



REC Simple250 LP-250 Upgrade Availability Report Summary

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Michelle Bradley, CBT
REC Networks
11541 Riverton Wharf Rd.
Mardela Springs, MD 21837
202 621-2355

<https://recnet.com>

<https://check.LP250.com>



Introduction

This document is to provide information to the Commissioners and hard-working staff at the Federal Communications Commission (FCC), other members of the broadcasting community as well as the general public to provide an update on the availability potential for the LP-250 service class as proposed by REC Networks (REC) in RM-11909. This document serves as a supplement to the *Petition for Rulemaking* filed by REC in May, 2021.

LP-250 and RM-11909

LP-250 is a proposed second service class for the Low Power FM (LPFM) radio service. This service would operate at 250 watts effective radiated power (ERP) based on 30 meters (98.4 feet) height above average terrain (HAAT). This would allow qualified LPFM stations to have an effective 60 dBu service contour of 7.1 kilometers (4.4 miles). The current LPFM service class operates at 100 watts ERP based on 30 meters HAAT and has an effective 60 dBu contour of 5.6 kilometers (3.5 miles).

The RM-11909 Petition for Rulemaking, also known as "Simple250" is a continuation of *ex parte* discussions between REC and FCC staff just prior to the *Report and Order* in MB Docket 19-193 in which the concept a previously proposed version of LP-250 was "too complex" and had some statutory concerns associated with the Local Community Radio Act of 2010 (LCRA).

Simple250 is just that, simple. Simple250 is merely an overlay of the current LP-100 rules, but with LP-250 "numbers", such as for distance separation, distance of minor moves and radio frequency radiation standards. We intend the LP-250 class of service to be an upgrade for existing LP-100 stations, including those that are authorized in the next LPFM filing window.

A future filing window for new LPFM stations should not be dependent on the outcome of RM-11909. Instead, REC endorses all new LPFM stations be filed for as LP-100 and then upgraded later. This gauges the demand for new stations and prevents unnecessary groups of mutually exclusive applicants.



Overall availability for upgrades on the same channel

When the FCC originally proposed a version of LP-250 in the *Fourth Notice of Proposed Rulemaking* in MM Docket 99-25, they had proposed a method that would allow as many stations as possible to be able to upgrade. To do this, they decided to allow the LPFM standard interfering contour into a 20 km buffer zone. This buffer zone was originally created in 2000 in order to benefit LPFM stations by reducing the chance for interference from primary full-service FM stations in the event the FM station was to make a minor site move. In the *Report and Order* in MB Docket 19-193, the FCC determined that reducing that 20 km buffer zone would create issues with LCRA language related to maintaining the codified distances between stations. To address this concern and after conducting studies on availability, REC determined that even if the required minimum spacing was extended to account for the full 20 km buffer zone, there would still be considerable opportunities for upgrade thus making a second class of service viable in the long run.

Based on a review of 2,098 LPFM authorizations, the overall breakdown of availability **on the same channel** is as follows:

LP-100 stations that can upgrade to LP-250 without needing a second-adjacent channel waiver	814	38.8%
LP-100 stations between 31~48 meters HAAT that can upgrade to LP-250 but the upgrade ERP is limited to 100 watts ERP due to "intermediate frequency"	9*	0.4%
LP-100 stations that can upgrade to LP-250 if it can be demonstrated that there will be no interference to a short-spaced second-adjacent channel station	336	16.0%
LP-100 stations that may be able to upgrade if another nearby LPFM does not or cannot upgrade	29*	1.4%
LP-100 stations that are unable to upgrade to LP-250 due to short-spacing with other facilities	910	43.3%
Overall LP-250 upgrade potential upgrade opportunity on the same channel**	1,173	55.9%

* - These values may vary depending on whether a second-adjacent channel waiver is required.

** - This value includes 14 of the 29 stations that are only able to upgrade if another LPFM station does not upgrade.



Upgrades requiring a change in channel

Channel changes are inconvenient to any radio listener and in many cases, is expensive for broadcasters as a new channel would require new creatives for on-air, online and in print; the broadcaster may bear an expense of a different antenna; and broadcasters may lose listeners that did not follow them in the channel change. However, for some stations, a channel change may be what is necessary to achieve the upgrade to LP-250.

The current FCC rules allow an LPFM station to change 1, 2, 3, 53 or 54 channels up or down as a minor change in channel. In addition, if the LPFM station can show through a contour study, that a certain channel would result in reduced incoming interference from other stations, the LPFM station can change to any channel from 88.1 through 107.9 if all distance separation requirements, including second adjacent channel waivers are met. For the purposes of this section, we will refer to this as a “major change” in channel.

We now turn to the 910 LPFM stations that we reported as unable to upgrade to LP-250 on their current channel so we can determine if the station was willing to do a channel change, and the change is allowed in accordance with the rules or through any kind of waiver, the FCC may provide for the upgrade.

