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

In the Matter of	)	
Amendment of Part 74 of the Commission's Rules	)	MB Docket No. 18-119
Regarding FM Translator Interference	)	

COMMENTS OF LPFM COALITION

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SUMMARY

The LPFM Coalition supports the concept of improving a notoriously inefficient translator interference process that currently allows translator interference to linger for months to the detriment of LPFM listeners. This, despite Congressional findings that LPFM improves broadcast localism and diversity.

But, the Commission's proposals must be formulated in a way that does not do more harm than good. The Notice of Proposed Rule Making in this proceeding, unfortunately, contains proposals that would actually harm LPFM listeners, in part, by taking away their individual right to seek remediation of translator interference.

The Commission proposes these curtailments of listener rights despite the clear mandates of, *inter alia,* the Local Community Radio Act of 2010 ("LCRA"), which Congress expressly intended to foster LPFM.

The risks posed by the NPRM proposals include implementation of a "one-size-fits-all" rubric to determine who is eligible to file for interference relief and where they must do their radio listening.

The Commission also proposes a single threshold complaint count before mandatory interference remediation in a way that would disparately impact LPFM stations. Disparities would arise because as full power stations have larger audiences to draw upon to find a sufficient number of eligible listeners ready, willing and able to file complaints.

The Commission also proposes a geographic border wall that could cut off interference complaints even from truly local listeners who have regularly used a station's broadcast signal simply but listen on the other side of such arbitrary borderline.

Given Congress's LCRA mandates, the Commission is simply not free to curtail these LPFM listeners' reception with this proposal as it would undermine the LPFM-created localism Congress intended when it enacted that legislation.

The Commission can – and must – achieve its administrative efficiency goals in this proceeding in a way that does not harm LPFM listening or undermine LCRA's Congressional Mandates. By carefully refashioning the package of regulatory changes proposed in the NPRM, the Commission can achieve the welcome goal of streamlining. But such streamlining can not, legally, occur unless the Commission adequately honors LCRA mandates.

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COMMENTS

The LPFM Coalition "LPFM Coalition", through counsel, hereby comments on the proposals contained in the "Notice of Proposed Rulemaking" in the above-captioned proceeding (the "NPRM") to amend Part 74 of the Commission's Rules Regarding FM Translator Interference.

Introduction

1. The LPFM Coalition brings together Low Power FM ("LPFM") station licenses and community advocacy organizations who are committed to grassroots involvement and access to media.[1] While the LPFM Coalition understands the business needs of the broadcast industry – as LPFM stations must meet expenses just like commercial broadcasters do – it's members also firmly support the policy underlying the Local Community Radio Act of 2010[2] ("LCRA"). LCRA was enacted, in large measure, to make possible the ongoing development of Low Power

[1] A list of those participating in the coalition is attached hereto as Attachment A. The LPFM Coalition, collectively, and each of its members, individually, are therefore collectively and individually "parties" with standing in any further proceedings arising from the NPRM.

[2] 111 P.L. 371, 124 Stat. 4072 (2011).

FM radio stations ("LPFM"), which Congress found to "further the overriding national policy goals of promoting broadcast localism and diversity."[3]

2. When Congress speaks, an administrative agency must act accordingly.[4] Thus, any regulation or regulatory regime arising from this proceeding must comply with Congressional intent in enacting LCRA. The Commission itself has acknowledged this mandate to foster and further LPFM development, stating: "LPFM stations are uniquely positioned to meet local needs, particularly in in areas of higher population density."[5]

3. These areas of higher population density are, thus, the relevant focus of this proceeding as far as LPFM is concerned.[6] These are the places where spectrum crowding increasingly vexes and threatens LPFM stations as translators crowd the minimal amount of remaining slack space and impinge on LPFM listeners' ability to hear broadcasts on which they have relied and, until that point, received without hindrance.

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[3] Comments of Rep. Henry Waxman, chair of House Energy and Commerce Committee, which had LCRA review jurisdiction. Rep. Waxman's spoke during the floor debate immediately preceding House passage of LCRA on Dec. 17, 2010. LOCAL COMMUNITY RADIO ACT OF 2010, 156 Cong Rec H 8619, 8623.

[4] As notably reflected in the judicial review provisions in Section 706 of the Administrative Procedure Act, 5 U.S.C. Sec. 706; *See also Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402 (1971).

[5] *Creation of a Lowe Power Radio Service*, Fourth Report and Order and Third Order on Reconsideration, 27 FCC Rcd 3346, 3373 at para. 19 ("Fourth Report and Order").

[6] Rural cross-service translator service is relevant to many communities, as noted in the NPRM at para.8. But the Commission must not such allow legitimate rural listening concerns to affect translator interference rules for more populous areas.

4. The Commission must, therefore, not be distracted by any irrelevant comments that seek rule changes adverse to LPFM listeners in areas of spectrum crowding under the guise of fostering better rural service. One size does not fit all. Indeed, the Commission often calibrates regulations to account for questions of place.[7] Here, too, the Commission can best accommodate the needs of rural listeners through targeted rules and policies more effectively and efficiently than through the blunt instrument of one-size-fits all interference remediation regulations.

5. That said, the LPFM Coalition applauds Commission efforts to improve a notoriously inefficient process of settling interference disputes between existing LPFM stations and newly arrived FM translators. The current system leaves translator interference in place for months on end – even after an LPFM licensee provided substantial evidence of interference and the offending translator licensee did not even reply to complaints, let alone taken any remedial action.[8]

6. But in improving the administrative system involved, the Commission is not free to adopt rules and procedures that diminish LPFM stations' ability to prevent spectrum encroachment pursuant to LCRA mandates. To assist the Commission in meeting Congressional intent in enacting LCRA, the LPFM coalition submits the following detailed comments on the NPRM.

Discussion

[7] For instance: ownership limits in 47 C.F.R. Sec. 73.3555 differ depending on how many stations operate in a market; 47 C.F.R. Sec. 73.512(c) generally prohibits new Class D FM stations anywhere except in the nation's least densely populated state, Alaska.

[8] *See, e.g.,* FCC File No. BLFT-20170830ABL, in which a newly relocated cross-service translator, W257BW, continued to cause harmful interference to the WOWD-LP, Takoma Park, Maryland, for about nine months, even though the translator licensee neither offered remediation or even a response to multiple interference complaints, multiple pleadings, and direct orders from the Commission to remediate or shut down.

7. The NPRM lays out five broad areas for comment and consideration: (1) interference remedies involving looser channel change rules; (2) requiring a minimum number of interference complaints before interfering translators must take remedial measures (3) establishing both standardized interference complaint information requirements and more strictly defined listener eligibility requirements for such filing; (4) curtailing the geographic area from which interference complaints are accepted; and (5) limiting the scope of pre-licensing interference objections. The LPFM Coalition discusses each in turn, below.

8. **Channel Changes:** The Commission proposes to modify 47 C.F.R. Section 1233(a)(1) to allow a translator causing interference to fix the problem by filing a minor change application to relocate to any available FM channel.[9] This regulation would replace current rules that severely limit channel relocation possibilities when utilizing minor change procedures.

9. While this regulatory change would potentially improve regulatory efficiency, the proposal is legally faulty, as proposed, because it does nothing to meet LCRA's mandate to foster LPFM service.

10. Should the Commission adopt a proposal of this type, it must include measures to meet LCRA mandates. To achieve this, the Commission should require that any such translator minor change application include preclusion showings to "facilitate the grant of *only* those translator applications that would not diminish or "block" future LPFM licensing in these markets."[10]

[9] Amendment of Part 74 of the Commission's Rules Regarding FM Translator Interference, Notice of Proposed Rulemaking, FCC 18-60, MB Docket 18-119 (May 10, 2018) ("NPRM"), at 6, para. 11.

[10] *Fourth Report and Order* at para. 20.

11. The industry is already familiar with such preclusion showings from recent translator filings. These showing were generally delivered to the Commission with a minimum of fuss or diversion of Commission administrative resources.

12. Requiring a preclusion study in a newly created minor change process would also (1) help prevent legal gamesmanship in ordinary minor change engineering by forcing applicants to think about and more completely demonstrate compliance with deeper policy goals (2) force applicants rather than FCC staff to analyze preclusive aspects that harm LPFM rather have Commission staff perform such analysis and (3) by providing more complete analysis at the application stage, cut the chances of actual interference complaints later and the attendant drain on FCC resources that explicitly the NPRM seeks to curtail.[11]

13. In sum, by requiring such preclusion showings in any such expanded minor change application process, the Commission would achieve two significant regulatory imperatives: (a) improving administrative efficiency while still (b) meeting significant LCRA mandates.

14. The Commission should also allow LPFM stations to avail themselves of the same streamlined channel change procedure (by minor change application) as an alternative means to resolve interference. Such a flip-side procedure would allow even greater flexibility and potentially further diminish burdens on FCC staff. However, any such regulation must be structured so that LPFM station channel changes are *wholly voluntary* to prevent coercion that may arise when a financially struggling community-based LPFM is challenged by a larger organization with more litigation resources at its disposal.

15. In leveling the playing field in this way, the Commission should also allow *negotiated settlements* that include payments to LPFM licensees that agree to voluntary channel changes.

[11] "Addressing these matters can be time-consuming for Commission staff. . . . ." *NPRM* at 2, para 3.

As a check on gaming the system, the Commission could impose transparency requirements by mandating that such settlement agreements be filed and approved before implementation (as is already true in existing settlement contexts).

16. By giving LPFM stations and translators equal rights to remedy interference through channel changes, the Commission would also help to alleviate the growing problem of LPFM stations hemmed in or blocked – a situation contrary to LCRA's underlying policy and mandates recognizing the importance of LPFM to broadcast diversity and localism.

17. **Quantum of Listener Complaints:** The NPRM proposes a new precondition for Commission interference remediation by making it available only AFTER a minimum number of *bona fide* listeners complain.[12] The NPRM specifically seeks comments on setting this minimum at six *bona fide* complaints.[13]

18. This proposal represents a sharp departure from the current requirement that translator licensees remediate ANY *bona fide* interference complaint from ANY listener – or shut down if they cannot do so.[14]

19. If enacted, this shift from the right of ANY *bona fide* listener to get interference relief suggests the Commission seeks to curtail the rights of listeners – in favor of translator authorization holders. This is being proposed even through Translator applicants file with full

[12] *NPRM* at 8-9, paras.15-17.

[13] *Id.* at para 16.

[14] 47 C.F.R Sec. 74.1203(b).

knowledge that Translator grants come with strict interference remediation provisions should their facilities cause ANY INTERFERENCE.[15]

20. If enacted, this would amount to a giveaway of public spectrum rights to one stakeholder at the expense of other stakeholders (listeners whose rights are being curtailed) and to LPFM licensees who, themselves, have made investments – whether through funding and fundraising, sweat equity or in diverting resources to radio from other non-commercial priorities.

21. Translator interference threatens harm to the finances of LPFM stations through loss of listeners, potential members and underwriting support in the face of interference and spectrum encroachment. Simply put: people are more likely to donate, underwrite or volunteer at a station they can hear.

22. Oddly, the NPRM fails to acknowledge these economic issues affecting LPFM stations[16] – let alone provide analysis or even ask for comments on how this shift in economic benefit and burden would affect the public interests in diversity and localism explicit in Congressional enactment of LCRA. Moreover, it ignores that Courts have instructed the Commission to consider the "relevance of economic injury to the public interest and made it incumbent upon the Commission to consider this factor in administering the (Communications) Act."[17]

23. Thus, the Commission is not legally free to make these changes without detailed analysis on how such rule changes would adversely affect the LPFM stations' economic viability.

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[15] Such knowledge tempers investment decision-making and, therefore, in no way runs afoul of any expectancy rights in FCC authorizations arising from licensee investments. *See, e.g., Victor Broadcasting, Inc. v. FCC*, 722 F.2d 756 (D.C. Cir. 1983).

[16] Although it does, inexplicably, quote from NAB pleadings noting potential economic costs to those licensees accused of causing interference. *NPRM* at 2, para 3.

[17] *WLVA, Inc. v. FCC*, 459 F.2d 1286, (DC Cir. 1972) *citing Carroll Broadcasting Co. v. FCC*, 258 F.2d 440 (DC Cir. 1958).

Moreover, given such need for economic viability, any regulatory change that undermines it would violate LCRA mandates by hindering improvements to diversity and localism[18] through LPFM that Congress intended when enacting that statute.

