

## Why GAO Did This Study

The Rail Safety Improvement Act of 2008 (RSIA) overhauled requirements for how much time certain freight railroad workers can spend on the job (called “hours of service”). Changes included limiting the number of consecutive days on duty before rest is required, increasing minimum rest time from 8 to 10 hours, and requiring rest time to be undisturbed. RSIA also provided for pilot projects and waivers. RSIA’s changes became effective for freight railroads in July 2009. GAO was asked to assess (1) the impact of these changes on covered train and engine (T&E) employees, including implications for fatigue, (2) the impact of the changes on the rail industry, and (3) actions the Federal Railroad Administration (FRA) has taken to oversee compliance with hours of service requirements and implement RSIA provisions for pilot projects and waivers. To perform this work, GAO analyzed covered employee work schedules and used models to assess fatigue, surveyed the railroad industry, analyzed FRA inspection and enforcement data, and interviewed federal and railroad officials as well as fatigue and sleep experts.

## What GAO Recommends

FRA should, among other things, assess the fatigue risk of work performed during night hours and develop data from pilot projects and waivers to help assess fatigue issues. The Department of Transportation raised concerns about findings related to the oversight process and provided additional clarifying information. Based in part on this additional information, GAO withdrew part of a recommendation. GAO also made other clarifications in the report.

View [GAO-11-853](#) or key components. To view the e-supplement online, click [GAO-11-894SP](#). For more information, contact Susan Fleming at (202) 512-2834 or [flemings@gao.gov](mailto:flemings@gao.gov).

## FREIGHT RAILROAD SAFETY

### Hours of Service Changes Have Increased Rest Time, but More Can Be Done to Address Fatigue Risk

## What GAO Found

According to GAO’s analysis of covered employee work schedules, RSIA’s requirements led to changed work schedules, increased rest time, and reduced risk of fatigue for covered T&E employees. RSIA’s consecutive work day limits and rest requirements contributed to work schedule changes and increases in rest time. Increased rest time also led to equivalent decreases in the hours that covered employees worked. Overall, GAO found, using an FRA-validated fatigue model, that the time covered employees spent working at a high risk of fatigue—a level associated with reduced alertness and an increased risk of errors and accidents—decreased by about 29 percent for employees of class I railroads (those with the largest revenues) and by about 36 percent for employees of selected class II railroads (those with smaller revenues). GAO’s analysis also shows that there are further opportunities to reduce fatigue risk. Specifically, RSIA’s changes did not result in material decreases in night work, yet scientific literature and GAO’s analysis show night work represents a major factor in fatigue risk.

As might be expected from changes aimed at improving safety by reducing covered employee fatigue, the railroad industry reported that RSIA’s hours of service changes had operational and administrative effects on it, some of which increased some railroads’ one-time or ongoing costs. GAO did not determine how RSIA’s changes affected railroads’ earnings; but the act took effect as the economy was starting to recover from the recession that began in late 2008. Through its industry survey and interviews, GAO found that RSIA’s changes affected railroad operations, including changes to crew and train schedules and increases in staffing levels. Railroad officials GAO spoke with attributed these changes to RSIA’s consecutive work day limits and rest requirements, both of which acted to reduce people’s availability to work. To maintain operations while complying with the law, railroad officials told GAO they, among other things, hired new employees or brought employees back from furlough. GAO estimated that adding people—120 to 500 each by some class I railroads—increased these railroads’ annual costs by \$11 million to \$50 million. Administrative effects reported by railroads included a need for railroads to revise their hours of service timekeeping systems.

FRA uses a risk-based approach to oversee compliance with hours of service and other safety requirements, analyzing inspection and accident data to help target inspections to activities where noncompliance is associated with a greater risk of accidents. GAO’s analysis of inspection and enforcement data for the years before RSIA took effect and for the following year show it is too early to determine if FRA has changed the priority it assigns to overseeing hours of service requirements or if a change in priority is warranted. FRA has not been able to implement RSIA-required pilot projects because no railroads have chosen to participate. Nor has it approved voluntary pilot projects designed to test the fatigue-reduction potential of alternatives to RSIA requirements. FRA has approved petitions for waivers of compliance with hours of service requirements for some railroads, but is not required by RSIA to collect data on the safety effects of the approved alternatives. Data from pilot projects—if implemented—and waivers could be used to improve FRA’s assessment of fatigue issues.