

believes this may be the reason that the difference in the numbers of collisions at whistle ban and non-ban crossings is so much less than for the other crossing categories. For crossings with passive warnings where trains do not exceed 15 miles per hour and where railroad personnel use flags to warn motorists of the approach of a train, whistle bans would entail a small risk of a collision resulting in an injury. However, at crossings with passive warnings and with higher train speeds, motorists would have no warning of the approach of a train if the train horn were banned. At such crossings, in order to ensure their safety, motorists must search for and recognize an approaching train, and then visually judge whether it is moving, and if so, estimate its arrival time at the crossing, all based only on visual information which may be impaired by hills, structures, vegetation, track curvature, and road curvature as well as by sun angle, weather conditions, or darkness. The driver's decision to stop must be made at a point sufficiently in advance of reaching the crossing to accommodate the vehicle's stopping distance. If other vehicles are following, a sudden decision to stop could result in a rear-end collision with the vehicle being pushed into the path of the train. While FRA's data indicated that the smallest increase in collision frequency is associated with whistle bans at passive crossings, logic suggested that the banning of train horns at passive crossings could entail a much more significant safety risk per unit of exposure (vehicle crossings per train movement). Without the audible train horn warning, motorists would have no indication of the imminent arrival of a train beyond what they could determine visually. For motorists unfamiliar with whistle bans who encounter passive crossings where horns are not sounded, there would be an even greater risk.

##### 5. Statutory Mandate

After reviewing FRA's Florida study, Congress addressed the issue. On November 2, 1994, Congress passed Public Law 103-440 ("Act") which added § 20153 to title 49 of the United States Code. (Subsections (i) and (j) were added on October 9, 1996 when § 20153 was amended by Public Law 104-264.) The Act requires the use of locomotive horns at public grade crossings, but gives FRA the authority to make reasonable exceptions. Section 20153 of title 49 of the United States Code states as follows:

"Section 20153. Audible warning at highway-rail grade crossings.

"(a) Definitions.—As used in this section—

"(1) the term "highway-rail grade crossing" includes any street or highway crossing over a line of railroad at grade;

"(2) the term "locomotive horn" refers to a train-borne audible warning device meeting standards specified by the Secretary of Transportation; and

"(3) the term "supplementary safety measure" (SSM) refers to a safety system or procedure, provided by the appropriate traffic control authority or law enforcement authority responsible for safety at the highway-rail grade crossing, that is determined by the Secretary to be an effective substitute for the locomotive horn in the prevention of highway-rail casualties. A traffic control arrangement that prevents careless movement over the crossing (e.g., as where adequate median barriers prevent movement around crossing gates extending over the full width of the lanes in the particular direction of travel), and that conforms to standards prescribed by the Secretary under this subsection, shall be deemed to constitute an SSM. The following do not, individually or in combination, constitute SSMs within the meaning of this subsection: standard traffic control devices or arrangements such as reflectorized crossbucks, stop signs, flashing lights, flashing lights with gates that do not completely block travel over the line of railroad, or traffic signals.

"(b) Requirement.—The Secretary of Transportation shall prescribe regulations requiring that a locomotive horn shall be sounded while each train is approaching and entering upon each public highway-rail grade crossing.

"(c) Exception.—(1) In issuing such regulations, the Secretary may except from the requirement to sound the locomotive horn any categories of rail operations or categories of highway-rail grade crossings (by train speed or other factors specified by regulation)—

"(A) that the Secretary determines not to present a significant risk with respect to loss of life or serious personal injury;

"(B) for which use of the locomotive horn as a warning measure is impractical; or

"(C) for which, in the judgment of the Secretary, SSMs fully compensate for the absence of the warning provided by the locomotive horn.

"(2) In order to provide for safety and the quiet of communities affected by train operations, the Secretary may specify in such regulations that any SSMs must be applied to all highway-rail grade crossings within a specified distance along the railroad in order to be

excepted from the requirement of this section.

"(d) Application for Waiver or Exemption.—Notwithstanding any other provision of this subchapter, the Secretary may not entertain an application for waiver or exemption of the regulations issued under this section unless such application shall have been submitted jointly by the railroad carrier owning, or controlling operations over, the crossing and by the appropriate traffic control authority or law enforcement authority. The Secretary shall not grant any such application unless, in the judgment of the Secretary, the application demonstrates that the safety of highway users will not be diminished.

"(e) Development of Supplementary Safety Measures.—(1) In order to promote the quiet of communities affected by rail operations and the development of innovative safety measures at highway-rail grade crossings, the Secretary may, in connection with demonstration of proposed new SSMs, order railroad carriers operating over one or more crossings to cease temporarily the sounding of locomotive horns at such crossings. Any such measures shall have been subject to testing and evaluation and deemed necessary by the Secretary prior to actual use in lieu of the locomotive horn.

"(2) The Secretary may include in regulations issued under this subsection special procedures for approval of new SSMs meeting the requirements of subsection (c)(1) of this section following successful demonstration of those measures.

"(f) Specific Rules.—The Secretary may, by regulation, provide that the following crossings over railroad lines shall be subject, in whole or in part, to the regulations required under this section:

"(1) Private highway-rail grade crossings.

"(2) Pedestrian crossings.

"(3) Crossings utilized primarily by nonmotorized vehicles and other special vehicles.

"(g) Issuance.—The Secretary shall issue regulations required by this section pertaining to categories of highway-rail grade crossings that in the judgment of the Secretary pose the greatest safety hazard to rail and highway users not later than 24 months following the date of enactment of this section. The Secretary shall issue regulations pertaining to any other categories of crossings not later than 48 months following the date of enactment of this section.