24. Even absent LCRA mandates (which remain binding), the Communications Act militates against any shift in regulatory focus away from listeners who, in fact, are the "public," referenced in the statutory command to regulate interference "as public convenience, interest, or necessity requires."[19] Taking away the right of one, two, three, four and, even, five listeners to get rid of translator interference to a service they regularly use represents a dramatic shift from the irrefutable legal principle that: "It is the right of the viewers and listeners, not the right of the broadcasters, which is paramount."[20]

25. Establishing a one-size-fits-all complaint minimum also harms LPFM in another way. LPFM stations serve a tiny geographic area compared to their full power counterparts. Less geographic area means fewer potential listeners overall when compared with a full power station in the same area. The imposition of a one-size-fits all complaint minimum would, thus, have a disparate impact – putting an astronomically larger relative burden on LPFM listeners and stations than on full power listeners and stations similarly seeking protection from or remediation of translator interference. It is self-evident that it is easier to find six *bona fide* listeners motivated enough to file complaints among a potential population of several million full power listeners than it is to find the same number of *bona fide* listeners ready, willing and able to file complaints from a potential LPFM audience a fraction of that size.

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[18] *See* para. 3, supra.

[19] 47 C.F.R. Sec. 74.303.

[20] *CBS v. FCC*, 453 U.S. 367, 395 (1981) (internal citations omitted).

26. Therefore, before imposing a new universally-applied minimum number of complaint requirement before interference remediation, the Commission must (1) explain fully – given all of its relevant statutory mandates – why it is moving away from the longstanding and legally mandated focus on the rights of listeners, in favor of a process that makes relief statistically easier for full power stations and listeners to achieve; (2) how making it exponentially harder for LPFM stations and listeners to gather sufficient interference complaints for remedial action can meet LCRA mandates (and related goals reflected in Section 307(b) of the Communications Act) and; (3) how taking away the right of even a single listener to obtain interference remediation comports with in the statutory command to regulate interference "as public convenience, interest, or necessity requires."[21]

27. Procedurally, it is not clear the why the Commission seeks rules that would curtail rights of LPFM stations and listeners to interference remediation, in the first place. The NPRM states, among other things, that the proposed complaint minimum of six was originally proposed by the National Association of Broadcasters ("NAB") – a trade organization representing full power commercial stations. Although the NPRM states that NAB made its proposal for six complaints based on consultation with "various stakeholders,"[22] the NAB's own Petition for Rule Making in this proceeding states that it had only "informally surveyed several of our members and communications attorneys . . . ."[23]

[21] 47 U.S.C. Sec. 303(f).

[22] NPRM at para. 15.

[23] Petition for Rulemaking, Submitted by National Association of Broadcasters on April 20, 2017 ("NAB Petition") at 9.

28. Rather than represent the input of "various stakeholders," as the NPRM asserts, the NAB proposal is nothing more than the input of a single interest group and a handful of lawyers who represent these same interests. To the contrary, there is no evidence that LPFM stations – a stakeholder group that stands to be harmed dramatically by the proposal – provided any inputs into the data gathered for the NAB Petition. *Not that it is NAB's job to do so* – but it is the Commission's job to properly characterize the inputs behind a Notice of Proposed Rule Making, and to actually consider the effects of a proposed rule on truly variegated group of stakeholders, rather than simply – and erroneously – assert that variety exists in the filing of a single interest Group based on its self-acknowledged polling of a very limited number of its own constituents and their legal representatives.

29. Moreover, the NAB Petition also discussed ONLY interference to *full power stations*[24] -- even though the NPRM extended the scope of the proposed rules to encompass interference to both full power and LPFM stations. In taking this proposed regulatory leap, the NPRM fails to discuss, let alone acknowledge, the unique statutory purpose of LPFM and the differing technical and economic realities in which it operates. A final rule must create a regulatory framework that deals with LPFM's unique characteristics in light of LCRA, lest any final rule be *ultra vires*, arbitrary or capricious.[25]

30. While the FCC would do well to leave LPFM out of any rules designed to meet the realities of full power stations, it is conceivable that the Commission could also streamline the interference remediation process on a sliding scale that accounts for the realities of LPFM

[24] *Id.*

[25] *See Administrative Procedure Act*, 5 U.S.C. Sec. 706(2).

stations doing what LCRA intended them to do for the public interest, convenience and necessity. Here again, one size does not fit all.

31. Thus, even if the Commission finds cause to impose a threshold complaint minimum on full power stations, it must NOT impose the same minimum (or any minimum) on LPFM. To do so would abrogate rights of individual listeners, generally, under the Communications Act, as well as undermine the public interest mandates of LCRA.

32. **Standardizing Interference Complaint Information and Eligibility:** The Commission could improve administrative efficiency by establishing an information checklist or standard form for translator interference complaints. Indeed, one of the biggest hardships for LPFM stations, is the lack of standardized data guidelines or forms to ensure interference complaints can pass Commission muster as *bona fide*, given the limited resources with which many operate. In the absence of a standardized list or form, those who can afford lawyers tend to produce interference complaints more likely to pass muster.

33. When compiling a standardized information list or form for translator interference complaints, the Commission should use non-technical language easily understood by people who listen to radio but are neither broadcast lawyers or technicians. As the rights of listeners are paramount, it should not require a lawyer's help to file a *bona fide,* proper and complete interference complaint declaration.

34. But even with clear, plain-spoken forms – LPFM stations are potentially threatened by another facet of the Commission's efforts to strictly define who is eligible to file an interference complaint.

35. LPFM stations are often run as grassroots community organizations. Unlike some of the more well established and better endowed noncommercial educational and public radio stations, they often have tiny budgets and often run mostly – if not wholly – on volunteer power.

36. LPFM volunteers and/or members may have air shifts, perform maintenance, help manage finances, or serve on boards and committees at such stations. They may also have family members in an LPFM's listening area. This is especially true for LPFM stations with niche programming serving discrete linguistic and cultural communities.

37. LPFM must not be put at a disadvantage, in interference proceedings, because of its grassroots, volunteer and member-based structure. Any FCC rules that automatically discard interference complaints from "interested" listeners must include carefully drawn definitions that don't eliminate LPFM volunteers and members or their families.

38. It may be appropriate to exclude interference complaints filed by a full power station's morning drive air personality, office manager or engineering contractor – and their immediate families – as their financial interests are clear. The same is not true of non-profit LPFM station volunteers. Such volunteers may program, fundraise, organize the office, answer phones, and take out the garbage. But, they and their families, simply lack the financial interests that employees, contractors, corporate managers, and their family members have. On a superficial basis, a disk jockey is a disk jockey. But economic interests are not present when the work is done purely for passion, rather than with pay.

39. As a practical matter, the Commission should define interested party to include those who either have (a) an attributable interest[26] and/or (b) receive income from a radio station's

[26] *See* 47 C.F.R. Sec. 73.3555, n.2 and 47 C.F.R. Sec. 73.858

operations. By limiting the definition of "interested parties" in this way, the Commission would avoid putting LPFM at a further disadvantage simply because a station has widespread and active community support (which is, after all, a sign or effective community engagement in the nonprofit sector). In sum: only those who have direct financial or control interests, whether at a full power or LPFM station, would thus be excluded from interference complaints.

40. By incorporating these 2 prongs, both already understood by licensees and Commission staff alike, the Commission would remove much ambiguity and create an efficient, easier to administer system that limits protracted haggling over who is disinterested enough to file a *bona fide* interference complaint.

41. The Commission also proposes to define more formally the concept of "regular listening,"[27] which has long been a requirement for interference complaints. It is important that, should the Commission establish such a definition, it accounts for how listeners tend to interact differently with many LPFM stations than they commonly do with full power stations.

42. While full power stations tend to offer listeners a "format" to which one can tune in and find an expected genre of programming at almost any time, many LPFM stations offer an eclectic mix of programs. Discrete niche formats coexist and interact across an eclectic LPFM's broadcast day. In such an environment, where different audiences may find programs of interest only some of the time, listeners to LPFM stations are more likely to tune in for specific programs rather than simply tune into a station because they like its kind of music or because it provides news, traffic, and weather at all times.

43. Thus, any definition of regular listening must be structured so people who may regularly seek a niche program on an LPFM station are not categorically excluded from providing *bona*

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[27] *NPRM* at 10, para. 20

fide listener complaints because their listening is regular but limited to a certain niche in an eclectic LPFM program schedule.

44. Such inclusiveness would be especially important when discrete communities find a single weekly LPFM program in that appeals to a minority cultural heritage.

45. Similarly, some listeners may only tune into an LPFM for its live broadcast of local government councils or committees. A town council may only meet monthly. A New England town meeting may only take place once per year. People interested in civic affairs may only tune in to a LPFM station for such live coverage. But they would not qualify as regular listeners under the Commission's proposed listening twice per month standard.[28]

46. The thing is, *they are still regular listeners* entitled to keep receiving the service they rely on. It is just that they are not *constant listeners*.

47. Moreover, the NPRM 2-listens-per-month proposal would also foster extreme hair-splitting in required interference declarations made under penalty of perjury. Would someone, who listens to a monthly program in the car, turns the car radio off, gets out at home, and then turns on a different radio several minutes later to listen to the rest of the program, be listening once or twice in a month? Likewise, would a bathroom break or a lunch break create twice a month listening if someone didn't keep listening continuously during the time he or she met basic human needs away from the radio? What about people who leave the radio on nearly all the time? Would the Commission staff be required to mediate or adjudicate disputes about specific attention to content vs. radio's use as background noise?

48. Moreover, this proposal would not actually provide administrative efficiency. It could just as well create more FCC staff intervention as challenges to listener *bona fides* simply change

[28] *Id.*

form: to such arguments as whether someone had stepped away from the radio long enough qualify for a second listen that month, or whether they were listening at all, by paying attention to a broadcast, rather than simply being in the presence of a turned-on radio that never gets turned off. The staff might have to rule, instead, on such things as how long it takes on average to walk a Labradoodle vs. a Schnauzer, and whether that walk time represents a sufficient break in listening to qualify as twice-per-month listening to the same station – that is, if the dog's walk did not actually start just before midnight on the last day of the month and end after midnight on the first day of the next month.

49. Moreover, strict definitions that make constant listening a requirement would likely deter honest *regular listeners* from signing interference complaint declarations because to avoid committing perjury in ambiguous situations as outlined above. Dishonest people, by contrast, would be as undeterred under the 2-listens-per-month standard as they are now.

50. To avoid both the sublime and the ridiculous outcomes discussed, the Commission must make it possible for all *regular* listeners' interference complaints to be considered and not limit complaint rights to those engaged in *constant listening*. To do anything else would not only disserve the public, which is axiomatically the beneficiary of the public interest standard underlying all broadcast regulation under the Communications Act, but also undermine the diversity and localism that Congress intended to foster through LPFM when it enacted LCRA.

51. **Limiting Complaints Based on Contour:** As noted, the NPRM threatens to shift the protective gaze of interference remediation requirements away from the rights of individual listeners to receive broadcasts they have regularly used ANYWHERE and, instead, establish a geographic gateway outside of which is a listener is out of luck if a favorite station suddenly becomes unlistenable due to translator interference. As noted, such an approach would de-

emphasize notion that the listening public is the "public," referenced in the statutory command to regulate interference "as public convenience, interest, or necessity requires."[29]

52. Given the right terrain features (weather, water, geology, or altitude - among other things), it is quite possible that a listener or group of listeners would regularly tune into broadcasts even though they do so well outside an LPFM station's core contour areas. Yet, the NPRM suggests that rather than allow such listeners to complain about and obtain remediation of translator interference, they should be ignored and forced to suffer lost service due to interference.[30] Given the nature of LPFM coverage, this would occur even if the LPFM station provided local content relevant to such listeners. Such a regulatory regime would fail to adequately support the strong public interest in localism; instead, it would violate LCRA mandates that promote LPFM precisely because of its positive contribution to localism.

53. Even more troubling: the NPRM proposes to close the translator complaint process – in a one-size-fits all manner – to any listener outside a regularly used station's 54 dBu contour.[31] But, as demonstrated in the technical study attached hereto as Exhibit B, such a restriction would also fail to protect potentially large numbers of LPFM listeners from harmful translator interference to signals that are highly reliable – and local – to them.

54. The technical analysis, attached at Exbibit B, makes clear that an LPFM station's 54 dBu contour is the wrong place to set the gateway. A 54 dBu border would remove local LPFM listeners from interference protections -- in contravention of Congress's intent to expand localism through LPFM.

