

eliminate the traditional fixed point at which the locomotive horn needs to be sounded. Rather, the length of time of the warning is the operative factor as to when to begin sounding the horn. FRA is providing the locomotive engineer a range of 15 to 20 seconds in advance of the crossing in which to sound the horn. This provision will prevent much unnecessary disruption to surrounding communities. Under present law in many States, a train traveling at 15 miles per hour would sound its horn for 60 seconds (over a full quarter mile) if required to initiate the sounding one-quarter mile in advance of the crossing. Under this rule, such a train traveling at 15 miles per hour would sound its horn for 15 to 20 seconds, but would only sound it over a distance of from 330 feet to 440 feet. Ample warning is provided the motorist while preventing unnecessary noise among the surrounding community. At the other end of the spectrum, a train traveling at 79 miles per hour travels more than four tenths of a mile in 20 seconds, and thus would only sound its horn for less than 12 seconds under this rule. It is clear that excessive horn noise would be generated if the horn were to be sounded for a full 20 seconds, since the horn sound is not effective as a warning beyond one-quarter mile. Thus, as proposed in the NPRM, FRA is limiting the sounding of the horn to a maximum of one-quarter mile in advance of a crossing, regardless of train speed. Sound diminishes at a rate of approximately 7.5 dB(A) for each doubling of distance. Thus, the sound from a locomotive horn registering 100dB(A) at 100 feet in front of the locomotive will have diminished to roughly 75 dB(A) at one-quarter mile in front of the locomotive. That distance is near the outer margin of utility in terms of alerting the motorist to oncoming trains at that crossing.

*Section 222.23 How Does This Regulation Affect Sounding of a Horn During an Emergency or Other Situations?*

Paragraph (a)(1) of this section is meant to make clear that a locomotive engineer may sound the locomotive horn in emergency situations. Notwithstanding any other provisions of the rule, a locomotive engineer may sound the locomotive horn to provide a warning to vehicle operators, pedestrians, trespassers or crews on other trains in an emergency situation if, in the engineer's sole judgment, such action is appropriate in order to prevent imminent injury, death or property damage. Thus, establishment of a quiet zone and the limits established on the

length of time a horn may be sounded, are not intended to prevent the engineer from using his or her discretion in emergency situations. CPUC recommended that FRA add "or at the discretion of the locomotive engineer" at the end of this paragraph because it is claimed that the proposed language places a burden on the engineer to prove that an emergency situation existed which would have resulted in imminent injury, death or property damage. FRA agrees that the engineer should not have the burden to prove that an emergency existed. We believe the present language is sufficiently clear to relieve the engineer of that burden. The BLE expressed "complete agreement" with the proposed language, as does the Mayor of Boca Raton, Florida. With the exception of minor proposed language change, the AAR also agrees with the proposal.

The AAR suggested that the phrase "[N]othing in this part" be replaced with "A railroad shall not be prohibited or restricted from using" in paragraph (b). The AAR claims that "FRA does not go far enough in addressing the railroads' need to sound horns for purposes other than to warn the public of trains approaching grade crossings or to warn roadway workers. Locomotive engineers use horns in other circumstances, such as when approaching passenger stations and to alert railroad employees to the pending movement of a train. It would be unsafe to prohibit the use of locomotive horns for such purposes. Consequently, FRA should specifically prevent States and localities from restricting railroads from sounding the locomotive horn for railroad operating purposes." While the substance of AAR's proposal has merit, the scope of this rulemaking is limited to locomotive horn use at grade crossings. Extending the regulatory framework beyond this limited area would require further rulemaking. To avoid misunderstanding regarding the subject matter subsumed by the rule, however, FRA has added the words, "or where required for other purposes under the railroad operating rules" at the end of this section.

This paragraph has been further changed slightly from the NPRM. The phrase, "including establishment of quiet-zones, or limits on the length of time in which a horn may be sounded" has been added to this paragraph to make clear that nothing in the rule, including the creation of quiet zones, or rules setting limits on where and when horns are sounded, shall prevent an engineer from using the horn as a warning in an emergency situation.

Paragraph (a)(2) is intended to make clear that while the rule does not preclude the sounding of the locomotive horn in emergency situations, the rule also does not impose a legal duty to sound the locomotive horn in such situations. It is FRA's intent that this section, and the rule as a whole, subsume the subject matter of sounding the locomotive horn at public grade crossings, including the sounding of locomotive horns within quiet zones during emergency and non-emergency situations. Absent the paragraph, it is conceivable that a railroad or engineer or both, could be found liable for damages resulting from a collision with an automobile at a grade crossing under the theory that the horn should have been sounded even though the crossing is within a quiet zone. It is the intent of FRA, that once a public authority creates a quiet zone pursuant to this part, the railroad and locomotive crew are relieved from any legal duty to sound the locomotive horn in an emergency situation. The rule's dual purpose of ensuring safety and reducing train horn noise where safety can reasonably be assured without horn use would be defeated if railroads felt compelled to make liberal use of the train horn in quiet zones merely to avoid being sued for not using it. Moreover, railroads and their crews would be placed in an untenable legal position, being prohibited from routine sounding of the horn but possibly being held liable for not sounding the horn if a collision does occur in a quiet zone and a plaintiff argues that the horn should have been sounded. Of course, we are confident that railroads and their engineers, given their very strong interest in avoiding crossings accidents, will err on the side of caution in using their discretion to determine which situations are truly emergencies warranting use of the horn.

In paragraph (b), the NPRM provided that nothing in this part restricts the use of the locomotive horn to announce the approach of the train to roadway workers in accordance with a program adopted under part 214 of this Chapter or where active warning devices have malfunctioned and use of the horn is required by either 49 CFR 234.105 (activation failure), 234.106 (partial activation), or 234.107 (false activation). This makes clear that locomotive horns must still be sounded in accordance with the listed regulations irrespective of the existence of a quiet zone. Such provisions have been established to provide warning to railroad employees working on and along the track and to motorists when grade crossing warning