Of 910 LPFM stations that can't upgrade on channel:

Can make a minor channel change and a second adjacent channel waiver may or may not be necessary	79	8.7%
Can make a major channel change and a second adjacent channel waiver is not necessary	139	15.3%
Can make a major channel change and a second adjacent channel waiver is necessary	233	25.6%
There are no alternate channels that would be available for an LP-250 upgrade	459	50.4%
Total LP-100 stations that may be able to change channels to get the LP-250 upgrade	451	49.6%



Overall LP-250 potential availability

When we combine upgrades involving the same channel, minor channel changes and major channel changes, the potential benefit is clear:

LP-100 stations that can potentially upgrade to LP-250	1,639	78.1%
LP-100 stations that are unable to upgrade to LP-250	459	21.9%

The bottom line here is that over three quarters of LPFM stations have a potential path to LP-250.

Other service activity reduced urban LPFM availability

When the FCC first proposed LP-250 and when REC proposed it in RM-11749 and RM-11810, we were using the same distance separation numbers (or in the case of RM-11810, lower through codified LP-10 numbers) as LP-100. This meant that the only way LP-250 would not be available was because of new short-spacing to an FM translator, another LPFM station or a foreign allotment or station.

Translator filing activity in Auction 83 from 2003 substantially reduced the number of LPFM new station and upgrade opportunities in core urban areas. The availability was further reduced with the migration of “250-mile” translators in 2016 and Auctions 99 and 100, which were part of the FCC’s “AM Revitalization” initiative. The 2021 full-service NCE filing window will cause a slight reduction in availability as not many LPFM opportunities are in the reserved band (88.1~91.9 MHz) and most channels are taken because of the nature of the reserved band, how full-service stations are protected by LPFM, the massive overprotection of Class B and B1 stations in the reserved band, as well as protections to Channel 6 TV stations, both full-service and low power.



Availability by community type

First a breakdown of the number of LPFM stations there are per population group based on LP-100 60 dBu population (2010 Census):

Rural		Suburban		Urban		
Less than 10,000	10,000~24,999	25,000~49,999	50,000~99,999	100,000~249,999	250,000~499,999	500,000 or more
553	388	374	394	275	91	19
26.4%	18.5%	17.9%	18.8%	13.1%	4.3%	0.9%
45.0%		36.7%		18.3%		

Population data was not available for 5 LPFM stations in American Samoa, Guam and the US Virgin Islands.

If we were to break down the previous availability statistics, we can get a look at potential upgrade opportunity by community category.

	Rural	Suburban	Urban
Total LPFM stations	945	768	385
Can upgrade to LP-250 on channel without a second adjacent waiver	560 59.3%	225 29.3%	29 7.5%
Can upgrade to LP-250 on channel requiring a second adjacent waiver	94 10.0%	160 20.8%	82 21.3%
Can upgrade to LP-250 with a 100 watt ERP limit	0 0.0%	6 7.8%	3 0.8%
Can upgrade to LP-250 only if another station does not upgrade	10 1.1%	16 2.1%	3 0.8%
Can upgrade with a minor channel change with or without waiver	51 5.4%	25 3.3%	3 0.8%
Can upgrade with a major channel change and no waiver	92 9.7%	45 5.9%	2 0.5%
Can upgrade with a major channel change a needs a waiver	69 7.3%	116 15.1%	48 12.5%
Can't upgrade on any channel	69 7.3%	175 22.8%	215 55.8%
Overall upgrade potential	876 92.6%	593 77.2%	170 44.2%

For the purpose of this table, we will report the 5 territorial LPFM stations as rural.



Deep diving into the deep rural areas

Deep rural area LPFMs face the most significant challenges of most LPFM stations due to their small audience size and large cost per listener. These 528 stations with a 60 dBu population of less than 10,000 persons pay the same prices for electricity, music licensing and other routine expenses as their larger population counterparts. These stations have the absolutely lowest population densities and have the biggest need to reach the largest population possible. For these stations, even 4.4 miles is not hyperlocal enough.

60 dBu LP-100 population	1~2999	3000~5999	6000~9999
Total LPFM stations	185	186	181
Can upgrade to LP-250 on channel without a second adjacent waiver	133 71.9%	121 65.1%	111 61.3%
Can upgrade to LP-250 on channel requiring a second adjacent waiver	12 6.5%	13 7.0%	17 9.4%
Can upgrade to LP-250 with a 100 watt ERP limit	0	0	0
Can upgrade to LP-250 only if another station does not upgrade	0	1 0.5%	2 1.1%
Can upgrade with a minor channel change with or without waiver	10 5.4%	16 8.6%	8 4.4%
Can upgrade with a major channel change and no waiver	13 7.0%	20 10.8%	17 9.4%
Can upgrade with a major channel change a needs a waiver	9 4.9%	6 3.2%	11 6.1%
Can't upgrade on any channel	8 4.3%	9 4.8%	15 8.3%
Overall upgrade potential	177 95.7%	177 95.2%	166 91.7%

For the purpose of this table, the 5 territorial LPFM stations (PR, AS, GU) were not included as no granular population data was available.