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[29] 47 C.F.R. Sec. 74.303.

[30] Which may or may not mean they receive a different service; it may mean they simply receive unusable service from any station on that channel due to the newly arrived interference.

[31] *NPRM* at 14, para. 28.

55. Should the Commission establish any hard borderline that walls off certain listeners, it must ensure that technical standards do not run counter to LCRA localism mandates by establishing dBu complaint borders without full technical analysis of their potential impact on LPFM.

56. **Scope of Complaints at Application Stage**: The Coalition, generally, favors efforts by the Commission to eliminate regulatory ambiguity arising from the language of Sections 73.1203 and 74.1204.[32] It is crucial, however, that any proposed rule unambiguously state that LPFM stations have the same rights as any existing station to challenge translator proposals that threaten harmful interference to their operations and, further, that the Commission shall consider any relevant information available to it. If the information is relevant, it must be admissible.

Conclusion

57. The Commission must not create a one-size-fits-all interference complaint and remediation process. LPFM's engineering challenges and listener habits are simply different, in many instances, than at full power stations. The Commission has a statutory mandate to foster LPFM given the Congressional finding that it increases localism and diversity. While more efficient translator interference complaint and remediation processes would certainly be a move in the right direction, the Commission must calibrate the rules implementing any interference remediation streamlining so they don't harm LPFM through overly restrictive definitions, terms or rubrics better suited to full power stations. Several tentative or near-tentative conclusions in the NPRM would, if adopted, create such harms. These must not be enacted. The Commission must remain cognizant, as discussed, of the mandates of LCRA as this proceeding moves

[32] *NPRM* at 15, para 30.

forward, as well as ensuring the rights of listeners who are, after all, the public whose interests any Commission rule must serve.

Respectfully Submitted,

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ATTACHMENT A

LPFM LICENSEE MEMBERS OF THE LPFM COALITION

Licensee	Call Sign	Facility ID	City, State
Historic Takoma, Inc.	WOWD-LP	195180	Takoma Park, MD
Borderlands Community Media Foundation, Inc.	KISJ-LP	194977	Bisbee, AZ
Hillman Community Radio	WXHR-LP	194356	Hillman, MI
Woods and Waters Land Trust	WYDX-LP	195375	Frankfort, KY
Big Car Media	WQRT-LP	193037	Indianapolis, IN
Access Humboldt	KZZH-LP	195765	Eureka, CA
Maui Community Television, Inc.	KAKU-LP	132284	Kahului, HI
Davis Community Television	KDRT-LP	123794	Davis, CA
Media Reform SC	WOHM-LP	195374	Charleston, SC
Media Alliance	WOOC-LP	194800	Troy, NY
African People's Education and Defense Fund, Inc.	WBPU-LP	196389	St. Petersburg, FL
Aframsouth	WUMO-LP	196044	Montgomery, AL
Pequenas Ligas Hispanas de New Haven Inc.	WONH-LP	196790	New Haven, CT
Third Coast Activist Resource Center	KJZX-LP	195044	Austin, TX
KCXU-LP FM	KCXU-LP	192235	San Jose, CA
Petaluma Community Access	KPCA-LP	194773	Petaluma, CA
Poor Magazine	KEXU-LP	194853	Oakland, CA
Peace and Justice Network of San Joaquin County	KXVS-LP	195758	Stockton, CA
WQNB FM – Beware, Inc.	WQNP-LP	196346	Miami, FL

ATTACHMENT A

NON-LICENSEE MEMBERS OF LPFM COALITION

Organization	Address
Common Frequency, Inc.	PO Box 4301 Davis, CA 95617
Prometheus Radio Project	PO Box 42158 Philadelphia, PA 19101
Media Alliance at the Pacific Felt Factory	2830 20th Street, Suite 102 San Francisco, CA 94110

ATTACHMENT B

Technical Study – 54 dBu Proposal

TECHNICAL ANALYSIS REGARDING THE "FCC 54 dBu CUT OFF" PROPOSAL

The FCC seeks comment on a minimum signal strength beyond which an FM station may not claim interference to its listeners from an FM translator. The Notice of Proposed Rulemaking, MB Docket 18-119 ("NPRM"), selects an arbitrary signal strength threshold to derive a *one-size-fits-all second protected contour* for all stations.[1] The complication regarding this proposal is it not based upon actual real-world signal propagation, or engineering merit, but an arbitrary compromised value as a response to a translator proponent's suggestion.[2] The technical excellence of the FM band should not be compromised in a part by lobbying without investigation. Regulation should follow in this case from pragmatic analysis of actual signal propagation. The following real-world scenarios illustrate the need to derive a reasoned approach to develop a balance between preserving actual current listenership and cautiously allotting new translator coverage. The examples demonstrate realistic coverage, and why the FCC 54 dBu contour limitation proposal falls short.

1. CASE 1: VALLEY AND ADJACENT FOOTHILLS

[1] Para.28. *Amendment of Part 74 of the Commission's Rules Regarding FM Translator Interference.* Notice of Proposed Rulemaking, MB Docket 18-119. May 10, 2018 ("NPRM").

[2] *NRPM* Para. 26 "Aztec suggests prohibiting translators from causing actual interference with the reception of another station only within the other station's protected contour…" with response Para. 27 "Although we disagree with the specifics of Aztec's proposal, we believe that it is necessary to consider how best to balance our enduring interest…"

Figure 1 demonstrates a Class B full power facility located within a large valley -- Sacramento, California. The FCC 54 and 60 dBu contours are denoted, with the station's corresponding Longley-Rice propagation. While the 54 dBu limitation cut-off may work for the valley floor, there are 200,000 people within the foothills/mountains that receive a listenable signal, along with arterial roads like I-80 and US-50 with substantial vehicle listeners where the signal is viable. It is also noted that this mountain area is also considered part of the Sacramento radio market, as viewed is Figure 2.

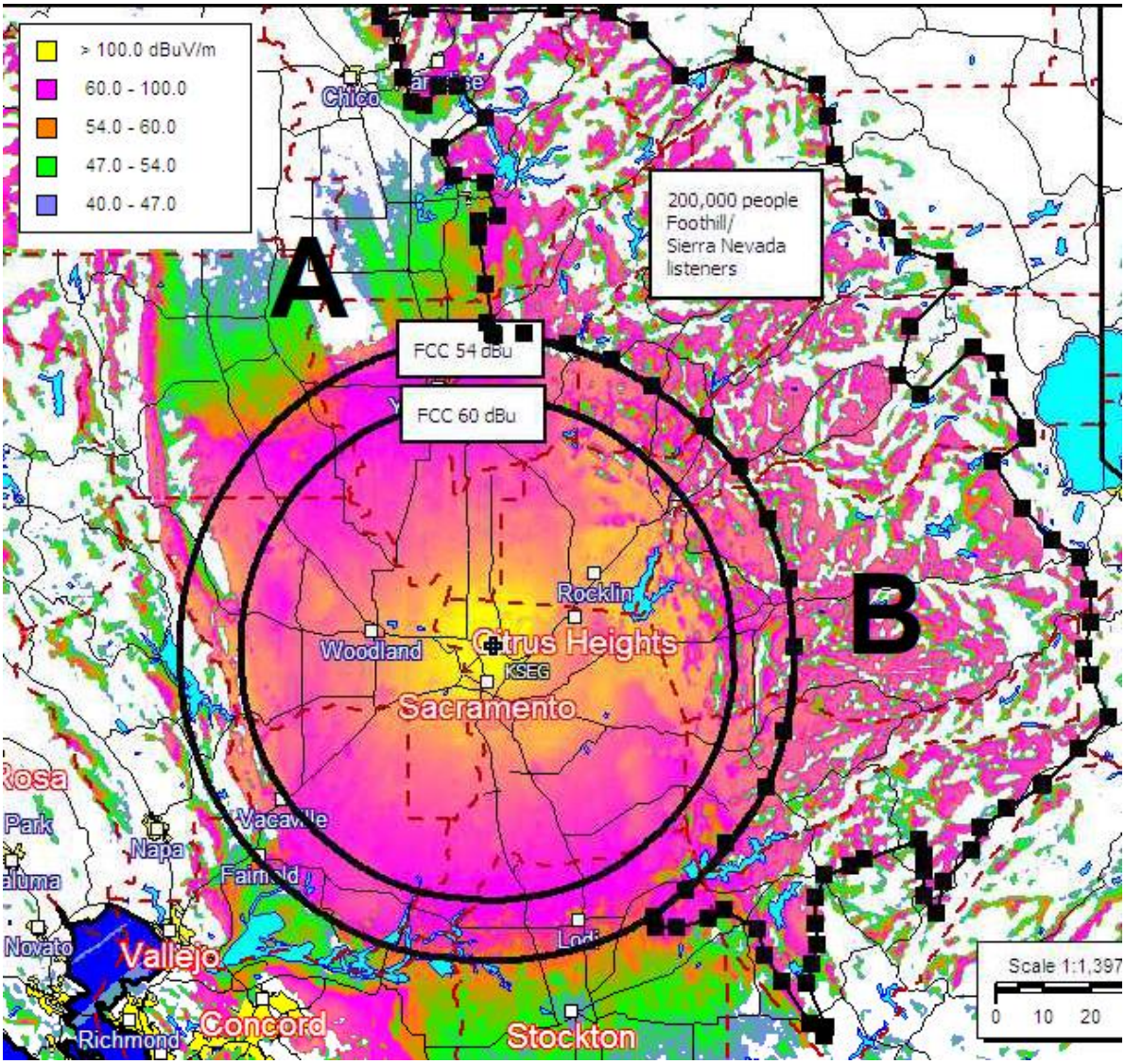


Figure 1

Figure 2: Sacramento radio market

While it may be suitable to propose a co-channel translator at *Point A*, outside of the station's 54 dBu contour, many regular listeners reside within the radio market at *Point B.* However, according to the current proposal, **the eastern part of the Sacramento radio market would have no recourse if a translator proposed using this channel at *Point B***, although the signal is clearibly viable here.

2. CASE 2: THE "RIMSHOT"

Figure 3 demonstrates the classic mountain-on-the-side-of-a-valley, or "rimshot", full power facility. The Class A full power below has its FCC 60 and 54 dBu contours labeled, yet it covers more than twice this area with an actual signal => 60 dBu Longley-Rice. If you view the terrain/signal diagram in Figure 4, a 60 dBu signal is still received 120 km from the transmitter in Vacaville, California. This is 14 km short of double the radius of the FCC 54 dBu contour. The rimshot facility is ubiquitous in broadcasting: find a key mountain tower site several kilometers away from a metro area where the terrain on the opposing side is so elevated that it counter-balances the HAAT. This permits a higher ERP for the actual elevation, mainly for projecting out 180 degrees along a valley. These types of stations derive long-distance vehicle-

reception at times better than facilities centered in the middle of the market due to line-of-sight coverage. The station depicted below serves the Sacramento market, but its FCC 54 dBu contour does not even reach the city limits of Sacramento. **Excluding the population within its FCC 54 dBu contour**, the facility covers **914,425 persons => 60 dBu Longley Rice.** All these potential listeners would have no recourse under the proposed 54 dBu limitation for Sections 74.1203(a)(3) and 74.1204(f) if a translator wanted to propose in this area. Many full power stations that have similar coverage schemes would loose protection under this proposed regime.

