

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	MB Docket 19-193
Notice of Proposed Rulemaking)	MB Docket 17-105
FCC 19-74)	

COMMENTS ON PROPOSED RULEMAKING

October 20, 2019

By LPFM/NCE community-radio engineer advocates.

The Commission is to be commended for this important proceeding which is also the first LPFM-specific proposal since the 99-25 rulemaking in 2012 which led to the LPFM window of 2013.

We are recognized for years of LPFM and NCE-FM advocacy, rulemaking participation, legal pleadings, engineering and otherwise supporting new-station applications and their modification, field experience with these stations, and other routine Commission matters. Our combined experience qualifies these respectfully-submitted comments.

Directional Antennas

We generally support the NPRM proposal to allow more LPFM directional antennas [para 3] . We think the proposed 73.316(c)-style engineering showing is overkill for stations of such low power and small footprint, whereas for powerful stations with large footprints, the consequences of directional pattern problems have potentially huge impact on the public and a very diligent proof is warranted. Translators, the nearest LPFM peers, are not required to produce proofs of performance.¹

¹ Commenters are aware of FM translators which proposed protective directional antennas yet installed omnidirectional ones and continue to operate with impunity despite varying types of complaint (including in some instances, no complaint despite interference). An FM translator might represent the literal survival of an AM station, and elimination of an LPFM-protective coverage pattern can increase listeners, and thus income, fourfold in some instances while saving thousands of dollars of antenna cost. This increased revenue can profitably fund economic bullying of LPFM stations through legal filings, while simultaneously impinging their listenership and viability -- battles which are ongoing at this writing. 73.316 may not be the right answer for dissuading unscrupulous FM translator owners from this risky but possibly tremendously-profitable gambit, but something needs to change.

[para 4] Instead of 73.316(c) proofs, we support Prometheus' proposal that LPFM stations resolve problems caused by their interference, requiring no additional rule changes.

[para 4] The initial complexity and expense of a directional antenna would demand considerable expertise and resources on behalf of an LPFM station. We believe this is a sufficient gating factor that regulation of circumstances where directional antennas may be used is unnecessary. Handwringing about LPFM stations possessing sufficient capability to respond to antenna-related problems quickly, seems to overlook their access to the power switch and, its existing necessity in some LPFM interference situations.²

Protecting Channel 6 Television Stations

Eliminating the distance separations between LPFM and TV-6 stations [para 10] is a proposal we strongly favor, and it may reduce some of the channel pressure in urban areas.³ Our experience suggests there is little to no risk of interference. We propose allowing Class-D FM stations, which are of less ERP, the same relief.

If a full-power TV-6 station's modifications cause interference to LPFM listeners, the LPFM is a secondary service and must accept it. If conversely an LPFM causes interference to full-power TV-6 viewers, we think the LPFM should be responsible for remediation. LPFM and LPTV are both secondary services and could apply the first-coverage concept already in use between FM secondary services when they interfere with one another.

In order to gain early experience, simplicity for staff and cost-reduction for LPFM stations, we think the temporary LPFM/TV-6 waiver proposal [para 11] need not be enacted -- remediation of interference caused by an LPFM to TV-6 viewers is the safeguard. We recognize that more-powerful primary-service FM stations deserve more study if not experimentation, and support removing as many if not all of the NCE-FM/-TV restrictions as is consistent with good service.

[para 13] LPTV audio on 87.7 MHz is second adjacent to the closest commonly-used FM channel 201, and so we propose applying the existing second-adjacent secondary-service rules from FM. Given the non-protection of second-adjacent LPFM stations by FM

² 73.809(c)

³ The LCRA allowed LPFM stations in more-densely-populated areas however, those LPFM stations are increasingly experiencing additional channel and interference pressure from the recent influx of AM cross-service translators, pitting some AM stations' very survival against existing LPFM stations' survival. Short of expanding the FM band, perhaps into TV channels 6 and 5 as some have proposed, the reduction of unnecessary TV protection may be the best chance of some relief in congested, contested areas.

translators in 74.1204(a)(4),⁴ and the secondary status of LPTV stations, we propose that LPTV “channel 199” operation be allowed and continued without adding rules regarding LPFM stations (or FM translators). Translator or LPFM operation on channel 201 near a channel-199 LPFM is unlikely in practice to cause problems for either party. Full-power NCE movement to 88.1 MHz could cause interference to LPTV audio listeners, but LPTV is already a secondary service and must accept primary-station interference, borrowing again from FM rules.

Redefine “Minor” Changes

The NPRM states “We agree with giving additional flexibility for station relocations and propose to change the definition of minor change to one which either: (1) does not exceed 5.6 kilometers or, (2) involves overlapping 60 dBu contours of the existing and proposed facilities.” Regarding point (2); We support LPFM minor relocations based on overlapping existing and proposed service contour overlap.⁵

However regarding point (1), the option of moving based upon *distance limitation* (5.6 km suggested by the Commission) should be harmonized with the maximum distance possible of two overlapping existing and proposed LPFM 60 dBu contours. This would simply be double the LPFM maximum radius at 100 watts at 30 meters HAAT. With FCC rounding rules, minor changes of 6.4 kilometers are currently allowed.⁶ Rather than burden LPFMs seeking to move 7 kilometers with the expense of a contour overlap study, we recommend changing the minor change distance from 5.6 kilometers with maximum rounding applied to $6.4 + 6.4 = 13$ kilometers.