As the data clearly shows, the very deep rural areas (those with populations of under 6,000 persons) will benefit the best compared with LPFMs from other population groups.



Average population gain from LP-250 upgrade

We now look at the average population gain that will be experienced by an upgrade to LP-250 of all stations that are able to upgrade in some manner.

LP-100 Population	Average LP-100 population	Average LP-250 population	Average net gain
1~2,999	1,540	2,389	270.2%
3,000~5,999	4,428	6,587	265.8%
6,000~9,999	7,852	10,837	229.2%
10,000~19,999	14,441	19,109	350.9%
20,000~29,999	24,689	33,329	234.2%
30,000~39,999	34,704	46,362	157.6%
40,000~49,999	43,984	58,626	141.2%
50,000~74,999	61,628	81,995	237.3%
75,000~99,999	86,395	114,301	136.2%
100,000~199,999	133,206	181,999	179.9%
200,000~499,999	287,336	390,099	135.1%
500,000 or greater	0	0	0%
Overall average	64,462	89,984	150.3%

There are no LPFM stations with a 60 dBu population of 500,00 or greater that can upgrade to LP-250.

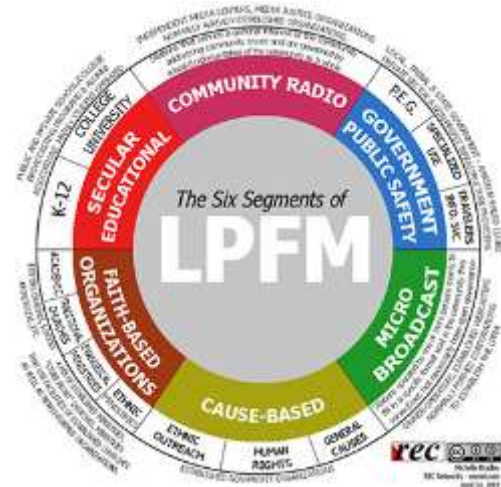
While all population classes with upgradable stations will see some growth. That growth is the most pronounced in the rural population classes, especially for the stations with the smallest LP-100 populations. This further demonstrates that a “country” mile is longer than a “city” mile and rural LPFM stations need the extra help in order to reach their viable target audience.



The diversity of LPFM

LPFM is one of the most diverse broadcast services available today. Over the past 20 years, some organizations have found very creative uses for LPFM stations and many different groups have been the licensees of stations.

REC has recognized this diversity through the segmenting of stations based on the nature of the station's ownership. The REC 6-Segments classifies most LPFM stations into one of 6 main categories and then within the segment, the station is further sub-classified. The primary 6 segments include:



Community Media (Community Radio) – Organizations that were previously involved in other community media such as websites, online radio or print publications. Stations in this category are more likely governed by people who care about radio and their community.

Government-Public Safety – This category includes public sector state, county, local and tribal agencies that provide LPFM services to advance public safety and provide other critical information.

Micro Broadcast – LPFM station has opened the door for many small groups wishing to bring a small radio station to their community. Organizations in this category were created primarily for the establishment of the LPFM station. Stations in this segment are less likely to have democratic community involvement in their boards.

Cause Based – Organizations in this segment are very active in their community providing educational and other services other than broadcasting. Like the Community Radio segment, the board members usually consist of community members who serve a term and are very active in the guidance of the station. On some stations, the organization works closely with another group of people who run the station day by day with the licensee organization having ultimate control. This was done in order to help gain traction in the §73.872 point system during a filing window. To address the "host organization" issue, REC proposed changes to assignments and transfers were adopted in 2019 in MB Docket 19-3.



Faith Based – Organizations in this segment include any kind of faith-based organization including stations representing Christianity, Judaism, Islam and other minority faiths. Stations in this segment represent the licensee organization and does include stations operated by faith-based organizations that are operated in a more secular manner. This segment also includes faith-based schools and colleges.

Secular Educational – This segment includes all educational institutions, from kindergarten to college that are not a part of a faith-based organization, including public and private institutions.

Not all LPFM stations have been assigned a segment from REC Networks.

LP-250 upgrade opportunities by segment

Segment	Stations	Potential upgrades in any manner	
Community Media	54	33	61.1%
Government-Public Safety	81	68	84.0%
Micro Broadcast	443	328	74.0%
Cause Based	347	245	70.6%
Faith Based	1,034	855	82.6%
Secular Educational	133	108	81.2%

Simple250 will help many different types of organizations expand their message, especially faith-based LPFMs, which include many stations that are operated by local churches and ministries and featuring local voices discussing local issues as opposed to national voices that may not reflect the specific needs of the local communities where stations are located in.

