

CRS Insights

Rail Safety Efforts Miss Leading Cause of Fatalities

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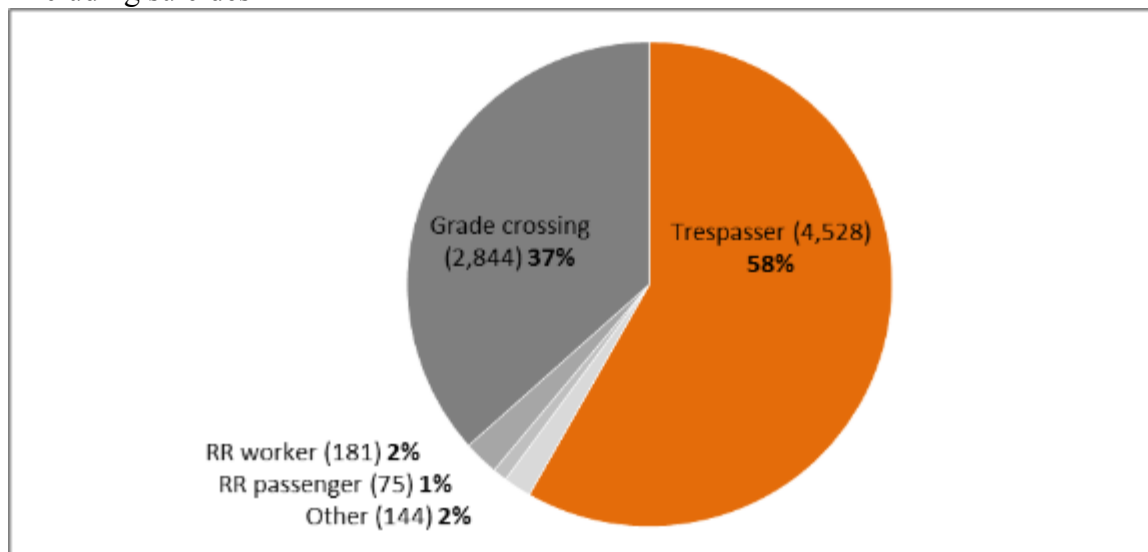
April 2, 2015 (IN10257)

As it debates reauthorization of the Rail Safety Improvement Act of 2008 (RSIA08; [P.L. 110-432](#)), Congress is focusing on steps to prevent train derailments and collisions. Such incidents often receive extensive publicity and cause harm to bystanders, such as the residents of Mount Carbon, WV, who were forced to evacuate after a train carrying crude oil derailed and burned on February 16, 2015.

Far less attention has been devoted to [trespassing](#), although it is a much greater cause of rail-related fatalities than derailments and collisions combined. Since 2005, nearly three-fifths of deaths in rail incidents have been pedestrian trespassers (see [Figure 1](#); note that the trespassing deaths in the figure do not include suicides).

Figure 1. Rail-Related Fatalities, 2005-2014

Excluding suicides



Source: CRS presentation of FRA Safety Data; <http://safetydata.fra.dot.gov/OfficeofSafety/Default.aspx>.

