

NTSB Most Wanted List

Critical changes needed to reduce transportation accidents and save lives.

Implement Positive Train Control Systems

The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating every civil aviation accident the United States and significant accidents in other modes of transportation – railroad, highway, marine and pipeline. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates the resources of the Federal Government and other organizations to provide assistance to victims and their family members impacted by major transportation disasters.



**National
Transportation
Safety Board**

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What is the issue?

Trains are a part of daily life, whether transporting passengers or cargo. But we do not have to accept train accidents as a given, particularly those involving head-on collisions. Such collisions are often due to human factors, such as fatigue, sleeping disorders, use of medications, and distractions. Fatigue played a role in a July 2005 train collision in Anding, Mississippi, that killed all four operators. In May 2008 in Newton, Massachusetts, the operator of a transit train was killed after she fell into a microsleep and her train collided with another train. And once again, in April 2011 near Red Oak, Iowa, fatigue was the issue when two trains collided, killing two crew members.

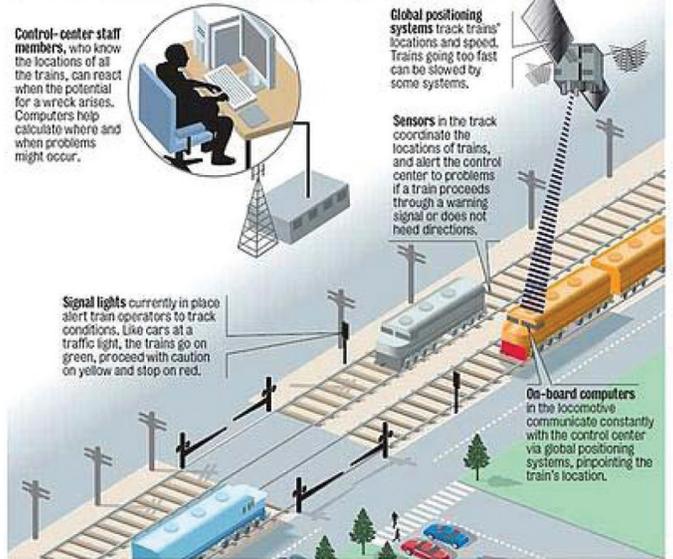
What can be done . . .

Although human error cannot be eradicated, there is technology capable of supplementing the human operation of trains—positive train control. Such systems provide a safety redundancy by slowing or stopping a train that is not being operated in accordance with signal systems and operating rules, as was the case in every accident listed above. Positive train control prevents train-to-train collisions and overspeed derailments. For years, it has been in place on Amtrak trains in the Northeast, but for positive train control to reach its greatest safety potential, it must be implemented on all passenger and freight trains. With this technology, even if the train operator has fallen asleep or is distracted in some way, human lives will not be at risk.

Statistics

Although legislation enacted in the aftermath of the Chatsworth, California, collision mandated positive train control systems by 2015, as of March 9, 2011, 10,000 miles of track were exempt from this mandate—which is a troubling fact. The Federal Railroad Administration accident database for 2011 attributes human factors issues as causal to most train collisions. Ninety-six head-on, rear-end, and side collision accidents occurred in 2011, and 83 percent of those accidents were determined to be caused by human factors. Positive train control can provide the critical redundancy to compensate for human error.

RAIL SAFETY: After a freight train and Metrolink train collided Sept. 12 in Chatsworth, killing 25 people, federal lawmakers passed a bill requiring railroads to install positive train control systems by 2015. Thursday's BSNF railway freight vs. Metrolink commuter train crash in Rialto has prompted questions about that deadline. Here's how the systems prevent railroad collisions.



Picture from Landairsea.com

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