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

In the Matter of	)	
	)	
Travelers' Information Stations;	)	PS Docket No. 09-19
	)	
American Association of Information Radio Operators Petition for Ruling on Travelers' Information Station Rules;	)	
	)	
Highway Information Systems, Inc. Petition for Rulemaking;	)	RM-11514
	)	
American Association of State Highway and Transportation Officials Petition for Rulemaking	)	RM-11531

ORDER ON RECONSIDERATION AND SECOND REPORT AND ORDER

Adopted: March 25, 2015 **Released: March 26, 2015**

By the Commission:

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I. INTRODUCTION

1. Commission rules authorize Public Safety Pool-eligible entities to use Travelers' Information Stations (TIS) to transmit noncommercial, travel-related information over AM band frequencies to motorists on a localized basis.[1] In a recent *Report and Order*, the Commission both

[1] *See* 47 C.F.R. § 90.242.

clarified and amended its TIS rules in order to promote a more efficient and effective service.[2] Among other things, the Commission clarified that permissible content under the TIS rules must have a nexus to travel, an emergency, or an imminent threat of danger, and that this rule, *inter alia*, prohibited the routine rebroadcast of weather information.[3] Subsequently, the Commission received a number of petitions, styled as "comments," asking it to reconsider this decision on the basis that such weather information would help travelers to plan their routes. In this proceeding, for the reasons set forth below, we treat these "comments" as petitions for reconsideration and dismiss them pursuant to section 1.429(l)(3) of the Commission's rules.[4] Specifically, we find that the petitions rely "on arguments that have been fully considered and rejected by the Commission within the same proceeding."[5] However, we take this opportunity to reaffirm and clarify that the TIS rules allow TIS licensees to integrate weather broadcasts into their TIS feeds during times of hazardous or potentially hazardous conditions and that the Commission affords TIS licensees substantial discretion to determine what information is relevant to such conditions.

2. Section 90.242(b)(8) of the Commission's rules requires the filtering of audio frequencies between 3 and 20 kHz.[6] Based on a comment record indicating that this filtering decreases the audibility of TIS broadcasts in general, and especially at night and over difficult terrain, the Commission also adopted a *Further Notice of Proposed Rulemaking* (*FNPRM*) concurrently with the *Report and Order* proposing elimination of the TIS filtering requirement.[7] In comments to the *FNPRM*, the National Association of Broadcasters (NAB) proposed relaxing, but not eliminating, the filtering requirement from 3 kHz to 5 kHz.[8] The Commission sought comment on this proposal.[9] The subsequent record indicates that a relaxed filtering requirement could improve TIS audio quality to match that of AM broadcast stations, while still retaining a sufficient filtering requirement to minimize adjacent channel interference. Accordingly, in this proceeding we adopt a Second Report and Order that maintains a filtering requirement but relaxes it from 3 kHz to 5 kHz. We will also do the following: 1) require use of a new roll-off curve to maintain the required 50 dB attenuation at 20 kHz; 2) allow placement of the filter ahead of the TIS transmitter in addition to current filter placement requirement and; 3) require certification only for newly manufactured equipment that implements these new rules.

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[2] *See* Travelers' Information Stations; American Association of Information Radio Operators Petition for Ruling on Travelers' Information Station Rules; Highway Information Systems, Inc. Petition for Rulemaking; American Association of State Highway and Transportation Officials Petition for Rulemaking; PS Docket No. 09-19, RM-11514, RM-11531, *Report and Order and Further Notice of Proposed Rulemaking*, 28 FCC Rcd 11276 (2013) (*Report and Order and FNPRM*).

[3] *See Report and Order*, 28 FCC Rcd at 11285 ¶ 25.

[4] *See* 47 C.F.R. §§ 1.429(l)(3).

[5] *Id*.

[6] *See* 47 C.F.R. § 90.242(b)(8).

[7] *See FNPRM*, 28 FCC Rcd at 11291 ¶ 42.

[8] *See* National Association of Broadcasters Reply Comments, PS Docket 09-19 (filed Oct. 22, 2013) at 1-2 (NAB *FNPRM* Reply Comments).

[9] *See* Public Safety and Homeland Security Bureau Seeks Comment on Proposals to Relax the Audio Filtering Requirement for Travelers' Information Stations, PS Docket No. 09-19, *Public Notice*, 29 FCC Rcd 3858 (PSHSB 2014) (*Filtering PN*); Public Safety and Homeland Security Bureau (PSHSB) Announces Revised Comment Dates for Proposal to Relax the Audio Filtering Requirement for Travelers' Information Stations , PS Docket No. 09-19, *Public Notice*, 29 FCC Rcd 5819 (PSHSB 2014). Comments were due June 30, 2014, and reply comments were due July 14, 2014. *Id*.

II. BACKGROUND

3. The Commission established TIS rules in a 1977 Report and Order[10] which declared its purpose as "[establishing] an efficient means of communicating certain kinds of information to travelers over low power radio transmitters licensed to Local Government entities."[11] The Commission specifically noted that such stations had been used to reduce traffic congestion and to transmit "road conditions, travel restrictions, and weather forecasts to motorists."[12] The Commission anticipated that such stations also would be used to "transmit travel related emergency messages concerning natural disasters (*e.g.*, forest fires, floods, etc.), traffic accidents and hazards, and related bulletins affecting the immediate welfare of citizens."[13]

4. The chief opposition to the authorization of TIS operations originally came from commercial broadcasters who argued that it would duplicate information provided by commercial broadcasts, siphoning off advertising revenues.[14] Other commercial licensees averred that TIS operations would cause impermissible interference with their operations.[15] To address these concerns, the Commission prohibited TIS operators from transmitting "commercial" messages and emphasized that strict limits would be placed on other operational aspects of TIS licenses, including authorized power levels.[16]

5. Presently, absent emergency conditions, TIS stations may only transmit "noncommercial voice information pertaining to traffic and road conditions, traffic hazard and travel advisories, directions, availability of lodging, rest stops and service stations, and descriptions of local points of interest."[17] In 2007, the Commission carried out an enforcement action against a TIS licensee for retransmitting NOAA weather broadcasts.[18]

6. Power and transmitter coverage limitations ensure that TIS operations are typically confined to the immediate vicinity of specified, travel-related areas.[19] Additionally, TIS licensees operate primarily on a secondary basis and their operations may "be suspended, modified, or withdrawn by the Commission without prior notice or right to hearing if necessary to resolve interference conflicts."[20]

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[10] *See* Amendment of Parts 2 and 89 of the Rules to Provide for the Use of Frequencies 530, 1606, and 1612 kHz by Stations in the Local Government Radio Services for the Transmission of Certain Kinds of Information to the Traveling Public, Docket No. 20509, *Report and Order*, 67 F.C.C.2d 917, Appendix C (1977) (*TIS Report and Order*).

[11] *Id.* at 917 ¶ 1.

[12] *Id.* at 921 ¶ 15.

[13] *Id.* at 922 ¶ 16.

[14] *Id.* at 918, 919 ¶¶ 5, 9.

[15] *Id*. at 924 ¶ 24.

[16] *Id*. at 917 ¶ 1.

[17] *See* 47 C.F.R. § 90.242(a)(7).

[18] *See* City of Santa Monica Licensee of Radio Station WQGR42, File No. EB-07-LA-216, *Notice of Violation* (Jul. 12, 2007).