Therefore, we recommend not adding any language to the existing 73.870(a), but simply changing the distance “5.6” to “13”.

Regarding LPFM channel changes, current rules consider co-channel, 1st, 2nd, 3rd, and "IF" to be minor changes or, to "any channel with a showing of reduced interference".

The notion of "reduced interference" has varied over time. Early on, it was lenient. Later it got stricter. Whether something will get approved or not seems to be somewhat random.

Any change is likely to reduce some interference and increase some other interference. What has priority? It really should be up to the applicant regarding interference

⁴ LPFM stations are required to protect second-adjacent FM Translators by 73.807, an illogical asymmetry, addressed later in the instant Comment.

⁵ We note, without recommendation, the disharmony with NCE minor changes based on self mutual exclusivity and, FM translator minor changes which align with the instant proposal.

⁶ ... when the application references 73.208(c)(8) for rounding to the nearest kilometer.

received and, honoring the neighbors regarding interference caused. It is not always this way.

A proposed change to any channel that reduces interference caused should always be accepted as minor, even if it increases interference received by the station asking for the change.

A proposed change, to any channel that meets all spacing rules, when the old channel might be short-spaced, should be considered to be a reduction of interference and, on those grounds alone, leading to acceptance of the change as minor.

In many cases, an LPFM station is forced into a situation where other allocations changed around them, causing what was originally a good channel to be short spaced or, even if not, it's ability to move becomes limited. An LPFM could lose its antenna site. It be forced to move and find itself closed in, with no practical moves possible without a non-adjacent channel change. Perhaps a new site is available within the distance a station is ordinarily allowed to move, but not available on the existing channel. In this case, the LPFM should be allowed to change to that channel, and this move be regarded thus, as a minor change. Sometimes this is necessary for the survival of the station.

On FM Booster Station Technical & Cross-ownership issues

Philosophically we support allowing LPFM stations to have boosters where warranted and with appropriate safeguards⁷. However the proposal warrants further technical study and, should be harmonized with interference protection and remediation procedures⁸.

We also suggest dispensing with ownership restrictions.

We do not see FM Boosters as expanding a station's FM channel consumption, unlike FM translators, nor extending the coverage area further than the existing service contour, and therefore see no reason to regulate FM booster ownership [para 16]. As an extreme example, if an LPFM station wished to install a handful of 1-watt FM boosters to cover a long narrow shadowed valley within its service contour, we see no reason to prohibit them from owning said boosters.

We propose removing the booster language from the proposed 73.860(b), thus reverting to the original language.

⁷ Recently-modified 74.1203 and 74.1204 may provide ideas about such safeguards.

⁸ Of several Booster applications granted to date, only two are currently licensed. Past complaints of unresolved interference at one of the facilities are indicative of a need for further study and consideration.

The booster mention in 73.860(b)(1) as proposed seems confusing, as the intent is already covered by (5). The HD-1 language of (b)(2) may provide unnecessary technical limitations on boosters.

Additionally, noting instances elsewhere of FM Booster facilities also serving as Auxiliary Antennas, and not considered “short-spaced” so long as they remain contained within the 60 dBu (1 mV/m) f (50,50) service contours of their respective main antennas, further consideration should be given to allowing an LPFM Booster to be classified as an Auxiliary facility.

There are numerous instances where new short-spacing imposed by Translators and Full-Power FM categorically prevents establishing an Auxiliary Antenna, for example, at the LPFM’s Main Studio location, because the Facility ID for the main LPFM antenna is preemptively codified in Commission records and databases as immediately subject to minimum spacing requirements 73.807. Boosters-as-auxiliary is an enhancement which would provide much needed relief and flexibility, especially for instances where the LPFMs are ‘boxed-in’ by short-spacing from two or more directions.

LPFM and EAS

Sibert’s identification in this proceeding, of problems with LPFM stations and the Emergency Alert System are familiar. We note the relatively-tremendous cost of EAS equipment – sometimes costing more than their brand-new FCC-certified transmitter which is another unique LPFM expense. Purchasing multiple separate EAS units for time-shared LPFM stations sharing transmission facilities is criminal, as is the cost of a multi-station EAS unit. Firmware updates can be expensive and sometimes seem required when they aren’t. EAS is overly-complicated and burdensome compared to many LPFM stations’ capacity and staff. It further comes with risk of literally ruinous fines for LPFMs who do not maintain their perch, often despite frequently-changing personnel, at the summit of the EAS learning curve. As the Commission has recently studied lower rates of LPFM participation in the national EAS tests, we need not burden the point further.

