

11.0 Regulatory Flexibility Assessment

The purpose of this assessment is to provide information and further detail on the assessment of the impacts on small entities by the Use of Locomotive Horns at Highway-Rail Grade Crossings Final Rule (49 CFR Part 222). This assessment is also intended to address the issues and concerns outlined in the Regulatory Flexibility Act.¹ Finally, this assessment discusses the provisions that the Federal Railroad Administration (FRA) incorporated into the final rule to minimize any adverse economic impact on small entities and to ensure sufficient outreach to these entities.

This Regulatory Flexibility Assessment (RFA) concludes that (1) small railroads should be minimally impacted by this rule; (2) some small businesses that operate along or nearby rail lines where locomotive horns are not routinely sounded, but that potentially may not after the implementation of this rule, may be moderately impacted; and (3) the most significant impacts on small entities will be on “governmental jurisdictions” of communities. Small railroads will mainly be affected by the requirements for maximum sound levels for locomotive horns and associated testing and certification requirements. FRA estimates that approximately 70 percent of the affected governmental jurisdictions of communities are considered to be small entities by the Small Business Administration (SBA). Many communities will only very minimally be affected by reporting and record keeping requirements of this rule and will be exempt from requirements to implement additional safety measures. Other communities will either:

- (1) elect to retain whistle bans currently in place and implement one or more safety measures or
- (2) accept locomotive horns will be sounded at crossings where they do not currently do so.

Data available to FRA indicates that this rule may have minimal economic impact on a substantial number of small entities (railroads) and possibly a significant economic impact on a few small entities (government jurisdictions and small businesses). However, there is no indication that this rule will have a significant economic impact on a substantial number of small entities. The SBA did not submit comments to the docket for this rulemaking in response to the Initial Regulatory Flexibility Assessment that accompanied the NPRM. FRA certifies that this rule will not have a significant economic impact on a substantial number of small entities.

¹ 5 U.S.C. 601 et seq..

11.1 Rationale for Choosing Regulatory Action and Problem Statement

The problem considered by this rule is collisions involving motor vehicles and the front ends of trains at highway-rail grade crossings where locomotive horns are not routinely sounded and their resulting casualties. FRA has documented both the increased risk at whistle-ban crossings, and locomotive horn effectiveness. In 1995, a national study using both empirical data and a computer model showed significant increase in the number of collisions on crossings with whistle bans.² Train whistles were also shown to have a deterrent effect on motorists attempting to go around lowered gates at highway-rail crossings. An update of this study performed by FRA as well as two subsequent revisions performed for FRA by Westat³ support these findings.

Locomotive horns are a means to alert motor-vehicle operators that a train is approaching. The locomotive horn also helps to provide operators with information about the approaching train including direction and proximity.

In the United States there are approximately 154,000 public highway-rail grade crossings. Only 62,000 of these crossings are equipped with gates and/or flashing lights. The effectiveness of some of these systems is compromised when motorists fail to heed their warnings, and still proceed through the crossings. At crossings where there are no active warning devices, motorists rely on the locomotive horn in addition to visual cues provided by the headlight, auxiliary alerting lights, and the train itself for information about approaching trains. Under inclement weather conditions, motorists have difficulty seeing approaching trains despite their lights. During the five-year period between 1997 and 2001, 301 collisions that were potentially preventable by sounding locomotive horns occurred at whistle-ban crossings. These collisions resulted in 21 fatalities and 110 non-fatal injuries. This translates into an annual average of 60 collisions, 4 fatalities, and 22 injuries.

The studies performed by Westat for FRA indicate that nationwide (excluding Florida), the adverse whistle ban effects were significant. All three classifications of warning devices experienced substantially higher collision rates in whistle ban areas as follows:

<u>Warning Device Class</u>	<u>Percent Difference (Higher)</u>	
	<u>Nationwide (excluding Chicago)</u>	<u>Chicago Area</u>
Passive	74.9	n/a
Flashing Lights	30.9	n/a
Gates with Flashing Lights	66.8	17.3

This rule requires that a locomotive horn to be sounded while a train is approaching and entering

² U.S. Department of Transportation, Federal Railroad Administration, *Nationwide Study of Train Whistle Bans*, April 1995.

³ *Analysis of The Safety Impact of Locomotive horn Bans at Highway-Rail Grade Crossings*, March 2002. *Analysis of the Safety Impact of Train Horn Bans at Highway-Rail Grade Crossings: an Update Using 1997-2001 Data*, May 2003.

a public highway-rail crossing. The rule provides for exceptions to this requirement in circumstances in which there is not a significant risk to life or serious personal injury, when the use of the locomotive horn is impractical, when supplementary safety measures fully compensate for the absence of the warning provided by the horn, or where the average quiet zone risk level is at or below the average level at gated crossings where the locomotive horn is regularly sounded.