[19] *See* 47 C.F.R. § 90.242(a)(5). *See also* 47 C.F.R. § 90.242(b)(4) (limiting output power and the field strength of the emission on the operating frequency).

[20] *See* 47 C.F.R. § 90.242(a)(4).

7. In 2008 and 2009, the Commission received three petitions seeking to expand the scope of the TIS rules.[21] The American Association of Information Radio Operators (AAIRO), one of the petitioners, asked the Commission, *inter alia*, to clarify that the TIS rules allow for the broadcast of NOAA Weather Radio retransmissions.[22] In 2010, the Commission adopted a Notice of Proposed Rulemaking (*NPRM*) seeking comment on that issue, among others.[23] In the subsequent *Report and Order*, the Commission held that the TIS rules did not allow the routine rebroadcast of weather information.[24] The Commission reasoned that by limiting TIS weather information to potentially hazardous conditions, drivers and other travelers will know immediately that they are receiving non-routine weather information that could negatively impact driving conditions.[25] In their comments to the *FNPRM*, a number of commenters asked the Commission to reconsider this decision. These requests for reconsideration are discussed below in section III.

8. Although the *NPRM* did not raise the issue of removal of the filtering provision of Section 90.242(b)(8), numerous commenters supported it in the record.[26] The *FNPRM* thus sought further comment on this issue in order to establish a more complete record.[27] The *NPRM* received eleven comments (three from AAIRO) and four reply comments (two from AAIRO).[28] Because NAB proposed relaxing rather than eliminating this requirement in its comments, and AAIRO expressed accord with this compromise position in its own comments, the Commission sought further comment on this newly raised option in the *Filtering PN*. This issue is discussed below in section IV.

III. ORDER ON RECONSIDERATION

9. *Background*. In its *NPRM* comments, AAIRO indicated that by its rulemaking petition it wanted the Commission to clarify that the TIS rules allowed for rebroadcast of "routine, detailed weather announcements."[29] AAIRO reasoned that "only a fraction of the population" has NOAA weather receivers, that routine NOAA weather broadcasts give information about road surface conditions, and that extended forecasts help travelers to plan their routes.[30] AAIRO also stated that "NOAA Radio 'All-Hazard' information … provide[s] pertinent lifesaving information to travelers."[31] AAIRO contended that broadcast of routine NOAA weather information would not "dilute TIS content or prove superfluous to its mission."[32] AAIRO considered it "likely that NOAA broadcasts will be excerpted by TIS, not run

[21] *See* Travelers Information Stations, PS Docket No. 09-19, American Association of Information Radio Operators Petition for Ruling on Travelers' Information Station Rules, Highway Information Systems, Inc. Petition for Rulemaking, RM-11514, American Association of State Highway and Transportation Officials Petition for Rulemaking, RM-11531, *Order and Notice of Proposed Rulemaking*, 25 FCC Rcd 18117 (2010) (*NPRM*).

[22] *See* Travelers' Information Service Provision of Localized Public Safety and Emergency Information Pursuant to 47 C.F.R. Sections 90.242 and 90.407, AAIRO Petition for Ruling (filed Sep. 9, 2008) at 1.

[23] *See NPRM*, 25 FCC Rcd at 18122 ¶ 15.

[24] *See Report and Order*, 28 FCC Rcd at 11285 ¶ 25.

[25] *Id.*

[26] *See FNPRM*, 28 FCC Rcd at 11291 ¶ 42.

[27] *See id.* at ¶ 43.

[28] *See* Appendix A for a list of commenters.

[29] *See FNPRM*, 28 FCC Rcd at 11284 ¶ 23.

[30] *Id*.

[31] *Id*.

[32] *Id*.

in their entirety, thus not replicating all NOAA content or duplicating broadcast news reports.[33] Many other commenters to the *NPRM* supported this proposal.[34]

10. However, the American Association of State Highway and Transportation Officials (AASHTO), another of the three petitioners that filed a petition for rulemaking requesting the Commission to initiate this proceeding, argued that other options existed for accessing routine NOAA weather information and that "TIS transmissions should continue to be reserved for location and time-limited weather related and other emergency information."[35] AASHTO suggested that "expansion of information beyond this basic core will dilute the value of TIS transmissions and travelers will be dissuaded from tuning to TIS transmissions unless they know that important emergency information is being transmitted."[36] Several other commenters to the *NPRM* agreed.[37] Gropper, for example, concurred that "[t]ravelers now have many sources of up to the minute weather and traffic information beyond traditional AM and FM broadcast sources, including cell phone, mobile internet, automobile based information systems, and satellite radio. Therefore, due to technological advances, TIS is no longer the primary alternative to AM/FM broadcasts for this information."[38] Nevertheless, Gropper supported integrating NOAA Weather Radio into TIS, short of continuous rebroadcast, arguing that this would allow for full automation of such broadcasts during an emergency and that not all information regarding dangerous weather conditions is "tone alerted" (*e.g.* severe weather statements, dense fog and snow advisories).[39]

11. In the *Report and Order*, the Commission determined that expanding the TIS rules to allow the transmission of non-emergency, non-travel-related information would dilute the effectiveness of TIS in assisting travelers and providing geographically focused emergency information.[40] With regard to rebroadcast of NOAA Weather Radio in particular, the Commission reasoned that routine weather information is widely available from alternative sources.[41] The Commission noted that by limiting TIS weather information to potentially hazardous conditions, drivers and other travelers will know immediately that they are receiving non-routine weather information that could negatively impact driving conditions.[42] The Commission further reasoned that prohibiting the routine retransmission of NOAA weather radio broadcasts does not thereby prohibit the "integration" of NOAA weather radio or NOAA radio all-hazards information into TIS during times of hazardous or potentially hazardous conditions.[43] The Commission noted that TIS stations may transmit NOAA broadcasts, whether "tone alerted" or not, so long as they relate to an existing or potential hazard.[44]

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[33] *Id*.

[34] *Id.*

[35] *Id.,* 28 FCC Rcd at 11285 ¶ 24.

[36] *Id*.

[37] *Id*.

[38] *Id*.

[39] *Id*.

[40] *Id.* at ¶ 25

[41] *Id.*

[42] *Id.*

[43] *Id.*

[44] *Id.*

12. Although the Commission did not receive any documents designated as "petitions for reconsideration," it did receive several designated as *FNPRM* "comments" that nevertheless asked the Commission to reconsider its decision to disallow broadcast of routine weather reports over TIS.[45] In his comments, for example, Gropper supports this request by arguing that the:

> NWS [National Weather Service] does NOT send any differentiating signal so users might be able to automatically differentiate between an alert message and a 'routine' message[;][46] [that e]ven 'routine' observations are important to traveler's safety[; that t]he same type of critical weather information is used nationwide for airline safety in the ATIS system[;][47] [and that] an 'occasional' standard would provide the correct balance between the FCC's requirement that NWR [National Weather Radio] NOT be continuously retransmitted on TIS, while permitting TIS operators the ability to tailor content to locally necessary requirements without fear that inadvertent retransmission of 'routine' weather information might result in a violation of the FCC rules."[48]

