Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC

In the matter of:	)	
	)	
Improvements to the Low Power FM	)	RM-11749
(LPFM) Radio Service	)	
	)	

REPLY COMMENTS OF REC NETWORKS AND
REC BROADCAST SERVICES, LLC ("REC")

REC Networks strives to assure a citizen's right to access the airwaves and strongly advocates for the Low Power FM ("LPFM") broadcast services. REC Broadcast Services, LLC is a Wisconsin corporation that provides broadcasting engineering and consulting services for FM broadcasting specializing mainly in the LPFM service (collectively "REC").

In the past 30 days, we have seen the supportive comments of hundreds of board members and listeners representing hundreds of LPFM stations from Hawaii to Maine in response to the above captioned proceeding ("Petition"). The station representatives have shared their own stories of the performance of their LPFM stations within the three-mile zone where it comes to the subject of building penetration and the low level radiation centers of LPFM stations.

Contour overlap with FM translators and "hybrid" contour overlap with Full-Service FM can be considered within the LCRA.

Both Educational Media Foundation ("EMF") and the LPFM Advocacy Group ("LPFM.AG") recommend that LPFM stations be able to use a contour overlap model to determine spacing either in addition to (in the case of EMF) or instead of (in the case of LPFM.AG) the minimum distance separation tables in §73.807(a) of the Commission's Rules.[1] EMF recommends that contour overlap be used to backstop the mileage requirements.[2] LPFM.AG calls for a

[1] - EMF comments at 7. LPFM.AG comments at 1.

[2] - EMF comments at 5.

complete replacement of the LPFM technical standards with those used for FM translators.[3] EMF refers to a current situation in Southern California where they claim that a proposed 100-watt LPFM station at Pasadena, California will cause interference to KYLA, Fountain Valley due to contour overlap.[4]

The argument to use contour overlap in addition to minimum distance separation for LPFM stations ("hybrid") does have merit. When LPFM was originally created, the Commission opposed the methodology in favor of minimum distance separation stating that "contour overlap methodology could significantly delay the implementation of the LPFM service because it would require substantial preparation on the part of applicants and the Commission and would increase the processing burden on the staff."[5] During the first LPFM filing windows, over 3,000 applications were filed using distance separation methodology and three years later, the Commission managed to handle over 13,000 FM translator applications in the Auction 83 filing window.

While REC mostly supports LPFM.AG's contention that LPFM stations should be permitted to have similar technical facilities as FM translators thus making the two services nearly interchangeable, such an arrangement in respect to domestic full-service FM stations is statutorily precluded by the Local Community Radio Act ("LCRA")[6]. Section 3(b) of the LCRA prohibits the Commission from amending the rules to "reduce the minimum co-channel, and first- and second-adjacent channel distance separation requirements ***in effect on the date of the enactment***

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[3] - LPFM.AG comments at 1-2.

[4] - See EMF Comments at 5. REC has already filed an opinion in the docket of the LPFM station in question therefore, our position on this specific station pair is already on record. See *Razorcake/Gorsky Press, Inc., REC Networks, Opposition to Educational Media Foundation,* BNPL-20131114AXZ (July 17, 2014).

[5] - See *Creation of a Low Power Radio Service*, Report and Order, 15 FCC Rcd. 2232 ("Original R&O")
at 68. (MMB 2000).

[6] - Pub. L. No. 111-371, 124 Stat 4072 (2011).

of this Act between – (a) low-power FM stations; and (b) full-service FM stations". (emphasis added)

EMF's approach seems to take the LCRA requirements into consideration. The way we read their approach is that LPFM stations would still be required to protect other facilities using the §73.807 minimum distance separation but with a contour overlap requirement up and above the minimum spacing. In other words, extend the REC proposed "Foothill Rule" to all LPFM stations.[7] In fact, EMF's concerns involving KYLA was one of several cases that REC had noted that served as the catalyst for proposing the Foothill Rule. We acknowledge that there are some full-service stations that can receive interference from LPFM stations even with the "buffer zone" that the Commission implemented in the Original R&O.[8] '

