



March 22, 2016

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street SW  
Washington DC 20554

Re: Revitalization of the AM Radio Service, MB Docket No. 13-249

Dear Ms. Dortch:

On March 21, 2016, the National Association of Broadcasters (NAB) submitted comments in the above-captioned proceeding.

Those comments erroneously did not include two appendices concerning a proposal to modify the daytime protection standards for AM Class B, C and D stations. The attached document includes the appendices, and replaces in its entirety the filing submitted on March 21.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Larry A. Walke". The signature is fluid and cursive, with the first name "Larry" being the most prominent.

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

In the Matter of )  
 )  
Revitalization of the AM Radio Service ) MB Docket No. 13-249

**COMMENTS OF THE  
NATIONAL ASSOCIATION OF BROADCASTERS**

**I. Introduction and Summary**

The National Association of Broadcasters (NAB)<sup>1</sup> appreciates the Commission's continued efforts to sustain and revitalize the AM radio service. Below we offer our views on certain proposals raised in the Further Notice and NOI in the above-captioned proceeding.<sup>2</sup> Specifically, NAB supports the Commission's relaxation of the criteria for locating a cross-service FM translator (although requests eliminating the newly proposed contour limit) and relaxation of the main studio rules for AM broadcasters, among others. NAB also provides herein summary results from a computer study modeling the potential effect of modifying the daytime protection standards for AM Class B, C and D stations.

**II. The Commission Should Revise the Standards for Locating FM Cross-Service Translators**

The Commission's authorization of cross-service translators in 2009 has been a resounding success,<sup>3</sup> enabling more than 700 AM radio stations to retransmit their

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<sup>1</sup> NAB is a nonprofit trade association that advocates on behalf of local radio and television stations and also broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the courts.

<sup>2</sup> *Revitalization of the AM Radio Service*, First Report and Order, Further Notice of Proposed Rulemaking, and Notice of Inquiry, MB Docket No. 13-249, 30 FCC Rcd 12145 (2015) (First R&O, Further Notice, or NOI).

<sup>3</sup> *Amendment of Service and Eligibility Rules for FM Broadcast Translator Stations*, Report and Order, 24 FCC Rcd 9642 (2009) (2009 Translator Order).

programming with a clearer, more reliable FM signal. The Commission's decision in the First R&O allowing AM stations to acquire and move an FM translator up to 250 miles will extend this opportunity to hundreds of additional broadcasters and their listeners.<sup>4</sup> However, the Commission's proposed 40-mile limit on locating such translators may unnecessarily hinder their use by some AM stations.<sup>5</sup>

The existing rules require that the 60 dB $\mu$  contour of an FM cross-service translator must be contained within the smaller of the 25-mile radius from the AM station's transmitter site or the AM station's daytime 2 mV/m contour.<sup>6</sup> As noted by NAB, these criteria are too restrictive in certain situations, such as where a station's transmitter site is located far from a population center because of land costs.<sup>7</sup> For example, the rule can make it difficult for stations to cover a core service area that is located beyond the 25-mile radius but within the 2 mV/m contour, preventing stations from using an FM translator where it is needed the most. The rule also does not take into account the directionality of numerous AM stations and the possibility that a null in the directional pattern of an AM station may exclude otherwise suitable translator locations.<sup>8</sup>

NAB thus recommended that, instead of limiting a translator's 60 dB $\mu$  contour to the *smaller* of an AM station's 25-mile radius or daytime 2 mV/m contour, the translator should be able to cover the *greater* of these benchmarks, to increase the flexibility of AM stations in

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<sup>4</sup> First R&O, 30 FCC Rcd at 12148-53.

<sup>5</sup> Further Notice, *id.*, at 12174.

<sup>6</sup> 47 C.F.R. § 74.1201(j).

<sup>7</sup> NAB Reply Comments, MB Docket 13-249, at 9, (Mar. 20, 2014).