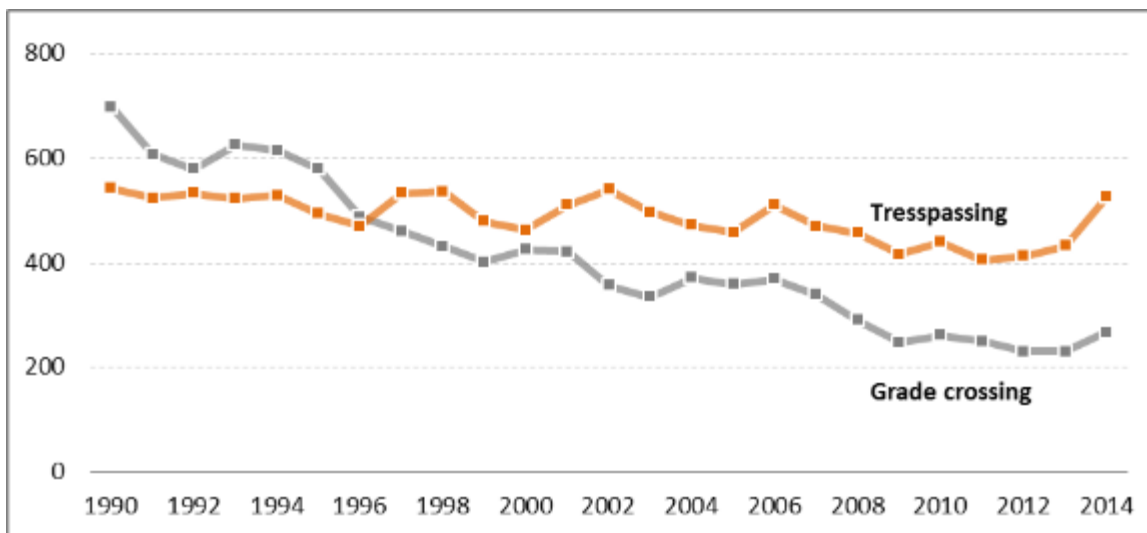
In 2014, there were 526 trespasser deaths, 419 trespasser injuries, 213 suicides, and 40 injuries from suicide attempts on rail property. This compares with 2 deaths and 128 injuries in train derailments and collisions. These figures are only for freight, commuter, and intercity passenger railroads, and exclude subways and light rail systems.

No Downward Trend in Trespasser Deaths

Efforts by railroads and government agencies have steadily reduced most types of rail-related fatalities in recent years. For example, the number of deaths in grade-crossing incidents has fallen from 698 in 1990 to fewer than 300 in 2014. In contrast, there has been no progress in reducing the number of deaths from trespassing, which has been the leading cause of rail-related fatalities since 1997 (see [Figure 2](#)). RSIA08 has not had a visible impact on the number of trespassing incidents or fatalities.

Figure 2. Trespassing and Grade-Crossing Fatalities

Trespassing does not include suicides

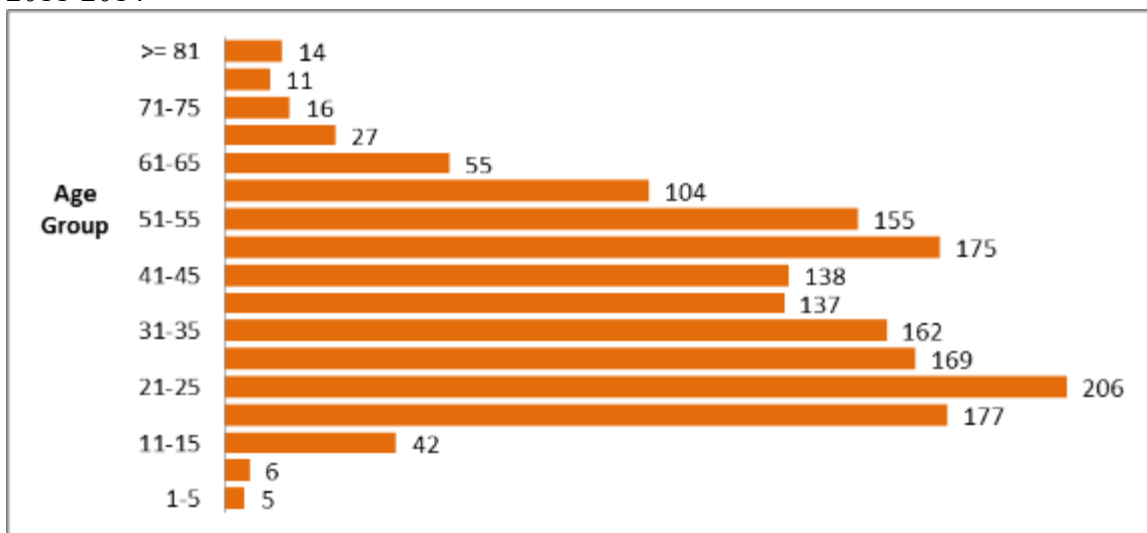


Source: CRS presentation of FRA Safety Data; <http://safetydata.fra.dot.gov/OfficeofSafety/Default.aspx>.

