

# Freight Rail Facts & Figures

## SAFETY

- In March 2023, freight railroads announced [seven key safety measures](#) to help drive accidents to zero, including installing approximately 1,000 new detectors. Freight railroads are the safest way to move goods over land, and the last decade was the [safest ever](#) for U.S. railroads.
  - **Mainline:** Class I railroads' mainline accident rate is down 49% since 2000. For all railroads, that rate has declined 44% since 2000.
  - **Track & Equipment:** [Track-caused](#) accidents are down 55% since 2000 and are at their lowest-ever rate across the entire industry. Equipment-caused accidents are down 21% since 2000 but increased by 15% compared to 2021.
  - **Derailment:** For all railroads, the derailment rate is down 31% since 2000. Despite that longer-term positive trend, it was up by 5% year-over-year.
  - **Employees:** Per Class I [railroad employee](#), the injury rate has dropped 63% since 2000 and is at an all-time low. America's railroads today have lower employee injury rates than most other major industries, including trucking, manufacturing, construction — even grocery stores.
  - **Hazmat:** More than 99.9% of all [hazmat](#) moved by rail reaches its destination without a release caused by a train accident. Since 2000, the hazmat accident rate is down 78% to an all-time low. Railroads train tens of thousands of [first responders](#) each year and developed the [AskRail™ app](#), which helps emergency responders effectively and safely respond to an incident by providing immediate information about railcars carrying hazmat.
  - **Grade Crossing:** [Grade crossing](#) collisions were down 23% last year compared to 2000 and the total number of public grade crossings has declined by 10% since 2005. However, along with trespass incidents, preventable accidents at grade crossings remain persistent challenges across the rail industry. Over 95% of rail-related fatalities are trespassers or grade crossing users. The combined total of trespasser and suicide fatalities for 2022 increased by 4% from 2021.

## INVESTMENTS

- From 1980 to 2022, America's freight railroads, the vast majority of which are privately owned, [spent approximately \\$780 billion](#) — averaging well over \$23 billion a year over the past five years — on capital expenditures and maintenance expenses related to locomotives, freight cars, tracks, bridges, tunnels and other infrastructure and equipment. That is the equivalent of 39 cents out of each revenue dollar between 1980 and 2022.
- Over the last 15 years, freight railroads have invested, on average, \$24.2 billion of their own capital into improving and maintaining their networks. To put this into perspective, that is \$1 billion more than the historic investments Congress has made this year in *rail and multi-modal programs* in the IIJA and the omnibus combined.

- In the last 10 years, U.S. Class I railroads have spent more than \$250 billion on infrastructure and equipment and have laid approximately six million tons of new rail.
- The average U.S. manufacturer historically spends about 3% of revenue on capital expenditures. The comparable figure for U.S. freight railroads between 2012 and 2021 averaged more than 18% or [six times higher](#).
- The American Society of Civil Engineers (ASCE) awarded America's rail network the highest grade in its last two [report cards](#).

## FUEL-EFFICIENCY

- Freight railroads account for roughly 40% of U.S. long-distance freight volume (measured by ton-miles) — more than any other mode of transportation. However, they account for just 0.5% of total U.S. greenhouse gas emissions, according to EPA data, and just 1.7% of transportation-related greenhouse gas emissions.
- Railroads are the most [fuel-efficient](#) way to move freight over land, moving one ton of freight nearly 500 miles per gallon of fuel, on average.
- On average, railroads are three to four times more fuel-efficient than trucks. A single freight train can replace several hundred trucks.
- Today's fuel-efficient locomotives have emitted fewer criteria pollutants and GHGs over the past decade. Idling-reduction technology, such as stop-start systems, can reduce unnecessary idle time by 50%. Advanced software improves fuel efficiency by up to 14% by calculating the most efficient speed, spacing and timing of trains.
- Greenhouse gas emissions are directly related to fuel consumption. That means moving freight by rail instead of truck lowers greenhouse gas emissions by up to 75%, on average.
- If 10% of the freight shipped by the largest trucks were moved by rail instead, greenhouse gas emissions would fall by more than 20 million tons annually. That's the equivalent of removing 4.0 million cars from our highways or planting 300 million trees.
- In 2022 alone, U.S. freight railroads consumed 765 million fewer gallons of fuel and emitted 8.6 million fewer tons of carbon dioxide than they would have if their fuel efficiency had remained constant since 2000.
- If railroads did not move freight in the [United States](#), it would take over 83 million additional trucks traveling on public roadways and would take about four times more fuel than rail to handle the freight Americans rely on every day.

## EMPLOYMENT

- Class I train and engine (T&E) employment in April 2023 was 51,556, which is up 504 (1.0%) over March 2023 and up 5,789 (12.6%) over January 2022. As of April 2023, freight railroads are close to a pre-pandemic T&E employment number, which was 51,801.
- In 2020, non-unionized U.S. Class I freight rail employees earned an [average annual compensation of \\$135,700](#), including wages and benefits.

- Approximately 85% of Class I rail employees are unionized, and rail employees are represented by one or more of a dozen different labor unions. The Railway Labor Act governs [collective bargaining](#) between freight railroads and their employees.
- The average compensation of rail workers involved in the latest round of negotiations ranks within the top 10% of all industries, with an average total compensation of more than \$126,000 in 2020. The final contracts will provide employees with a 14.1% wage increase effective immediately and a 24% wage increase by 2024, the most substantial in decades. Estimates show that by the end of the agreement, the average rail worker's total compensation will reach about \$160,000 per year. The agreements will also provide about \$16,000, on average, in immediate payouts to unionized Class I freight rail employees.
- The average unionized Class I freight rail employee currently receives three weeks of [paid vacation](#) and up to 14 days for personal leave. More senior employees receive up to seven weeks of paid vacation.
- Rail industry employees are covered by the Railroad Retirement System, which is separate from social security and is funded by railroads and their employees. In 2021, nearly 500,000 beneficiaries received retirement and survivor benefits totaling \$13.4 billion from the system.