13. AAIRO similarly asserts that "conventional weather broadcasts should fall within the content 'Travel Advisory,' because non-hazardous weather information could be very useful to motorists."[49] Aurora further argues that "[h]aving the full NOAA Weather Radio content available on a TIS station also works to increase the reach [of] the TIS station as a public safety tool because more people will become accustomed to listening to the TIS station as a 24/7 source of useful information readily available on a daily basis as well as during emergencies."[50] Four additional commenters support this reconsideration request.[51]

[45] *See* PS Docket 09-19, AAIRO Comments (filed Sep. 17, 2013) at 1-2 (AAIRO *FNPRM* Weather Comments); Vineland and Cumberland County Health Departments Comments (filed Sept. 3, 2013) at 1 (Vineland *FNPRM* Comments); Aurora, Illinois Emergency Management Comments (filed Sept. 3, 2013) (Aurora *FNPRM* Comments); Daniel R. Gropper *FNPRM* Comments (filed Sept. 11, 2013) at 2 (Gropper *FNPRM* Comments); City of Santa Paula, California Comments (filed Sept. 3, 2013) (Santa Paula *FNPRM* Comments); City of Sugarland, Texas Comments (filed Sept. 3, 2013) (Sugarland *FNPRM* Comments); Jackson County, West Virginia Emergency Services Comments (filed Sept. 3, 2013) (Jackson *FNPRM* Comments).

[46] *See* Gropper *FNPRM* Comments at 5.

[47] *Id.* at 6.

[48] *Id.* at 7 (all caps in original).

[49] *See* AAIRO *FNPRM* Weather Comments at 1-2. AAIRO also argues that "the FCC [should] clarify that the inclusion of a weather forecast as a 'Travel Advisory' falls within the discretion of the licensee, if the licensee believes that the forecast for his/her local area contains information that describes an imminent danger to safety of life or property." *Id*.

[50] *See* Aurora *FNPRM* Comments at 1.

[51] *See* Santa Paula *FNPRM* Comments at 1 ("the tight restrictions on the weather information that is available to us from reliable and trusted sources is too restrictive and counterproductive in the useful sharing of information that can promote public safety."); Vineland *FNPRM* Comments at 1 ("normal everyday weather forecasts. … still contain essential travel information that will help [travelers] avoid traveling in less than desirable conditions."); Sugarland *FNPRM* Comments at 1 ("even fair weather forecasts [should] be allowed for broadcasts as this information also allows residents/visitors to be prepared and plan for best times to travel or not"); Jackson *FNPRM* Comments at 1 ("Broadcasting weather alerts from NOAA seems logical, as many homes do not have weather alert radios").

14. *Discussion*. To the extent the commenters ask the Commission to reconsider its decision in the *First Report and Order,* we treat them as petitions for reconsideration.[52] Section 1.429(l) of the Commission's rules provides in relevant part:

> Petitions for reconsideration of a Commission action that plainly do not warrant consideration by the Commission may be dismissed or denied by the relevant bureau(s) or office(s). Examples include, but are not limited to, petitions that:
>
> **…**
>
> (3) Rely on arguments that have been fully considered and rejected by the Commission within the same proceeding;

Because these petitions seek Commission rules to allow the rebroadcast of routine NOAA weather information because "this could help travelers plan their trips," or because "NWS does NOT send any differentiating signal so users might be able to automatically differentiate between an alert message and a 'routine' message," we find that the petitions "[r]ely on arguments that have been fully considered and rejected by the Commission within the same proceeding."[53] These are the same arguments that Gropper and AAIRO made in their 2011 comments to the *NPRM*, and the Commission expressly addressed these arguments in the *Report and Order*.[54] Accordingly, we dismiss the petitions for reconsideration.

15. We take this opportunity however, to emphasize that while the *First Report and Order* prohibits TIS licensees from broadcasting routine, non-emergency, non-travel-related information, including retransmission of routine NOAA weather broadcasts, it does allow TIS licensees to integrate weather broadcasts into their TIS feeds "during times of hazardous or potentially hazardous conditions."[55] In fact, the Commission recently clarified that "TIS broadcasting of emergency information and information related to imminent threats to safety and property, whether travel-related or not, is already allowed under our Part 90 rules."[56] In addition, given that TIS licensees are in the best position to assess hazards in the localities that they serve, the Commission affords TIS licensees substantial discretion to determine what information is relevant to "hazardous or potentially hazardous conditions" under the Commission's rules.[57] We believe that this provides sufficient flexibility to public safety authorities to broadcast necessary weather information over the TIS while at the same time maintaining the primary, travel-related basis of the service.[58]

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[52] If we had decided not to treat these comments as petitions for reconsideration, we would have found that they were outside the scope of the *FNPRM*, which was limited to filtering issues, and would not have considered them further.

[53] *See* 47 C.F.R. § 1.429(l)(3).

[54] *See Report and Order*, 28 FCC Rcd at 11285 ¶¶ 24-25.

[55] *See id.* at ¶ 25.

[56] *See Report and Order*, 28 FCC Rcd at 11283 ¶ 21.

[57] *See id.*, 28 FCC Rcd at 11286-87 ¶ 28 ("We are persuaded by those commenters that argue that the Part 90 rules should allow for discretion on the part of TIS licensees regarding use of the TIS service"). Examples of "hazardous or potentially hazardous conditions" that may reasonably warrant a TIS licensee's decision to retransmit NOAA weather broadcasts include but are not limited to snow, ice, mudslides, fog, flash floods, thunderstorms, wildfires, tornados and hurricanes.

[58] We note that this content requirement is substantially similar to one recently recommended by the Communications Security, Reliability and Interoperability Council (CSRIC) working group on Wireless Emergency Alerts (WEA). *See* CSRIC IV Working Group 2, Geographic Targeting, Message Content and Character Limitation Subgroup Report (October, 2014) at 46 ("It is recommended that the FCC modify the WEA Alert Message Requirements § 10.400 Classification to allow the use of WEA for Emergency Government Information. An Emergency Government Information alert is a message issued by an authorized Federal, State, Tribal, or local

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IV. SECOND REPORT AND ORDER

16. We now consider the record in this proceeding with respect the issues of relaxing or eliminating the filtering provision of Section 90.242(b)(8), which requires the filtering of TIS audio frequencies above 3 kHz.[59]

17. *Background*. As noted, although the *NPRM* did not raise the issue, numerous commenters argued in the docket for removal of the TIS filtering requirement. Commenters contended that this requirement decreases the audibility of TIS broadcasts in general, and especially at night and over difficult terrain.[60] One commenter in particular, Burden, stated that he had conducted:

> an experiment at the site of a TIS facility which had a first adjacent [AM broadcast station] audibly present but outside of its protected contour. I removed the 3 kHz filter opening the transmitted response to that of the 8 kHz program line. The result confirmed the intelligibility of the transmitted signal as considerably improved with no audible interference presented to the reception of the first adjacent.[61]

Burden continued that:

> AM broadcast bandwidth specified by the NRSC-2 Spectrum Mask adopted by the FCC some time ago to resolve interference issues, limits the audio frequency response of AM broadcast transmission to 10 kHz. Limiting the bandwidth of TIS transmission to the same bandwidth as the NRSC mask should be logical. A recent study into acceptable audio bandwidths conducted by NPR Labs in an AM-DAB study for the NRSC, concluded that limitations to an audio bandwidth less than 7 kHz was not advisable for AM broadcast facilities.[62]

18. Because this particular issue was not raised in the *NPRM* but rather was introduced by commenters in the record, the Commission sought further comment in the *FNPRM* on removing the filtering provision, asking whether there is any reason this restriction should not be removed.[63] All commenters to the *FNPRM*, save two,[64] supported elimination of the filtering requirement. In addition, many commenters, while supporting this elimination, opposed a mandate to "require filter removal for existing licensees."[65] According to AAIRO, "if the FCC were to mandate that all TIS licensees who wish

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government official source to provide essential information directly related to an issued weather or non-weather Imminent Threat Alert.").