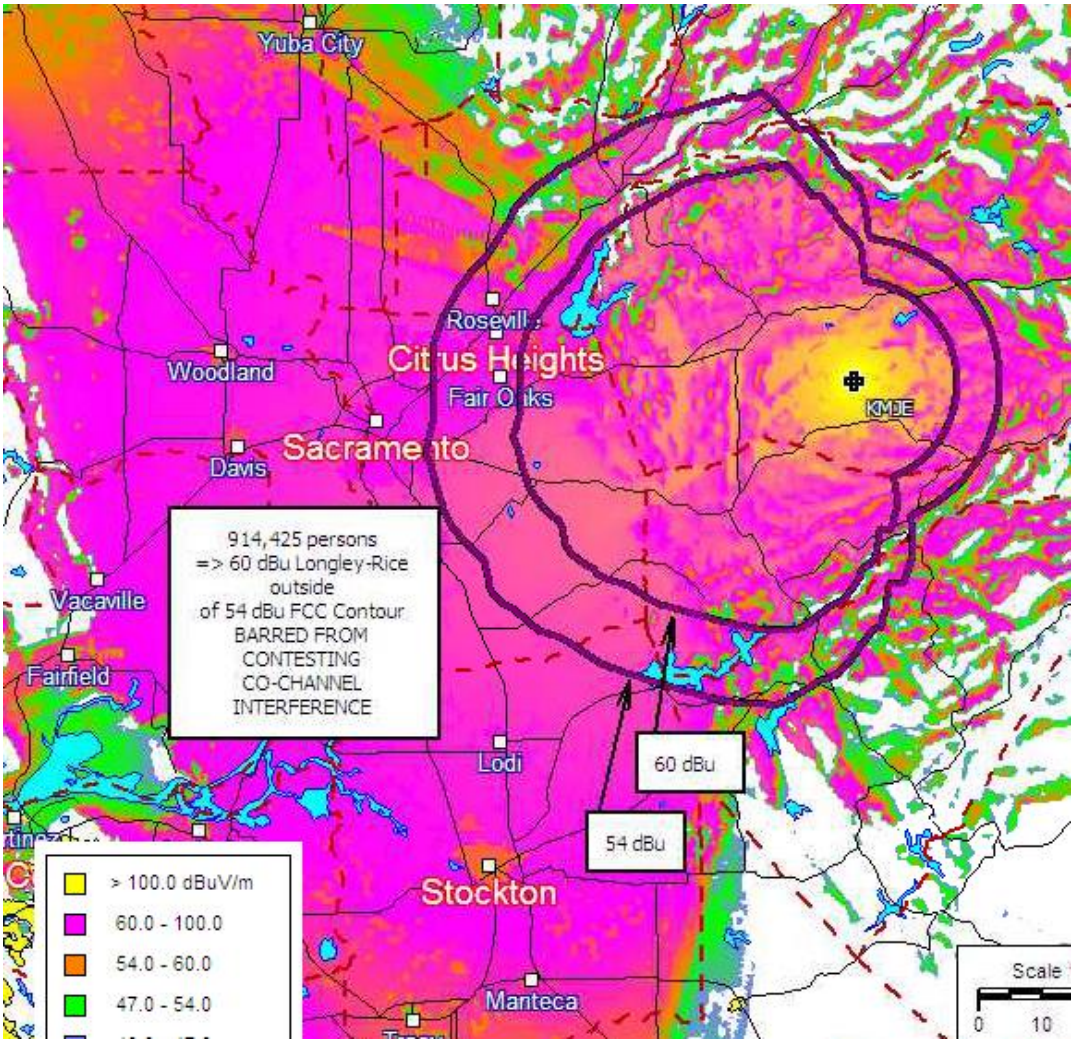


Figure 3: Sacramento, California "rimshot" station.

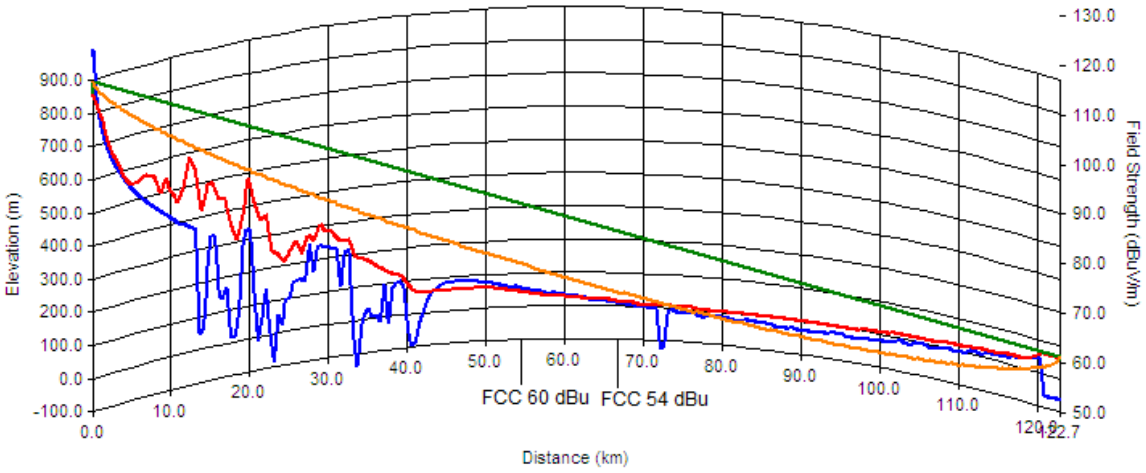


Figure 4: Terrain/signal diagram, with FCC 60 and 54 dBu contour distances noted.

3. CASE 3: THE "TRICKED CONTOUR"

In certain cases, the FCC contour seems to completely diverge from actual coverage. Much of the time this is due to the prediction of coverage method detailed in Section 73.313. For calculating FM coverage, at least fifty terrain elevation points from 3 to 16 kilometers from the transmitter must be evaluated on the eight azimuth radials. The method is "blind" against terrain irregularities that occur before 3 km, and after 16 km. Figure 5 is a prime example of this. FCC 54 and 60 dBu are depicted for this LPFM along with Longley-Rice propagation. The northern azimuth of the FCC 60 dBu extends out 12.7 km, but the actual coverage peters-out to 25 dBu (L-R) within 2 km. The eastern azimuth of the FCC 60 dBu is stunted, yet the L-R 60 dBu coverage extends past the FCC 54 dBu contour. In other words, under the current NPRM proposal, the FCC 54 dBu are of no coverage is protected, ***but the actual 60 dBu reception outside the FCC 54 dBu contour is not protected***.

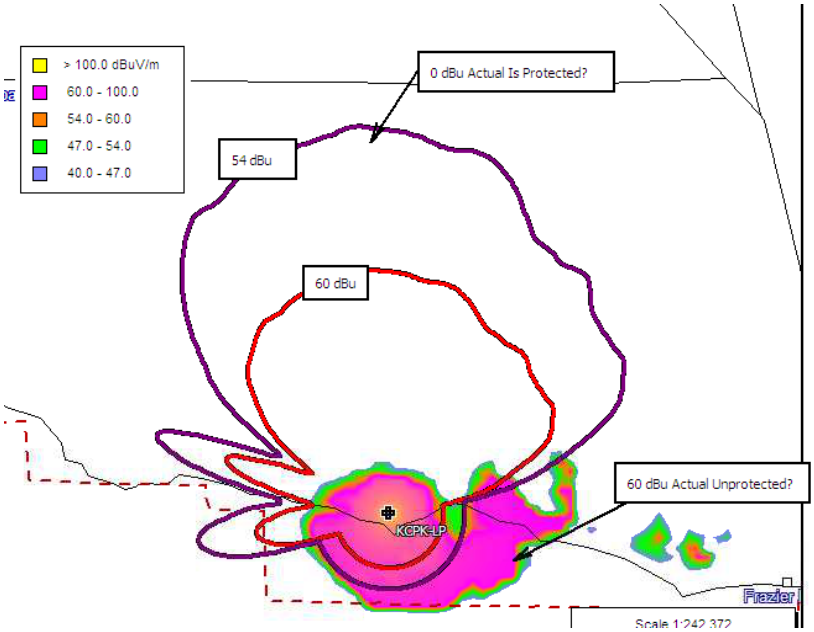


Figure 5: (A) FCC 54/60 dBu contours and Longley-Rice coverage

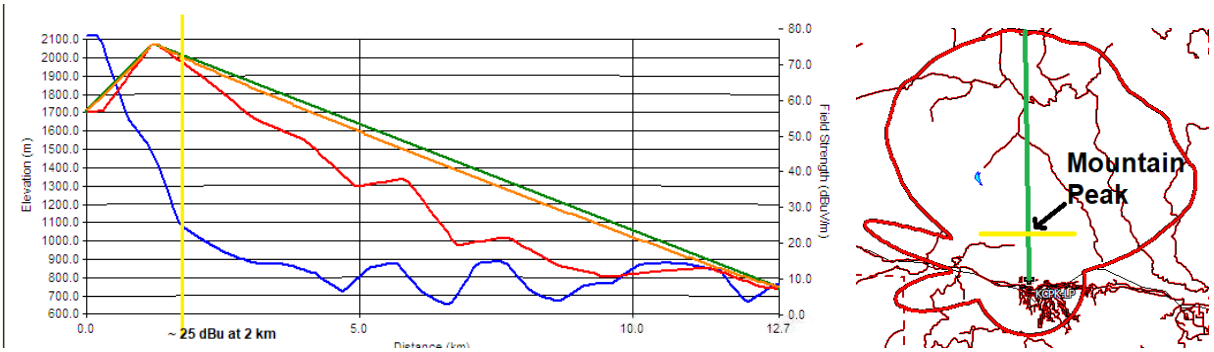


Figure 5: (B) Terrain/signal diagram (C) diagram relationship.

4. CASE 4: BASIN LINE-OF-SIGHT

Figure 6 demonstrates a Low Power FM FCC 54 dBu contour (top station), and the addition of a 250 watt first-adjacent translator application FCC 60 dBu contour (bottom station) shoehorned-in to take the most populated city in the vicinity. The LPFM's Longley-Rice propagation demonstrates a viable signal into the largest city in the vicinity, Eureka, California. Under the proposed FCC 54 dBu cutoff rule, this LPFM would not be able to challenge interference cases where it viably serves population in Eureka. In this case, 60% of its current coverage population might be usurped with no recourse. This problem is common with LPFM.

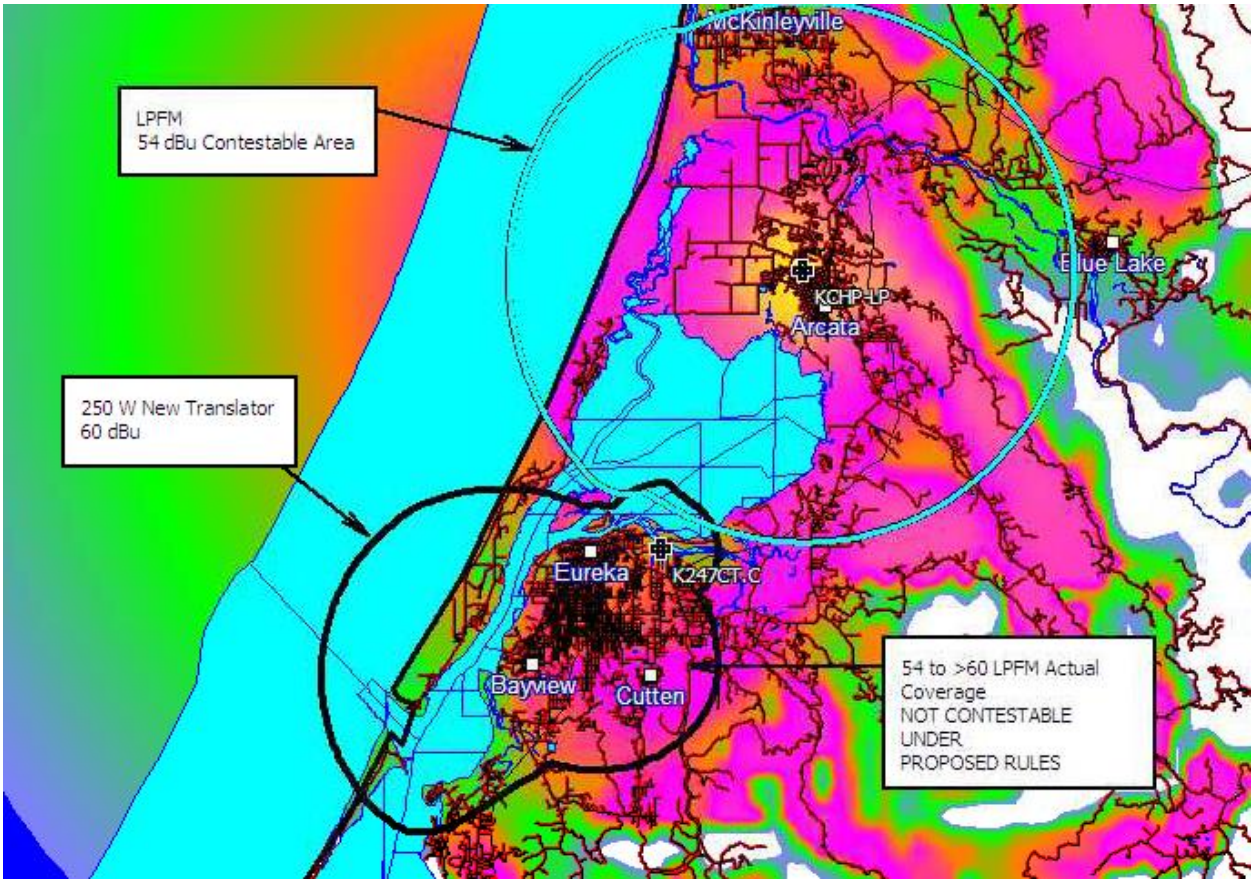


Figure 6: LPFM vs new translator

The following four examples analyze LPFM-specific interference cases. The FCC facility identifiers and city identifiers are excluded for anonymity.

