

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of:	)	
	)	
	)	
Amendments of Part 73 and 74 to Improve the Low Power FM Radio Service Technical Rules	)	MB Docket No. 19-193
	)	
Modernization of Media Regulation Initiative	)	MB Docket No. 17-105

**COMMENTS OF JEFF SIBERT**

The following comments are submitted by myself, Jeff Sibert, regarding the Notice of Proposed Rulemaking in MB Docket 19-197. I am the president of Park Public Radio, which holds the license for Low Power FM (LPFM) station KPPS-LP. I have also donated thousands of hours of engineering and technical services to a number of LPFM and Non-Commercial Educational (NCE) licenses and served on the governing boards of two NCE stations since 2003.

The Commission has proposed a number of changes to the technical regulations for the LPFM service, many of which I am in favor of. However, the Commission's proposed rules does not substantially help the needs of incumbent LPFM broadcasters, and further reforms are necessary to address the unfavorable rules that LPFM operators face versus FM translator operators. The Commission should also reconsider its tentative rejection of LP250, contour protection towards short-spaced FM translators, and other proposals that will meaningfully help struggling LPFM operators.

**Table of Contents:**

<b>I.</b>	<b>Directional Antennas</b>	<b>3</b>
<b>II.</b>	<b>Channel 6 Television Interference</b>	<b>4</b>
<b>III.</b>	<b>Minor Changes</b>	<b>6</b>
<b>IV.</b>	<b>FM Booster Stations</b>	<b>7</b>
<b>V.</b>	<b>Miscellaneous issues</b>	<b>8</b>
	<b>a. Radio Reading Services</b>	<b>8</b>
	<b>b. Emergency Alert System</b>	<b>9</b>
	<b>c. Other Issues</b>	<b>11</b>
<b>VI.</b>	<b>Conclusion</b>	<b>16</b>

## **I. Directional Antennas**

The Commission proposes to allow increased use of directional antennas, including the use of directional antennas in the Mexican border zone where LPFM stations are presently licensed for a maximum of 50 watts non-directional and the allow the use of custom and composite models. This change will allow a number of LPFM stations within the border zone to increase power by up to 3 dB along radials that do not intersect Mexico.

However, the proposal does not fundamentally help most LPFM stations. The Commission admits at para. 6 that “directional antennas... will not be used widely in the LPFM service due to their higher cost and limited necessity.” The expected limited use of directional antennas is not due to the cost associated with their use, as many FM translator stations utilize directional antennas in order to protect other stations. Surely if the cost of a directional antenna was a barrier we would see very few directional antennas in this service, yet their use is ubiquitous. Likewise a large number of FM translators would not exist or would be unable to serve meaningful populations without directional antennas. As secondary operators, directional antennas are vital to ensuring FM translators serve their intended areas while reducing interference towards neighboring stations. The necessity in these cases are great.

The main reason few LPFM operators would use directional antennas rests solely in the regulatory restrictions placed upon it versus the few restrictions placed upon the FM translator service. LPFM cannot use directional antennas to provide protection towards short-spaced FM translator and full power stations. Yet many LPFM stations have become short-spaced due to the grant of FM translator stations during the recent AM revitalization windows. Faced with increased interference due to these new FM translator stations, LPFM operators have few options to mitigate the interference and

many would appreciate the same flexibility in siting as FM translator operators. Particularly egregious are situations where LPFM stations have become “boxed-in” and unable to move at all due to incoming interference from multiple short spaced FM translator stations. I am hoping the Commission will consider allowing additional use cases.

Also, in the FM translator service, there is no requirement for a proof of performance, sign-off by licensed surveyor and engineer, etc. This lower regulatory burden reduces the financial costs FM translator operators must bear to use directional antennas, and as such their use has flourished compared to full power broadcasters who face a much stricter regulatory burden. There is no reason for LPFM stations to face a greater regulatory burden compared to FM translator stations. To require the same proof of performance as a full power station would make the use of a directional antenna pointless. No operator will undergo this expense, which could range in the tens of thousands of dollars, for a measly 3 dB increase in a small portion of their service area. The Commission’s proposal to require a 73.316(c) proof will effectively render this proposal meaningless. If a proof is not required for FM translators then there is no reason it should be required for LPFM stations either. However, for fairness reasons, the Commission should put in place safeguards that require the LPFM station to mitigate interference that is caused to other stations in a manner similar to that required of FM translator stations. As much as possible, the Commission should seek to harmonize the rules and expectations of FM translator and LPFM operators.