Some communities believe that the sounding of train whistles at every crossing is excessive and an infringement on community quality of life, and therefore have enacted “whistle bans” that prevent the trains from sounding their whistles entirely, or during particular times (usually at night). FRA is concerned that with the increased risk at grade crossings where train horns are not sounded, or other safety measures are in place, collisions and casualties may increase significantly.

11.2 Legal Authority

This rule is required by law. The 1994 Railroad Safety Reauthorization Act (Public Law 103-440) requires the use of locomotive horns at grade crossings and gives FRA authority to make reasonable exceptions.⁴ This law requires the use of locomotive horns at grade crossings, but gives FRA authority to make reasonable exceptions. Congress amended this law on October 9, 1996.⁵ The amended law requires the FRA to take into account the interest of communities that have in effect restrictions on the sounding of a locomotive horn at highway-rail crossings. In addition, it requires FRA to work in partnership with affected communities to provide technical assistance and to provide a reasonable amount of time for local communities to install supplementary safety measures and take into account local safety initiatives.

Legal Authority: 29 U.S.C. 20102-20103, 20110-20112, 20114, 20137, 20138, 20143, 20301-20303, 20306, 20701-20703, 21301-20302, 21304, 21306, and 21311; 49 CFR 1.49(c), (g), and (m).

11.3 Small Entities Affected

Communities: Small Governmental Jurisdictions

This Final Rule potentially impacts a greater audience of small entities than most FRA regulations. The potential audience includes many small entities that are classified as “small governmental jurisdictions.” As defined by SBA, this term means governments of cities, counties, towns, townships, villages, school districts, or special districts with a population of less than 50,000.

This rule could impact approximately 260 governmental jurisdictions whose communities

⁴ Public Law 103-440.

⁵ Public Law 104-264.

currently have either formal or informal whistle bans in place. FRA estimates that approximately 70 percent of these communities are small entities. An estimated 193 small jurisdictional governments may be affected by the implementation of this rule. FRA also estimates that 40 percent of the affected crossings are contained in small communities whose governmental jurisdictions are considered to be small entities.⁶ The impact on these governments will vary depending on whether they have to implement safety measures to retain their whistle bans or not and if so, depending on whether they elect to implement such supplementary measures or allow the locomotive horns to be sounded once again. The impacts of these decisions will also vary depending on the number of whistle-ban crossings, the population density of the community neighborhoods that immediately surround the affected grade crossings, and train traffic volume over the affected crossings.

FRA expects the majority of small governmental jurisdictions which have not attempted to institute whistle bans in their communities will not do so in the future. Therefore, this rule should not impact them. A relatively small number of governmental jurisdictions may seek to establish quiet zones if rail traffic increases following railroad mergers or other events. This would increase the number of affected small governmental jurisdictions beyond 193. Communities seeking to establish New Quiet Zones will have fewer and, in many cases, more expensive alternatives available to them for complying with the requirements of this rule than communities with whistle bans that were established prior to October 9, 1996.

This Regulatory Flexibility Assessment may be overstating the impact on small entities that are governmental jurisdictions because “quiet zones” may be located within the boundary of a small community, but may be the legal and responsible entity of another entity. Many roads that are located within the boundaries of a town or other small community actually are the responsibility of a larger community governmental jurisdiction such as a county or state. Thus, the financial burden for some roadway’s crossings may be the county, state or possibly even federal government. In response to the NPRM, some communities commented that they needed more time to establish quiet zones. The final rule extends the proposed implementation schedule by a minimum of two years and a maximum of five years.

Small Railroads

The U.S. Small Business Administration (SBA) stipulates in its “Size Standards” that the largest a railroad business firm that is “for-profit” may be and still be classified as a “small entity” is 1,500 employees for “Line-Haul Operating” Railroads, and 500 employees for “Switching and Terminal Establishments.”⁷ “Small entity,” is defined in 5 U.S.C. 601 as a small business

⁶ Prior to issuing the NPRM, FRA researched 155 of the affected communities outside of the Chicago area with 1,387 whistle-ban crossings and found that 115 of these communities are governmental jurisdictions that are considered small entities by the SBA definition. These 115 communities contain 597 of the 1,387 whistle-ban crossings.

