

Railroads: Moving America Safely

ASSOCIATION OF AMERICAN RAILROADS

MAY 2013

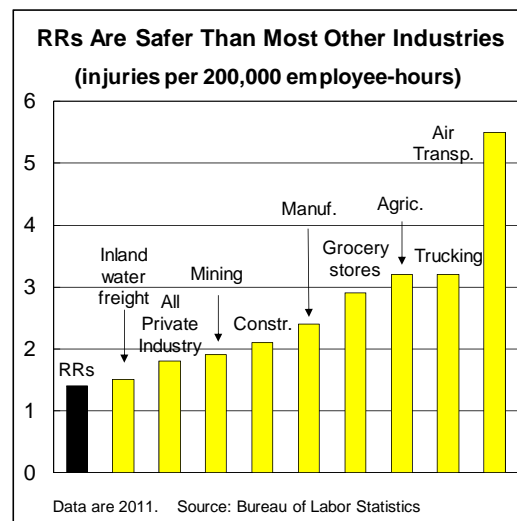
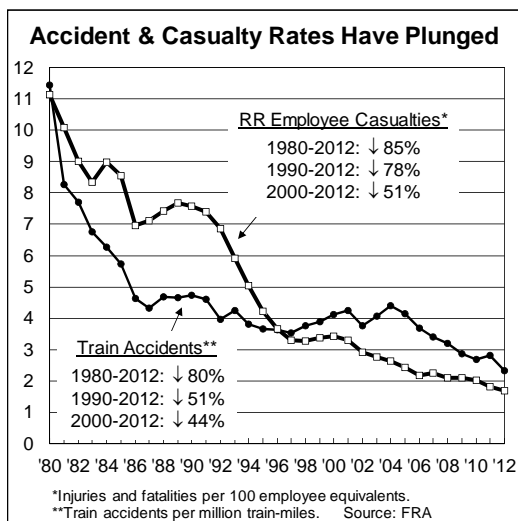
Summary

Nothing is more important to America's railroads than safety, and **today railroads are safer than ever before**. The train accident rate in 2012 was down 80 percent from 1980 and down 44 percent from 2000; the employee injury rate was down 85 percent from 1980 and down 51 percent from 2000; and the grade crossing collision rate was down 82 percent from 1980 and down 45 percent from 2000. **Each of these categories achieved record lows in 2012.**

Railroads are proud of these improvements, but they know the safety challenge never ends. Working together with their employees, suppliers, customers, and regulators at the Federal Railroad Administration and elsewhere in government, railroads are constantly developing and implementing new technologies and operating practices to further improve rail safety.

America's Railroads Are Safer than Ever

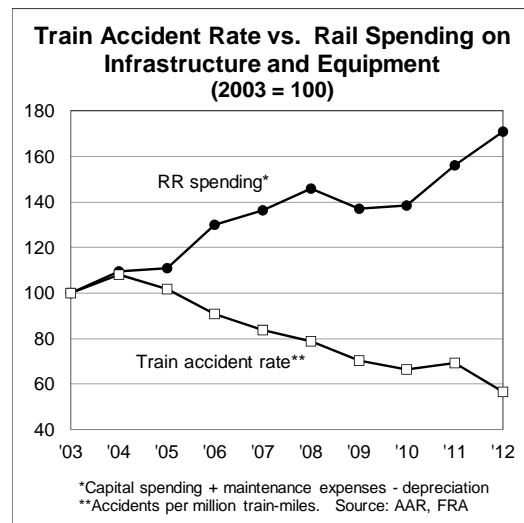
- Overall, 2012 was the safest year ever for U.S. railroads, beating the previous record set in 2011. From 1980 to 2012, the **train accident rate fell 80 percent**, the **rail employee injury rate fell 85 percent**, and the **grade crossing collision rate fell 82 percent**. Since 2000, the declines have been 44 percent, 51 percent, and 45 percent, respectively, indicating that rail safety continues to improve. 2012 saw record lows in each of these categories.
- America's railroads today have lower employee injury rates than most other major industries, **including trucking, inland water transportation, airlines, agriculture, mining, manufacturing, and construction** — even lower than grocery stores.