While we can't implement a full "translator-like" contour overlap methodology between LPFM and full power FM, it may still be possible to implement such spacing between LPFM stations and FM translators, boosters and other LPFM stations and to provide a "hybrid" approach for full-power FM protection. Section 3(b)(1) of the LCRA states that the Commission can't reduce minimum distance separation between low-power FM stations and "full-service" FM stations. While the LCRA does not specifically define what a "full-service" FM station is, in Section 3(a), it does distinguish between "full-service" FM stations, FM translators and FM booster stations. Because of this distinction in Section 3(a), Section 3(b)(1) of the LCRA can be interpreted as the statutory requirement for distance separation applies only to domestic full-power commercial and non-commercial FM broadcast stations and does not apply to FM translator and FM booster stations.[9]

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[7] - Petition at 19.

[8] - Original R&O at 64.

[9] - For the purposes of this interpretation, we would consider Class-D (Secondary) FM stations to be "full-service" and subject to the protections of the LCRA.

Section 3(b)(1) also states that the distances to be used in consideration for the enforcement of this section are those "distance separation requirements in effect on the date of enactment of this Act".[10] The LCRA became Public Law on January 4, 2011. On the date that the LCRA became Public Law, §73.807 of the Commission's Rules was still codified with distance separation tables for both the LP100 and LP10 services. In the *Fifth Report and Order*, the Commission deleted the LP10 service from the Rules.[11] This rule change was adopted on March 19, 2012, more than one year after the LCRA became Public Law. Therefore, it can be interpreted that despite being deleted from the rules, it is possible to resurrect the LP10 spacing table and implement them in a rulemaking as the table was part of the rules when the LCRA was enacted.[12]

With that, REC would propose that the Commission consider a "hybrid" protection method for LPFM stations. Under the hybrid protection concept:

- LPFM stations can propose any facility with the equivalent service contour of 7.1 kilometers and a maximum ERP of 250 watts and a minimum service contour of 1.8 kilometers (1 watt at 30m HAAT).[13]

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[10] - LCRA, Section 3(b)(1).

[11] - See *Creation of a Low Power Radio Service*, Fifth Report and Order, 27 FCC Rcd. 3334-3335 ("Fifth R&O") at 48-51. (MB 2012).

[12] - See Appendix B for the former LP10 spacing tables.

[13] - We are proposing to keep the maximum service contour at 7.1 km. REC disagrees with the concept of extending the service contour to those of translators (7.3 km in the eastern USA and California, 13.3 km in the western USA) as such an expansion (especially in the western USA) would degrade the hyperlocal nature of LPFM. Despite both being secondary services, we recognize that there is a distinct difference between the type of service FM translators render in comparison to LPFM stations. REC does share some of the concerns that have been expressed by the owner-operator AM stations that are concerned that LPFM stations should not be able to get too big as to compete with commercial stations. We also feel that the 7.1 km limitation strikes a balance between the need to provide improved LPFM service within the existing hyperlocal service area and the need to improve Class-D AM stations through the use of FM translators as either a permanent solution or as an interim solution with an eventual migration to an extended FM broadcast band between 76.1 and 87.9 MHz.

- LPFM stations would be required to protect full-service FM stations using contour overlap criteria thus prohibiting overlap of the LPFM station's interfering contour with the service contour of the full-service station.[14]
- Regardless of a lack of contour overlap between the LPFM station and the full-service station, the LPFM station must also meet a minimum distance separation from the full-power station. This separation would be based on the former LP10 table.[15]
- Protection by LPFM stations to FM translators, FM boosters and other LPFM stations would be only be through contour overlap methodology and not through a hybrid minimum distance separation.
- Protection by LPFM stations to foreign stations would follow the existing international agreements with Canada and Mexico as they relate to FM translators. This also includes maximum service contour sizes and power restrictions on stations near the border.

This hybrid method would take into consideration the recommendations of EMF by providing a contour overlap methodology with a "back-stop" for distance separation. This hybrid method also addresses several aspects of LPFM.AG's position while remaining in compliance with the LCRA and maintaining the hyperlocal nature of the LPFM service. This hybrid method could also re-open the door for a potential for lower power FM stations such as the former LP10, the LP50 proposed by REC as well as sub-100 watt LPFM services proposed by Nickolaus Leggett and Don Schellhardt[16].