[59] When the Commission adopted the filtering requirement in 1977, it provided no explanation for the requirement in the *TIS Report and Order* but merely included it in the rules appendix. *See TIS Report and Order,* 67 F.C.C.2d at Appendix C.

[60] *See FNPRM*, 28 FCC Rcd at 11291 ¶ 42, and sources cited therein.

[61] *See* Burden Comments, PS Docket 09-19 (filed March 7, 2011) at 2 (Burden *NPRM* Comments). *See also FNPRM*, 28 FCC Rcd at 11291 ¶ 42.

[62] *See id*.

[63] *See FNPRM*, 28 FCC Rcd at 11291 ¶ 43.

[64] *See* SBE Comments, PS Docket 09-19 (filed Sep. 18, 2013) at 3, 5-6 (SBE *FNPRM* Comments); NAB *FNPRM* Reply Comments at 3-4.

[65] *See, e.g.,* AAIRO Comments, PS Docket No. 09-19 (filed Sep. 17, 2013) at 1-2 (AAIRO *FNPRM* Filter Comments). *See also,* AASHTO Reply Comments, PS Docket No. 09-19 (filed Oct. 17, 2013) at 2 (AASHTO *FNPRM* Reply Comments) ("the bandwidth filter provision should be removed from Section 90.242 … and … removal of audio filters in existing stations [should] be optional."); Vineland *FNPRM* Comments at 1 ("I am in support of the proposal to allow the optional removal of output filters for TIS broadcasts; however, it is my hope that recertification will not be required if said filters are removed."); Aurora *FNPRM* Reply Comments at 1 ("fully
(continued….)

to remove the filters must go through a new type acceptance/recertification, that requirement would present an undue financial burden [and t]he imposition of both the above requirements would likely cause most TIS Services to cease due to expense and logistics."[66]

19. The Society of Broadcast Engineers (SBE) and the National Association of Broadcasters (NAB) were the only commenters opposing removal of the TIS filtering restrictions. According to SBE "there is a significant potential for increased interference from this proposal."[67] SBE took particular issue with Burden's claim that he "conducted an experiment removing the '3 kHz filter … with no audible interference presented to the reception of the first adjacent,'" because "[t]he commenter's anecdotal experiment lacked any demonstration of technical validity or proper scientific methodology."[68]

20. SBE also took issue with Burden's claim that "'limitations to an audio bandwidth less than 7 kHz was not advisable for AM broadcast facilities' and 'it only follows that the audio quality of the emergency message needs to be offered with the same intelligibility as that from AM radio broadcast facilities'" because "[w]hat these allegations fail to mention was that all the standards and studies cited were relative to AM full power broadcast stations." SBE asserts that the findings of those studies "were not intended to be applied to TIS stations, which are licensed under very different standards and with a different allocation status."[69]

21. SBE further alleged that "many TIS stations fail to adhere to generally accepted modulation standards employed by AM broadcasters. … SBE members have observed and reported that many TIS stations grossly over- or undermodulate their carriers resulting in poor audio quality and / or poor listenability. This is a … supervening contributor to the poor audio quality that they attribute incorrectly to the audio filters."[70] While NAB shared many of SBE's concerns,[71] it also submitted "that a compromise approach may be workable."[72] Specifically, NAB stated that "a filter capable of filtering audio frequencies above 5 kHz should allow for a TIS signal of sufficiently higher quality, without impeding neighboring AM services."[73] NAB noted that "full-power AM radio stations routinely use 5

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support the removal of the output filters but … ask that removal be made optional and that recertification not be required."); Gropper *FNPRM* Reply Comments at 8 ("favor … removing the 3KHz audio passband filter to make TIS content more understandable and useful. [But should make] removal discretionary with the TIS operator and not require[e] the transmitter to be recertified should the filter be removed."); Douglas County, Nebraska Emergency Management Agency Comments (filed Sep. 3, 2013) at 1 (Douglas *FNPRM* Comments) ("We know that message quality is important to the effective reception of emergency information and if optional removal of broadcast filters will enhance message quality, we support such efforts"); Santa Paula *FNPRM* Comments at 1 ("I support the removal of the filters but ask that it be optional and that recertification not be required."); Sugarland *FNPRM* Comments at 1 ("Cities should be able to choose to keep or remove these filters at their discretion. But, if they do choose to remove them, this should not force cities to recertify their TIS transmitters."); Jackson *FNPRM* Comments at 1 ("The removal of the filters will enhance clarity; however, this should be an option to the owner/emergency manager").

[66] *See* AAIRO *FNPRM* Filter Comments at 2.

[67] *See* SBE *FNPRM* Comments at 3.

[68] *Id.* at 5.

[69] *Id.* at 5-6.

[70] *Id.* at 6.

[71] *See* NAB *FNPRM* Reply Comments at 3-4. NAB also expressed concern that some TIS stations might be broadcasting musical content in violation of the TIS rules. *Id.* at 4.

[72] *Id.* at 4.

[73] *Id*.

kHz filters to address and prevent interference among AM stations, with few significant problems."[74] Accordingly, NAB offered "a proposal to allow TIS operators to use a 5 kHz filter, presuming TIS stations broadcast only voice content, as required under the Commission's rules."[75]

22. AAIRO responded that it "can … support the compromise proposed by the National Association of Broadcasters, …" because "[t]he wider filter bandpass would markedly improve TIS voice transmissions and would also protect adjacent broadcasters should a TIS operator transmit non-voice material without authorization."[76] AAIRO further stated that if:

> a wider bandwidth filter may be substituted in place of the present 3-kHz filter … the filter [should] be outboard to the TIS transmitter and immediately ahead of its audio input. The FCC should prescribe the exact formula for the audio filter and require its use by all TIS operations – new or existing – whose 3-kHz filters have been deactivated. AAIRO suggests the use of the same roll-off curve presently used in the 3-kHz filter, as it has proven to be adequate during the 30+ years of the TIS service's existence. The use of an outboard filter will streamline the timeline to improve the service and dramatically lower costs for existing operators who would otherwise be required to purchase new transmitters or have their present transmitters modified and recertified."[77]

23. Because this compromise proposal was developed in the *FNPRM* comment record, the Bureau released the *Filtering PN* which not only sought comment on the issue of relaxation versus elimination of the TIS filtering requirement, but also whether, if the relaxation proposal were adopted, (1) revision of the related operational requirements would be required; (2) the rules regarding placement of the filter could be revised; (3) recertification would be required for such changes; and (4) relaxation of the filtering requirement (and the associated operational changes) should be mandatory or at the licensee's discretion. We address each of these issues, below.