5. LPFM EXAMPLE 1

Below, to the left and right, are established minimally-spaced co-channel LPFM services, with a co-channel translator application proposed in the middle, within a major US city.

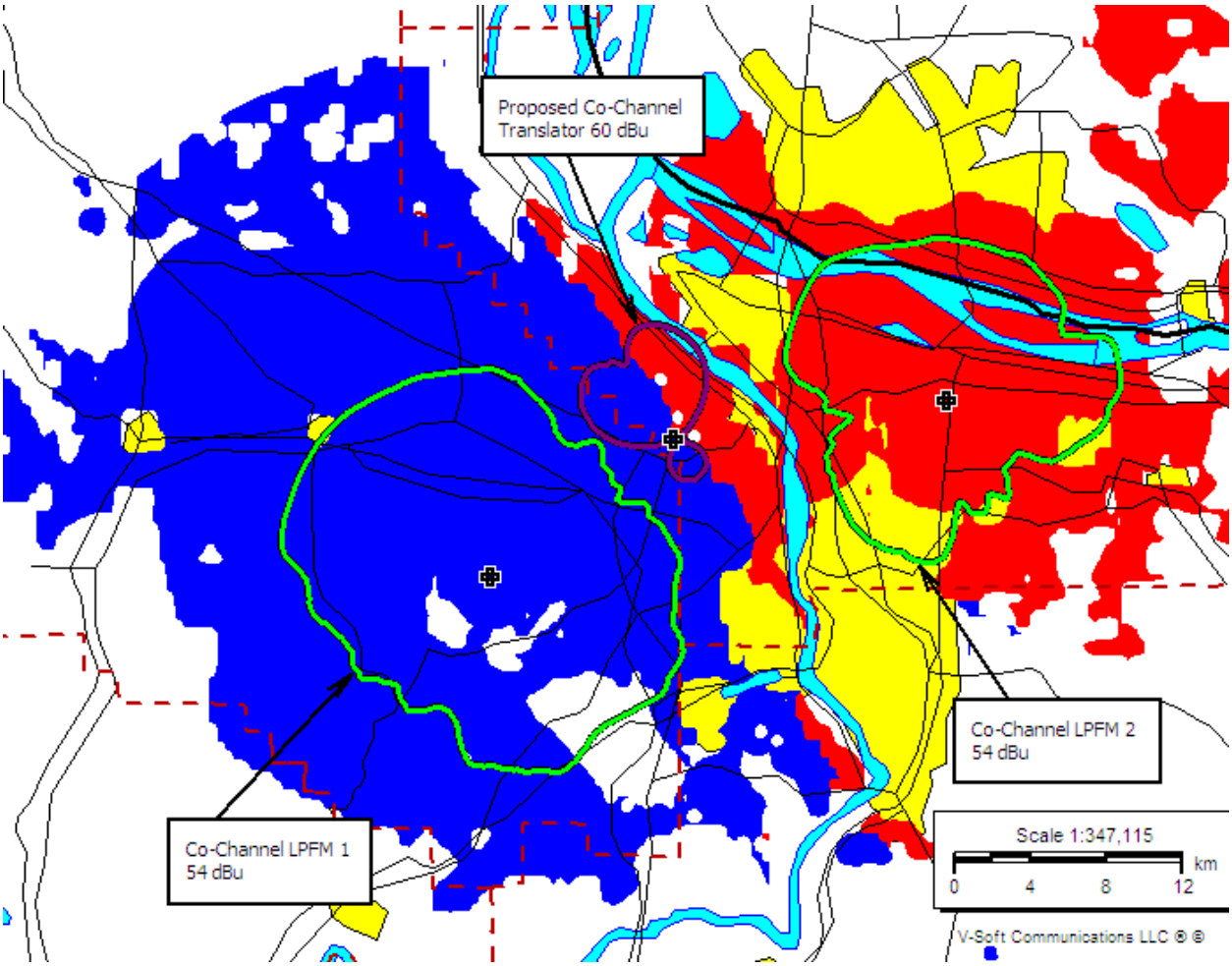


Figure 7

The **blue area** shows the Longley-Rice coverage =>54 dBu with FCC 54 dBu contour illustrated in green from *LPFM 1*. The **red area** shows the Longley-Rice coverage =>54 dBu

with FCC 54 dBu contour illustrated in green from *LPFM 2*. The **purple contour** is the proposed co-channel translator's 60 dBu FCC contour.

According to the above, both LPFM 1 and 2 have **very listenable coverage** within the proposed translator's FCC 60 dBu contour. **Under the NPRM's proposed 54 dBu cutoff rule, both LPFMs would be barred from using Sections 74.1203(a)(3) and 74.1204(f) to assist in retaining their bona fide listeners**.

Furthermore, Figure 8 delineates the proposed translator FCC 60 dBu contour. The green, red, and blue areas represent areas where, correspondingly, LPFM 1, a co-channel Full Power FM station (red), and LPFM 1 and 2's (green/red) D/U is stronger than 20db below the translator signal.

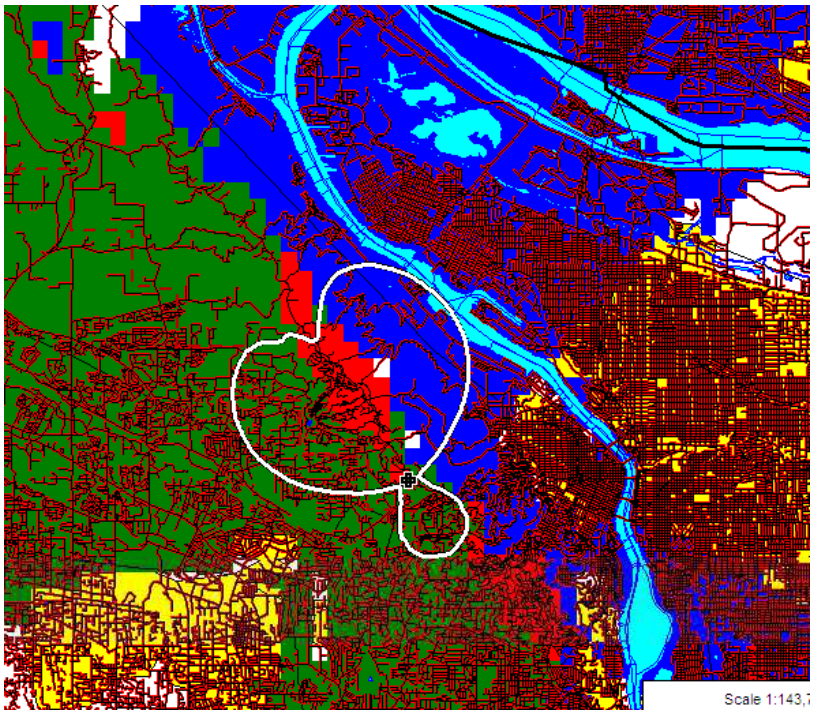


Figure 8: Co-channel interference.

According to Longley-Rice interference calculations, the new translator introduces interference-free coverage to 64 persons to the detriment of three currently-received co-channel stations.

```
Totals for 177****.A (2**)
                                      Population          Area
      Calculation Area Population:     1,654,330   [  2828.4 sq. km ]
      Not Affected by Terrain Loss:      850,354   [  1602.8 sq. km ]
      Interfered Population:             850,290   [  1602.2 sq. km ]
      Interference Free:                      64   [     0.6 sq. km ]

      Percent Interference:                99.99 %
```

6. LPFM EXAMPLE 2

Referring to Figure 9, towards the top of the map, a FCC 54 dBu LPFM contour is identified. A proposed co-channel translator FCC 60 dBu contour is also illustrated towards the bottom. The Longley-Rice coverage of the LPFM station is presented in the background, with various colors relating to signal strength. The resultant demonstrates LPFM areas of even => 60 dBu Longley-Rice coverage within the proposed co-channel translator FCC 60 dBu contour. However, the LPFM's FCC 54 dBu contour is not even close to the translator's FCC 60 dBu contour. It this case, under the proposed NPRM, the LPFM would be **barred from using Sections 74.1203(a)(3) and 74.1204(f) to demonstrate established listenership within the proposed translator FCC 60 dBu.**

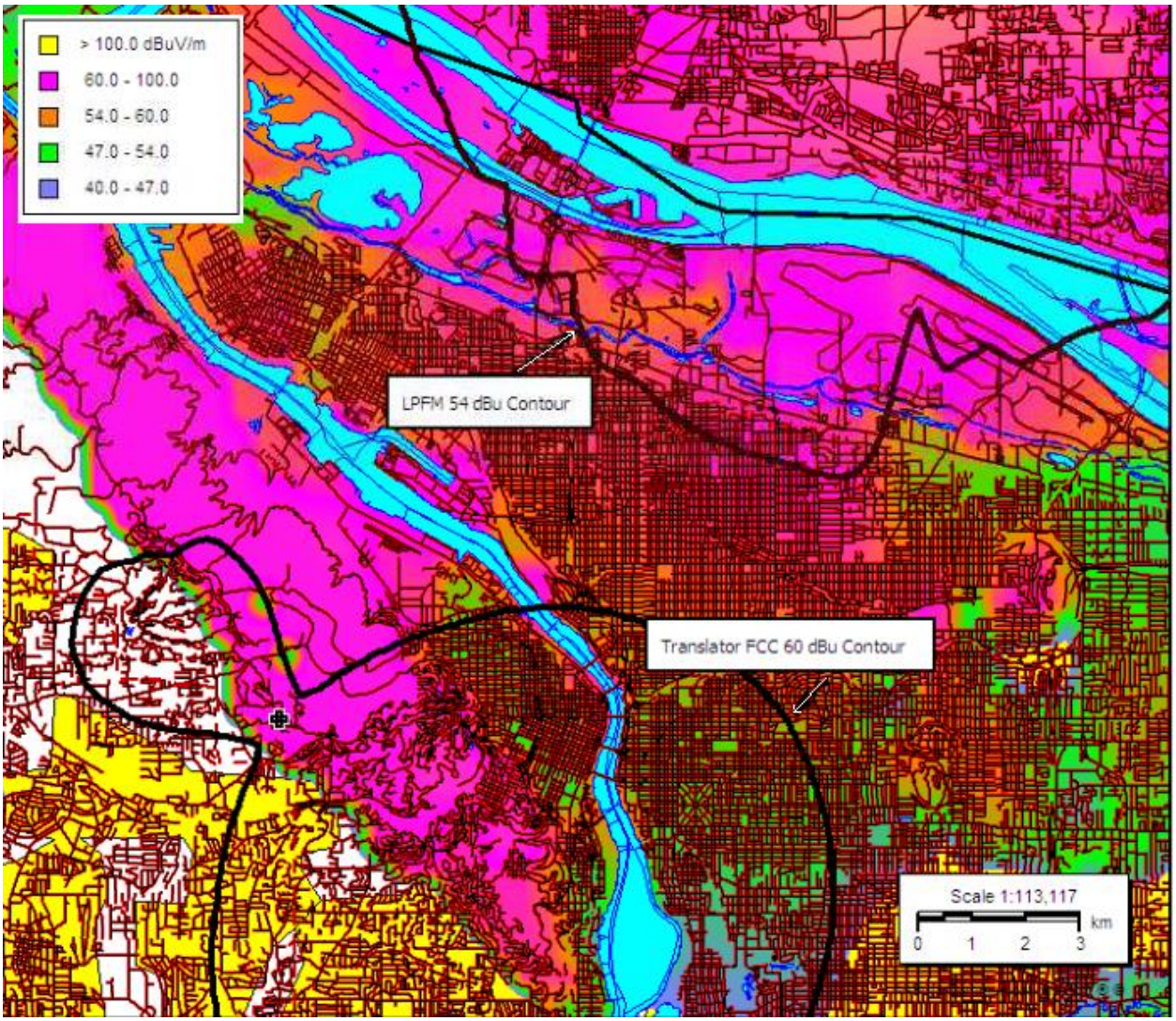


Figure 9

Delving further, the proposed translator supplants a total of two listenable fringe co-channel signals with a substantial amount of interference. Refer to Figure 10 below.