LP-250 impact on a future FM translator window

While the analysis performed in our petition has indicated that a large number of LPFM stations would be able to upgrade to LP250, nowhere in our petition did we suggest the timing of

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[14] - See Appendix C.

[15] - This would be similar to the §73.215 distance separation for full-service stations.

[16] - We do note that REC does remain opposed to any geographic restrictions on LP-250 stations other than those required as a part of international agreements.

the availability of LP250 in respect of a future FM translator window. REC does recognize that an FM translator window will have an impact on the availability of LP250, especially in more urban areas where FM translators for AM stations will be more in demand. This impact can not be measured until we determine the scope of the next translator window. NAB states that Section 5 of the LCRA states that licenses are available for FM translators as well as LPFM stations.[17] NAB is correct that the LCRA does call for some parity when licensing new FM translator and new LPFM stations.

NAB's logic fizzles when you take into consideration that nowhere in this petition are we asking for any new LPFM stations. We are asking for the ability for *existing* LPFM stations to become more in parity with FM translators to better serve their local audience. Section 5 would not come into play here because we are not proposing any new LPFM stations, only upgrades to existing stations. Even if LPFM stations were permitted to upgrade prior to the opening of a filing window for FM translators, it would only increase the average service contour that the translator would be required to protect by 1.5 km. Since FM translators are permitted to use directional antennas and are not subject to minimum distance separation requirements that LPFM stations are subject to, they are more likely to be able to find a channel while permitting the existing LPFM station to expand. Since we are not proposing any new LPFM stations as a part of this proceeding, there is no violation of Section 5 of the LCRA and the impact to the future availability of FM translators will be minimal.[18] Remember, there are many LPFM licensees that are awaiting their first opportunity to file for an FM translator.

We do note that while NAB is staunchly opposed to LP250 due to concerns over the allocation of spectrum to new FM translators, we do note that the National Translator Association ("NTA") "stands firmly in support" of the Petition.[19] NTA further states that an open filing

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[17] - NAB Comments 7.

[18] - New LPFM stations would only be in a filing window that REC would expect to take place after a filing window for FM translators.

[19] - NTA comments at 1.

window for new FM translators is long overdue.[20] REC agrees with NTA. A translator window is long overdue especially if the window also gives LPFM licensees the opportunity to file for an FM translator.[21] This differing of opinion by two major trade organizations only demonstrates NAB's bigotry towards LPFM.

This petition is not "premature"

In their comments, NAB states that the Petition is "premature" as it "comes prior to the Commission finishing its processing of the 2,800 applications for 100-watt stations submitted in the 2013 LPFM filing window ("2013 Window Applications")."[22] They further state that it would be "imprudent, if not impossible" for the Commission to assess the impact of upgrading LPFM to 250 watts before the effects of all LPFM stations are known.[23] The NAB further states the because a majority of the 2013 Window Applications have not been constructed and estimate that only 150 of these stations are currently on the air.[24]

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[20] - NTA comments at 2.

[21] - We do note that our proposals to allow LP250 as well as our proposal to allow FM boosters in lieu of an FM translator will not just help LPFM stations within their community but will also be more spectrum efficient than the use of a second channel for an LPFM station. While REC does support FM boosters for LPFM, we do not support LPFM.AG's proposal to allow LPFM stations to operate boosters at 200% of the primary station's output power. (LPFM.AG Comments at 2) Such power would extend a station's service contour well beyond their service contour and at higher elevations would create a disastrous effect on the availability of spectrum as well as more of a risk for interference for both listeners of the LPFM station as well as other stations. The ability to operate up to 500 watts at any antenna height would result in service contours that go against the hyperlocal nature of the LPFM service. FM translators (both fill-in and non-fill in) as well as FM boosters all have upper limits for field strength. Boosters for LPFM should be subject to the same upper limits.

[22] - NAB Comments at 2.

[23] - Id.

