

# Putting profit before safety: Colorado's Rail Safety Imperative

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# Presentation Overview

## Rail safety impacts Colorado's communities, workers, and environment

- Colorado can and should legislate on rail safety issues
- Colorado has an outsized stake in rail safety
  - Unique, rugged geography
  - Achieving statutory emissions reduction goals
  - Highly sensitive, fragile ecosystem
- Colorado can prevent derailments, a main safety concern
  - Insufficiency of trackside detection
  - Long trains
  - Blocked crossings

A one size fits all approach is not the best solution...State and local governments are better positioned to address the unique road and emergency service characteristics in a particular state.

-Keith Washington, Deputy Secretary, Department of Transportation

**Increased rail usage is vital for safer and more sustainable Colorado communities...**



# Rail is the safest way to move hazardous material

## US hazmat incidents by shipping method

Trucks carry about twice as much hazardous materials as trains, but the number of reported incidents, including spills, injuries and evacuations, is far higher.

Highway Rail Air

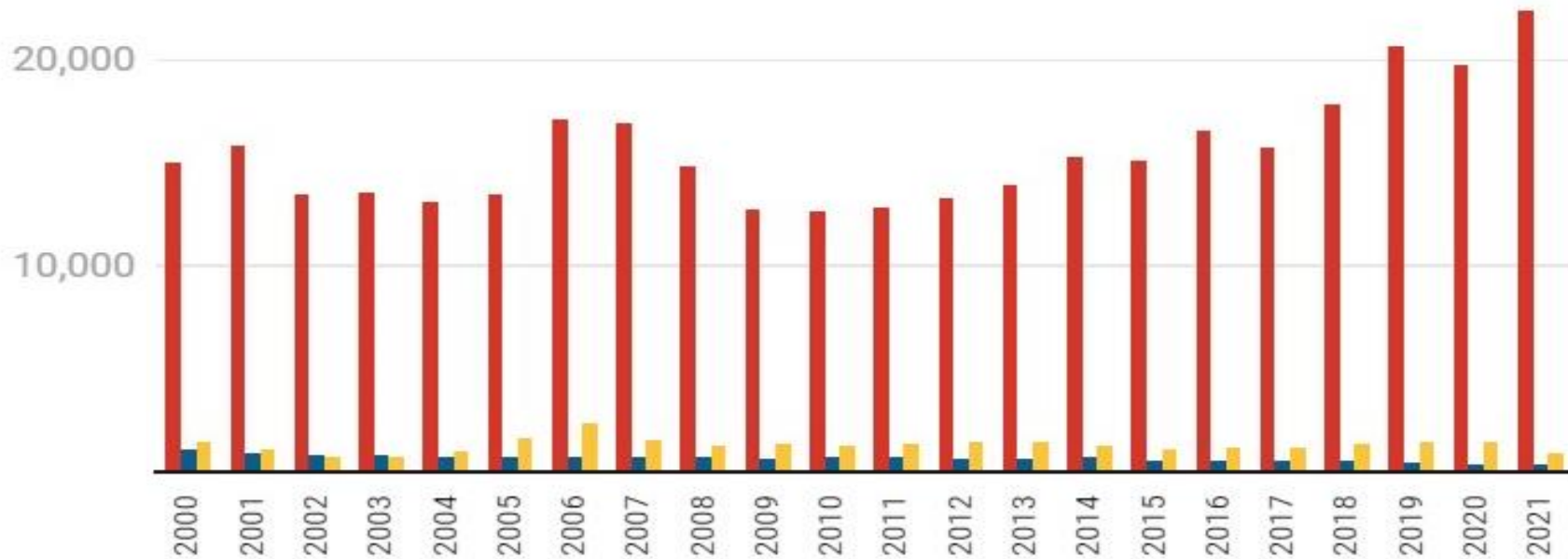


Chart: The Conversation/CC-BY-ND • Source: [U.S. Bureau of Transportation Statistics](#) • [Get the data](#) • [Download image](#) • Created with [Datawrapper](#)