<sup>8</sup> National Translator Association Comments, MB Docket No. 13-249, at 2-3, (Jan. 21, 2014), at 2-3.

locating FM translators.<sup>9</sup> The Commission agrees in the Further Notice, adopting NAB's proposal; however, the Commission imposes a new restriction that the translator's coverage contour may not extend beyond a 40-mile (64 km) radius centered at the AM station's transmitter site.<sup>10</sup> The Commission states that this approach will provide useful signal coverage without allowing a cross-service translator to extend an AM radio station's coverage beyond its "core service area."<sup>11</sup>

NAB submits that the newly proposed 40-mile cap should be eliminated as unnecessary because the existing 2 mV/m contour cap effectively constrains operation to the station's core service area. We also question whether the new limit will raise similar concerns as the previous standard, since a 40-mile maximum distance is no less arbitrary than the 25-mile limit. It will still disadvantage AM stations seeking to reach listeners in a core area located 41 miles or more away from the station's transmitter site, but within the station's 2 mV/m contour. The geography of markets can vary widely, and we understand there are many instances where an AM station's 2 mV/m contour reaches beyond 40 miles, with substantial population centers within those areas. Moreover, even if a station's contour may be predicted on paper to cover such an urban core, there will always be listeners in such areas unable to receive a decent signal because of interference and noise. A limit of 40 miles on the reach of a translator would prevent stations from minimizing this problem and fulfilling listeners' expectations.

Given the nationwide trend of expanding population centers within suburbs and exurbs, and ever-increasing commutes, the "core market area" for many AM stations

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<sup>9</sup> NAB Reply Comments at 11-14.

<sup>10</sup> Further Notice, 30 FCC Rcd at 12174.

<sup>11</sup> *Id.*

continues to grow and shift. It is critical that AM stations have the flexibility to follow and serve these listeners. NAB sees no reason for a special limit on cross-service translators. Eliminating the 40-mile limit would not allow AM stations to unreasonably expand their service area, or impinge on other radio services. Rather, it would link a translator's coverage more closely to an AM station's 2 mV/m contour, which is the definition of a translator that is a "fill-in" asset, in keeping with Section 74.1231 of the rules.<sup>12</sup> FM translators remain a secondary service, strictly prohibited from causing interference to any primary full-power stations or first-in-time secondary stations.<sup>13</sup> NAB's proposed modification of the translator coverage criteria is modest, but would provide substantial, immediate benefits to AM stations and their listeners, and in particular to stations participating in the newly implemented 250-mile modification windows.

### **III. The Commission Should Carefully Consider the Impact of Changing the Daytime Protection Standards for AM Class B, C and D Stations**

The Commission proposes to reduce the daytime protected contour for Class B, C and D stations from the 0.5 to the 2 mV/m contour, to allow AM stations to increase power and signal strength to overcome increased levels of environmental noise that degrade their service.<sup>14</sup> NAB appreciates the Commission's commitment to improving AM radio service, especially given the interference challenges faced by AM stations. That said, modifying the daytime protections for Class B, C and D stations is a complicated approach that may benefit some stations while negatively impacting others and producing unintentional consequences.

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<sup>12</sup> 47 C.F.R. § 74.1231.

<sup>13</sup> *Id.*, at § 74.1203.

<sup>14</sup> Further Notice, 30 FCC Rcd at 12172.

To better understand the ramifications of these proposed changes, NAB commissioned a study by Doug Vernier Telecommunications Consultants that examines the impact of the Commission's proposed rule changes on a select group of AM stations.<sup>15</sup> A brief summary of the results from this study are included in Appendices A and B. The study examines the potential changes in population and geographic coverage of fourteen AM "root" stations, as well as the causal impact on the ability of certain nearby, contour-related "affected" stations to upgrade their power. Specifically:

- Appendix A illustrates how when an AM station (the "root" station) elects to increase its signal power under the proposed changes, this higher power increases the population within the root station's 2 mV/m contour and impacts the ability of nearby "affected" AM stations to do a subsequent power increase; and
- Appendix B focuses on the impact of the root station power increase on the affected station's existing interference-free population within the 0.5 mV/m contour. Only three of the fourteen root stations were selected for this part of the study (WBNS, WGFA, WITY).