⁷ “Table of Size Standards,” U.S. Small Business Administration, January 31, 1996, 13 CFR Part 121.

concern that is independently owned and operated, and is not dominant in its field of operation. FRA considers railroads that meet the line haulage revenue requirements of a Class III railroad as “small entities”. For other entities, the same dollar limit on revenues is established to determine whether a railroad shipper or contractor is a small entity.⁸ FRA used this alternative definition in the NPRM to identify small railroads affected by this rulemaking and requested comment on the appropriateness of doing so. No comments were received. Therefore, FRA is using this alternative definition of “small entity” to identify small railroads affected by this final rule.

Given this interim definition of small entity it is difficult to determine exactly how many of the estimated 685 railroads that operate in the United States are considered small entities.⁹ Nationwide, 45 to 50 railroads provide approximately 90 percent or more of the industry’s employment; own almost 90 percent of the track; and operate over 90 percent of the ton-miles. Included in this group are passenger railroads that provide well over 95 percent of the passenger miles. FRA believes that these 45 to 50 railroads are not small entities. Therefore, FRA estimates that approximately 640 railroads that may be affected by this rule are small entities.

Intercity passenger and commuter railroads are not considered small entities by SBA definition because they are owned by governmental jurisdictions or transit authorities that serve populations of well over 50,000.

Most the existing whistle bans cover rail lines that are owned by railroads that are not considered small entities. FRA is aware of fewer than 10 Class III railroads that operate over crossings that are subject to local whistle bans.

The standards for maximum locomotive horn sound levels and related horn testing and certification will affect small railroads. FRA has incorporated alternative testing standards to allow small railroads with limited physical space to perform tests with relative ease.

Small Businesses

It is not feasible for FRA to survey or determine how many small businesses may be affected by the implementation of this rule. FRA is aware of concerns advanced by owners and operators of hotels, motels and some other establishments as a result of numerous town meetings and other

⁸ As defined by the Interstate Commerce Commission (ICC) - now the Surface Transportation Board (S.B.), all “switching and terminal” railroads are classified as Class III, regardless of their operating revenue.

⁹ Approximately 685 railroads report accident/incident data and statistics to the FRA.

outreach sessions in which FRA has participated during development of this rule. Such concerns were taken into consideration in development of the final rule. The increase in flexibility and implementation schedule provided by the final rule addresses those concerns.

This rule may also affect small businesses that might set-up shop in an area that borders or is nearby a rail corridor that formerly had a whistle ban in effect prior to this rulemaking process. For these potentially affected small entities, the existence of an established “quiet zone” could or could not be a factor in their decision to open for business in such a location. FRA requested comments on potential impacts on such future small businesses in the NPRM, but did not receive any.

11.4 Reporting, Record keeping, and Other Compliance Requirements

When a state or local government designates a quiet zone, it is required to provide notice of such designation to all operating railroads over the crossings within the quiet zone, the highway or traffic control authority or law enforcement authority that has control over vehicular traffic at the crossings within the quiet zone, the state agency responsible for highway and road safety, and FRA. In addition, the quiet zone that is established will not take effect until an accurate and complete U.S. DOT Grade Crossing Inventory Form is provided to FRA. Updates to the inventory are also required every 3 to 5 years thereafter.

One alternative option for complying with this rule is allowing locomotive horns to be sounded. This alternative imposes no direct costs on governmental jurisdictions. Other alternatives which will likely be implemented include installation of medians at gated crossings at estimated costs between \$13,000 and \$15,000; installation of four-quadrant gate systems at an estimated cost of \$100,000 plus annual maintenance costs of \$2,500 -\$5,000; photo enforcement at estimated costs between \$28,000-\$65,500, plus annual maintenance costs between \$6,600-\$24,000; and programmed enforcement programs estimated to cost between \$20,000 and \$25,000 initially and \$4,600 annually thereafter.

Finally, FRA has not limited compliance alternatives to the lists provided in Appendix A or Appendix B of the final rule. Other safety measures may be implemented if their analysis demonstrates that the number of motorists that violate the crossing is equivalent or less than that when locomotive horns are sounded. FRA intends to rely on the creativity of communities to formulate solutions that will work for them.

11.5 Impacts

FRA expects that the costs of this rulemaking will be incurred predominantly by communities with whistle bans in place, in some cases, with state government funding. As noted above, FRA estimates that 70 percent of the approximately 265 jurisdictional governments of communities that have whistle bans in place are considered to be small entities. For these small entities the impacts will vary. Some communities will have to comply with only minimal reporting requirements to retain whistle bans. Some communities that would be required to implement

supplementary measures in order to retain whistle bans may elect not to do so and will be minimally impacted if at all.