## **II. Channel 6 Television Interference**

The Commission proposes to eliminate the TV 6 protections for all classes of FM stations and institute a waiver process. I fully support this position as the current rules were designed for analog TV stations and current digital receiver technology does not indicate the need for such overprotection. This is especially important for LPFM stations where the overprotection is even more egregious and the

rules are far more rigid towards LPFM stations located close to operating TV 6 facilities. My comments below are specifically for LPFM regulations contained in 73.825.

All other FM services utilize much more friendly TV Channel 6 protection rules (73.525 and 73.1205). Both services are allowed to use a simple mileage spacing table, or utilize contour protection if the distances in the spacing table are not met. As TV 6 protections are based on analog television and were never updated for digital television, there is likely substantial over-protection of Channel 6 TV stations even in the Full Power and FM Translator services.

The NPR study shows conclusively that interference towards Digital TV 6 stations are far reduced compared to those of analog stations, and receiver technology continues to improve. The benefit to existing and prospective LPFM operators through increased spectrum availability should greatly outweigh the de minimus interference that might result from the LPFM. Even in the remote chance interference results, the LPFM should be allowed an opportunity to resolve the interference problem using well established interference remediation procedures.

The Commission should not permit Channel 6 operators to continue to broadcast an analog service on 87.7 MHz following their transition to digital. Almost all of these stations exist solely to broadcast an analog FM service. This is an extremely inefficient use of broadcast spectrum as the Channel 6 station utilizes 6 MHz of spectrum of which only 200 KHz is utilized as a program service. The video carrier contains no meaningful content. If the Commission does continue to permit these stations to utilize an analog carrier, it should not provide any additional protection.

Since interference does not discriminate by class or type of service, I also support Commission eliminating 73.525 and 73.1205 on July 13, 2021.

### III. Minor Changes

The Commission proposes allowing minor changes beyond 5.6 km if there is overlap between the 60 dBu contours of the existing and proposed facility. This change is desperately needed to allow LPFM operators additional flexibility in siting, and harmonizes the minor change relocation restrictions in the FM translator and FM NCE services.

The 5.6 km minor change restriction is just another example LPFM stations having more burdensome regulations compared to that of other services. There is no reason to allow FM translator stations to move anywhere the 60 dBu contours overlapped, but restrict LPFM stations to 5.6 km when an 11.2 km move would still result in overlap of the 60 dBu contours. When siting an LPFM station, it is important that a site be chosen that maximizes height and power in a manner that best serves the intended audience. It can be a challenge to find sites that meet 73.807 spacing at the allowable heights, while also navigating the landmine of city zoning and leasing issues that can make numerous sites unavailable to an LPFM operator. Second adjacent issues can add extra challenge since LPFM stations cannot simply propose operation on the tallest building in the market when those buildings may be so tall as to permit only a few watts ERP.

I would, however, propose the Commission allow moves up to 11.2 km without needing to show overlap of the 60 dBu contours of the existing and proposed stations. For an LPFM operating at 100 watts and up to 30 meters HAAT, the 60 dBu contour would extend 5.636 km. At 11.2 km there would be 0.072 km of overlap between the facilities ( $11.2 - 5.636 - 5.636$ ). A showing would therefore only be required in the case where the LPFM station has radials that exceed 5.6 km due to terrain. Limiting the need to provide a showing will reduce the burden on both the applicant and the Media Bureau staff.

#### **IV. FM Booster Stations**

The Commission proposes to allow the use of FM booster stations by LPFM operators. Several LPFM stations are currently authorized FM booster stations by waiver and have benefited from increased signal strength in otherwise terrain challenged areas. I support greater use of FM booster stations. However, I do not support rules that are more restrictive than the well-established rules in use by Full Power FM stations. Such restrictions are unnecessary as part 74 limits the use of booster stations to very specific situations.

REC Networks proposes a specific set of criteria that is laid out in the NPRM at para. 16. Most of this criteria, however, is already included in part 74 subpart K. FM booster stations are already required to be contained within the service contour of the primary (73.1235(c)), are limited to 20% of the class maximum ERP (74.1235(c)), and must be located on the same channel (74.1202(c)) and carry the same programming (74.1231(i)). REC's restrictions on the LPFM station being licensed rather than permitted is not relevant because an FM booster station cannot operate separate of a licensed LPFM station. The restrictions on location are unnecessary because the FM booster must be located within the 60 dBu contour of the primary. The Commission could simply utilize the existing FM Booster rules for LPFM stations and be done, no further restrictions are necessary.