We note that, because of the tremendous variety in AM stations and allocation scenarios across the country, the study's result cannot be extrapolated or be considered representative of the impact throughout the AM band. NAB offers this study solely for the information it provides on a handful of specific examples, and any basis for discussion and evaluation of the proposals it may provide. Further, the results shown in Appendix A and B

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<sup>15</sup> This study was carried out using V-Soft Communications®' AM-Pro-2™, a computer program which has become the industry standard for AM groundwave and sky wave propagation calculations. AM-Pro has been adopted for use by the Federal Communications Commission, Industry Canada and broadcast engineering consultants in the U.S. and Canada. Population figures in the study are based on data from the 2010 U.S. Census, Public Law – Population and Housing database.

provide information on the simulated impact of increasing power at a single root station on affected stations; if other nearby stations increase power as a result of the proposed rules changes, then the impact on affected stations will likely compound in terms of interference and constraints on potential future upgrades.

The primary conclusions to be drawn from the study are that when a station increases its power under the proposed changes, it is likely to expand its interference-free population (depending on whether and by how much nearby stations also increase their power), but in doing so the interference-free population of nearby stations can be harmed. In particular, AM stations that are unable to take advantage of the proposed rules to upgrade their own service because they are already operating at maximum power or cannot afford the associated costs of equipment or electricity. These important considerations suggest that, if the Commission intends to enact the proposed changes, it is imperative that a process be implemented to manage the transition in a way that allows all stations an equal opportunity to improve or protect their service.

Notwithstanding this well-intentioned proposal, NAB submits that the most important action the Commission could take to improve AM radio reception is to control and reduce the ever-increasing noise floor that degrades AM signal quality.<sup>16</sup> AM radio is hindered by a variety of unintentional and incidental radiators, including electric power transmission lines, electronic sign boards, compact fluorescent and LED lights and computers, to the point where many stations no longer enjoy interference-free service out to the 0.5 mV/m contour. We have urged the Commission to review the Part 15 rules and other policies, and where appropriate, inject more specificity into the rules to clarify that all such devices fall within the

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<sup>16</sup> See, e.g., NAB Comments, MB Docket 13-249 (Jan. 22, 2014), at 21.

Commission's purview. We have also asked the Commission to more rigorously enforce violations of these rules.<sup>17</sup> NAB recognizes that doing so is a challenge, given the proliferation of devices that produce RF energy. However, simply allowing AM stations to increase power to hopefully overcome such noise is inefficient and sidesteps the root problems causing the widespread, worsening conditions that challenge AM broadcasters. Rather, the Commission should undertake a two-pronged approach of allowing AM stations to increase power to overcome environmental noise – without harming or hindering other stations – while modernizing and vigorously enforcing its Part 15 rules and other policies intended to constrain undesired RF radiation. NAB looks forward to participating in such an effort.

#### **IV. Relaxing the Main Studio Requirements Would Allow Stations to Redirect Resources Toward Programming and Public Service**

In the NOI, the Commission seeks comment on modifying the main studio rules as a means of easing the financial strain on AM radio stations.<sup>18</sup> The Commission asks whether it should allow more AM stations to co-locate their main studio at another station outside the parameters of the main studio rule, and relax the main studio staffing obligations of AM broadcasters.<sup>19</sup>

Regarding the former, Section 73.1125(a) of the rules requires that a station's main studio must be located either (1) within a station's principal community contour, (2) within the contour of any other broadcast station licensed to its community, or (3) within 25 miles

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<sup>17</sup> *Id.*

<sup>18</sup> NOI, 30 FCC Rcd at 12180.

<sup>19</sup> *Id.*, at 12180-81.



of the center of its community.<sup>20</sup> Under Section 73.1125(b)(2), the Commission may waive these requirements for “good cause” where the proposed main studio location “would be consistent with the operation of a station in the public interest.”<sup>21</sup> The Commission routinely grants such waivers to noncommercial stations, provided a station commits to maintaining a local connection with its community of license.<sup>22</sup> For example, stations may pledge to ascertain the needs and interests of their community and provide responsive programming, designate staff to engage in community events, staff a toll-free telephone number for listener input, and accommodate requests to review the station’s public inspection file.<sup>23</sup> The Commission has found that collocation waivers can improve the efficiency of noncommercial stations without undermining localism.<sup>24</sup>

However, such waivers are rarely, if ever, granted to commercial stations.<sup>25</sup> NAB submits that AM radio stations are equally deserving of more flexibility in collocating their main studio, as are their listeners of the resulting benefits.<sup>26</sup> First, doing so would promote costs savings that could be redirected toward programming and public service.<sup>27</sup> AM

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<sup>20</sup> 47 C.F.R. § 73.1125(a).