LPFM stations in the Faith-Based and Government/Public Safety are more distributed in the deep rural and rural areas, where Community Media and Cause Based organizations are more distributed among the suburban and urban areas with Micro Radio and Secular Educational being more evenly distributed among the community types.



LP-250 opportunities in urban areas

In the history of the effort to establish LP-250, the LPFM advocacy groups that actually interface with LPFM stations, such as REC Networks, Prometheus Radio Project and Common Frequency have opposed any rule that would restrict the ability for LP-100 stations to upgrade solely based on their location in respect to the urban core (such as "no stations within 10 miles of the core can upgrade"). We continue our position that an upgrade opportunity should be permitted, regardless of location in respect to the urban core, population density, Census designation of any other form of red lining other than distance separation to other broadcast stations.

While many urban LPFM stations would not be permitted to upgrade due to spectrum crowding, there are some opportunities for upgrades for stations in and near urban core areas.

REC has identified some LPFM stations in and near the core urban areas that may be able to upgrade. Not all stations are able to upgrade. Top-30 markets with potential urban upgrades for a few select stations include:

- Los Angeles (KBUU-LP, KLIE-LP, KTPC-LP)
- San Francisco (KEPT-LP, KQEA-LP, KQEB-LP)
- Dallas/Fort Worth (KUZU-LP, KYNC-LP)
- Philadelphia (WOOM-LP)
- Miami/Fort Lauderdale (WJEW-LP, WMXR-LP, WOIB-LP, WWPP-LP, WZOP-LP)
- Seattle/Tacoma (KBFG-LP, KHUH-LP, KNLI-LP, KTQA-LP, KUCP-LP)
- Phoenix (KFXV-LP)
- Tampa/St. Petersburg (WPBW-LP, WUJM-LP, WVVD-LP, WWZT-LP)
- Denver (KETO-LP)
- Portland/Beaverton (KFFD-LP, KYQT-LP)
- Charlotte (WMFB-LP)
- St. Louis (KSIQ-LP, KWAP-LP)
- San Antonio (KCTC-LP)
- Inland Empire, CA (KQLH-LP, KWRS-LP)
- Sacramento (KUBU-LP, KUTZ-LP)
- Salt Lake City (KUAA-LP)
- Orlando (WHBP-LP, WMQV-LP, WNKQ-LP, WWRT-LP)



Conclusion

One of the biggest challenges to rural living is quality of life. Those of us in rural areas travel farther to reach the basic amenities that those in suburban and urban areas take for granted. We drive country miles in order to go to school, the bank, to get groceries and use other related services. We drive further to reach our government and our neighbors. Many areas are unable to get public transportation or delivery services such as DoorDash and UberEats.

As such, those in rural areas face more challenges that are within the Commission's purview. Rural areas are likely to have fewer wireless choices, wireless "dead zones", lack access to terrestrial-based MVPDs and wired broadband services. We also lack coverage and support from commercial and even noncommercial broadcast stations, which are understandably more focused on the suburban and urban areas where they receive most of their support through advertising and underwriting. Some areas lack free full over-the-air television services and must pay an MVPD just to receive their "local" channels from a nearby metro area.

Rural areas continue to struggle in this changing economy and has been further frustrated by climate change impacting crops and catches, offshoring of American jobs and most recently, the COVID-19 pandemic and the domino effect that it has had on rural life.

For those of us in rural areas, 3.5 miles is anything but "hyperlocal", but is more of "just down the road".

It is time to encourage the development and growth of home-town rural and deep rural LPFM stations to better provide free information, entertainment and companionship, especially during emergencies in a manner that is localized to their area, which is measured more by the "country mile".

Simple250 will allow these voices to better reach the rest of America, narrow the rural-urban gap and help improve the quality of life for the millions of Americans who provide the necessities for all Americans, including those in the urban areas.

Simple250 will permit LPFM stations to go the extra country mile.



Additional Information

To check to see if a particular LPFM station can upgrade using what was proposed by REC in Simple250/RM-11909, please visit:

<https://check.LP250.com>

Detailed raw data will be placed in the RM-11909 record.

Inquiries from Commission staff, Commissioners, industry representatives and the media can be directed to:

Michelle Bradley, CBT
REC Networks

202 621-2355

lpfm@recnet.com

FCC LMS data used in this document is updated as of close of business on May 21, 2021. Spectrum is fluid and data is subject to change based on subsequent modification applications, rulemakings to amend the FM Table of Allotments and the outcome of the November, 2021 NCE-FM filing window.