On concerning proposal is requiring LPFM operators to give up one of their two FM translator stations in order to utilize a booster. Although most LPFM operators do not use FM translators today, many would likely do so if the Commission were to open a window allowing their use. Today LPFM operators must purchase an FM translator on the open market, but prices are sky high and out of reach for most LPFM operators due to increased demand following the AM revitalization windows.

The use of a booster station should be to enable operators to utilize greater spectrum efficiency by reusing the same channel as their parent in terrain shielded areas. Operators who are given the choice between operating a booster and operating a translator are would likely choose the translator if

one is available because the translator would not cause interference to the primary and the translator would provide an expansion beyond the 60 dBu of the primary. The Commission, however, should be encouraging the use of greater spectrum efficiency, and not punishing operators who would benefit from the more spectrally efficient booster. If an operator is allowed only two boosters and/or translator stations, why would the operator give up a translator for a booster?

The Commission does not restrict the use of boosters in other services, see 74.1232(g). There is no reason to further restrict LPFM operators who would benefit from an FM booster station. I encourage the Commission to reconsider its proposal to require LPFM operators to give up one of its two FM translator allowances if it chooses to operate an FM Booster.

## **V. Miscellaneous issues**

### *A. Radio Reading Services*

In the NPRM, the Commission declined to publish a list of stations operating radio reading services. However, out of date and misapplied protections have done real harm to LPFM stations already. In the case of KRSM-LP's original application (BNPL-20131114BRM), the application was initially dismissed due to the Commission belief that third adjacent KSJN operated a Radio Reading Service on channel 258. The applicant had to defend itself dismissal due to a station that never even operated a Radio Reading Service. The year 2000 list included a station with the call sign KSJN in Minneapolis, MN, but that station uses the call sign KNOW-FM and operates on channel 216. Another applicant (Fac. ID 194304, application BNPL-20131112BEF) was dismissed on the same day for the exact same station (KSJN) and its petition for reconsideration was denied. If the Commission is going to dismiss applications for failure to protect radio reading services then it needs to exercise extreme caution and ensure that the dismissal is for the correct station. Suggesting applicants can readily identify stations on channel 200 to 220 (para 21) is nonsensical, especially since it has in multiple



instances dismissed stations on channel 258 (in the cases noted above), and expecting applicants to rely on other sources is laughable. There are no comprehensive sources. It should be noted that the link included to the IAAS in footnote 79 does not actually list the stations that broadcast a radio reading service. It only includes a list of the organizations that operate the services, and many of the pages do not list the radio stations that operate the service. An LPFM applicant that must rely on this list will be unable to determine which are impacted. An LPFM who similarly relies on the original year 2000 list (if it can even find it) will find that a number of the stations in the list have changed call signs and many of the stations in the list are incomplete. Out of fairness for applicants who face dismissal due to the presence of radio reading services on third adjacent channels, either a list needs to be published or applicants should be allowed the ability to propose a nunc pro tunc curative amendment to any application dismissed for failure to protect a radio reading service.

#### ***B. Emergency Alert System.***

Para. 22 of the NPRM discusses the requirements of EAS receivers in the LPFM service. Despite the Commission's remarks, I still firmly believe the participation in EAS of most LPFM stations does more harm than good. My comments within RM-11810 are still valid, however the Commission stated I did not provide evidence to show EAS requirements for LPFM stations are unduly burdensome. Therefore I am providing further evidence to show how the requirements are unduly burdensome.

The Commission should certainly be concerned when a majority of LPFM stations did not participate in recent EAS national tests. LPFM participation rates in 2017 and 2018 were 48.5% and 48.4%, respectively. This is about 30% lower than the average for radio as a whole. If most operators aren't participating then clearly there is a burden on these operators. If EAS participation was not unduly burdensome then the participation numbers would be much more in line with full power broadcasters as a whole.

The low participation rate is likely due to a combination of factors. One such factor is general unawareness. The Commission does a terrible job communicating the regulatory requirements despite having a database of every operator's email address. It would be easy to send regular reminders to LPFM operators reminding them of their responsibility and providing simple instructions on how to meet the requirements. Operators should not be expected to read trade publications or receive word from communications attorneys (many do not have counsel) when the Commission has the power to communicate to operators directly. Although an EAS reminder was sent this year, it was sent on the same date the first form was due, leaving operators no time to comply.

