

Freight Rail Safety in our Communities: **Delivering safety and prosperity in the Pacific Northwest**

Johan Hellman, Executive Director of State Government Affairs



Overview

More than a century serving the Northwest

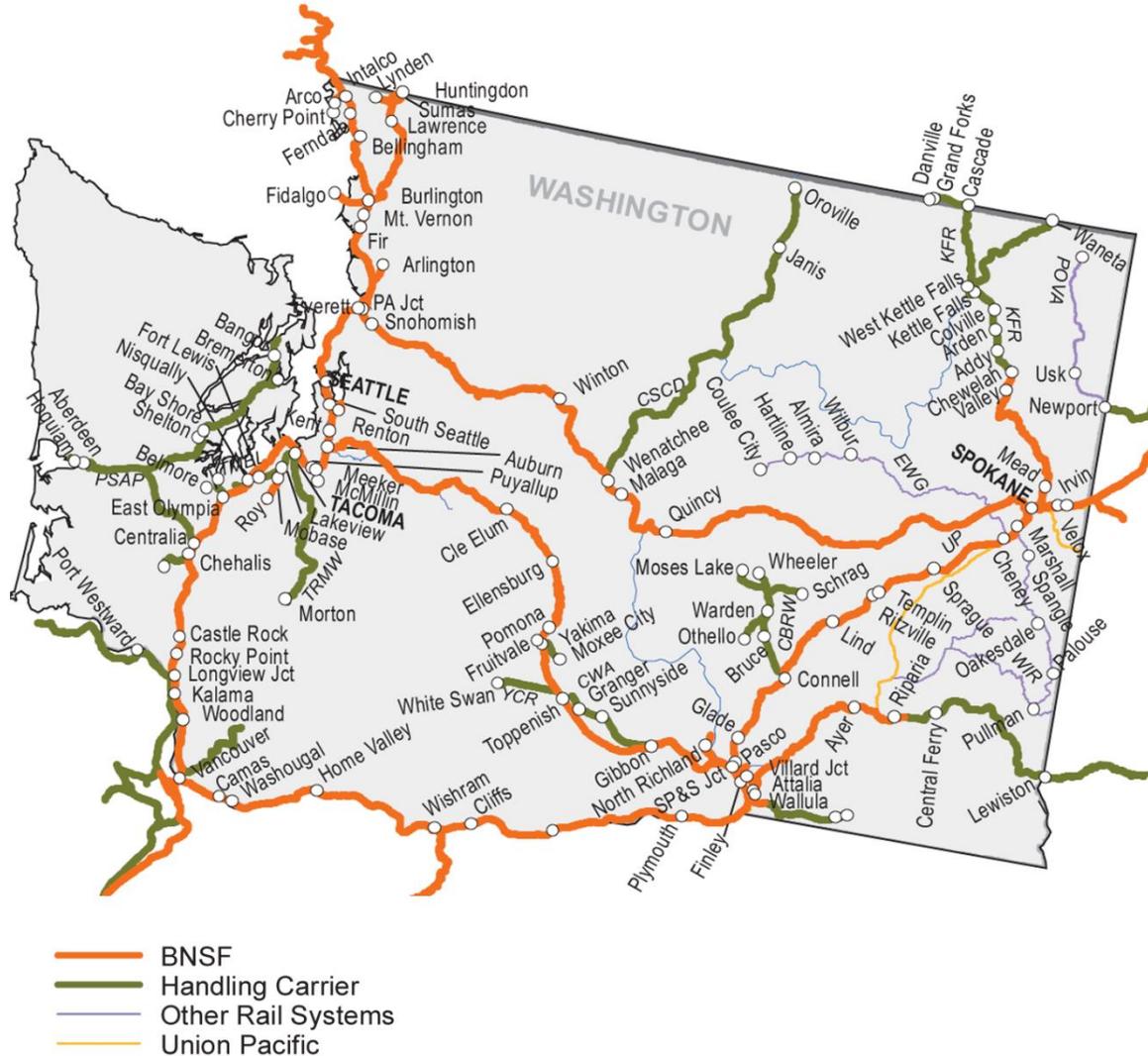
Over 100 Years in the Northwest



BNSF National Network