[24] - Id. at 3.

NAB's logic is flawed. From the 2013 Window Applications, 372 LPFM stations are now fully licensed. Another 905 applicants that are on construction permits have obtained call signs. At this time, there are 37 applications that are currently mutually exclusive with a majority of those applications being in MX Group 27 in Los Angeles. In addition, there are currently 128 pending singleton applications. Of those applications, 106 of them are a part of an Informal Objection filed by REC in relation to Hispanic Christian Community Network. Due to the pendency of these applications and the objections that remain pending, we can't speak on them nor can we predict their outcome. Regardless of the outcome, these applications will continue to be protected by other LPFM stations and if granted, they would have the opportunity to upgrade if they otherwise meet the technical requirements[25]. NAB's logic is further flawed as it fails to take into consideration the 773 licensed LPFM stations from the first LPFM filing window series in 2000 and 2001. With a total of 2,622 authorized facilities of which 1,145 are fully licensed, we are far enough along the process to consider the impacts of improving the LPFM service for as many LPFM stations as possible. That is hardly "premature".

Additional clarifications to misunderstandings

Local programming requirement. The NAB and other commenters may have misunderstood REC's request to relieve time-share stations from their 8-hour local programming requirement in favor of a requirement of one-third of their scheduled time share allotment.[26] Just to clarify, this request is only for a small number of LPFM stations that are on either a voluntary time share agreement where points were aggregated or they are on an involuntary time share arrangement. These stations originally pledged to operate 8 hours a day of local programming. These stations were not aware that they would be entering into a time share situation. For many of these stations that operate 8 hours or less in a broadcast day, the mere broadcast of a newscast

[25] - We do note that in MX Group 27, a large number of the pending applications would not be able to upgrade due to I.F. short spacing with KPFK Los Angeles. None of the pending applications in MX Group 37 will be able to upgrade due to I.F. short spacing with KALW, San Francisco. We also note that of the stations that otherwise meet spacing will have a higher hurdle with second-adjacent channel protection.

[26] - NAB Comments at 6, Albert Davis at 1

or even a public service announcement not produced locally would put the station out of compliance. We do note that this would impact all members of the time share group so overall, the channel will still get 8 hours a day in local programming collectively among all of the licensees who share the channel. For example, if there are three stations time sharing, each operating 8 hours per day, their local programming commitment would be 2 hours and 40 minutes per station (2:40 + 2:40 + 2:40 = 8:00). Likewise, two stations operating 12 hours per day would have a 4 hour a day obligation (4:00 + 4:00 = 8:00). We also note that the FCC has already given relief to time share stations where it comes to the main studio pledge.[27] We feel that it is only appropriate that the local programming pledge is also appropriately prorated.

Commercial programming on LPFM. – Despite some comments posted as well as comments made in the community, nothing in this proposal suggests that LPFM become a commercial service nor is this petition intended to be a gateway to commercial LPFM and/or power beyond 250 watts.[28] REC, along with the other well-established LPFM advocacy organizations continue to oppose steering LPFM into a service that permits that airs "commercials". The well-established LPFM advocacy organizations will support and defend the non-commercial nature of LPFM in accordance with §399b of the Communications Act. LPFM stations were created to provide specialized programming to various audiences with diverse interests and were never intended to compete with full-power stations, especially independently-owned (mom-and-pop) class-D AM stations. Class-D AM stations already struggle to stay on the air and REC acknowledges these stations and the service they provide to their communities. These stations, especially in rural areas need FM translators to make the stations more viable. Even with LP250, there will still be spectrum available for FM translators for rural Class-D AM stations.

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[27] - See *Creation of a Low Power Radio Service,* Sixth Report and Order. 27 FCC Rcd 15470 at 185 and footnote 468.