Working to Ensure That Rail Safety Continues to Improve

Railroads devote enormous resources in a multi-pronged strategy to help ensure that rail safety continues to improve:

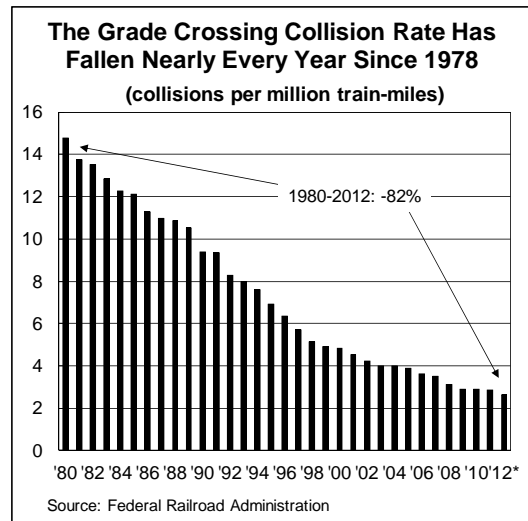
- In recent years, America's freight railroads have been **reinvesting more than ever before — including more than \$25 billion in 2012 — on infrastructure and equipment**. Nearly all of these investments enhance safety in one way or another. The more they are able to reinvest, the safer they become (see chart at right).
- Railroads are constantly incorporating **new technologies** to improve rail safety. A few of the many examples include **sophisticated detectors** along tracks that identify defects on passing rail cars; **ground-penetrating radar** that identifies problems below ground, such as excessive moisture, that could destabilize track; and **specialized rail cars** that use sophisticated instruments to identify defects in tracks. Many of the industry's technological advancements are developed and refined at the Transportation Technology Center, Inc. (TTCI) in Pueblo, Colorado, a wholly owned subsidiary of the Association of American Railroads that is widely considered to be the finest rail research facility in the world.
- **Virtually every aspect of rail operations is subject to oversight by the Federal Railroad Administration (FRA)**, sometimes in minute detail. Among many other areas, railroads are subject to stringent FRA regulation regarding track and equipment inspections; employee certification; allowable operating speeds; and the capabilities and performance of signaling systems. Hundreds of FRA personnel perform regular inspections of rail facilities and operations throughout the country. In many states, FRA safety inspectors are supplemented by state safety inspectors. Railroads are also subject to safety oversight by a plethora of other federal agencies, including the Occupational Safety and Health Administration (OSHA), the Pipeline and Hazardous Materials Safety Administration (PHMSA), and the Department of Homeland Security (DHS).



Improving Safety at Grade Crossings and on Railroad Property

- From 1980 through 2012, grade crossing **collisions fell 82 percent**, grade crossing **injuries fell 77 percent**, and grade crossing **fatalities fell 72 percent**. The grade crossing collision rate — defined as collisions per million train-miles — fell 82 percent from 1980 through 2012. It has fallen nearly every year since 1978.
- This huge improvement is due in part to the federal **Section 130 program**, which allocates more than \$200 million per year to states for grade crossing improvements.
- Railroads themselves spend **hundreds of millions of dollars each year** on grade crossing improvements and maintenance. They also work with local authorities to close unneeded or redundant grade crossings.

- Intensive education efforts by railroads, working with state and local law enforcement officials and others (especially **Operation Lifesaver**), have improved public awareness about safe behavior around grade crossings and on railroad property.
- It is an unfortunate reality that too many people inappropriately use railroad property for short cuts, recreation, or other purposes, sometimes with terrible results. Railroads are engaged in ongoing efforts with Operation Lifesaver and others to educate the public that, for their own safety, they should stay off rail property.



Moving Hazardous Materials Safely

In 2010, U.S. railroads transported approximately 1.8 million carloads of hazardous materials, including 77,000 carloads of “toxic inhalation hazard” (TIH) materials. Railroads are the safest mode for transporting hazardous materials, and **it is safer to ship hazmat by rail today than ever before.**

- In 2010, **99.998 percent** of rail hazmat shipments reached their destination without a release caused by a train accident. Rail hazmat accident rates are **down 91 percent since 1980 and 38 percent since 2000.**
- Steps railroads take to enhance rail safety in general, including the steps outlined above, also enhance the safety of hazmat transportation, but railroads also have long been taking concrete steps to make hazmat transportation safer. Just a few examples:
 - ✓ Railroads and a number of federal agencies have jointly developed the **Rail Corridor Risk Management System (RCRMS)**, a sophisticated statistical routing model designed to ensure that TIH materials are transported on routes that pose the least overall safety and security risk.
 - ✓ Railroads follow stringent TSA **“chain of custody” requirements** for rail cars carrying TIH materials. Transfer of TIH cars from a shipper to a railroad, from one railroad to another, and from a railroad to a receiver must be carefully documented.
 - ✓ Around half of all chemicals, and nearly all TIH materials, are transported in tank cars. **Tank cars built today are vastly improved** over earlier generations of tank cars, with higher grade steel, better thermal protection, improved valves and fittings, often thicker tanks, and many other improvements.
 - ✓ Railroads are installing **“positive train control” (PTC)** technology on rail main lines used to transport TIH materials. PTC is a safety technology designed to automatically stop or slow a train before certain types of accidents occur.