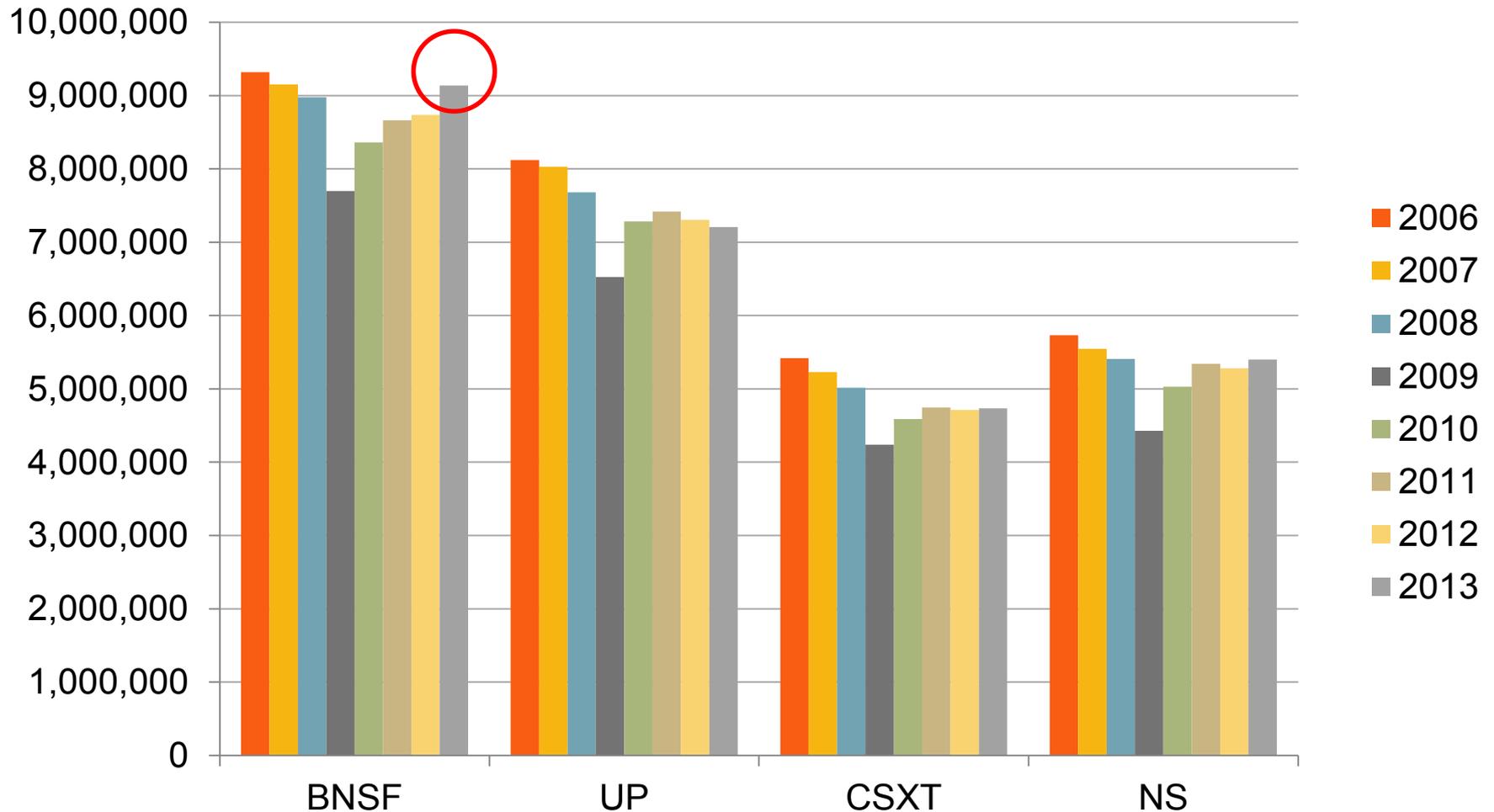


BNSF Washington State Network



As the Economy Improves, Rail Traffic Rebounded

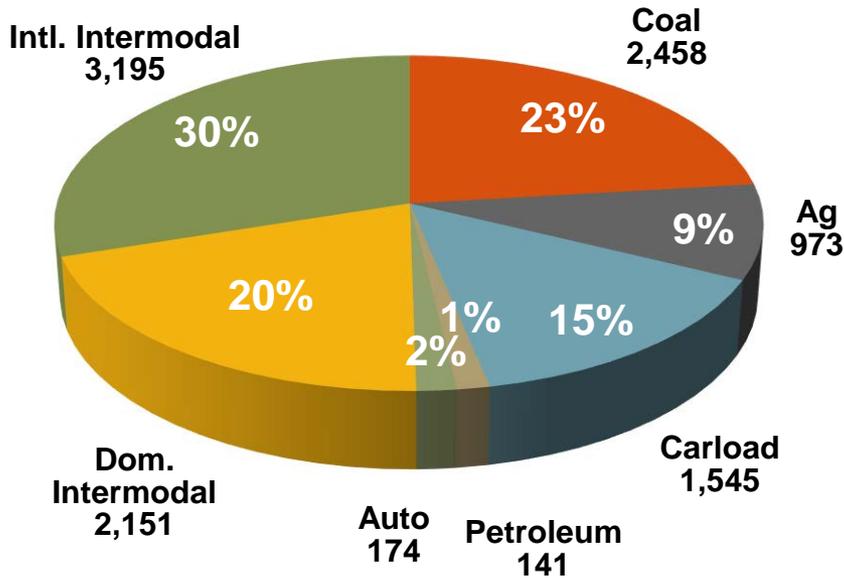
Units originated



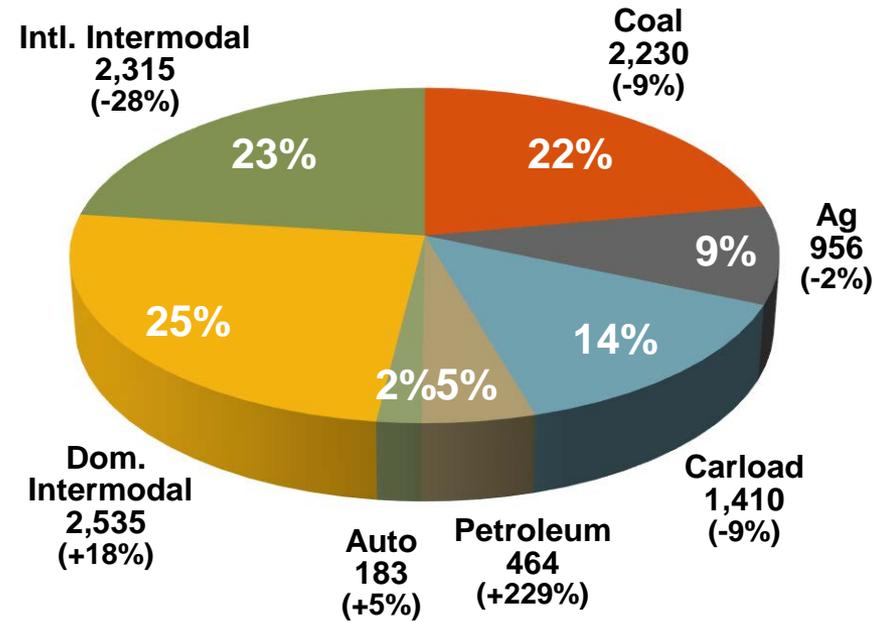
Traffic Growth is Much Different Today

Units in thousands

2006
Total 10,637

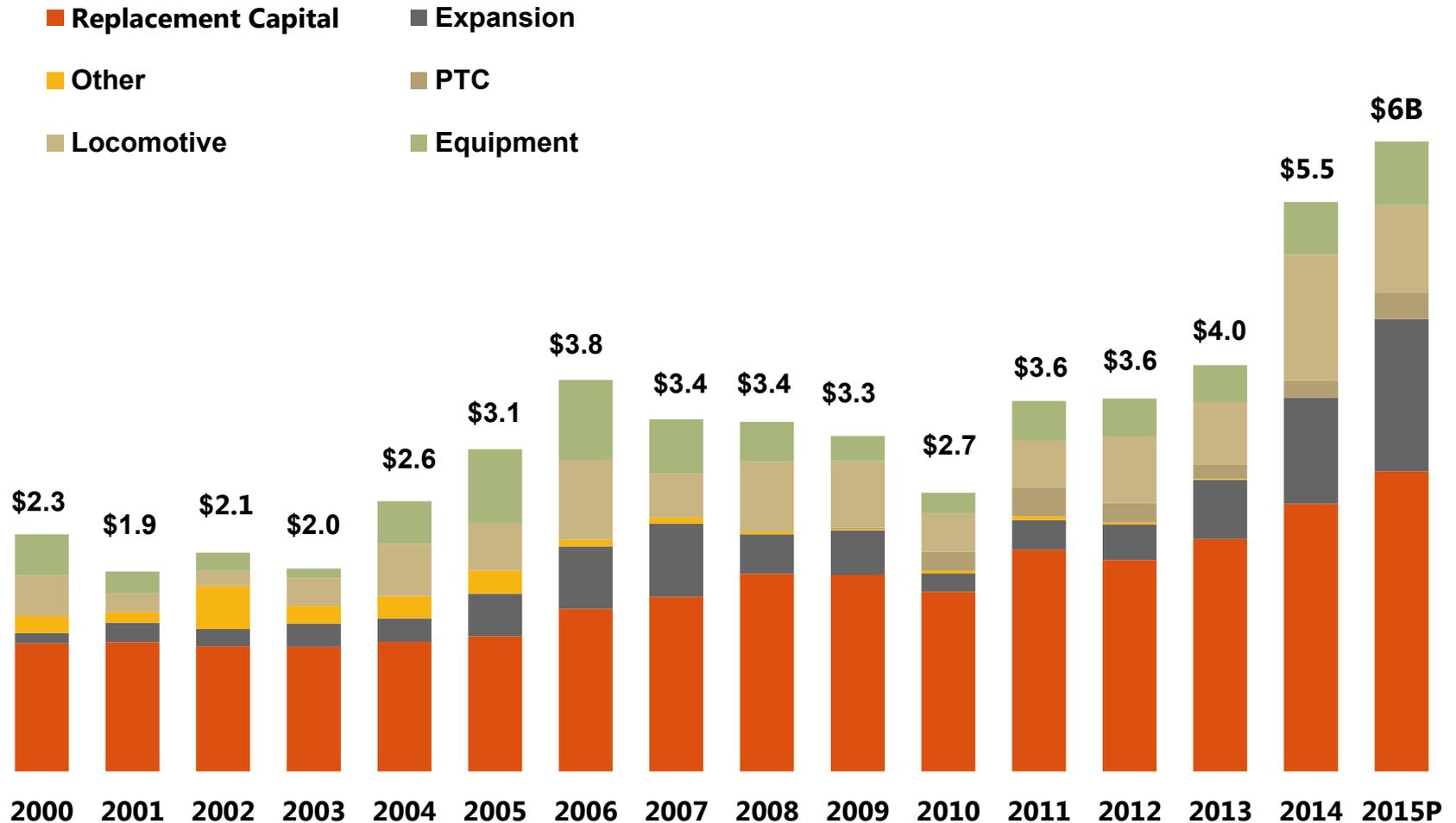