[28] - See Comments of Harry W. Brown at 1, American Militia Association at 1, Summit Media at 1-3,

Conclusion

In this proceeding, we have heard from many LPFM stations facing issues that are unique to stations with limits in height and service contour size. These issues can be addressed through the increase of field strengths within the three-mile zone surrounding their transmitters. RM-11749 will address these issues by allowing stations that technically qualify to be able to improve their signal. Since this proposal does not propose any new LPFM stations prior to the opening of a filing window for FM translators, RM-11749 does not violate Section 5 of the LCRA. Groups such as the Catholic Radio Association, the National Translator Association and Prometheus Radio Project support RM-11749. Even the largest non-commercial station operator, Educational Media Foundation is not opposed to the overall concept of LP250. Of the major organizations, only the National Association of Broadcasters stands alone in their opposition to LP250. REC agrees with SSR Communications that RM-11749 should be carried forward in a comprehensive rulemaking proceeding along with RM-11727 which creates a new Class C4 FM service. The public interest expands well beyond the needs of the NAB and the NAB does not represent all of the interests of all 100 channels on the FM dial.

With that, REC continues to support RM-11749 and we urge the Commission to move it forward to a Notice of Proposed Rulemaking.

Respectfully submitted,
/S/
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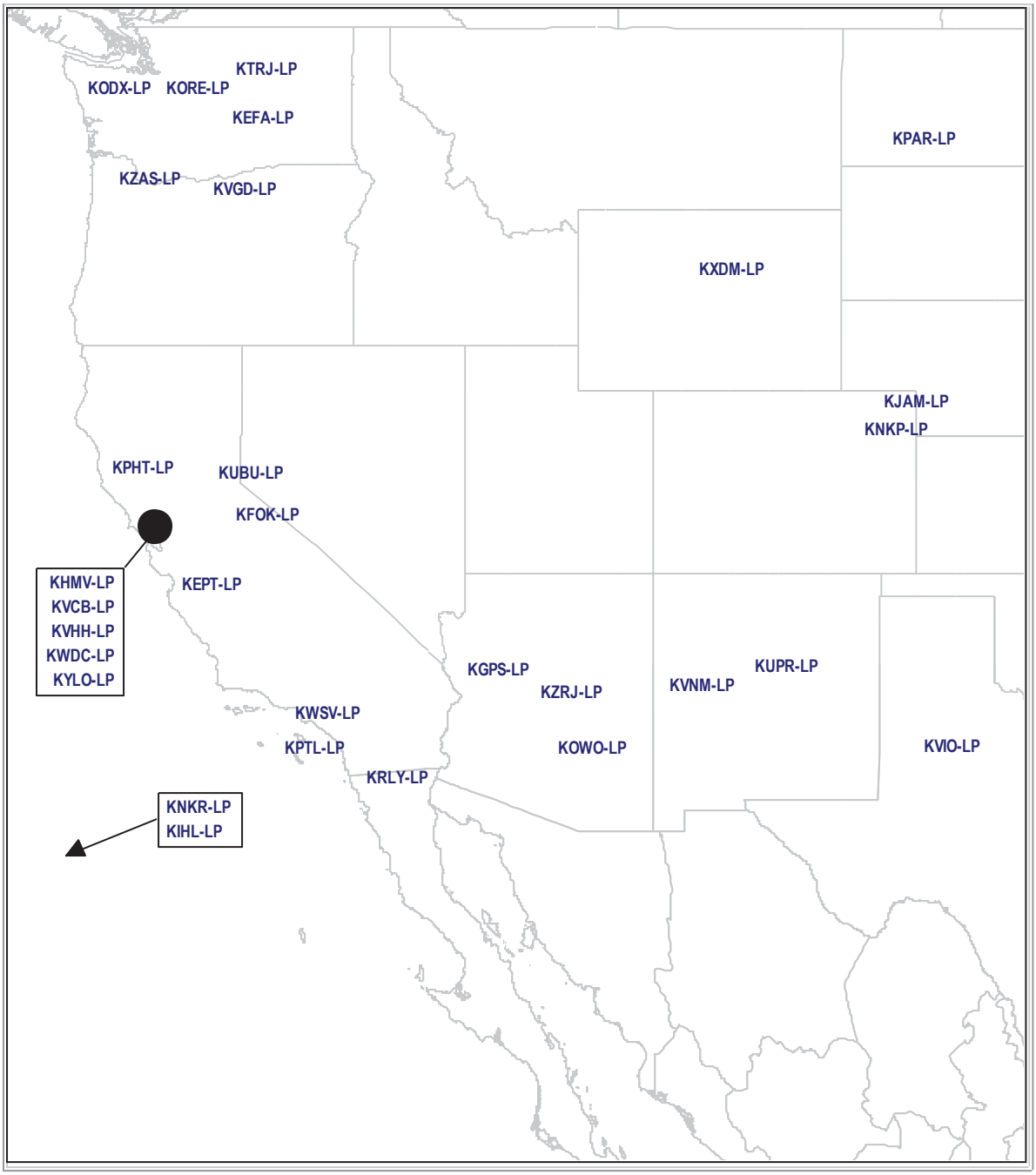
APPENDIX A