“Federal data shows that rail has had **far fewer incidents, deaths and damage** when moving hazardous materials in the U.S. than trucks.” ([source](#), **PBS 2/23**)



**Rail plays a key role  
in Colorado's  
greenhouse gas  
reduction goals**

- Colorado transportation emissions reduction goals will benefit from shipping more goods by rail:

- Reduces vehicles on highway leading to less traffic (safer, less idling on highways)
- Less wear and tear on highways
- Heavy and medium duty vehicles fleets hard to electrify

## US freight transportation in 2016

About 40 percent of freight is moved by road but its consumption of energy and contribution to greenhouse gas emissions is higher compared to other modes of transportation.

■ Road/truck ■ Rail ■ Pipeline ■ Waterways

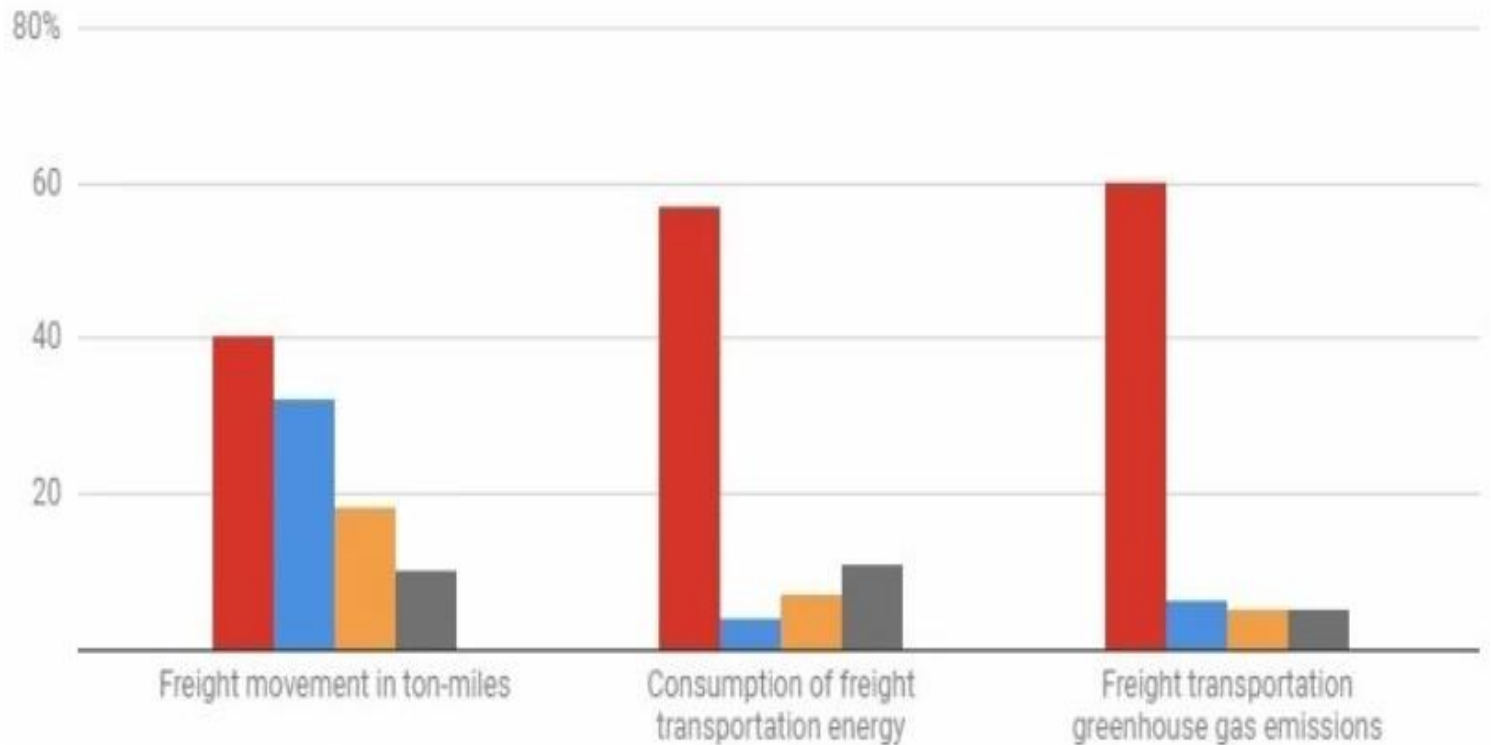


Chart: The Conversation, CC-BY-ND

• Source: Andreas Hoffrichter with data from US Department of Transportation and National Transportation Research Center • [Get the data](#)