2013
Total 10,093
(-5%)

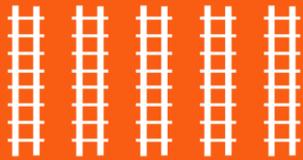


Capital Commitments

\$ Billions



\$5.5 Billion Deployed in 2014



\$3,643M

CAPACITY

Maintenance Capital:
\$2,615M

Expansion Capital:
\$1,028M



613

LOCOMOTIVES

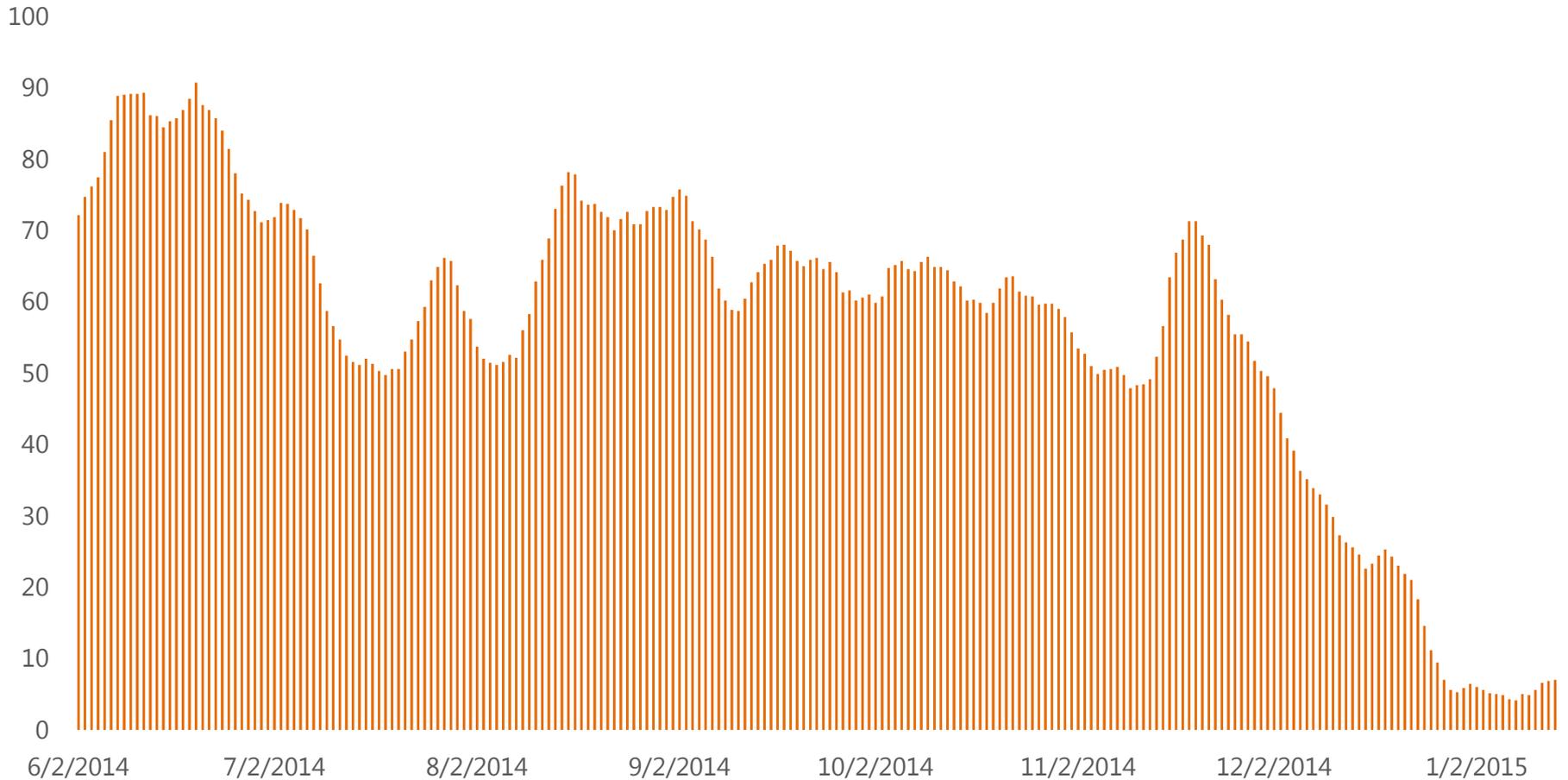
*includes long-term leases and acquisitions