We believe that a reliable nationwide alert system which can function without the internet is essential, and concur with the Commission not eliminating the EAS requirement for LPFM stations, noting that the issue of EAS and LPFM stations needs work.⁹ Also, the FCC should recognize the efficiency of allowing co-located LPFM site

⁹ We suggest a possible alternative could be the Commission’s favorable consideration of stations applying under §11.34(e) *Waiver requests of the Certification requirements for EAS Encoders or EAS Decoders which are constructed for use by an EAS Participant, but are not offered for sale will be considered on an individual basis* should any such applications arise, and Commission support acquiring the cryptographic keys for CAP and IPAWS stations possessing a waiver-permitted home-made EAS.

transmitter equipment (a LPFM sharetime of more than one station requiring more than one EAS in the same rack as an example) to use a common EAS system by explicitly stating in the rules that this is condoned.

Second/Third-Adjacent LPFM/Translator Harmony

We recommend [para 19] removing the protection of translator second/third adjacent channels by LPFM for good reason:

- (1) According to § 74.1204(a)(4), translators are not required to protect LPFM second and third adjacent channels.
- (2) Translators are not required to protect translator second and third adjacent channels.
- (3) According to § 73.807(a)(1), LPFM is not required to protect LPFM second and third adjacent channels.
- (4) *However*, § 73.807(a)(1) requires LPFM to protect second and third adjacent channels.

We support harmony between (4) and (1), (2), and (3), by discontinuing LPFM protection of second- and third-adjacent translators.¹⁰

Harmonize § 73.870(c)

We suggest striking § 73.870(c) from the LPFM rules. § 73.870(c) states:

§ 73.870(c) Applications subject to paragraph (b) of this section that fail to meet the § 73.807 minimum distance separations with respect to all applications and facilities in existence as the date of the pertinent public notice in paragraph (b) of this section other than to LPFM station facilities proposed in applications filed in the same window, will be dismissed without any opportunity to amend such applications.

§73.870(c) uniquely annihilates new-LPFM applicants if they make a mistake, such as not properly executing a second adjacent waiver. The rule does not pertain to LPFM minor changes, nor does this stipulation appear in any other service: translator, FM, AM, TV, or LPTV. The latter-mentioned service may amend new applications *nunc pro tunc* if there is an engineering error regarding distance spacing or contour overlap.

¹⁰ Such proposed rule change would not be contraindicated by the Local Community Radio Act (“LCRA”) because LCRA Section (3)(b)(1) only pertains to not reducing the minimum spacing of full power stations. The LCRA also states in Section 5(3) that translators and LPFM shall be equal in status to each other. LPFM protecting second/third adjacent translators, but not translators protecting second/third-adjacent LPFM is a current dichotomy within this regime.

Increased-coverage LPFM: “LP-250”

We find it unfortunate that the Commission omitted the much-anticipated “LP-250” from consideration at this time, and are eager to enhance a future increased-coverage proposal from our experience 1) in rural areas 2) with LPFM stations’ technical capacity 3) regarding certified equipment 4) regarding possible adjustments to interference procedures, and 5) considering LPFM RF safety. A 4dB power increase to 250 Watts at 30 meters HAAT can be improved upon.

Many of our LPFM constituents do not have interference-free coverage within their LP-100 60 dBu contours with no relief in sight. The LPFM minimum spacing to translators does not take into account 250-watt fill-in translators at substantial height which may impart a huge 40 dBu interfering contour. After building an LPFM station co-channel to such translator station, an LPFM signal might be found to only achieve one mile coverage, with no other viable channel to move to. There are also cases of incoming interference over bodies of water, tropospheric ducting, single-digit-wattage stations that have no building penetration, rimshot full power station incoming interference, HD interference, and geographic anomalies in HAAT that force a small wattage that covers less than a 5.6 km radius in actuality. Allowing a LP-250 upgrade service to LP-100 stations would permit these stations to continue operation as intended instead of handing their licences back to the FCC because their coverages are not useful for serving the public.

Streamline Transmitter Type Acceptability Definition

Full power and LPFM stations both point to §73.1660, "Acceptability of broadcast transmitters." §73.1660(a)(1) points to a verification procedure with "procedures described in subpart J of part 2 of this chapter" referred to as *type accepted* or *type verified*. §73.1660(a)(2) states "transmitters shall be certified" or *type certified*. These are equivalent requirements with only different names. Talking with FCC staff about this, it is even admitted that *type verified* is synonymous with *type certified*. It would not make any sense to prevent an LPFM facility from using a transmitter that is fully vetted for full power broadcast only because it is referenced under a different name. §73.1660 should be streamlined to demonstrate that certification and verification are equivalent, with both designations acceptable for LPFM facilities.

CONCLUSION

The Commission is to be commended for applying simplification and modernization to LPFM and TV-6 protection, and considering the REC proposal for rulemaking. We are generally favorable toward these proposals. Our reply proposes reusing existing rules

instead of creating new ones, eliminating some redundant and disharmonious ones, and simplifying for example the minor-modification proposal to keep the LPFM service technically accessible, all of which should simplify the regulatory path for not only stations but also Commission staff. We thank Commission staff for their consideration of these reply comments and await our next opportunity to participate in this proceeding.

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