<sup>21</sup> *Id.*, at § 73.1125(b)(2).

<sup>22</sup> Blount Masscom, Inc., *et al.* Comments, MB Docket No. 13-249, at 2, (Jan. 20, 2014).

<sup>23</sup> See, e.g., Letter from Ms. Marlene Dortch, Secretary, FCC, to Donald E. Martin, Counsel, New Life Evangelistic Center, Inc., KNLN (Vienna, MO), Facility ID #87389 (Dec. 19, 2007); Letter from Linda Blair, Chief, Audio Services Division, Media Bureau, FCC, to E. Joseph Knoll, III, Counsel, Minnesota Public Radio (Fergus Falls, MN), Facility ID #92307 (Feb. 8, 2001).

<sup>24</sup> See, e.g., Letter from Barbara A. Kreisman, Chief, Video Division, Media Bureau, FCC, to Montana State University c/o Margaret L. Miller, Esq., KUHM-TV (Helena, MT), Facility ID #68717 (Sep. 18, 2015).

<sup>25</sup> Blount Comments at 2; Grant Co. Broadcasters Comments, MB Docket No. 14-127, at 1, (Feb. 20, 2015).

<sup>26</sup> Although the Commission is seeking comment on relaxing these rules for AM radio stations at this time, FM radio stations are no less deserving of the same consideration. NAB requests that any further steps in this inquiry, whether in a Notice of Proposed Rulemaking or other mechanism, similarly explore modifying the main studio rules for FM radio stations.

<sup>27</sup> See, e.g., *Review of the Commission’s Rules Regarding the Main Studio and Local Public Inspection Files of Broadcast Television and Radio Stations*, Report and Order, 13 FCC Rcd 15691, 15963-65 (1998) (1998 Report and Order) (Commission relaxed the main studio rule, stating: “We believe these changes will reduce

stations would have more opportunities to eliminate the costs of duplicating personnel, facilities and equipment at separate locations, and reduce employee travel between separate studios.<sup>28</sup> In addition, expanding the geographic area where AM stations may locate their studio could open up new lower-cost areas. Collocation also promotes collaboration among stations' staff on programming, research, marketing, maintenance, and administration, among other functions.<sup>29</sup> As Salem Communications explains, more flexibility to locate a main studio for multiple stations would "open potential opportunities for cost savings in major cities where Salem operates."<sup>30</sup>

Second, providing AM stations more flexibility to collocate their studio is consistent with Commission precedent. In 1987, the Commission first relaxed the rule to allow the main studio to be located outside a station's community of license, provided it remained within the station's principal community contour. The Commission found that the rule's purpose of ensuring a station's responsiveness to its community would not be harmed because the public largely preferred to contact stations by telephone or mail rather than visiting the studio.<sup>31</sup> A decade later, the Commission adopted the three options set forth above in the wake of the Telecommunications Act of 1996, which increased the number of stations that one entity could own in a single market and thereby increased the incentive for station groups to consolidate operations into a centralized facility.<sup>32</sup> Again, the Commission

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substantially the burdens the previous rule imposed on the licensee, and can generate savings that can be put to more productive use for the benefit of the community served by the station.").

<sup>28</sup> *Id.*

<sup>29</sup> American Radio System Corp. Comments, MM Docket No. 97-138, at 5-6, (Aug. 8, 1997).

<sup>30</sup> Salem Communications Corp. Comments, MB Docket No. 13-249, at 4, (Mar. 20, 2014).

<sup>31</sup> *Amendment of Main Studio and Program Origination Rules for Radio and Television Broadcast Stations*, Report and Order, 2 FCC Rcd 3215, 3217-19 (1987) (1987 Report and Order).