+7,000

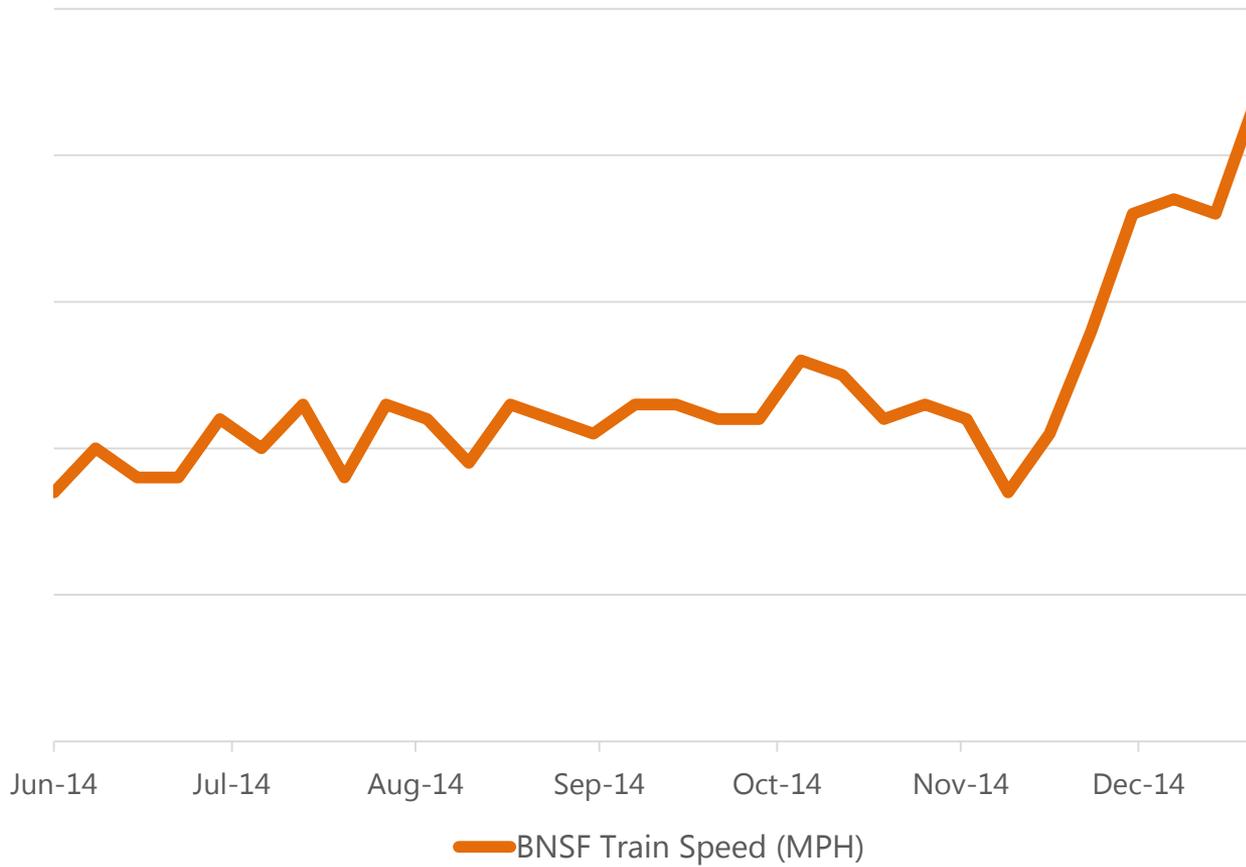
PEOPLE

Trains Held for Power Has Decreased

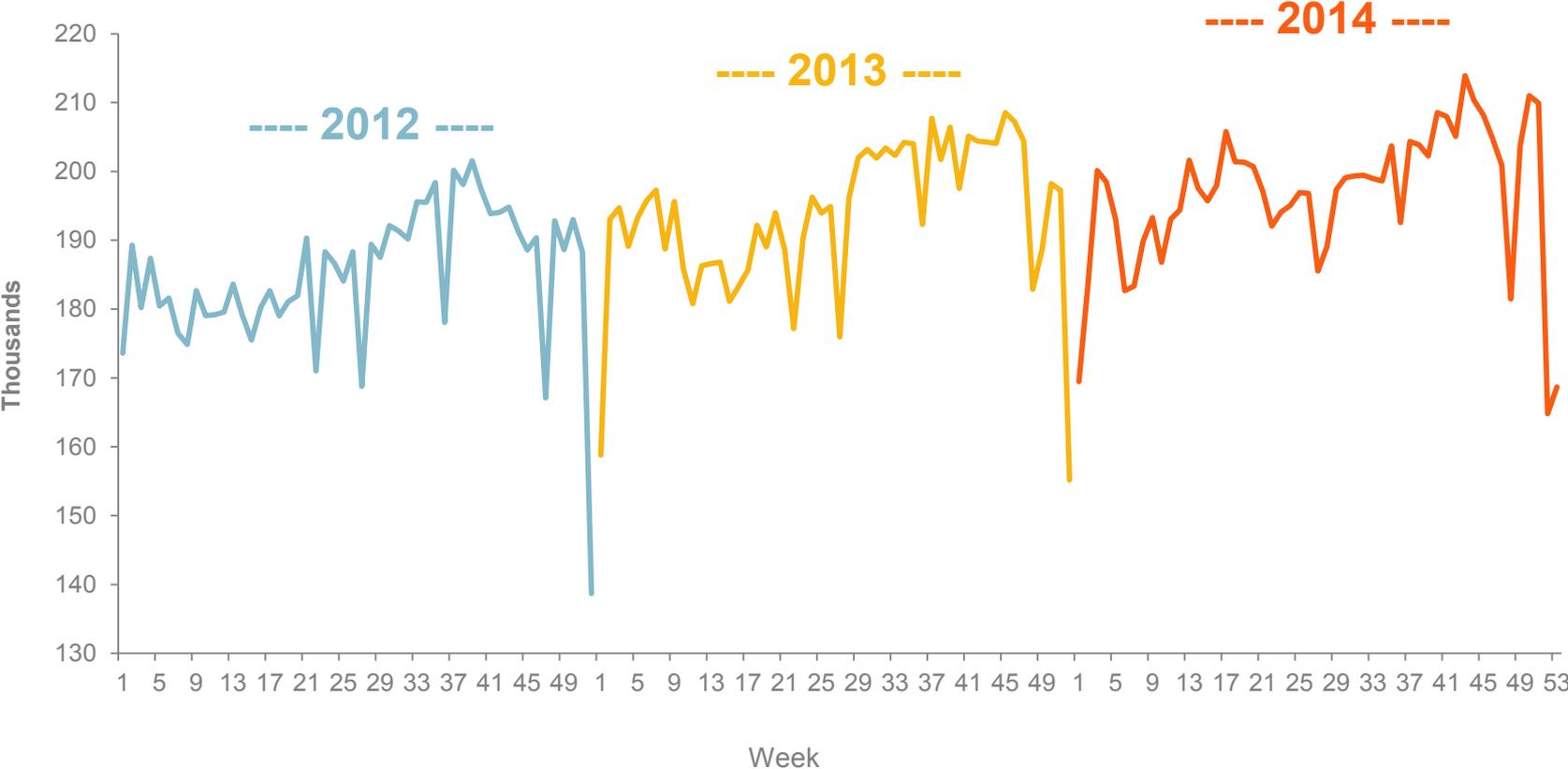


Velocity has improved

2014 TRAIN SPEEDS (ALL TRAFFIC)

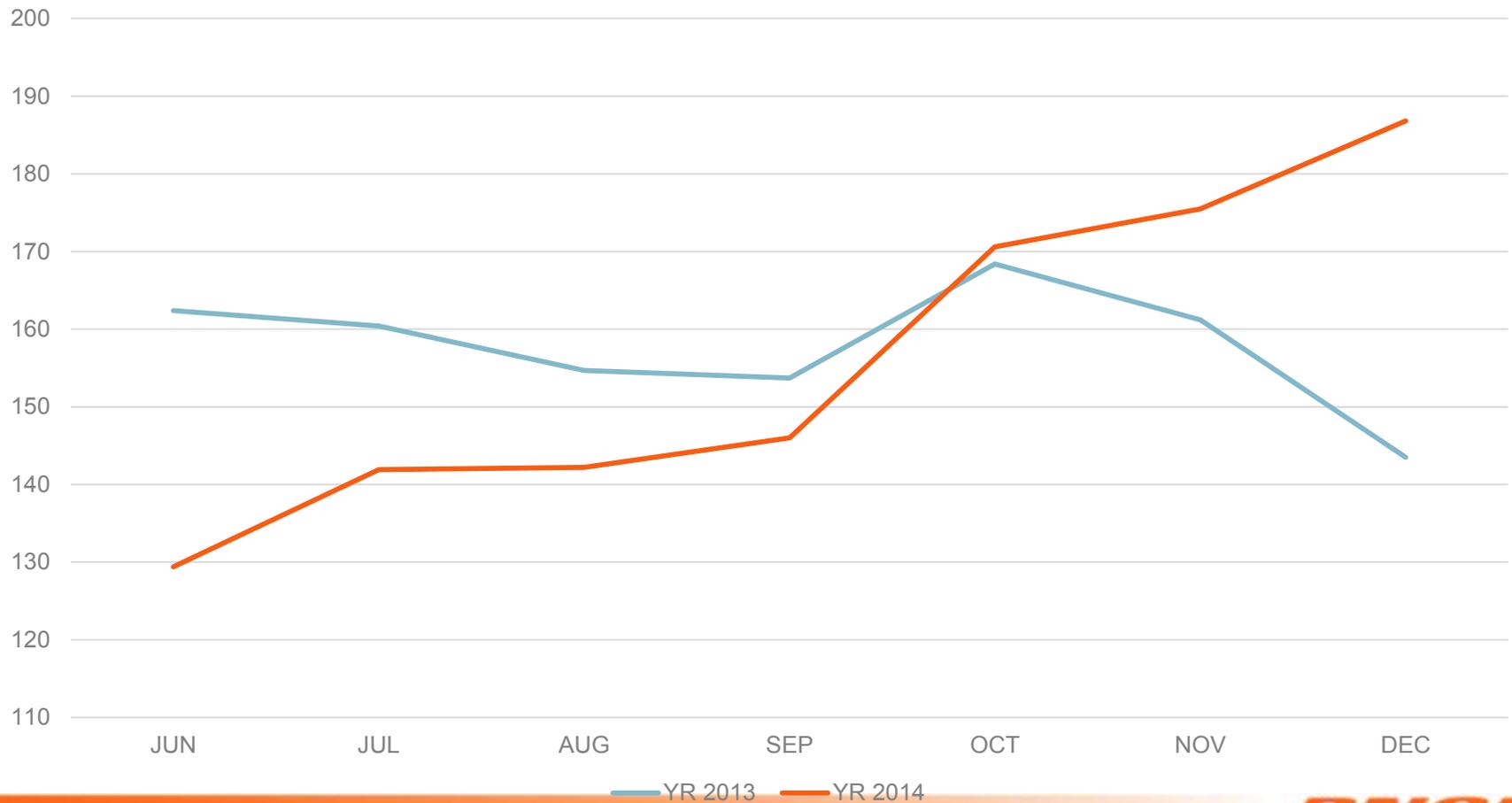