24. *Discussion*. *Elimination versus Relaxation of the TIS Filtering Requirement*. The filtering requirement limits the bandwidth of the TIS signal, thereby reducing the risk of interference to the reception of adjacent channel AM stations.[78] However, the rule also has the effect of distinguishing TIS sonically from other AM stations, so that a motorist tuning her radio manually may know intuitively that she has tuned to a TIS station. Specifically, TIS stations have smaller audio bandwidth due to the 3-kHz filter than AM stations, so the audio fidelity of TIS is lower and less intelligible. Based on the record on this filtering issue that prompted us to adopt the *FNPRM*,[79] and the record we have developed in response to the *FNPRM*, we find that the public interest benefits of this sonic distinction are minor at best, and that the public interest would be better served by allowing TIS to transmit more intelligible audio to ensure that motorists receive and understand travel-related information.

25. The *Filtering PN* first sought comment on whether the public interest was better served by relaxing the filter requirement from 3 kHz to 5 kHz or eliminating it as proposed in the *FNPRM*.[80]

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[74] *Id.*

[75] *Id.* at 5.

[76] *See* AAIRO Reply Comments, PS Docket 09-19 (filed Oct. 22, 2013) at 1 (AAIRO *FNPRM* Second Reply Comments) at 1.

[77] *Id.* at 2.

[78] SBE states that "[e]limination of audio filters would exacerbate interference to first, second and third adjacent channels of stations located adjacent to the TIS station." SBE *FNPRM* Comments at 4.

[79] *FNPRM*, 28 FCC Rcd at 11291 ¶ 42, and sources cited therein.

[80] *See Filtering PN*, 29 FCC Rcd at 3860.

Burden still calls for complete elimination based on his previously discussed experiment.[81] All the other responding commenters support or would accept relaxation of the filtering requirement, although North Plainfield would prefer complete elimination of the requirement.[82]

26. The record indicates that relaxation of the filtering requirement from 3 kHz to 5 kHz could improve TIS audio quality and intelligibility to match that of commercial AM broadcasting, while still minimizing adjacent channel interference.[83] Even though Burden's experiment purported to demonstrate that a TIS station without a filter caused no audible adjacent channel interference to the reception of a first adjacent AM station outside its protected contour, we note that it was conducted at a single site and contains no information about the call signs, coordinates, power levels, or received signal strengths of the TIS or AM stations. Therefore, Burden's experiment provides us neither a sufficient pool of results nor sufficient data to make a general conclusion that there would be no adjacent channel interference anywhere were we to entirely remove the TIS filtering requirements. Accordingly, in this Report and Order we adopt rules relaxing the minimum filtering requirement for TIS transmitters from 3 kHz to 5 kHz. We note, however, that licensees may continue to employ the 3-kHz requirement at their option.

27. *Revision of Operational Requirements.* The current TIS rule requires that at audio frequencies between 3 kHz and 20 kHz, the filter "shall have an attenuation greater than the attenuation at 1 kHz by at least: 60 $\log_{10}$(f/3) decibels, where 'f' is the audio frequency in kHz."[84] At audio frequencies above 20 kHz, the attenuation shall be at least 50 decibels greater than the attenuation at 1 kHz.[85] This produces a roll-off curve that starts at 0 dB attenuation for 3 kHz, then increases attenuation to approximately 50 dB at 20 kHz. In its *FNPRM* comments, AAIRO suggested that the Commission should use "the same roll-off curve presently used in the 3-kHz filter" for a 5-kHz filter.[86] However, if one slides this curve up in frequency to have 0 dB attenuation at 5 kHz but maintains the same slope,[87] then the curve would attenuate signals only by 36 dB at 20 kHz. Accordingly, the *Filtering PN* sought comment on whether 36 dB attenuation at 20 kHz would be sufficient or whether the roll-off curve for a 5 kHz audio filter in a TIS system should have 50 dB attenuation at 20 kHz, consistent with the existing rule.[88]

28. The *Filtering PN* also noted that a roll-off curve of 83 $\log_{10}$(f/5) decibels for frequencies between 5 kHz and 20 kHz would have 0 dB attenuation at the 5 kHz starting point, and would achieve

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[81] *See* Burden Associates Reply Comments, PS Docket 09-19 (filed July 2, 2014) at 1 (Burden *Filtering PN* Reply Comments).

[82] *See* PS Docket 09-19: AAIRO Comments (filed May 14, 2014) at 1 (AAIRO *Filtering PN* Comments); NAB Comments (filed May 16, 2014) at 2 (NAB *Filtering PN* Comments); Hatfield & Dawson Comments (filed April 29, 2014) at 1 (Hatfield *Filtering PN* Comments); Borough of North Plainfield, New Jersey Reply Comments (filed July 3, 2014) at 1-2 (North Plainfield *Filtering PN* Reply Comments) ("A mis-heard emergency message on TIS is … a serious risk with that 3 khz. response ceiling, and opening it up to 5 khz would be a help." "Eliminating the 3 khz. audio limitation and allowing full-fidelity AF frequency transmission on the TIS stations will help.").

[83] NAB *FNPRM* Reply Comments at 5, AAIRO *FNPRM* Second Reply Comments at 1.

[84] *See* 47 C.F.R. § 90.242(b)(8).

[85] *Id*.

[86] *See* AAIRO *FNPRM* Second Reply Comments at 2.

[87] The roll-off curve in this example would be defined as 60 $\log_{10}$(f/5) decibels. Changing the divisor under "f" from 3 to 5 slides the starting point of the curve up in frequency from 3 kHz to 5 kHz. The number 60 in front of the logarithm defines the slope of the curve and remains unchanged here from the current rule.

[88] *See Filtering PN*, 29 FCC Rcd at 3861.

50 dB attenuation at 20 kHz.[89] However, this is a steeper roll-off curve than the formula prescribed in the current rule. Accordingly the *Filtering PN* also sought comment on whether the Commission should impose this attenuation if the Commission decides to relax the filtering requirement from 3 kHz to 5 kHz.[90] It also sought comment on whether affordable audio filters exist in the marketplace that satisfy this roll-off curve; whether equipment manufacturers could retrofit existing filters or economically design, manufacture, and market such filters in the near term; and on the general availability of 5 kHz audio filters in the marketplace, the roll-off curves of specific models, and whether, alternatively, we should impose one of those roll-off curves in our rules.[91]

29. In its *Filtering PN* comments, AAIRO states that although it "suggested previously that the same 3-kHz filtering formula could be employed for a 5-kHz filter for convenience of design … if an alternate formula would provide superior protection to adjacent frequencies, it should be employed."[92] NAB too supports the Commission requiring the proposed new roll-off curve to achieve the required attenuation.[93] No commenter opposed these proposed roll-off requirements for use with a 5-kHz filter. Moreover, these roll-off requirements are in the public interest because they provide similar interference protection to the reception of adjacent channel AM stations as existing 3 kHz filters based on the same 50 dB attenuation at 20 kHz. AAIRO states that "[s]tand-alone filters that comply with new rules for the TIS service can be built by TIS transmitter manufacturers, some of whom have already committed to stand-alone filter manufacture and to making those filters available to the market when new filtering rules are issued. The cost to manufacture a passive stand-alone filter is nominal."[94] We are persuaded that 5 kHz filters will be available for TIS at reasonable cost. Accordingly, we adopt these new operational requirements for 5 kHz filters in TIS systems.