## CAPACITY & SERVICE

- The freight rail network is nearly 140,000 miles. There are six Class I railroads (railroads with 2021 revenue of at least \$900 million) and approximately 615 short line railroads (Class II and III). Short lines and Class I railroads. Class I railroads account for around 67% of freight rail mileage, 87% of employees and 94% of revenue.
- Railroads operate in [49 states](#) and the District of Columbia, with short lines running over about 44,000 route miles and Class I railroads running over about 92,000 route miles.
- Approximately 70% of the miles traveled by [Amtrak](#) trains are on tracks owned by others, mainly freight railroads. Freight rail accounts for around 40% of long-distance ton-miles — more than any other mode of transportation.
- The Federal Highway Administration [forecasts](#) that total U.S. freight movements will rise from around 19.3 billion tons in 2020 to 25.1 billion tons in 2040 — a 30% increase.
- For 150 years, [Chicago](#) has remained the nation's busiest rail hub. All six U.S. Class I railroads operate there, as do many non-Class I railroads. Approximately one in four rail carloads and intermodal units originate, terminate or pass through the Chicago area.
- Since the [Staggers Act](#) was passed in 1980, average rail rates adjusted for inflation have fallen 40%. This means the average rail shipper can move much more freight for the same price it paid more than 40 years ago.

## INDUSTRIES WE SUPPORT

- Freight rail is part of an integrated network of trains, trucks and barges that ships around [61 tons of goods](#) per American every year.
- In a typical year, freight railroads haul around 1.6 billion tons of raw materials and finished goods. Redesigned railcars have helped increase average tonnage. In 2022, the average freight train carried 4,089 tons, up from 2,923 tons in 2000.
- **Agricultural & Food Products:** In a typical year, railroads haul around 1.6 million carloads of grain and other farm products; more than 1.7 million carloads of [food products](#); and several hundred thousand carloads of fertilizers and the raw materials that go into making them. Agricultural and food products include wheat, corn, soybeans, animal feed, beer, birdseed, canned produce, corn syrup, flour, frozen chickens, sugar, wine and countless other food products. In recent years, they have also moved an average of 835,000 tons of pet food annually. Railroads typically carry more than 60,000 carloads of food and agriculture products per week. One railcar can carry enough:
  - Flour for approximately 258,000 loaves of bread or
  - Corn for the lifetime feeding requirements of 37,000 chickens or
  - Barley for around 94,000 gallons of beer or
  - Soybeans for about 400,000 pounds of tofu.
- **Grain:** The United States is the world's largest [grain](#) producer. Railroads account for well over a third of U.S. grain export movements, according to the USDA. In 2022, U.S. Class I railroads moved 1.5 million carloads of grain. Corn is by far the highest-volume grain carried by railroads. As of early 2023, the North American railroad grain car fleet consisted of around 273,000 cars (owned by railroads and non-railroads) with a 1.4 billion cubic feet capacity.
- **Chemicals:** Freight railroads moved 2.3 million carloads of plastics, fertilizers and other [chemicals](#) in 2022. Chemicals help clean our water, fertilize our farms, package our food, build our cars and homes, protect our health, and enhance our well-being in thousands of other ways. One rail tank car of anhydrous ammonia carries the equivalent of around four tanker trucks and enough to fertilize 770 acres of corn.
- **Coal:** Freight railroads moved 3.4 million carloads of [coal](#) in 2022. While rail coal volumes have declined in recent years, railroads account for around 70% of U.S. coal deliveries to power plants. One rail car can carry enough coal to power 20 homes for a year.
- **Construction, Pulp & Paper:** Freight railroads move around three million carloads of [construction-related](#) materials in a typical year. One rail car to carry as much crushed stone, sand and gravel as five trucks. The pulp and paper industry is one of the largest industries in the world. In a typical year, America's freight railroads carry around 700,000 carloads of pulp and paper products.
- **Crude Oil:** In 2022, the average carload of [crude oil](#) originated in the United States carried around 650 barrels of oil. Based on that, the 68,000 carloads of crude oil originated by U.S. Class I railroads in 2022 was equivalent to around 121,000 barrels per day, or approximately 1.0% of U.S. production. One rail carries enough crude oil to make approximately 13,500 gallons of gasoline.

- **Intermodal:** In 2022, U.S. rail [intermodal](#) volume was 13.5 million units, and intermodal accounted for approximately 27% of revenue for major U.S. railroads, more than any other single rail traffic segment. It's been the fastest-growing major rail traffic segment over the past 25 years. Around half of rail intermodal volume consists of imports or exports, reflecting the vital role intermodal plays in international trade.
- **Motor Vehicles & Parts:** Freight railroads are part of every production stage of an automobile — from moving raw materials and auto parts to delivering a finished car or truck to dealerships across the nation. Freight railroads carry 1.8 million carloads in a typical year. With a single train capable of carrying hundreds of cars, freight rail transports around 75% of the [new cars and light trucks](#) purchased in the U.S. Despite pandemic-related shortages, in 2022, automakers sold nearly 14 million new cars and light trucks in the United States, an achievement made possible in large part by freight railroads.