Growing agricultural volumes



Ag Velocity Improving

AG FLEET MILES PER DAY INCREASED 44% FROM JUNE TO DECEMBER 2014



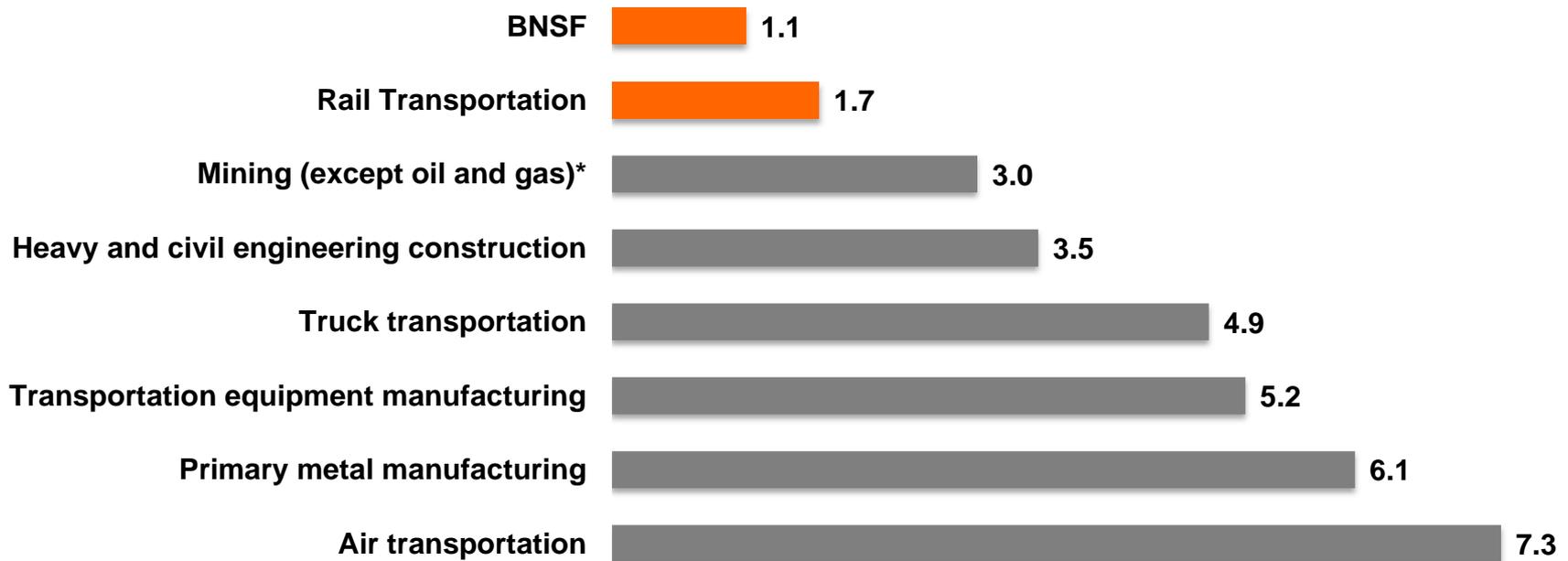
Safety

Prevention, response, remediation