However, a likely larger issue is that stations do not have EAS equipment or the equipment is not kept properly up-to-date with software patches. The cost of most EAS encoders, AM/FM/NOAA receivers, and accessories will exceed \$3,000. For a typical start-up LPFM operator, this will account for about 1/3 of the entire cost to construct a station with a basic studio<sup>1</sup>. I suspect that many operators who are trying to raise enough money to construct before CP expiration will likely forgo any equipment that is not strictly necessary to transmit a signal and programming, and the EAS unit for some may simply not be included. There simply isn't grant money available to purchase EAS equipment, and our state emergency management agencies are unaware of the unique needs of LPFM stations. For instance, one emergency manager didn't understand how a radio station could be entirely volunteer operated without paid staff, and our state EAS plan (MN) doesn't even include LPFM stations, so many stations are simply ignored and aren't in regular contact with their state authorities.

To add salt to the wound, EAS and CAP protocols are updated regularly and stations are expected to oftentimes pay for updates. A \$500 or so update every few years just adds to the burden when many of these stations operate on shoe string budgets.

---

<sup>1</sup> I find the cost to construct a typical station as about \$10,000 between 2014 and 2016 when most LPFM stations were constructed. A certified BW TX300 V2 transmitter was about \$3,000, antenna and cable \$1,000, EAS \$3,000, basic studio consisting of microphones, mixer, PC, CD players, and associated equipment \$3,000.

One option the Commission and FEMA could consider is to establish a one time grant that would pay a substantial portion of the costs for any station that does not have appropriate EAS equipment to acquire or update the equipment and place it in service within a reasonable period of time. The likely cost would be around \$1 Million and the participation rate among LPFM stations would as a result drastically increase.

A second option would be to allow LPFM stations some flexibility to use non-certified decoders and the ability to use either pre-CAP EAS equipment (such as a gray Sage Endec) or CAP-only equipment. An organization in Canada wrote a CAP-only software decoder for the Canadian system that runs on a Raspberry Pi and costs about \$20, and they have expressed interest in writing similar software for the USA system. I spoke with their developer at a recent conference and they already have a prototype in development. Any LPFM station that has not yet purchased equipment would benefit from such a system.

Or the Commission can simply expend resources trying to understand why compliance rates are so low with predictable results, and make statements suggesting that EAS regulations are not unduly burdensome when the statistics clearly show otherwise. Hopefully this explanation provides some evidence to show EAS requirements for LPFM stations may indeed be unduly burdensome and some steps that can be used to help improve it.

### **C. Other issues**

The Commission asks for other comments and technical proposals that may help. However, the proposals that will actually do the most good are missing from consideration in this NPRM. An increase in power, use of contour protection towards translators, and other comments rejected in footnote 15 are the ones that will help LPFM operators the most. It is disheartening to see that FM Translator stations have such significant regulatory flexibility yet LPFM operators are hamstrung by

ineffective regulations that harm their very existence. The failure of the Commission to even consider these proposals shows it either does not understand or does not care about the technical challenges actually facing LPFM operators.

There are a several threats that harm the very future of LPFM operators. There are numerous reasons that show why many LPFM stations are failing:

1. *Small service areas* – LPFM stations are the most restricted service having 60 dBu service areas of only 5.6 km. as opposed the 28.2 km minimum of a Class A station. 100 watts at 30 meters is not enough to provide adequate building penetration in most areas or overcome interference that increased following AM revitalization translators. LPFM operators are prohibited from operating other LPFM or full power stations and have not had a window opportunity to apply for their two translators. The Commissions unwillingness to consider granting LPFM stations a power increase, despite substantial support from the community for LP250, is tragic.
2. *Non-Commercial status.* A non-commercial station needs a large coverage area to attract donors. Many non-commercial operators such as public radio and religious organizations/churches have large networks of stations and can pull in support from a large potential base of listeners while achieving efficiency of scale in their regional networks. A 100 watt station cannot generate a large base of listeners due to limited range. The limited range and the inability to air commercials ensures that budgets will be tight, so tight that even a \$3000 EAS decoder is a massive burden when their entire yearly budget may be less than this amount. Additionally, many parent organizations must focus their limited finances on their core mission and cannot give meaningful financial support to radio station operations.
3. *Prohibition on sale of the license.* In a perfect example of “be careful what you wish for” an LPFM station cannot be sold to another entity for anything more than the depreciated value of its assets. This was to prevent speculation and ensure that licenses only went to those who truly

wanted to operate the station. This sounds great in theory, but in practice has been anything but. What this means is that the LPFM license is worthless. Banks and lenders are unlikely to give a loan to an LPFM operator if the operator cannot use the license as collateral. Many organizations who applied for LPFM stations in 2013 with great hopes are finding that operating a station is expensive and detracts from their core mission. Money that was spent getting on air is now wasted and there is no way to recover the expense. Other organizations better equipped to run an LPFM station are shut out. The LPFM operator may then unwillingly sink more money into a losing operation and instead provides a 24/7 automated service with limited value to the community in order to keep the license active until someone comes along and agrees to pay the LPFM operator a sum of money to turn in its license. My station is one of many that have been offered money by an FM translator operator to turn in its license or find a new frequency so that the FM translator can expand its service area. If my organization ever decided that we no longer wanted to continue to operate our station we could simply take the payout previously offered and turn our license in. Is the public interest aided in any way by this?