30. *Revision of the Filter Placement Requirements*. The current rule requires that "[e]ach transmitter in a Travelers Information Station shall be equipped with an audio low-pass filter [that] shall be installed between the modulation limiter and the modulated stage."[95] However, as noted, in response to the *FNPRM,* AAIRO suggested that "the [replacement] filter [should] be outboard to the TIS transmitter and immediately ahead of its audio input."[96] AAIRO further noted that "[t]he use of an outboard filter will streamline the timeline to improve the service and dramatically lower costs for existing operators who would otherwise be required to purchase new transmitters or have their present transmitters modified and recertified."[97]Accordingly, the *Filtering PN* sought comment on the feasibility of AAIRO's suggestion and whether to require such configuration in our rules in the event the Commission were to relax the filtering requirement.[98]

31. In its *Filtering PN* comments, AAIRO reiterates that the "least burdensome way for a willing licensee to make a filter change is to merely 'turn off' the existing 3-kHz TIS filter in the

[89] *Id*.

[90] *Id.*

[91] *Id.*

[92] *See* AAIRO *Filtering PN* Comments at 2.

[93] *See* NAB *Filtering PN* Comments at 2 ("Commission staff correctly determined that a filter with characteristics defined by 83 log10(f/5) decibels would achieve 50 dB attenuation at 20 kHz.").

[94] AAIRO Filtering PN Comments at 2.

[95] *See* 47 C.F.R. § 90.242(b)(8).

[96] *See* AAIRO *FNPRM* Second Reply Comments at 2.

[97] *Id.*

[98] *See Filtering PN*, 29 FCC Rcd at 3861.

transmitter (which can be done by merely removing a single jumper on a circuit board) and to add a stand-alone 5-kHz filter ahead of the transmitter in the audio chain."[99] NAB states that the filter should still be installed between the modulation limiter and the modulated stage as required by the current rule.[100] However, NAB also states that it could accept an alternative: audio processors that incorporate what it refers to as 5 kHz "brick wall" filtering,[101] so long as those processors are commonly accepted and approved for the commercial AM broadcast service.[102]

32. The current filter placement is at the last stage in the audio chain before modulation of the signal to radio frequencies (RF). The filter placement required in the rule ensures that any signal distortion introduced by the modulation limiter does not effectively increase the bandwidth of the audio signal before the modulation to RF. Based on AAIRO's description of the filter placement, the filter is integrated onto a circuit board and cannot be replaced by a user. Placing a 5 kHz filter between the modulation limiter and the modulated stage, as NAB requests, would effectively require a circuit board replacement, which is essentially the whole TIS transmitter system. However, NAB's alternative suggestion, an audio processor, would replace the modulation limiter and audio filter and thus would also require a circuit board replacement. The cost for TIS operators to replace a typical TIS transmitter would be $18-23,000 for equipment and installation.[103] While either of NAB's proposals would reduce slightly the likelihood of harmful interference from TIS operations to broadcast stations in the AM band relative to an outboard filter, neither slight improvement would be significant enough to warrant the associated costs that would be imposed on TIS operators. Modulation limiters may have the potential to introduce some distortion into the signal after the signal has passed through an outboard 5 kHz filter, but given that the Commission will have certified all TIS transmitter models on the market for proper operation; that the 5-kHz filter we prescribe has a steeper roll-off curve than current 3-kHz filters, and that AM radio limits the upper modulating frequency to 5 kHz,[104] we believe this likely to be of only minimal concern.

33. We revise our TIS rules to allow for a placement of the audio filter either ahead of the transmitter or between the modulation limiter and the modulated stage. This allows for either an outboard filter ahead of the transmitter circuit board before the board's modulation limiter, or a filter integrated into the transmitter circuit board in the present position after the modulation limiter. We expect our action will lead to improved audio quality at reasonable cost for TIS operators who wish to take advantage of the new rules and will not increase the potential for harmful interference. We therefore revise our rules to permit TIS operators to retrofit TIS equipment equipped with 3 kHz filters by placing the outboard 5 kHz audio filter at the transmitter audio input, and deactivate the 3 kHz filter, as AAIRO recommends. Similarly, we will allow manufacturers to manufacture, market, and sell already certified TIS systems that have been retrofitted accordingly. Alternatively, manufacturers may design new TIS systems where the 5 kHz audio filter is at the current placement between the modulation limiter and the modulated stage, or a system equipped with an audio processor that performs the filtering with the prescribed roll-off performance. However, to avoid imposing burdens on manufacturers, we do not require any redesigns of TIS equipment. We realize that interested manufacturers may choose the first

[99] *See* AAIRO *Filtering PN* Comments at 2.

[100] NAB *Filtering PN* Comments at 2. NAB does not provide an explanation as to why it prefers this placement.

[101] A "brick wall" filter has a steep roll-off curve that approaches vertical and allows virtually no signal to pass above the cutoff frequency, hence, a "brick wall."

[102] *See* NAB *Filtering PN* Comments at 2-3. NAB does not specify its preferred placement of audio processors in TIS systems.

[103] *See, e.g.*, http://www.theradiosource.com/products/comparison-product-features-prices.htm (last visited Sept. 29, 2014) for Information Station Specialists' prices of Info Station Classic and Info Station IP.

[104] *See* http://fas.org/man/dod-101/navy/docs/es310/AM.htm (last visited Oct. 10, 2014).

option out of cost considerations, as AAIRO observed in its comments to the *Filtering PN*.[105] We discuss the FCC equipment certification of these permutations below.

34. *Certification*. Many *FNPRM* commenters who supported elimination of the filtering requirement also requested that no recertification requirement accompany such change.[106] The *Filtering PN* sought comment on whether audio filter elimination/replacement and AAIRO's foregoing suggestion regarding filter placement would either: (1) constitute a change to TIS transmitters that requires recertification; (2) constitute a permissive change in certificated equipment that does not require recertification;[107] or (3) be exempt from the Commission's equipment authorization rules.[108]

35. No commenter spoke to the question of whether any of the foregoing changes, *i.e.*, raising the minimum frequency for filtering a TIS transmitter from 3 to 5 kHz, the modification of the roll-off curve, and replacing the filter, would thereafter require recertification of the equipment under the Commission's rules. A retrofit to already certified equipment, *i.e.*, the addition of an outboard 5 kHz filter at the audio input of equipment with "deactivated" 3 kHz filters, will require a Class II permissive change under Section 2.1043(b)(2) of the Commission's rules, because the performance characteristics will be degraded from the time of the initial certification but will still meet the minimum requirements of the applicable rules. In this instance, manufacturers should file a Class II permissive change request with the Commission for each TIS model they seek to have retrofitted, and each permissive change filing should include a list of filters, if more than one to be approved with the system, and clear and concise instructions for TIS operators to perform the retrofit themselves. Grantees should make such instructions available to their customers and other interested TIS operators. Licensees interested in retrofitting existing equipment with 5 kHz filters must verify that their equipment model has received a Class II permissive change grant from the Commission and only use approved filters for the system.[109] Then, such licensees may retrofit the equipment per the manufacturer's instructions without further Commission authorization. Alternatively, if manufacturers design new TIS transmitters that contain 5 kHz audio filters between the modulation limiter and the modulated stage, that is, integrated into the

[105] *See* AAIRO *FNPRM* Filter Comments at 2 ("Allowing a stand-alone filter would … permit the continued manufacture of TIS transmitters in the current design without the requirement that they be redesigned to include modified internal filters. This will prevent the passing of a significant transmitter redesign cost burden to future operators and licensees.").