<sup>32</sup> 1998 Report and Order, 13 FCC Rcd at 15962-65.

noted that listeners were increasingly likely to contact stations remotely instead of in person.<sup>33</sup>

Today, advances in technology have virtually eliminated the need for a local main studio, as almost all audience contact with broadcasters is by email or telephone. Indeed, accessibility to a station's public inspection file was one of the pillars of the original main studio rules,<sup>34</sup> but only weeks ago the Commission modernized the public inspection file rules to require that radio stations post their files to a central, online database instead of maintaining paper files at the main studio.<sup>35</sup> The Commission stated that the

evolution of the Internet and the spread of broadband infrastructure have transformed the way society accesses information today. It is no longer reasonable to require the public to travel to a station or headquarters' office to review the public file and make paper copies when a centralized, online file will permit review with a quick, easy, and almost costless Internet search.<sup>36</sup>

Thus, the Commission itself has minimized the need for a physical local main studio for purposes of community monitoring of broadcasters' performance.

For the same reasons, the Commission should relax the requirement that broadcasters maintain a full-time management and full-time staff presence at their main studio.<sup>37</sup> Although the Commission has determined that management personnel need not be "chained to their desks" during normal business hours, they must still "report to work at the main studio on a daily basis, spend a substantial amount of time there and . . . use the

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<sup>33</sup> *Id.*, 13 FCC Rcd at 15964-65.

<sup>34</sup> 1987 Report and Order, 2 FCC Rcd at 3217-19

<sup>35</sup> *Expansion of Online Public File Obligations to Cable and Satellite TV Operators and Broadcast and Satellite Radio Licensees*, Report and Order, MB Docket No. 14-127, DA 16-90 (*rel.* Jan. 29, 2016).

<sup>36</sup> *Id.*, at ¶ 2.

<sup>37</sup> See *Jones Eastern of the Outer Banks, Inc.*, Memorandum Opinion and Order, 6 FCC Rcd 3615, 3616 (1991) (*Jones Eastern*), *clarified*, 7 FCC Rcd 6800 (1992) (*Jones Eastern II*).

studio as a ‘home base.’”<sup>38</sup> This has been interpreted to mean that at least two employees must report to the main studio as their primary place of business on a daily basis, one of whom is management, and at least one employee should be present during normal business hours.<sup>39</sup> Compliance with these obligations are burdensome and expensive for many broadcast stations,<sup>40</sup> as well as outdated and unnecessary given the rapid development of technology, the public’s preference for email communication and the transition to an online public file system, all of which ensure that audiences can monitor station performance and broadcasters remain engaged in their local communities.

Finally, relaxing the main studio rule and staffing requirements would help to allay concerns about the security of broadcast staff. As Commissioner O’Rielly lamented in a recent blog, local broadcasting personnel often become celebrities in their communities, but this exposure can attract unwanted and sometimes dangerous attention from unstable individuals.<sup>41</sup> Commissioner O’Rielly noted that allowing unknown individuals into a broadcast facility to review the public inspection file or some other purpose can be risky, and encouraged the Commission and industry to consider ways to improve the personal safety of broadcasting staff. NAB submits that this NOI is a perfect opportunity to fulfill Commissioner O’Rielly’s goal. Permitting more AM broadcasters to collocate their main studios, and easing the staffing requirements of facilities, will help stations narrow and control the

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<sup>38</sup> Jones Eastern II, 7 FCC Rcd at 6802.

<sup>39</sup> See *Consolidated Radio, Inc.*, Notice of Apparent Liability for Forfeiture, 26 FCC Rcd 6801 (Enf. Bur. 2011).

<sup>40</sup> See, e.g., *J.M.J. Radio, Inc.*, Notice of Apparent Liability for Forfeiture, 25 FCC Rcd 16882 (Enf. Bur. 2010) (station fined \$7,000 for violating the main studio rule); *Mattoon Broadcasting Company*, Notice of Apparent Liability for Forfeiture, 26 FCC Rcd 6577 (Enf. Bur. 2011) (station fined \$14,000 for failing to maintain a management and staff present at the stations’ collocated main studio, among other violations); *Mount Rushmore Broadcasting, Inc.*, Notice of Apparent Liability for Forfeiture, 27 FCC Rcd 5296 (Enf. Bur. 2012) (station fined \$21,500 for failing to maintain a staff presence at its main studio, among other rules violations).