Preventing Accidents in First Place

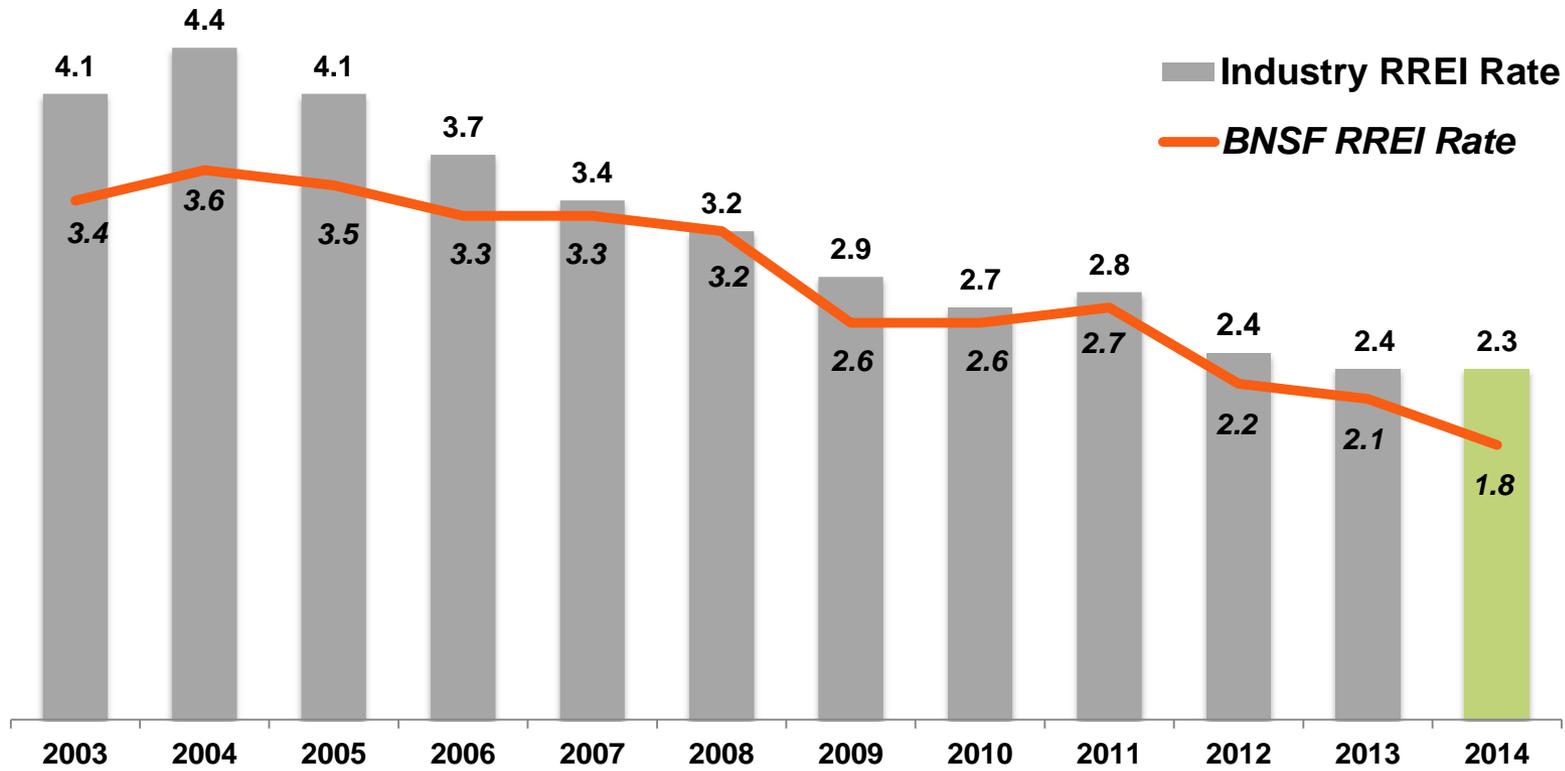
BNSF's employee safety record exceeds the industry average for rail transportation, and is significantly safer than other major industries