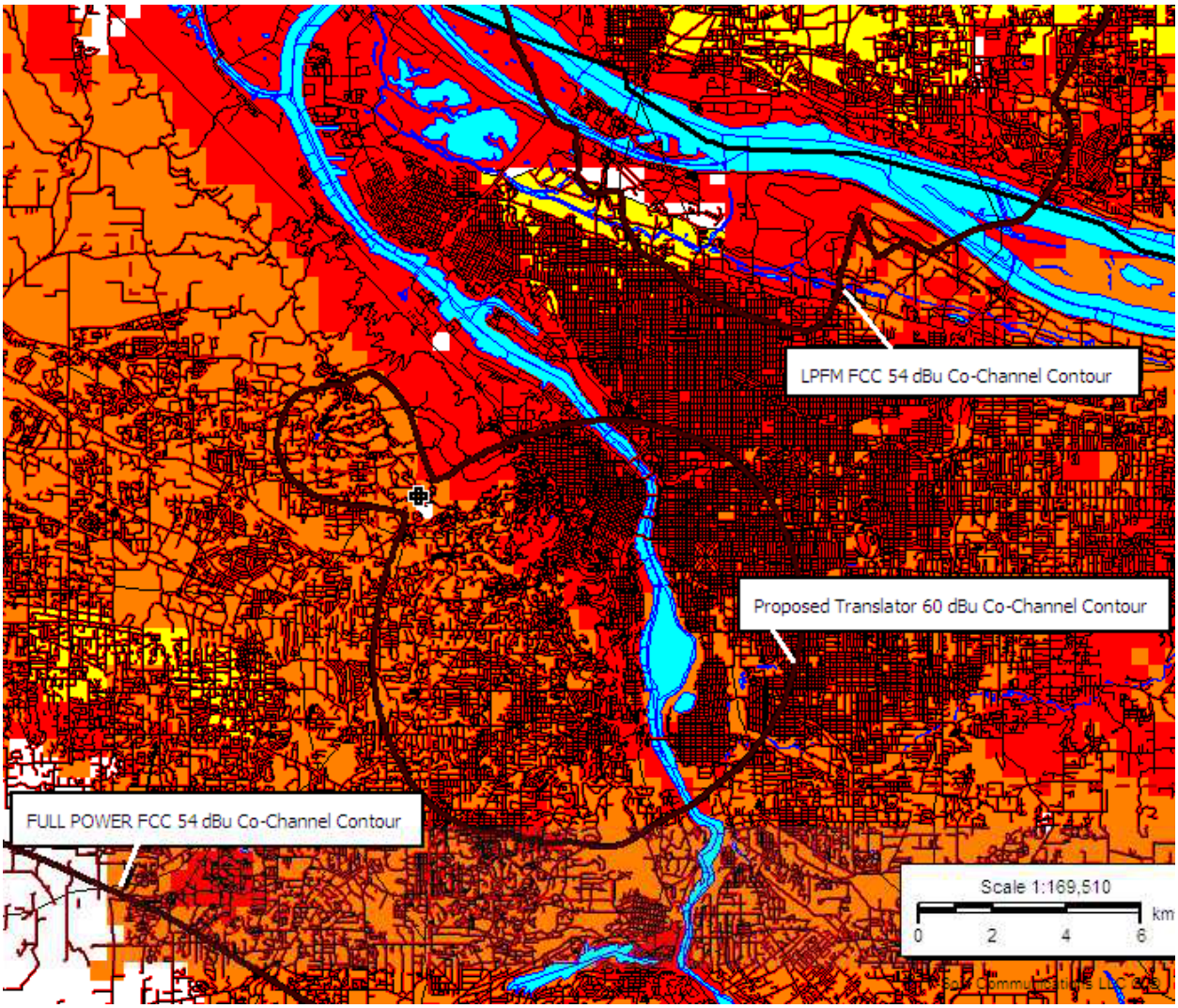


Figure 10

Figure 10 demonstrates:

- Full Power FM FCC 54 dBu co-channel contour to the south (lower left corner).
- LPFM FCC 54 dBu co-channel contour to the north (upper right corner).
- Proposed FCC 60 dBu co-channel translator contour in the middle
- Orange area demonstrates areas where the Full Power FM D/U is stronger than 20db below the translator signal.
- Red area demonstrates areas where the Full Power D/U is stronger than 20db below the translator signal.

The resultant:

- According to FCC ratios, the translator is providing no interference-free coverage within its 60 dBu FCC contour.
- The translator is provides unlistability to two current main studio services to rebroadcast a redundant AM service with untenable interference.
- Under the proposed NPRM 54 dBu cutoff rule, neither the Full Power FM or the LPFM would be able to contest this translator.
- With the proposal, all parties broadcast parties lose, and listeners lose.

7. LPFM EXAMPLE 3

A large-market central-city LPFM's FCC 54 and 60 dBu contours are presented in Figure 11. A proposed translator co-channel 60 dBu contour in red appears to the left of this. The LPFM's Longley-Rice propagation plot appears in the background indicates signal listenability within the proposed translator 60 dBu contour. The 54 dBu limitation proposed in the *NPRM* would prevent listeners of this LPFM from filing complaints against the translator.

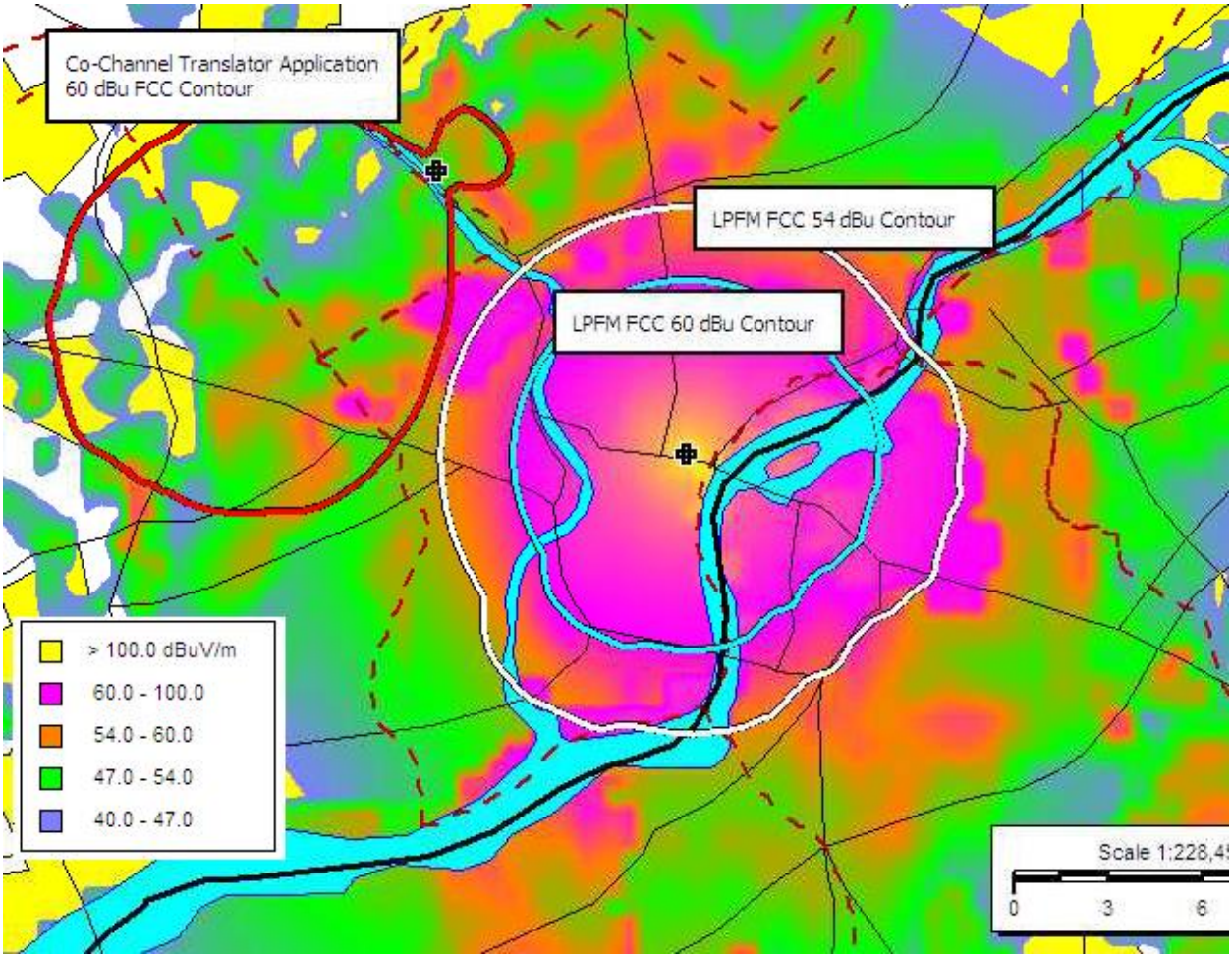


Figure 11

Next, Figures 12 and 13 demonstrate the interference to the LPFM's coverage area, and projected interference to the new translator.

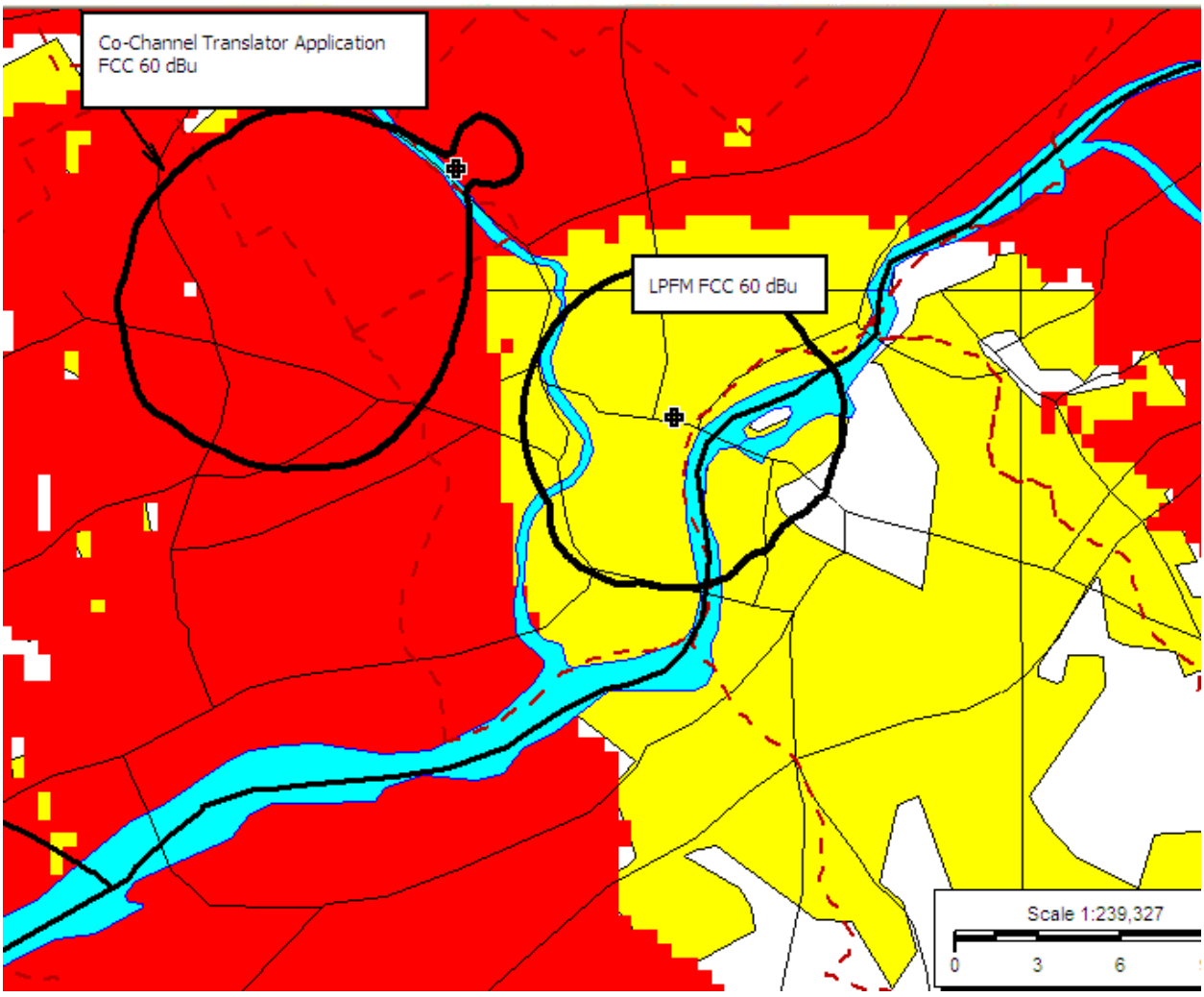


Figure 12

Figure 12 demonstrates the new interference area created by the new translator to the LPFM, cornering the LPFM's finge listening area.