<sup>41</sup> *Improving Broadcasters’ Physical Security*, Commissioner Michael O’Rielly (Sep. 29, 2015), available at <https://www.fcc.gov/news-events/blog/2015/09/29/improving-broadcasters-physical-security>.

circumstances when members of the public can access station personnel, reducing opportunities for trouble.

As to potential policy changes, NAB supports a flexible, easy-to-administer approach. For example, instead of considering case-by-case requests for waiver of the main studio rules, the Commission should simply create a presumption in favor of permitting AM stations to collocate their main studio at a co-owned station outside the parameters of the main studio rule. This approach would be consistent with recent Commission efforts to streamline regulatory burdens on AM broadcasters, including the relaxation of community coverage obligations<sup>42</sup> and proposals to expand the siting FM cross-service translators.<sup>43</sup> A presumption would also relieve applicants of the burdens associated with preparing a waiver request and conserve Commission resources needed to consider individual requests. Nor should the Commission impose an absolute restriction on the number of stations that could collocate their main studios, or a specific limit on the distance a co-locating station may move its studio from its community of license.<sup>44</sup> In the same vein, the Commission should refrain from placing any hard and fast limits on the management presence required at a station's studio.

Rather, marketplace constraints should govern. More than most outlets, AM broadcasters appreciate that localism is their most attractive, unique characteristic. AM stations must keep their fingers on the pulse of their local communities, not only to maintain a high profile, but also to help ascertain the programming needs and interests of their community. Providing community-responsive programming and staying engaged in their

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<sup>42</sup> Report and Order, 30 FCC Rcd at 12154 - 59.

<sup>43</sup> Further Notice, 30 FCC Rcd at 12173 - 74.

<sup>44</sup> *Id.*, at 12174.

local community are critical to a broadcast station's popularity, customer loyalty, and in turn, advertising revenue. Regardless of whether a station's main studio is located inside or outside the community of license, or staffed by management 24/7, listeners can always communicate with broadcasters by telephone or email, monitor a station's public service performance through the online public file, and most importantly, register their discontent with a station's failure to provide community-responsive programming by changing the channel.

Accordingly, NAB submits that broadcasters should be permitted to collocate and staff their main studio in a manner that ensures the public interest in AM radio service and allows broadcasters to remain viable in an increasingly competitive media marketplace.

#### V. Conclusion

For the reasons described above, NAB requests that the Commission modify its proposal for locating FM cross-service translators, and relax the main studio rule and staffing requirements.

Respectfully submitted,

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Rick Kaplan  
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Dated: March 21, 2016

**APPENDIX A**

**Summary - Study of Impact of AM Revitalization Rules on Select Stations**

**Notes:**

- 1) Fourteen stations (labeled "Root") were selected for study to determine maximum power increase allowed under proposed rules and the impact on nearby stations.
- 2) For each root station, the three closest, contour-related stations affected by the root station's increase were identified (labeled "affected") and it was determined how much affected station's power could be increased after increasing root station's power.
- 3) "Existing" station power is currently licensed power; "Studied" station power is maximum increase allowed under proposed rules without changing the station's current antenna system (with the exception of affected station WONE, see note 5).
- 4) "Existing" population is population within root station's current 2 mV/m contour; "Studied" population is that within 2 mV contour with increased power; % increase is the percentage the root station's population within its 2 mV/m contour increased as a result of the power increase.
- 5) For station WONE, no increase was possible following increase of root station WITY using current configuration, but by adding a second tower it was possible to increase power for WONE from 5 to 45 kW.