“As of 2014, freight rail resulted in 21.2 metric tons of GHG emissions per million ton-miles while trucks emitted 154.1 metric tons of GHG per million ton-miles. **This makes rail over seven times more energy efficient than trucking in terms of GHG emissions.**” ([source](#))

# Safety Concern: Derailments

- Derailments can be caused by:
  - **Track related issues** such as broken or cracked rails due to disturbances in rail or weaknesses
  - **Equipment failure** including defective wheels, locomotive bearings, car bearings, suspension, and other car defects and failures. An accident can still happen if the train's employees follow all the necessary safety procedures.
  - **Environmental factors** including extreme heat and snowfall; both of which will become more frequent and unpredictable due to climate change
  - **Human error**, the likelihood of which increases when workers must work long hours and many days in a row without a break or not receiving adequate training—all common practices

[source](#)



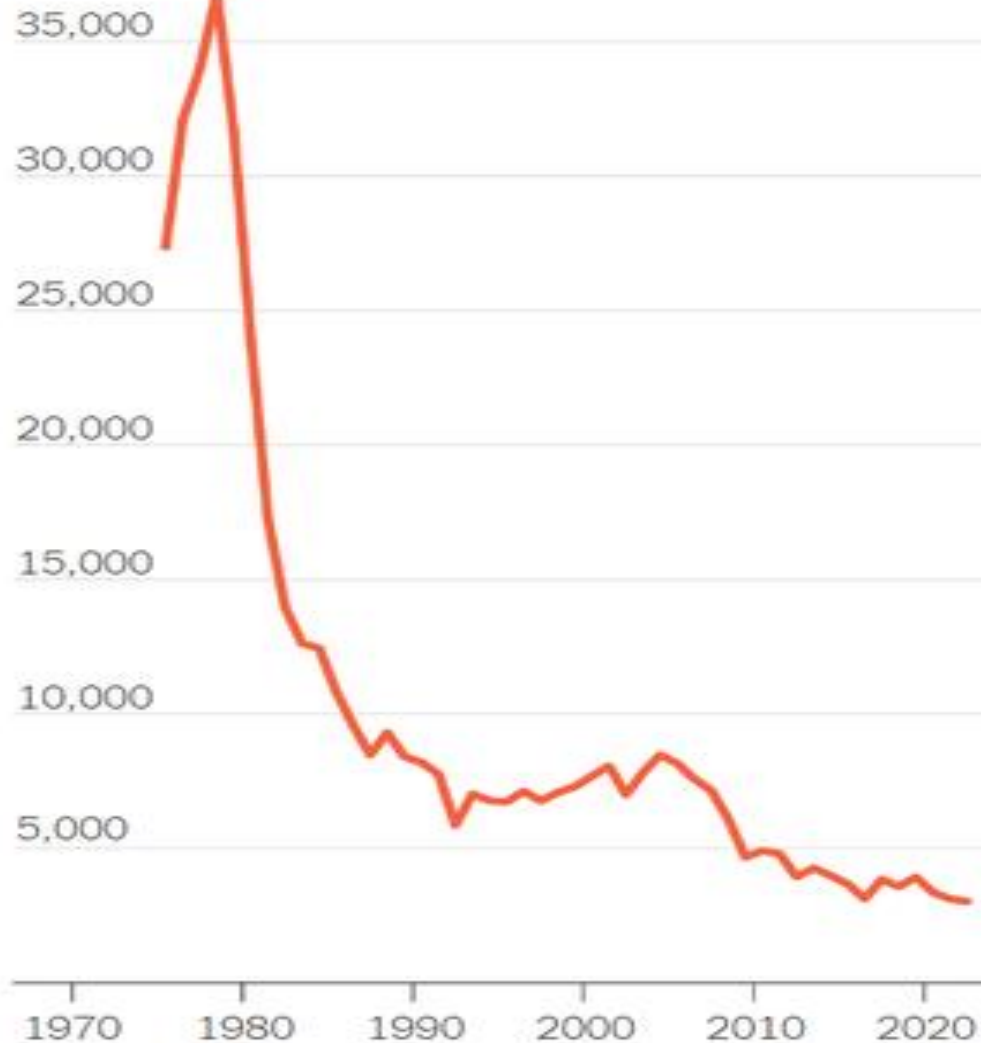
Train derailed in Commerce City near Suncor Refinery,  
June 16th, 2023