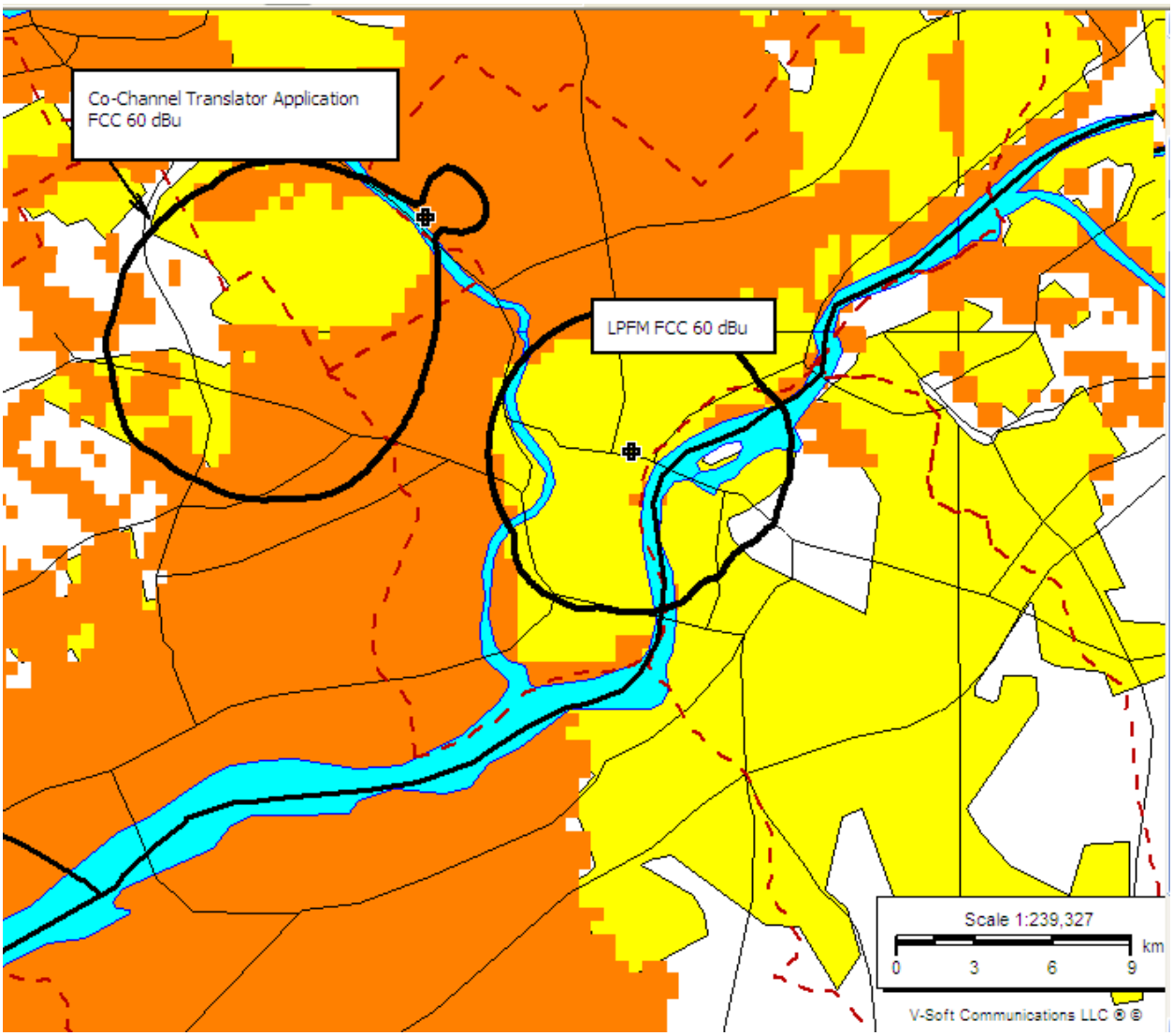


Figure 13

Figure 13 demonstrates the interference from the LPFM imparted upon the proposed translator. Using a 30 dBu threshold, and FCC D/U ratios, 90% of the proposed translator signal is impacted by interference.

Totals for 177****.A (2**)

	Population	Area
Calculation Area Population:	9,956,457	[31418.8 sq. km]
Not Affected by Terrain Loss:	2,667,784	[4785.9 sq. km]
Interfered Population:	2,424,545	[4168.6 sq. km]
Interference Free:	243,239	[617.3 sq. km]
Percent Interference:	90.88 %	

The translator proposal is virtually a wash.

8. LPFM EXAMPLE 4

Figure 14 demonstrates a LPFM to the north (top) with FCC 54 and 60 dBu contours, and LPFM Longley-Rice propagation plot. To the south (bottom) is a co-channel translator proposal's FCC 60 dBu contour. As demonstrated, due to terrain reasons, the LPFM signal actually propagates well-beyond its FCC 54 dBu contour. Yet again, under the NPRM's 54 dBu cutoff proposal, the LPFM would be barred from contesting their lost listenership to the translator via Sections 74.1203(a)(3) and 74.1204(f).

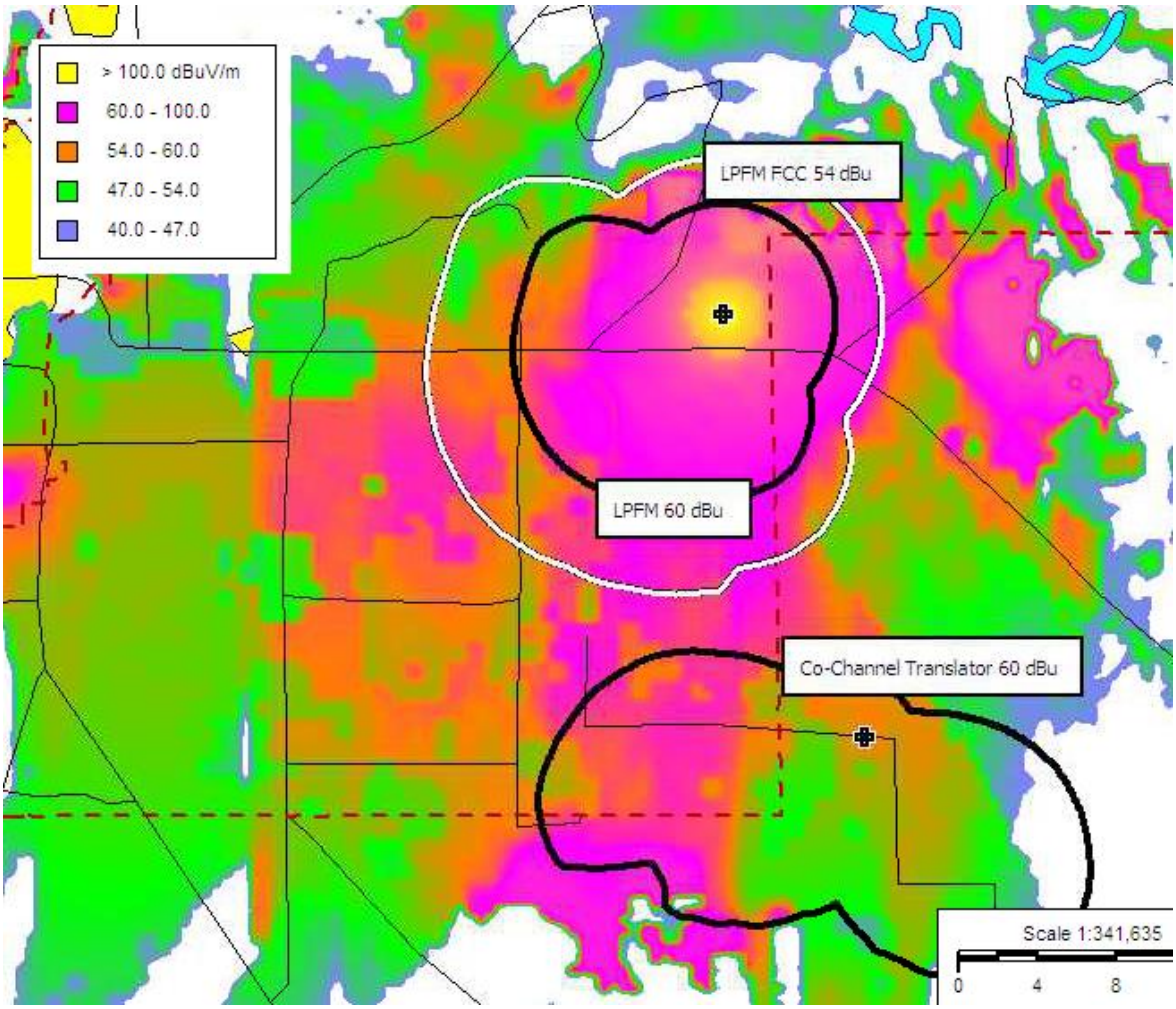


Figure 14

Figure 15 demonstrates (Longley-Rice) interference to the LPFM imparted by the translator.

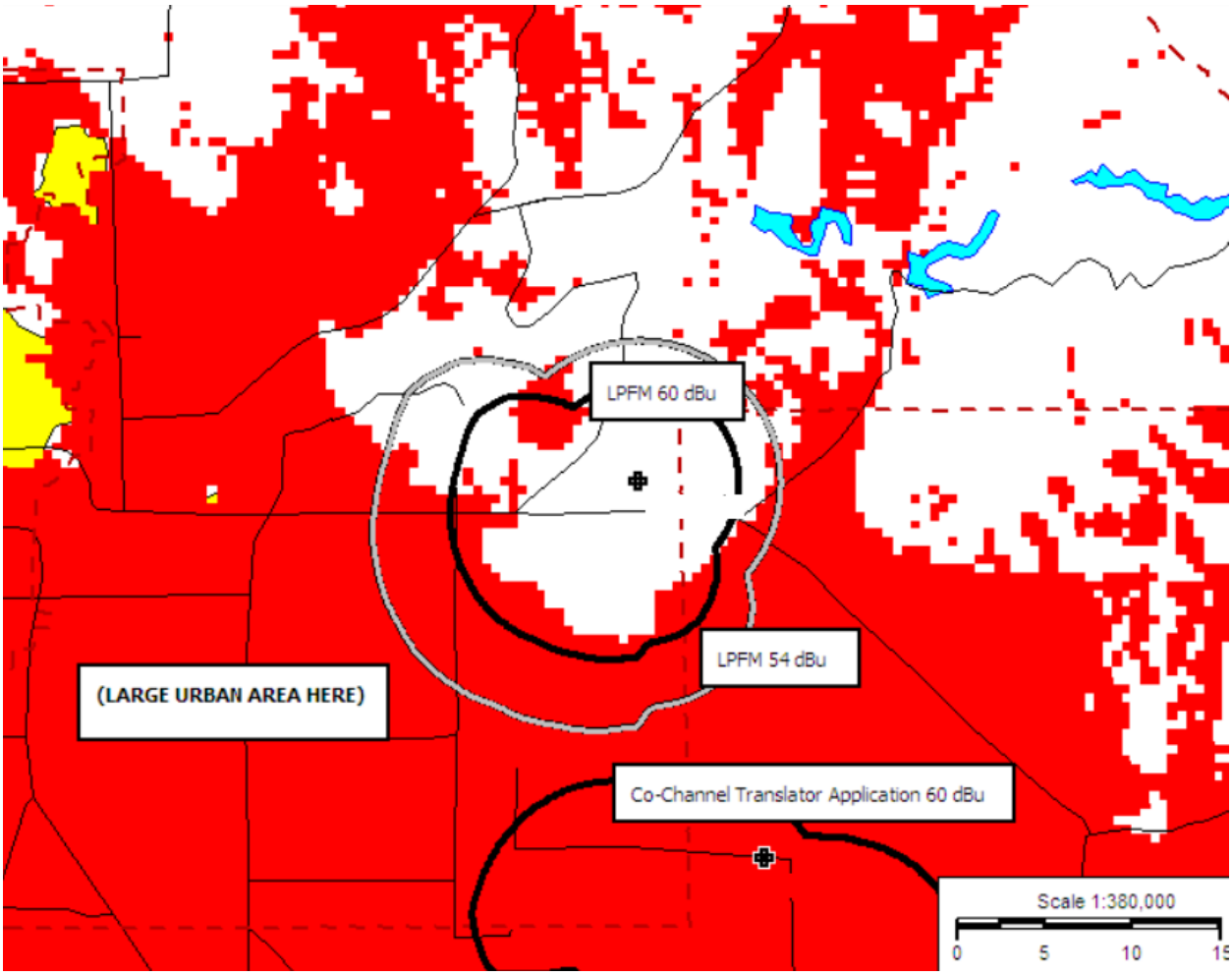


Figure 15

Figure 16 demonstrates (Longley-Rice) interference to the translator imparted by the LPFM. Within a 30 dBu threshold, 97.7% of the population receives interference.