For small governmental jurisdictions that elect to implement additional safety measures to retain or establish quiet zones, the impact will vary according to the measures they implement. One of the less expensive safety measures that a community may implement is photo enforcement at an estimated initial cost of \$28,000 - \$65,500 and an annual cost of \$6,600 - 24,000 per crossing, depending on how many crossings share equipment. Communities may lower overall costs by installing boxes at all crossings and rotating cameras among up to 4 crossings. Communities that have implemented photo-enforcement indicate that most of the annual cost is directly offset by revenue generated by the collection of fines arising from violations. Other lower cost options for gated crossings are frangible delineators on mountable curbs or barrier curbs at estimated costs between \$13,000 and \$15,000 per crossing. Some lower cost options, such as one-way streets with gates and temporary and permanent closures are not viable alternatives for many crossings. Other quiet zone options can be more expensive. Such options include four-quadrant gate systems, programmed enforcement, and grade separation. Maintenance and upkeep for automated warning devices are the responsibility of the pertinent railroad, per *49 CFR part 234*.

One supplementary safety measure that could prove to be a very viable alternative to the governmental jurisdiction of a small community is “programmed enforcement” aimed at reducing the number of motorists violations at railroad crossings by changing behavior. Such activities may involve developing departmental policies on railroad safety, training law enforcement officers in enforcing safety regulations, monitoring crossings and issuing citations, as well as collecting data on program effectiveness. Information collected from municipalities with programs already in place indicates that revenues from such programs exceed costs.¹⁰ The impact of establishing supplementary safety measures could eventually be felt by governmental jurisdictions of communities where rail traffic increases due to railroad mergers or a commuter railroad start-up.

Small railroads will be affected under the provision establishing a maximum train horn sound level. They will have to test and potentially adjust their locomotive horns to comply with the maximum sound level of 110 dB(A). As such, they will incur costs for performing the horn volume test and making any needed adjustments to the horn. Since small railroads own fewer locomotives, they will need to perform much fewer tests than larger railroads, and will incur lower total costs associated with this requirement.

Under current regulations (49 CFR 234), railroads are required to maintain automated warning devices, such as gates and lights at grade crossings. To the extent that communities choose to install devices that have higher maintenance costs than existing devices, there will be increased

¹⁰ This is based on information collected from several municipalities in Illinois and Los Angeles.

maintenance costs to the railroad. For example, maintenance costs for a standard system of 2 automatic gates and flashing lights device are considerably lower than for a four-quadrant gate arrangement with flashing lights.

When proposing new rules or changes in current regulations FRA is usually concerned with any potential impact on tourist railroads. These are passenger railroads that operate scenic, excursion and dinner train operations. Almost all of these are considered to be small entities. FRA is not aware of any whistle bans in place on lines that are operated on or owned by tourist operators. Most people find the sound of steam whistles on these operations to be more enjoyable and nostalgic, and therefore the noise from these operations if it were to exist is less likely to be seen as noise pollution. Nevertheless, these railroads may be affected by the standards for maximum sound levels for locomotive horns and will be affected by locomotive horn certification and testing requirements. FRA has provided for alternative testing requirements for locomotive horns that tourist railroads may find better suited for their operations.

FRA has crafted an exception from the requirement to sound the horn for any tourist railroad operating off the general system at speeds not to exceed 15 mph. This exception will allow tourist trains to run silent where state law allows.

Forty-nine CFR Part 229 covers locomotives “other than steam.” FRA is not amending 49 CFR Part 230, the Steam Locomotive Inspection and Maintenance Standards, which does contain a requirement for an audible warning device meeting the 96 dB(A) standard. The only steam locomotives in service are historic locomotives used for tourist and excursion service. The great majority of these locomotives are owned and operated by small businesses or non-profit museums. If used on the general system or by a railroad that operates greater than 15 miles per hour, their audible warning devices will be required to be sounded at highway-rail crossings. Given the generally less frequent use of these locomotives, their historic characteristics, community acceptance of the steam whistle, and the cost that would be involved, FRA sees no reason to require that they be tested for compliance with maximum horn volume applicable to other locomotives.

For small businesses that are located along or near a rail line that currently have a whistle ban, the impacts will vary. As noted prior, FRA does not know how many such small businesses will be impacted. Obviously the concern and the impact will be the noise from the locomotive horns at crossings were locomotive horns are not currently sounded. FRA estimates that approximately 90 percent of the communities that currently have whistle bans will retain them either because they will not have to implement additional safety measures to do so or because they will implement the necessary measures. Thus, very few small businesses should be impacted.

Among these businesses the impact will vary. The impact will be minimal for small businesses, other than hotels, operating along rail lines where the whistle ban was only in effect during night-time hours. For small businesses located along or near a rail line that formerly operated a whistle ban during day-time hours the impact will vary according to the number of crossings

with whistle bans in place and daily train traffic levels through those crossings, as well as the distance of the commercial property from the rail line and the extent to which structures are effectively sound insulated.