**Current unsafe,  
profit-driven  
practices by  
companies put  
workers and  
communities at  
risk.**



# Derailments involving hazardous materials

**Overall number of train cars derailed**



**Number of cars carrying hazardous materials on trains that derailed**



Source: U.S. Department of Transportation

# *Derailments are preventable*

Colorado can:

- Require more trackside detectors
- Prohibit long train usage

# Derailment Prevention Tactic: More trackside detectors

*Trackside detectors* are sensors in fixed locations along tracks that alert train crews of real-time safety problems

Example types of detectors:

- *A hot bearing detector* detects increased heat on the axle
- *A dragging equipment detector* alerts train crews to defective equipment being dragged by the train



Trackside detector

# Possible Detector Improvements

- **Address current lack of federal requirements for maintenance, location, and types of detectors**
- **Greater density of detectors needed in Colorado**
- **Train crews must be immediately alerted of train equipment status to prevent derailment**
- **Provide detector data to regulators to better inform decision making**

## Derailment Prevention Tactic: Prohibit Excessively Long Trains

- Average train length has steadily increased favoring profit over safety
  - East Palestine train was 150 cars long
- Companies are pushing to extend Colorado trains to exceed 150 cars — nearly 3 miles long!
- There are no limits in state or federal law on how long trains can be.





# Long Train safety concerns

- Navigating Colorado's unique and mountainous terrain
- Impedes crew's ability to communicate with each other
- Difficult for two-person crew to monitor cars
- Inability to hear track-based warning alarms
- Increases possibility of derailment
- Rail infrastructure hasn't been improved or upgraded for long trains
- Longest sidings (a low-speed track section distinct from the running line) in Colorado DO NOT support long trains



Union Pacific Train near Moffat Tunnel

# Safety Concern: Blocked Grade Crossings

- Blocked crossings happen when a train stops at an intersection for an extended period of time, impeding the ability of people, cars, and emergency vehicles to navigate their communities safely. [source](#)
- Beyond being frustrating, blocked crossings can be deadly when people are forced to cross over trains or when emergency vehicles are stopped at crossings and cannot respond to calls in a timely manner.



# Blocked Grade Crossing Prevention Tactic: Prohibit Excessively Long Trains

- Existing rail infrastructure simply cannot support long trains without causing blocked crossings
- Long trains INCREASE potential of blocked crossings.
- Set maximum acceptable blocked crossing times



# Blocked Grade Crossing Prevention Tactic: Set Maximum Acceptable Blocking Times

- Communities across Colorado are at risk of law enforcement and first responders not being able to get to emergencies
- Establishing maximum allowable blocking times will require railroads to move or break apart trains blocking crossings



**Colorado's communities,  
workers, and environment  
cannot wait for federal action  
for protection.**