative need basis taking into consideration that the channels will be more effective when used in rural areas where penetration of foliage and trees is important. In short, make VHF high and low band a rural centered bank of frequencies and offer incentives to encourage urban and suburban areas to use the higher frequency channels (400 MHz and 800 MHz).

Comment #7 - Reference page 414418, E - Miscellaneous Proposals, Paragraph 24 - Modification of Existing Systems:

Problem:

As indicated in comment #1 reducing deviation to 3 KHz does nothing for receivers that will still have a full channel bandwidth. As a result, opening adjacent channel coordination without limitation in 1996 would cause interference problems. As stated in comment #4, ERP and HAAT limits would require the department to triple the number of mobile relays and base stations to retain existing coverage. Both of these functions represent a major impact on our radio systems.

Recommendation:

Implement a one step transition in the year starting 2004 and recognize the need to exempt wide area radio systems from ERP and HAAT limits. Finally, encourage use of VHF low band and high band in rural areas where they function the best over long distances. Use the higher frequencies in the cities.

Please accept my thanks in advance for taking the time to consider these concerns. If you have any questions regarding our agency's input, please feel free to call me at (206) 753-1931.

Sincerely,

PAUL E. GEORGE
MAINTENANCE CHIEF
OPERATIONS DIVISION

CC Cleve Pinnix, Director WSP&RC
Kathy Smith, Assistant Director - Operations WSP&RC
Jim Kelly, Radio Systems Manager - Dept. Natural Resources

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