In summation, since FRA does not know exactly how each community will elect to proceed on the future of its existing whistle ban(s), it cannot estimate or determine the actual impact of this rule on small entities. Nevertheless, FRA is confident that a substantial number of small entities will not be significantly impacted by this rule. In any event, FRA has incorporated into this final rule a wide range of options intended to mitigate any impacts consistent with the statutory mandate to address safety at highway-rail crossings.

11.6 Alternative Treatment for Small Entities

Congress has ensured that all communities that might be adversely affected by this rule be provided adequate time to initiate changes. The law requires that this Final Rule not be effective for 365 days.

In addition, FRA is allowing whistle bans established before October 9, 1996 to continue for a period of five years from issuance of the rule, if the community files a detailed plan for establishing a quiet zone with the FRA Associate Administrator for Safety within three years. Some communities may have an additional three years beyond the five years if, in addition to filing of the detailed plan within three years, the State provides to the Associate Administrator: a comprehensive State-wide implementation plan and funding commitment for implementing improvements and within the first four years of the rule at least one improvement is initiated within the state. In effect, the final rule adds a minimum of 2 years and maximum of 5 years to the implementation schedule proposed in the NPRM. FRA expects that many small communities will take advantage of the extended implementation periods.

FRA has provided numerous alternatives for establishing quiet zones in Appendixes A, & B of the Final Rule. These alternatives vary in cost impact and expected effectiveness. In addition, Appendix C lists which scenarios do not require supplementary safety measures. Communities may also apply for permission to use systems that are not listed in the Appendixes. If such systems are found to be sufficient then they will be added to the appropriate appendix.

FRA has also incorporated alternative testing standards to allow small railroads with limited physical space to perform tests.

11.7 Outreach to Small Entities

After issuing its Nationwide Study of Train Whistle Bans in 1995, FRA went to great lengths to reach out to communities. FRA directly wrote to each community that was known to have a whistle ban in affect at the time and offered to visit the community and discuss the increased risk associated with whistle bans and provisions of the Swift Act. The agency's Regional Grade Crossing Managers followed-up with additional community meetings. During this same time period FRA also provided the same information to associations that represented cities and counties.

At the NPRM stage of this rulemaking, FRA provided outreach to potentially affected small entities in several ways. First, FRA specifically addressed its concern for the affected small entities in the NPRM. The preamble of the NPRM noted issues and areas on which the agency needed further input. Second, FRA notified Congressional representatives whose districts would potentially be impacted by the proposed rule. Third, FRA held 12 public hearings nationwide following publication of the NPRM. Many of these were held in or near locations where small entities that are governmental jurisdictions that have a population of less than 50,000.

FRA has been working with over a dozen communities to plan the necessary supplementary safety measures for the establishment of quiet zones. About half of these communities have populations less than 50,000 and are therefore considered small governmental jurisdictions.

FRA has answered hundreds of letters from citizens, community officials, and members of Congress on issues related to this rulemaking. In developing the Final Rule, the agency also considered close to 3,000 comments that were submitted to the docket for this rulemaking in response to the NPRM. Some of these comments addressed issues of concern to small entities. In response to comments, FRA added a considerable amount of flexibility to the rule and extended the implementation schedule by a minimum of two years and a maximum of five years.

FRA will once again notify Congressional representatives whose districts could potentially be impacted by this final rule when it is issued. The agency's eight Regional Grade Crossing Managers and eight Assistant Regional Grade Crossing Managers that worked with the potentially affected communities and railroads during this rulemaking will continue to do so through the implementation stage.

11.8 Conclusion

This is essentially a safety rule that minimizes the potential negative impacts of a Congressional mandate to blow train whistles and horns at highway-rail grade crossings. It contains provisions for exceptions for many small communities and it gives communities that are affected sufficient flexibility to limit the impact of the locomotive horns within their jurisdictions. However, this rule will be responsible for varying amounts of impact on some of the potentially affected small entities, no matter how the outcome for each whistle ban is determined. That is, if a community elects to simply follow the mandate and allow locomotive horns to sound at crossings where a

whistle ban is now in place, there will be a noise impact to any potential small business that exists along that route. If a community elects to implement supplementary safety measures that are necessary to establish a quiet zone, then the local government jurisdiction will be impacted by the cost of such programs or systems. At a minimum, such communities will be burdened with administrative costs. It is important to note that the impacts discussed in this assessment are inherent in the requirements of the law, which allows recognition of supplementary safety measures provided by traffic control and law enforcement authorities of the affected communities.