Injury Rate per 200,000 Employee Hours

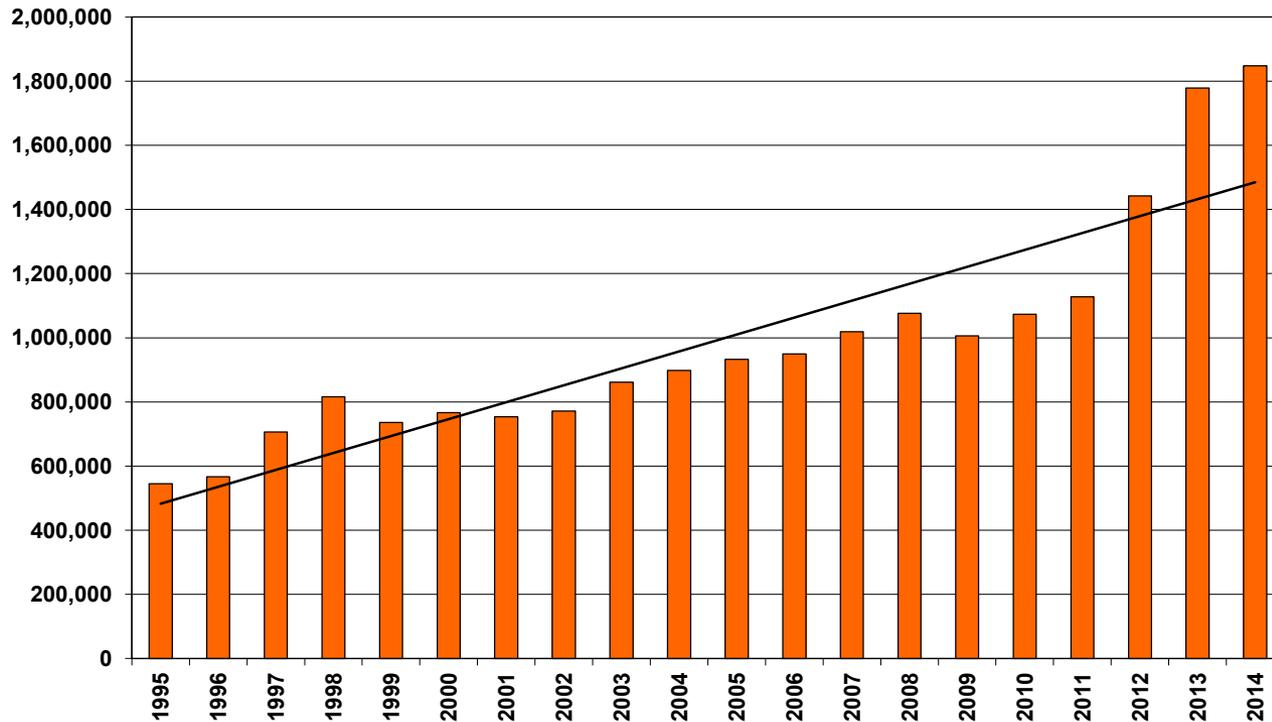


BNSF: Safety Leader for Continuous Risk Reduction

BNSF vs. Industry Reportable Rail Equipment Incident Rate (*Incidents per Million Train Miles*)