[106] *See* AAIRO *FNPRM* Filter Comments at 1-2 ("if the FCC were to mandate that all TIS licensees who wish to remove the filters must go through a new type acceptance/recertification, that requirement would present an undue financial burden [and t]he imposition of both the above requirements would likely cause most TIS Services to cease due to expense and logistics."). *See also,* AASHTO *FNPRM* Reply Comments at 2 ; Vineland *FNPRM* Comments at 1; Aurora *FNPRM* Comments at 1; Gropper *FNPRM* Comments at 8; Douglas *FNPRM* Comments at 1; Santa Paula *FNPRM* Comments at 1; Sugarland *FNPRM* Comments at 1; Jackson *FNPRM* Comments at 1.

[107] *See* 47 C.F.R. § 2.1043(b)(2). "A Class II permissive change includes those modifications which degrade the performance characteristics as reported to the Commission at the time of the initial certification. Such degraded performance must still meet the minimum requirements of the applicable rules. When a Class II permissive change is made by the grantee, the grantee shall supply the Commission with complete information and the results of tests of the characteristics affected by such change. The modified equipment shall not be marketed under the existing grant of certification prior to acknowledgement by the Commission that the change is acceptable." *Id*.

[108] *See Filtering PN*, 29 FCC Rcd at 3862. The Commission sets forth its equipment authorization rules in 47 C.F.R. Part 2, Subpart J.

[109] If a party (such as a TIS licensee) other than the grantee of certification modifies a device through either hardware or software changes (*i.e*., installs an unapproved filter in the TIS transmitter) without the consent of the original grantee, then that party becomes responsible for the modified device's compliance of the equipment with the Commission's rules. In accordance with this responsibility, the modifying party must obtain a new FCC ID for its product. *See* 47 C.F.R. § 2.909(a).

circuit board, this will require a new Commission certification because this would effectively require a new design, which is essentially a whole new TIS transmitter system.[110] Absent a dedicated 5 kHz filter, use of an audio processor to perform the 5 kHz filtering, including a digital audio player as AAIRO mentions,[111] will require Commission certification to operate under Section 90.242 to ensure that their output - independent of the input frequency content - satisfies the prescribed roll-off requirements.

36. *Mandatory Nature of Change to Filtering Requirement*. The *Filtering PN* also sought comment on whether, if the Commission either relaxes or eliminates the TIS filtering requirement, it should also require existing licensees to comply with the relaxed filtering parameters.[112] According to AAIRO, the only commenter on this issue, the "change to new filtering requirements should be made optional to individual licensees rather than being mandated. Certainly, none are harmed, if a licensee determines that s/he will retain the present 3-kHz filter. Mandating the change for all current TIS operators would present a significant financial burden to governmental entities."[113] We find AAIRO's arguments persuasive on this issue. Accordingly, we find that there is in fact no reason to mandate that all TIS licensees replace their 3 kHz filter since, if a licensee does not choose to relax its own TIS transmitter filtering parameters, there would be no change from the present, more stringent TIS filtering requirements. Manufacturers may also continue to manufacture, market, and sell already certified TIS systems, which have the 3 kHz filters "activated," as these systems are in compliance with both the existing filtering rule and the more relaxed rule we adopt today.

37. *Music Content*. Finally, SBE provided anecdotal reports of musical content over TIS and contends that "[w]hile most voice content is below 3 KHz, music expands that bandwidth."[114] However, AAIRO asserts that "[n]one of AAIRO's nearly 400 members 'broadcast musical content.'"[115] NAB argues that music's wider bandwidth "may not be adequately filtered by a 5 kHz filter and could cause harmful interference to neighboring AM radio services," and "reiterate[s] that relaxing the TIS filtering requirement must be contingent on TIS stations' strict compliance with 47 C.F.R. § 90.242(a)(7)."[116] While we cannot take enforcement action at this time based on the limited evidence before us, we take this opportunity to remind licensees that only voice content is permitted per Section 90.242(a)(7) of our rules,[117] and that music content of any kind is not permitted.

V. PROCEDURAL MATTERS

A. Accessible Formats

38. To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

[110] *See* 47 C.F.R. § 2.1043(a).

[111] AAIRO *Filtering PN* Comments at 2-3. "Generally speaking, digital audio players that produce voice messages for the vast majority of Travelers' Information Stations are not designed to record audio frequencies above 5 kHz - and only receive voice messages for broadcast via phone lines which, by nature, are limited to audio frequencies much less than 5 kHz."

[112] *See Filtering PN*, 29 FCC Rcd at 3862.

[113] *See* AAIRO *Filtering PN* Comments at 1.

[114] SBE *FNPRM* Comments at 6.

[115] AAIRO Comments at

[116] NAB Comments at 3.

[117] 47 C.F.R. § 90.242(a)(7).

B. Regulatory Flexibility Analysis

39. As required by the Regulatory Flexibility Act of 1980, *see* 5 U.S.C. § 603, the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) of the possible significant economic impact on small entities of the policies and rules addressed in this document. The FRFA is set forth in Appendix C.

C. Paperwork Reduction Act Analysis

40. This document does not contain new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. In addition, therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4).

D. Congressional Review Act

41. The Commission will send a copy of this Order on Reconsideration and Second Report and Order in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, see 5 U.S.C. 801(a)(1)(A).

VI. ORDERING CLAUSES

42. Accordingly, IT IS ORDERED that pursuant to sections 4(i), 303, and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303, 405, this Order on Reconsideration and Second Report and Order IS ADOPTED.

43. IT IS FURTHER ORDERED that the Petitions for Reconsideration of the American Association of Information Radio Operators; Aurora, Illinois Emergency Management; Daniel R. Gropper; Jackson County, West Virginia Emergency Services; City of Santa Paula, California; City of Sugarland, Texas; Vineland and Cumberland County Health Departments ARE DISMISSED.

44. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Order on Reconsideration and Second Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

45. IT IS FURTHER ORDERED that the Commission SHALL SEND a copy of this Order on Reconsideration and Second Report and Order in a report to be sent to Congress and the General Accounting Office pursuant to the Congressional Review Act, see 5 U.S.C. § 801(a)(1)(A).

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

List of Commenters

Comments to *FNPRM*

American Association of Information Radio Operators (8/29/13, filter)	AAIRO (filter)
American Association of Information Radio Operators (8/29/13, weather)	AAIRO (weather)
American Association of Information Radio Operators (10/3/13)	AAIRO (10/3/13)
Aurora, Illinois Emergency Management (Flaherty)	Aurora
Douglas County, Nebraska Emergency Management Agency (Johnson)	Douglas
Daniel R. Gropper	Gropper
Jackson County, West Virginia Emergency Services (Smittle)	Jackson
City of Santa Paula, California (Lazenby)	Santa Paula
Society of Broadcast Engineers	SBE
City of Sugarland, Texas (Pollicoff)	Sugarland
Vineland and Cumberland County Health Departments (Dickinson)	Vineland

Reply Comments to *FNPRM*

American Association of Information Radio Operators (10/17/13)	AAIRO First Reply
American Association of Information Radio Operators (10/22/13)	AAIRO Second Reply
American Association of State Highway and Transportation Officials	AASHTO
National Association of Broadcasters	NAB

Comments to *Filtering PN*

American Association of Information Radio Operators	AAIRO
Hatfield & Dawson Consulting Engineers, LLC	Hatfield & Dawson
National Association of Broadcasters	NAB

Reply Comments to *Filtering PN*

Richard W. Burden Associates	Burden
Borough of North Plainfield, New Jersey (Phoenix)	North Plainfield

APPENDIX B

Final Rules

Part 90 of Chapter 1 of Title 47 of the Code of Federal Regulations is amended as follows:

1. The authority citation for Part 90 continues to read as follows:

Authority: Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), 332(c)(7).