Efforts to reduce grade-crossing deaths focus on education of an identifiable population—automobile drivers, particularly young drivers. Those killed while trespassing, on the other hand, are not an easily identifiable population subset. They are not clustered in any particular age-group (see [Figure 3](#)), although the majority is male. The most populous states (California, Texas, Illinois, and New York) also have the most deaths. The Federal Railroad Administration (FRA) has developed a location [map](#) of trespassing deaths and injuries from June 2011–November 2014.

Figure 3. Trespass Fatalities by Age

2011-2014



Source: CRS presentation of FRA Safety Data; <http://safetydata.fra.dot.gov/OfficeofSafety/Default.aspx>.

Most trespassers are simply taking a shortcut along rail tracks, although some are on the tracks for recreational purposes. Slightly more deaths occur in the warmer months. Although most fatal incidents involve trespassers walking on or beside the tracks, some victims are killed lying, standing, or sitting on or beside the tracks. The wearing of ear or headphones, distraction by cellphones, and alcohol or drugs are believed to play a role in many deaths. Trespassers may not appreciate that once an engineer sees them, it may take more than a mile for the train to stop.

The "3 E's" Approach

Although the freight railroads, Amtrak, and many commuter railroads have police forces that could arrest trespassers, the industry has devoted most of its effort to educating the public that railroad tracks are far riskier

than they appear. The rail industry and the U.S. Department of Transportation fund [Operation Lifesaver](#), a national nonprofit organization that administers a public education program about grade-crossing safety and prevention of trespassing. It has a paid staff of five and relies on 2,000 volunteers (many of them current or retired railroad employees) to educate the public about the potential dangers of railroad rights-of-way. It has been [found effective](#) in reducing collisions at grade crossings.

At a recent National Transportation Safety Board (NTSB) [forum](#) on rail trespassing, panelists expressed the need for further research on trespassing activity in order to better identify the intended audience for education programs. It was noted that FRA collects data only on trespassing activity that results in a fatality or injury, while individual railroads may have much larger data sets of trespassing encounters that might yield more actionable information. At the forum, it was also noted that Hollywood often depicts rail trespassing as an acceptable or even attractive activity, and instead could be enlisted to warn of its dangers.

Education about the dangers of rail trespassing is part of a three-pronged ("3 E's") approach that also includes engineering (warning signs, fencing) and enforcement (policing, fines). Freight railroads seek to reduce trespassing because, among other reasons, a death or injury results in a crime scene investigation, delaying train movement. Police encounters with trespassers, supplemented with information from locomotive crews and perhaps locomotive-mounted cameras, can be used to identify trespassing "hot spots" and then evaluate abatement options. At the NTSB forum, a Los Angeles police official noted that Transportation Security Administration funding for surveillance and sensors along tracks had been helpful in identifying high-risk areas for trespassing.

Issues for Congress

FRA's FY2016 [budget request](#) asks Congress to fund eight trespass prevention managers to develop site-specific mitigation plans in each of FRA's regions. These plans would utilize lessons learned from two pilot tests: one in Pittsford, NY, indicating that surveillance equipment linked to automatic warnings can be effective in reducing the number of trespassing incidents, and one in West Palm Beach, FL, that validated a process for organizing local stakeholders in order to identify and implement mitigation measures.

In RSIA08 (§206), Congress authorized FRA to make a total of \$5 million in grants to Operation Lifesaver from FY2010 through FY2013. (Operation Lifesaver also receives funding specific to grade-crossing safety through the Federal Highway Administration). However, there is no dedicated program devoted to rail trespass prevention analogous to the so-called "Section 130 program" (in Title 23 of the *U.S. Code*), which provides \$220 million annually from the federal Highway Trust Fund for train warning devices and other safety improvements at rail grade crossings.