5.0 Grade Crossings, Communities, Railroads, and Locomotives Affected -

Quiet zones in the following communities have already been established using Supplementary Safety Measures: Burlington, Vermont; Louisville, Kentucky; Cortland, Illinois; Koon Rapids, Minnesota; Spokane County and Yakima, Washington; and McNabb Road, Southeast Florida. Since these quiet zones are in compliance with the requirements of this final rule, this analysis does not include regulatory costs or safety benefits associated with their establishment.

Pre-Rule Quiet Zone Crossings and Communities: Pre-Rule Quiet Zones are segments of a rail line with one or more consecutive public highway-rail crossings at which locomotive horns were not sounded routinely as of October 9, 1996[1] and the date of publication of the interim final rule. For purposes of identifying Pre-Rule Quiet Zones, FRA used the DOT Grade Crossing Inventory database to identify "whistle ban jurisdictions" (WBJ) which are political subdivision/railroad combinations. A city or village might comprise one, two, or more WBJs. Generally, crossings within WBJs have similar collision risk levels (as measured by the FRA Accident Prediction Formulas and information regarding the severity of collisions considered preventable by implementation of this rule) and the communities in which they are in probably have similar desires regarding the sounding of locomotive horns at crossings. This first cut identification of WBJs resulted in the grouping of crossings that are along more than one rail line (sidings, yard track, etc) and have significantly different levels of collision risk in absence of the routine sounding of the locomotive horn. To correct for this, FRA further segmented certain WBJs into two or more WBJs as necessary to group crossings along individual rail lines. To accomplish this, FRA reviewed individual crossing information such as the number of main tracks and train traffic along with risk levels.

FRA is aware of 1,988 crossings located in a total of 260 cities nationwide that are in potential Pre-Rule Quiet Zones. Depending on their risk profile, these crossings may be affected by the final rule requirements for sounding the horn or establishing quiet zones.

Illinois: According to comments from the Chicago Area Transportation Study (CATS), the "Illinois Commerce Commission has excused railroads from routinely sounding their horn at grade crossings that are equipped with automatic warning devices and experienced less than three collisions in the past five years." CATS comments go on to state that, "according to the FRA inventory, 4,828 grade crossings met these criteria. Throughout the state, 1.9 million people reside within 1/4 mile of a Commerce Commission excused grade crossing; 3.8 million people reside within ½ mile and, 6.6 million live within one mile of a Commerce Commission excused grade crossing. A potential problem exists in that FRA does not currently include the Commerce Commission set of 4,828 grade crossings as currently operating under a ban. This is important in that these crossings are similar to a crossing that has a whistle ban in place, since the horn is not currently required to be sounded. Whether or not these crossings are included is

[1] October 9, 1996 was the last time Congress passed legislation addressing restrictions on the sounding of locomotive horns at grade crossings.

critical when evaluating the cost - benefit of the proposed rule. The addition of 3,000 plus grade crossings to the cost side of the cost-benefit analysis is likely to indicate that the costs would exceed the benefits."

Information provided by the Association of American Railroads (AAR) on October 24, 2000 indicated a total of 28 no-whistle freight-only crossings in the Chicago Region and 227 no-whistle crossings on the Metra route system for a total of 255. The AAR noted that "none of these railroads operates at public crossings in Chicago without sounding the whistle unless the crossings are equipped with gates or trains operate at speeds under 10 m.p.h." At approximately the same time Metra informed FRA that 130 crossings on their property were no-whistle crossings. When combined and checked against year 2002 DOT Grade Crossing Inventory records 304 Chicago area crossings were considered no-whistle based upon AAR and Metra sources. In November of 2002, the Illinois Commerce commission (ICC) provided their inventory of crossings in the state of Illinois indicating current whistle status (based on actual practice). It showed 278 no-whistle crossings in the Chicago Region and of those 226 corresponded with the 304 provided by AAR and Metra. FRA also learned of 29 additional quiet crossings in some other suburban Chicago communities for a total of 385. One crossing has since closed. FRA's reconciliation in effect adds no-whistle crossings on Metra's home lines to the AAR estimates and the information from the ICC.