No.	Station	Freq (kHz)	City of license	STATION POWER (kW)		POPULATION		% Increase	Notes
				Existing	Studied	Existing	Studied		
1	Root: <b>KBNP</b>	1410	Portland, OR	5	8.5	1,871,404	1,950,455	4.2%	Class C
	Affected: <b>KEDO</b>	1400	Longview, WA	1	1				
	<b>KZZD</b>	1390	Salem, OR	5	50				
	<b>KYKN</b>	1430	Keizer, OR	5	50				
2	Root: <b>KGAL</b>	1580	Lebonon, OR	5	50	122,548	407,173	232.3%	All can go to 50 kW simultaneously
	Affected: <b>KOPB</b>	1600	Eugene, OR	5	50				
	<b>KTIL</b>	1590	Newarts,OR	5	50				
	<b>KOHI</b>	1600	St. Helens, OR	1	50				
3	Root: <b>KGGR</b>	1040	Dallas, TX	3.3	27	6,538,981	7,176,814	9.8%	Already max'd as non-DA 1 kW if Mexico ignored Limited to 3 kW by KGGR
	Affected: <b>WHO</b>	1040	DesMoines, IA	50	50				
	<b>KRMV</b>	1050	Killen, TX	0.25	0.5				
	<b>KXCA</b>	1050	Lawton, OK	0.25	3				
	Root: <b>KRRS</b>	1460	Santa Rosa, CA	1	1				
5	Root: <b>WAAM</b>	1600	Ann Arbor, MI	5	5				Blocked by Canada
6	Root: <b>WADO</b>	1280	New York, NY	50	50	13,588,950	15,358,305	13.0%	Pattern opened out No incr if WBNR incr to 2.2 kW 1 kW if WSHU goes to 1.85 kW No change to DA pattern
	Affected: <b>WSHU</b>	1260	Westport, CT	1	1.85				
	<b>WBNR</b>	1260	Beacon, NY	1	2.2				
	<b>WFJS (CP)</b>	1260	Trenton, NJ	5.9	50				

(CONTINUED ON NEXT PAGE)

APPENDIX A

No.	Station	Freq (kHz)	City of license	STATION POWER (kW)		POPULATION		% Increase	Notes
				Existing	Studied	Existing	Studied		
7	Root: WAOK	1380	Atlanta, GA	25	50	2,309,863	2,875,142	24.5%	Class C Stopped pre and post
	Affected: WLTA	1400	Alpharetta, GA	1	1				
	WRAB	1380	Arab, AL	1	1				
	WFDR	1370	Manchester, GA	2.3	50				
8	Root: WBNS	1460	Columbus, OH	5	43	1,672,016	2,059,894	23.2%	No to pre & post by Canada Limited by WBNS and WJPA Limited by WBNS
	Affected: WABQ	1460	Painesville, OH	1	1				
	WMBA	1460	Ambridge, PA	0.5	2.9				
	WJCP	1460	North Vernon, IN	1	9				
9	Root: WGFA	1360	Watska, IL	1	50	18,987	378,922	1895.7%	If drop DA = 1 kW omni Limited by WGFA's increase Limited at 14 kW by WGFA Not limited by WGFA
	Affected: WLKB	1360	DeKalb, IL	1	1.1				
	WSAI	1360	Cincinnati, OH	5	14				
	WLTH	1370	Gary, IN	1	10				
10	Root: WGSP	1310	Charlotte, NC	5	50	1,098,642	1,773,157	61.4%	Limited at 8 kW by WGSP Limited at 6.1 kW by WGSP Limited at 20 kW by WGSP
	Affected: WISE	1310	Ashville, NB	5	8				
	WTKI	1310	Durham, NC	6	6.1				
	WDKD	1310	Kingstree, SC	5	20				
11	Root: WITY	980	Danville, IL	1	50	104,003	790,143	659.7%	Limited at 7 kW by WRFM Limited at 5 kW by Canada Adding a tower to make station DA
	Affected: WMAY	970	Springfield, IL	1	50				
	WITZ	990	Jasper, IN	1	7				
	WONE	980	Dayton, OH	5	5				
12	Root: WMGC	810	Murfreesboro, TN	5	14	1,071,206	1,542,663	44.0%	Pattern can be let out Limited at 3 kW by WMGC Limited at 18 kW by WMGC
	Affected: WCKA	810	Jacksonville, AL	50	50				
	WCTA	810	Alamo, TN	0.25	3				
	WTNW	820	Jasper, TN	1	18				
13	Root: WNIV	970	Atlanta, GA	5	50	1,943,321	3,701,197	90.5%	Limited to 20 kW by WNIV Limited to 7.5 kW by WNIV Limited to 19 kW by WNIV
	Affected: WRFC	960	Athens, GA	5	20				
	WRHA	970	Spring City, TN	0.5	7.5				
	WISK	990	Lawrenceville, TN	1	19				
14	Root: WRHL	1060	Rochelle, IL	0.25	22	61,039	535,134	776.7%	Limited to 10 kW by WRHL Limited to 30 kW by KFIL Not limited by WRHL
	Affected: WTSO	1070	Madison, WI	10	10				
	KFIL	1060	Preston, MN	1	30				
	WLIP	1050	Kenosha, WI	0.25	0.5				