Stations supporting RM-11749



Stations supporting RM-11749

APPENDIX B
FORMER LP10 SPACING TABLE

	Co-channel minimum separation (km)		First-adjacent channel minimum separation (km)		Second and third adjacent channel minimum separation	I.F. channel minimum separations
Station class protected by LPFM	Required	For no interference received from max. class facility	Required	For no interference received from max. class facility	Required	10.6 or 10.8 MHz
D	16	21	10	11	6	2
A	59	90	53	53	29	5
B1	77	117	70	70	45	8
B	99	141	91	91	66	11
C3	69	117	64	64	39	8
C2	82	141	77	81	52	11
C1	103	175	97	108	73	18
C0	114	190	99	127	84	21
C	122	201	116	140	92	26

Puerto Rico and Virgin Islands:

	Co-channel minimum separation (km)		First-adjacent channel minimum separation (km)		Second and third adjacent channel minimum separation	I.F. channel minimum separations
Station class protected by LPFM	Required	For no interference received from max. class facility	Required	For no interference received from max. class facility	Required	10.6 or 10.8 MHz
A	72	108	66	66	42	8
B1	84	125	78	78	53	9
B	126	177	118	118	92	18

APPENDIX C
CONTOUR OVERLAP CHARTS

Commercial Class B FM stations (Protected Contour: 0.5 mV/m)

Frequency Separation	**Interference contour of proposed LPFM station**	**Protected contour of commercial Class B station**
Co-channel	0.05 mV/m (34 dBu)	0.5 mV/m (54 dBu)
200 kHz	0.25 mV/m (48 dBu)	0.5 mV/m (54 dBu)
400 kHz/600 kHz*	50.0 mV/m (94 dBu)	0.5 mV/m (54 dBu)

Commercial Class B1 FM stations (Protected Contour: 0.7 mV/m)

Frequency Separation	**Interference contour of proposed LPFM station**	**Protected contour of commercial Class B1 station**
Co-channel	0.07 mV/m (37 dBu)	0.7 mV/m (57 dBu)
200 kHz	0.35 mV/m (51 dBu)	0.7 mV/m (57 dBu)
400 kHz/600 kHz*	70.0 mV/m (97 dBu)	0.7 mV/m (57 dBu)

Low Power FM stations (Protected Contour: 1mV/m)

Frequency Separation	**Interference contour of proposed LPFM station**	**Protected contour of existing LPFM station**
Co-channel	0.01 mV/m (40 dBu)	1 mV/m (60 dBu)
200 kHz	0.05 mV/m (54 dBu)	1 mV/m (60 dBu)

All other classes of FM stations and FM translators (Protected Contour: 1mV/m)

Frequency Separation	**Interference contour of proposed LPFM station**	**Protected contour of FM station or FM translator**
Co-channel	0.01 mV/m (40 dBu)	1 mV/m (60 dBu)
200 kHz	0.05 mV/m (54 dBu)	1 mV/m (60 dBu)
400 kHz/600 kHz*	100 mV/m (100 dBu)	1 mV/m (60 dBu)

* - 600 kHz protection for FM stations that carry radio reading services.

Intermediate Frequency protections (+/- 53 or 54 channels) prohibit overlap of the 91 dBu contours between full power stations and LPFM stations if the LPFM ERP exceeds 100 watts.