4. *Inflexible Rules.* As has been stated by myself and many other commentators in the past, the LPFM service has much more stringent technical regulations compared to FM Translator, Class D NCE, and Full Power FM stations. There is no reason that LPFM stations should have more strict regulations than an FM Translator as both are secondary services and supposed to be equal in status. LPFM stations are being de facto treated as third class citizens behind Full Power and FM Translator stations. The inflexibility is harming the ability for many LPFM stations to continue to serve their audiences. My experience with trying to build WVIC-LP is an example of rules that serve nobody and merely wasted my time, my client's time, and the Commission's

resources while depriving the community of St. Paul, MN of a viable local service for more than two years at this point.

5. *No unified lobbying entity.* Full Power and FM Translator broadcasters have numerous organizations that support and lobby for their interests, one such entity is the National Association of Broadcasters (NAB). LPFM stations on the other hand do not have a entity that can lobby on their behalf. These organizations have opposed LPFM organizations since day one (the first MM99-25 rulemaking) and clearly no LPFM organization wants to be a member of a professional organization that opposes their very existence. REC Networks is the closest organization that looks out for the needs of LPFM broadcasters, but REC is a consulting/engineering firm and not a membership organization that can adequately advocate for the needs of its members. Since LPFM operators have little money (as described above) they cannot afford to spend large amounts of money hiring attorneys to advocate for them. The Commission will undoubtedly receive a lot of comments from organizations that represent Full Power and FM Translator operators about why LPFM stations should continue to only receive 'table scraps from their masters' because to improve the LPFM service would put their members interests at risk. No commercial operator wants to see increased competition, nor do they want to see spectrum go to anyone except themselves. The result is the LPFM service does not meaningfully improve and Commercial interests will continue to control most of the FM spectrum.

The Commission may not have the authority to resolve all of these problems on its own, but it can certainly provide some relief to LPFM broadcasters who are frequently assaulted by interference and bureaucratic unwillingness to craft meaningful and fair regulations. There are three things the Commission has the authority to do help these problems:

1. *LP250*. Allow LPFM stations the ability to increase to 250 watts as proposed by REC Networks and ‘tentatively rejected’ by this NPRM. There is no reason this cannot be considered at this time.
2. *Contour Protection*. LPFM stations should be allowed to specify contour protection towards FM translator stations that they have short-spacings with. There is no prohibition on the use of contour protection by the Local Community Radio Act towards FM translator stations, the prohibition only applies towards Full Power stations. If the Commission is unwilling to allow the use of contour protection towards short-spaced FM Translator stations then the Commission should also deny any FM translator application that creates short-spacing with an LPFM application. This is necessary in order to avoid the issues that occur due to the use of different interference protection regimes for these two services.
3. *Permit sale of license*. The Commission should further study and consider allowing the free market to place a price on an LPFM license (but not CP), consistent with the policies in all other services. As it stands today, a number of LPFM licenses are in the hands of organizations that had high hopes, but today cannot adequately operate the station, and their only recourse to recoup their investment/losses is to turn in their license in exchange for payment by an FM translator operator who wants their spectrum. Allowing the free market to dictate the price of spectrum ensures LPFM licenses will go into the hands of organizations who are willing and ready to operate the station, rather than be lost to an FM translator operator who is looking to increase their coverage area. To minimize speculation, a four year holding period could be required.

## **VI. Conclusion:**

The proposals that the Commission has advanced in this NPRM do provide regulatory relief to many operating LPFM stations and prospective LPFM applicants. However, they fall substantially short of enacting the real reform that is needed to provide equity and fairness between other secondary services (Class D and FM Translators) including an increase in power (LP250), the use of contour protection, and other proposals rejected in footnote 15. There is substantial agreement within the LPFM community that substantial technical reform is needed, rather than the “trimming around the edges” that we see advanced in this NPRM. The Commission should reconsider its tentative rejection of these proposals and place them back on the table as soon as possible.

Respectfully Submitted,



Jeff Sibert  
President  
Park Public Radio, Inc.  
KPPS-LP  
Jeff@parkpublicradio.org

October 21, 2019