2. Section 90.242 is amended by revising paragraph (b)(8) to read as follows:

§ 90.242 Travelers' information stations.

(a) * * *

(b) * * *

(8) Each transmitter in a Travelers Information Station shall be equipped with an audio low-pass filter. Such filter shall be installed either at the transmitter's audio input or between the modulation limiter and the modulated stage. At audio frequencies between 5 kHz and 20 kHz this filter shall have an attenuation greater than the attenuation at 1 kHz by at least:

83 log10 (f/5) decibels.

where "f" is the audio frequency in kHz. At audio frequencies above 20 kHz, the attenuation shall be at least 50 decibels greater than the attenuation at 1 kHz.

APPENDIX C

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[1] and Initial Regulatory Flexibility Analysis (IRFA) was incorporated into the Notice of Proposed Rulemaking in PS Docket 09-19 (*NPRM*). The Commission sought written comment on the proposals in the *NPRM*, including comments on the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.

A. Need for, and Objectives of, the Second Report and Order

2. This Second Report and Order ("Order") seeks to ensure that the Commission's Travelers Information Station (TIS) rules better serve all Americans. Section 90.242(b)(8) of the Commission's rules requires the filtering of audio frequencies between 3 and 20 kHz.[2] The comment record in this proceeding indicated that such filtering decreases the audibility of TIS broadcasts, in general, and especially at night, and over difficult terrain. The record also indicated that a relaxed filtering requirement could improve TIS audio quality to match that of AM broadcast stations, while still retaining a sufficient filtering requirement to minimize adjacent channel interference. Accordingly, the Order maintains a filtering requirement but relaxes it from 3 kHz to 5 kHz. In conjunction with this, the Order also requires use of a new roll-off curve to maintain the required 50 dB attenuation at 20 kHz, allows placement of the filter either ahead of the TIS transmitter in addition to the location that the present TIS rules now require, and requires certification only for newly designed equipment that implements these new rules.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA.

3. There were no comments that specifically addressed the IRFA. Nonetheless, the Agency considered the potential impact of the rules proposed in the IRFA on small entities as discussed here in paragraph 5.

C. Description and Estimate of the Number of Small Entities to Which Rules Will Apply

4. The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities that may be affected by the rules adopted herein.[3] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[4] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[5] A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of

[1] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

[2] *See* 47 C.F.R. § 90.242(b)(8).

[3] 5 U.S.C. § 604(a)(3).

[4] 5 U.S.C. § 601(6).

[5] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

operation; and (3) satisfies any additional criteria established by the Small Business Administration ("SBA").[6]

5. Our action may, over time, affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three comprehensive, statutory small entity size standards that encompass entities that could be directly affected by the proposals under consideration.[7] Nationwide, there are 28.2 million small businesses, according to the SBA.[8] Additionally, a "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."[9] Nationwide, as of 2007, there were approximately 1,621,315 small organizations.[10] Finally, the term "small governmental jurisdiction" is defined generally as "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."[11] Census Bureau data for 2007 indicate that there were 89,527 governmental jurisdictions in the United States.[12] We estimate that, of this total, as many as 88,761 entities may qualify as "small governmental jurisdictions."[13] Thus, we estimate that most governmental jurisdictions are small. However, we estimate that approximately 1,449 governmental entities hold TIS licenses, and only a subset of these entities constitute small governmental jurisdictions.[14]

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

6. This Order will require manufacturers of TIS transmitters to seek certification solely for any newly manufactured equipment that complies with the new filtering requirements. Modifications to already existing equipment for sale are treated as permissive changes under Commission rules. This does not require recertification but does require a report to the Commission on the results of tests of the characteristics affected by such change.

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[6] 15 U.S.C. § 632.

[7] *See* 5 U.S.C. § 601(3)–(6).

[8] *See* SBA, Office of Advocacy, "Frequently Asked Questions," available at http://web.sba.gov/faqs/faqindex.cfm?areaID=24 (March 2014).

[9] 5 U.S.C. § 601(4).

[10] Independent Sector, The New Nonprofit Almanac & Desk Reference (2010).

[11] 5 U.S.C. § 601(5).

[12] U.S. Census Bureau, Statistical Abstract of the United States: 2011, Table 427 (2007).

[13] The 2007 U.S Census data for small governmental organizations are not presented based on the size of the population in each such organization. There were 89,476 local governmental organizations in 2007. If we assume that county, municipal, township, and school district organizations are more likely than larger governmental organizations to have populations of 50,000 or less, the total of these organizations is 52,095. If we make the same population assumption about special districts, specifically that they are likely to have a population of 50,000 or less, and also assume that special districts are different from county, municipal, township, and school districts, in 2007 there were 37,381 such special districts. Therefore, there are a total of 89,476 local government organizations. As a basis of estimating how many of these 89,476 local government organizations were small, in 2011, we note that there were a total of 715 cities and towns (incorporated places and minor civil divisions) with populations over 50,000. City and Towns Totals: Vintage 2011 – U.S. Census Bureau, *available at* http://www.census.gov/popest/data/cities/totals/2011/index.html. If we subtract the 715 cities and towns that meet or exceed the 50,000 population threshold, we conclude that approximately 88,761 are small U.S. Census Bureau, Statistical Abstract of the United States: 2011 2011, Tables 427, 426 (Data cited therein are from 2007).

[14] Based on an FCC Universal Licensing System search of August 6, 2014. Search parameters: Radio Service = PW; Authorization Type = Regular; Status = Active; Frequency Upper Band >= 0.53; Frequency Assigned <= 1.7.

E. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

7. The RFA requires an agency to describe any significant alternatives that it has considered in developing its approach, which may include the following four alternatives (among others): "(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities."[15]

8. The proposed rules are designed to minimally impact all TIS participants, including small entities, while at the same time protecting the lives and property of all Americans, which confers a direct benefit on small entities. Moreover, none of the rules is likely to have a significant economic impact on small entities as the rules relax present filtering restrictions and allow the small entities themselves to decide whether or not to implement the relaxed filtering requirements. The equipment certification requirement does not necessitate the use of any new forms, procedures or additional specifications. Certification has been, and continues to be, a basic regulatory necessity for all manufacturers of covered equipment whether large or small.

9. **Report to Congress:** The Commission will send a copy of this Order, including this FRFA, in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act.[16] In addition, the Commission will send a copy of the Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the Report and Order and FRFA (or summaries thereof) will also be published in the Federal Register.[17]

[15] 5 U.S.C. § 603(c)(1) – (c)(4).

[16] *See* 5 U.S.C. § 801(a)(1)(A).

[17] *See* 5 U.S.C. § 604(b).