**TOTALS** | 30,400,960 | 38,548,999 | 26.8% | Increase of 8,148,039  
**Average increase for stations able to upgrade:** 319.6%



APPENDIX B

**Summary - interference-free population analysis of affected stations within 0.5 mV/m contour before and after power increases by a single root station and affected station**

**Notes:**

- 1) This table shows impact of increasing a **SINGLE** "root" station on nearby affected stations. Note that impact would be more severe if additional nearby stations increase power as well.
- 2) Three "affected" stations from three "root" stations in Appendix A (WBNS, WGFA, WITY) were selected for analysis of impact of proposed rules on interference-free listener population within the 0.5 mV/m contour of the affected station.
- 3) For each affected station, first row is with existing power levels, second row is with only root station power increased, and third row is with both root and affected station powers increased (except for affected station WABQ, see note 4).
- 4) Affected station WABQ is not able to increase power under the proposed rules when root station WBNS is increased to maximum allowable power.
- 5) INT FREE (0.5 mV/m) columns indicate **interference free** population within 0.5 mV/m contour of affected station; percent figure is change in this population from existing when just root (second row) and when root and affected (third row) are increased in power.

No.	ROOT STATION	AFFECTED STATION			STATION PWR (kW)			INT FREE (0.5 mV/m)		Notes
		Call Sign	Freq (kHz)	City of license	Root	Affected	Population	% CHG from existing pop		
8	WBNS 1460 kHz Columbus, OH	WABQ <i>(note 4)</i>	1460	Painsville, OH	5	1	317,994		EXISTING	
					43	1	309,142	-2.8%	Root increases	
					5	0.5	663,877		EXISTING	
			WMBA	1460	Ambridge, PA	43	0.5	489,409	-26.3%	Root increases
			WCJP	1460	North Vernon, IN	43	2.9	1,263,963	90.4%	Root and affected increase
						5	1	237,725		EXISTING
						43	1	170,994	-28.1%	Root increases
						43	9	391,754	64.8%	Root and affected increase

(CONTINUED ON NEXT PAGE)

**APPENDIX B**

No.	ROOT STATION	AFFECTED STATION			STATION PWR (kW)		INT FREE (0.5 mV/m)		Notes
		Freq (kHz)	City of license	Root	Affected	Population	% CHG from existing pop		
9	WGFA 1360 kHz Watseka, IL	WLBK 1360	DeKalb, Il	1	1	665,719		EXISTING	
				50	1	299,407	-55.0%	Root increases	
				50	1.1	317,575	-52.3%	Root and affected increase	
		WSAI 1360	Cincinnati, OH	1	5	3,058,235		EXISTING	
				50	5	2,518,272	-17.7%	Root increases	
				50	14	3,005,454	-1.7%	Root and affected increase	
11	WITY 980 kHz Danville, IL	WLTH 1370	Gary, IN	1	1	841,120		EXISTING	
				50	1	758,554	-9.8%	Root increases	
				50	10	1,168,737	39.0%	Root and affected increase	
		WMAY 970	Springfield, IL	1	1	768,409		EXISTING	
				50	1	714,974	-7.0%	Root increases	
				50	50	3,785,789	392.7%	Root and affected increase	
WITZ 990	Jasper, IN	1	1	647,182		EXISTING			
		50	1	621,955	-3.9%	Root increases			
		50	7	938,751	45.1%	Root and affected increase			
WONE 980	Dayton, OH	1	5	4,030,644		EXISTING			
		50	5	3,918,799	-2.8%	Root increases			
		50	45	5,595,894	38.8%	Root and affected increase			

**AFFECTED STATION TOTALS**

Current 0.5 mV/m population:	11,230,905
0.5 mV/m population after root increase:	9,801,506
0.5 mV/m population after root and affected increase:	16,777,059
	-12.7%
	49.4%