New Quiet Zone Crossings and Communities: For purposes of this rule, a New Quiet Zone is a segment of a rail line with one or more consecutive public highway-rail crossings at which routine sounding of locomotive horns is restricted and which does not qualify as a Pre-Rule Quiet Zone. New Quiet zones can be grouped into two categories: (1) those that will be established based on whistle ban ordinances passed after October 9, 1996 and (2) those that will be established after this rule is issued. FRA is aware of 66 whistle-ban crossings in existence today that were established after October 9, 1996. This analysis assumes that communities will comply with the requirements of this rule for establishing and maintaining New Quiet Zones.

FRA has received numerous requests for guidance from communities desiring to establish quiet zones. In general, such communities have elected to wait for the final rule before proceeding with the actual creation of quiet zones. FRA has specifically received notice form Olmstead Falls and Berea, Ohio; Fargo, North Dakota; Moorhead and Farmington, Minnesota; Salt Lake City, Utah; Richardson, Texas; Peoria, Morrison, and Dekalb, Illinois; Stevens Point and Fox Point, Wisconsin; and Lansing, Michigan.

Some communities once expressed a desire to silence locomotive horns, but the railroads that operate through those communities have rejected the notion due to concerns about safety and liability. In 1991, Consolidated Rail Corporation (Conrail), one of the largest railroads in North America at the time[2], began ignoring whistle bans that had been enacted by local communities

[2] Norfolk Southern Corporation and CSX Transportation have since purchased most of Conrail's railroad assets.

along its rail lines. Other whistle ban ordinances along rail lines of the Norfolk Southern, CSX, Burlington Northern and Santa Fe, Kansas City Southern Railroad, Wisconsin Central, Union Pacific and the former Southern Pacific were also canceled prior to October 9, 1996. FRA believes that these communities will consider establishing New Quiet Zones along these corridors once this final rule is issued.

FRA estimates that communities will consider establishing New Quiet Zones incorporating a total of 867 crossings nationwide (excluding Florida) in the first three years of the rule. Information collected for the Final Environmental Impact Statement from the 2000 Census indicates that, outside of the corridors that currently have whistle bans in place, no persons would be severely impacted at 105 of these crossings and that less than 20 persons are severely impacted by train horn noise at 245 of these crossings. This analysis assumes that communities will establish New Quiet Zones where train horns routinely sound today only to the extent that more than 20 persons are severely affected along the corridor. In addition, communities may not include in New Quiet Zones crossings with less than five daytime train traffic volumes and no nighttime train traffic to the extent that these crossings would require added safety measures. FRA identified 75 such crossings[3] in the remaining group of 517. Therefore, FRA expects that New Quiet Zones established in the first three years of this rule will be comprised of a total of 442 public crossings.

The group of crossings is reduced to 339 when crossings with less than ten daytime trains are excluded as well.

This rule also addresses private crossings. Although FRA does not know how many such crossings would be included in New Quiet Zones, for purposes of this analysis, FRA estimates that for every 20 public crossings there will be an average of 1 private crossing, that is 17 private crossings.

As time passes and rail traffic increases in certain rail corridors situated along highly populated areas, additional New Quiet Zones may be established.

Crossings where locomotive horns sound routinely: Approximately 152,000 public at-grade crossings nationwide will be affected by the requirements for maximum locomotive horn sound levels. All public, at-grade crossings will be affected, except where the locomotive horns will not be sounded**.**

Railroads: All 685 passenger and freight U.S. railroads will be affected by the requirements for maximum locomotive horn sound levels, testing and certification of locomotive horns, and when to use locomotive horns. Railroads are currently responsible for the maintenance of active warning devices installed at grade crossings. Many railroads will incur additional maintenance costs associated with the installation or upgrade of active warning devices.

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[3] Seventy-two of the 75 crossings have less than one per day, the other 3 have an average of less than 5 trains per day.

Locomotives: With the exception of about 150 steam locomotives, all locomotives operating on railroads subject to this rule will be affected by the requirements for maximum locomotive horn sound levels as well as the requirements for the testing and certification of locomotive horns. There are approximately 23,000 locomotives currently in service in the United States. FRA holds this number constant for analysis. Determining the number of future locomotives is complicated by several factors. For example, locomotives that are retired may not be replaced one for one, as a railroad may choose to replace several lower horsepower locomotives with fewer higher horsepower locomotives. Also, rather than retiring locomotives or rebuilding them, they may be sold to Class II or III railroads. Without information on factors affecting the future number of locomotives, FRA holds the number of locomotives constant for analysis.