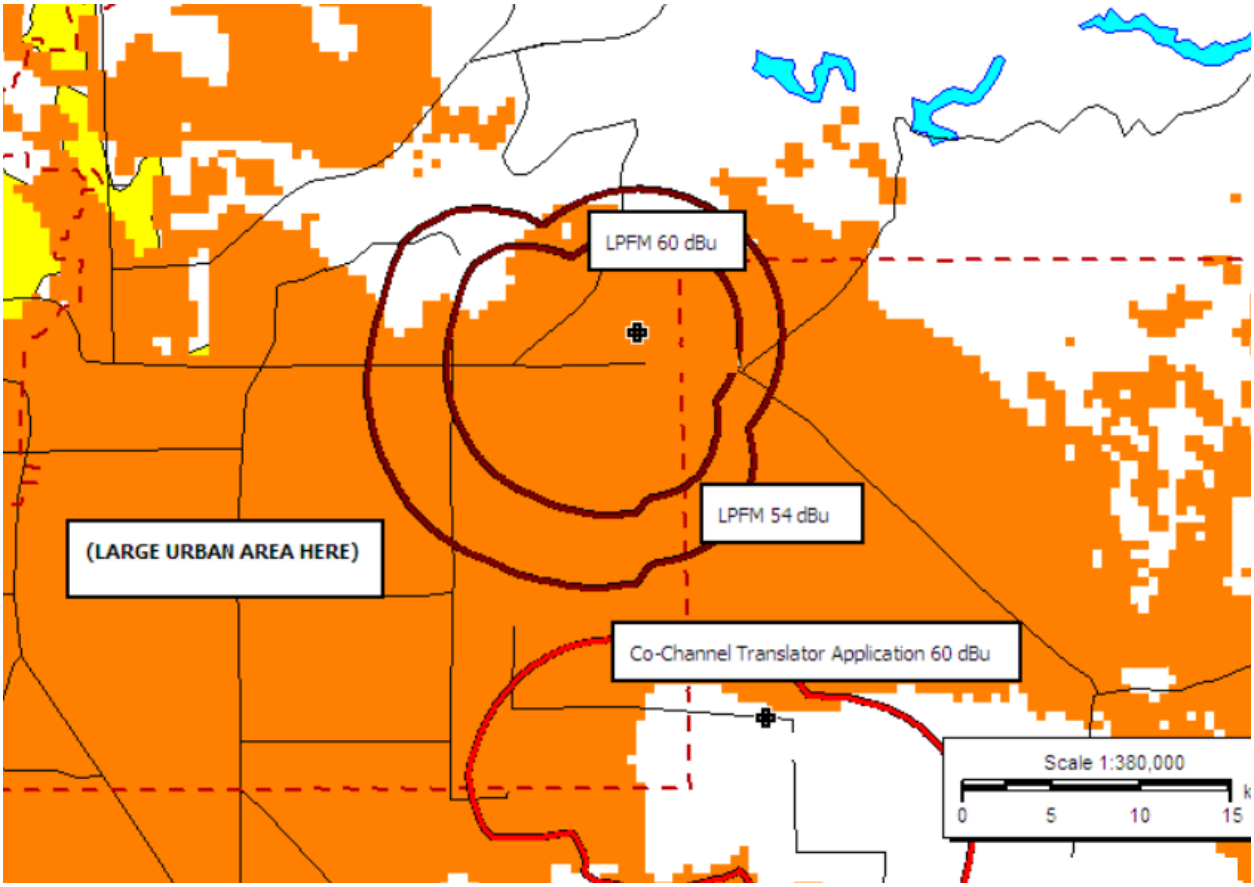


Figure 16

```
Totals for K*****(2**)
                                        Population          Area
      Calculation Area Population:       3,251,590    [ 31418.3 sq. km ]
      Not Affected by Terrain Loss:      1,333,610    [ 10465.7 sq. km ]
      Interfered Population:             1,304,008    [  8310.0 sq. km ]
      Interference Free:                    29,602    [  2155.7 sq. km ]

      Percent Interference:                 97.78 %
```

9. INTERPRETATION

The NPRM's 54 dBu limitation appears grossly inadequate in protecting real world signal coverage in a multitude of cases. The FCC 50-50 tables were derived in the 1940s for generalized contours between full power stations. At that time the FM band was never anticipated to use HD, booster, full power, translators, and LPFM. The NPRM's 54 dBu cutoff proposal is a crowbar where a scalpel should be used.

Translators require a more surgical approach in placement rather than a 54 dBu protection demarcation. Propagation divergence from the F(50, 50) method and subtle factors inherent to the rules command a closer look:

- **Line-of-sight coverage** endowed-stations sustain prime coverage beyond the FCC model. Unencumbered high-elevation signals appear to behave closer in modality to free space path loss vs F(50,50) charts. High-elevation sites may offer superiority over power because the curvature of the earth is overcome. Similarly, there could be greater opportunity for line-of-sight propagation within the F(50,50) fringe signals for LPFM: Full power stations at FCC standard Class Chart height/powers average 55-65 dBu signals at the horizon assuming flat land, but a LPFM's fringe contour of FCC 39 dBu contour meets the horizon for a facility at 30 m HAAT.

- **Similarly, a station within a basin of graduating terrain** of many miles performs similarly to a terrain-elevated (rimshot) site.

- **Terrain can be a wildcard** when it falls outside of the point sampling of 3 to 16 kilometers prescribed in Section 73.313. The probability of elevation aberration upon any individual cardinal radial upon non-flat terrain region could be an immanent factor in deceptively extending or limiting FCC contours.

- **The NPRM's 54 dBu proposal inherently excludes LPFM challenges to translators**: Section 74.1204 allow translators to propose as close to protected contours of full power stations as long as their proposed F(50,10) contours do not cross. This includes entering the 54 dBu full power station's contour. However, between LPFM and translator, interference contours act more by reciprocation due to closer proximity and similar coverage size. In other words, a translator cannot physically propose within a LPFM's 54 dBu: *Since the translator's 40 F(50,10) cannot cross the LPFM 60 F(50,50) (for co-channels), and the 54 F(50,10) cannot cross the LPFM's 60 F(50,50) (first adjacent), from Section 74.1204, this precludes any translator from proposing inside the LPFM's 54 dBu*. Thus, **LPFM services are then excluded from using Section 74.1203(a)(3) and 74.1204(f)** under the NPRM. Yet the aforementioned LPFM cases clearly delineate true usurped LPFM listening audiences in terms of actual signal propagation.

- **Total translator interference has been an invisible, industry-unbroached issue.** Unfortunately, the physics of signal propagation does not bend to shoehorned-in translator proposals, and lobbying; *you can't get something from nothing*. Signal engineering under Section 74.1204 does not take into account incoming interference for translators. Many new translator proposals have ignored untenable real world incoming interference. What this means in the frame of the *NPRM* proposal is if a translator is proposed at the 54 dBu boundary of a co-channel full power station, the a translator is going to have possibly 0 to 4 kilometers of interference-free service (assessing D/U) to the detriment of **creating interference several times that area between two or more stations.**

We viewed in the previously depicted LPFM cases were 90% or more of the translator's theoretically-proposed listenership is to receive interference. At the same time, half the co-channel non-60 dBu listership of the LPFM is eradicated. Both stations lose due to the translator proposal. Under the NPRM, the victimized stations would be prohibited from bringing this to the FCC under Sections 74.1203(a)(3) and 74.1204(f).

These types of proposals pose deleterious consequence to the FM band. Most FM listening nowadays is in the vehicle. One translator, one LPFM, and a fringe full power jammed onto one co-channel in a metropolitan area is a recipe for "islands" of listenability, with the majority of the space rendered to interference. This spells the demise of sizable listenerships for both commuters and highway travelers.

10. CONCLUSION

Translators are best proposed when they utilize underused spectrum nooks for which the distant full power co-channel is terrain-attenuated. This is not obvious by just gauging the incoming full power F(50,10) contour. The 1940's FCC contour model is not the best suited tool for ascertaining distant signal strengths because it is an extrapolated approximated model.

We suggest the FCC accept Longley-Rice propagation demonstrations to certify listenability of signal within a proposed translators 60 dBu when submitting demonstrations under Section 74.1203(a)(3) and 74.1204(f). The usage of this propagation model would not be unprecedented. The FCC's Office of Engineering Technology Bulletin #69

outlined usage of Longley-Rice for digital television.[3] It is also mandated under Section 339(c)(3) of the Communications Act to prescribe a reliable point-to-point predictive model for satellite reception.[4] The Media Bureau currently uses FORTRAN code on its Sun Microsystem Enterprise 3500 and UltraSPARC computers. Furthermore, the Audio Division has accepted Longley-Rice to meet alternative coverage of community of license requirements for FM stations in specific cases where exceedingly flat or rough terrain is present.[5] The employment of Longley-Rice here is the most accurate, fair, and time-tested tool at the FCC's disposal to judge FM signal viability. In total, it is suggested:

- No FCC contour limitation ("54 dBu" as NPRM suggests) should be considered because it is not indicative of real world coverage, best engineering practice, or preserving the excellence of the FM band.

- Licensees should be able to demonstrate that if there is a signal listability using Longley-Rice within the translator's 60 dBu, Sections 74.1203(a)(3) and 74.1204(f) should be applicable.

[3] *Longley-Rice Methodology for Evaluating TV Coverage and Interference.* This Bulletin provides guidance on the implementation and use of Longley-Rice methodology for evaluating TV service coverage and interference in accordance with Sections 73.622, 73.623 and 74.704 of the FCC rules (February 6, 2004).

[4] Individual Location Longley-Rice (ILLR) is used to determine whether a given view is within the qualifying signal of local television stations. If the test reveals a low signal, the viewer is allowed to utilize a satellite feed.

[5] See *Letter to KMAJ-FM Topeka, Kansas from FCC*, August 8, 2002. Letter outlined the specific guidelines required to propose using 70 dBu Longley-Rice coverage instead of FCC F(50,50) 70 dBu coverage. Cases where the terrain departs widely from a 50-meter roughness value. Terrain roughness (Δh), derived by the FCC in 1975, where the 50-meter value represents an average value for terrain in the US. See 56 FCC 2d 749 (1975).

- An additional measure should be added to both Sections 74.1203 and 74.1204 for established LPFM and translators stating that if a new translator creates more interference to population than it creates interference-free service to population, the FCC would take complaints upon demonstration of a Longley-Rice interference exhibit.

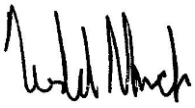
* * *

PROPAGATION SETTINGS

Prop Mode: Longley-Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 311.0
Receiver Ht AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 50%
Sit. Variability: 50%
ITM Mode: Broadcast

TECHNICAL CONSULT CERTIFICATION

I declare under penalty of perjury, that the technical content of the Petition and Attachments are true and accurate to the best of my knowledge and belief. I further certify over 10 years experience in submitting engineering exhibits before the FCC, 20 years performing broadcasting engineering work associated with radio facilities, a degree in Engineering from the University of California, Davis, and familiarity with FCC regulations.



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