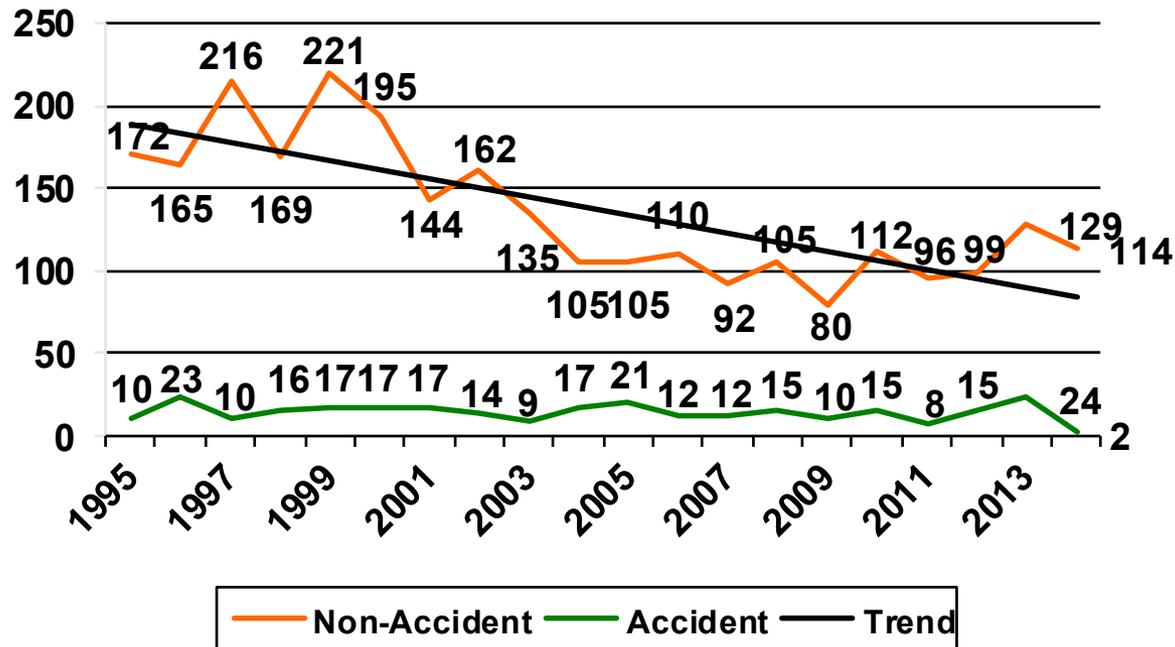


Hazardous material shipments rise



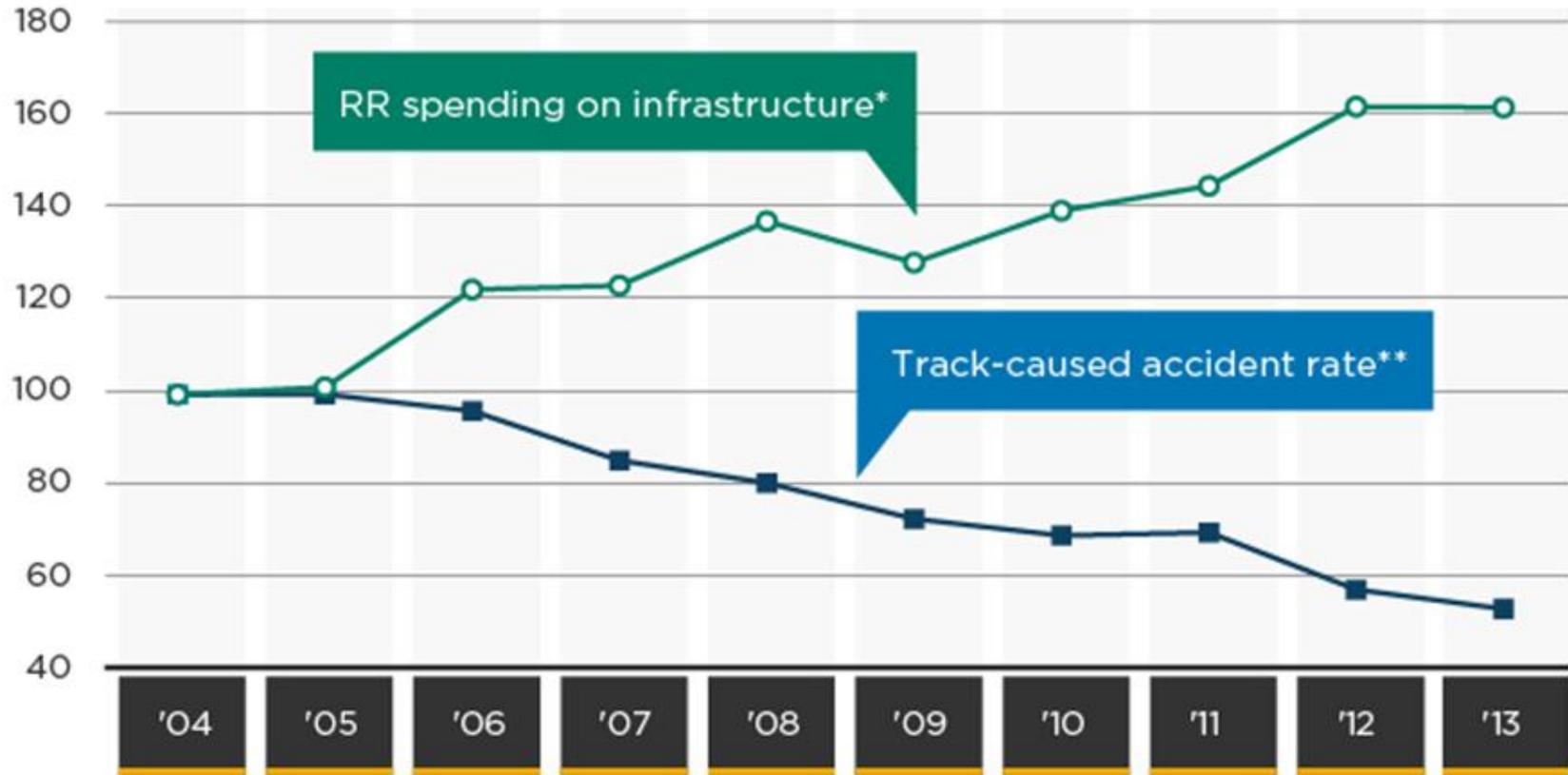
BNSF Number of Hazmat Shipments

Hazmat incidents have decreased



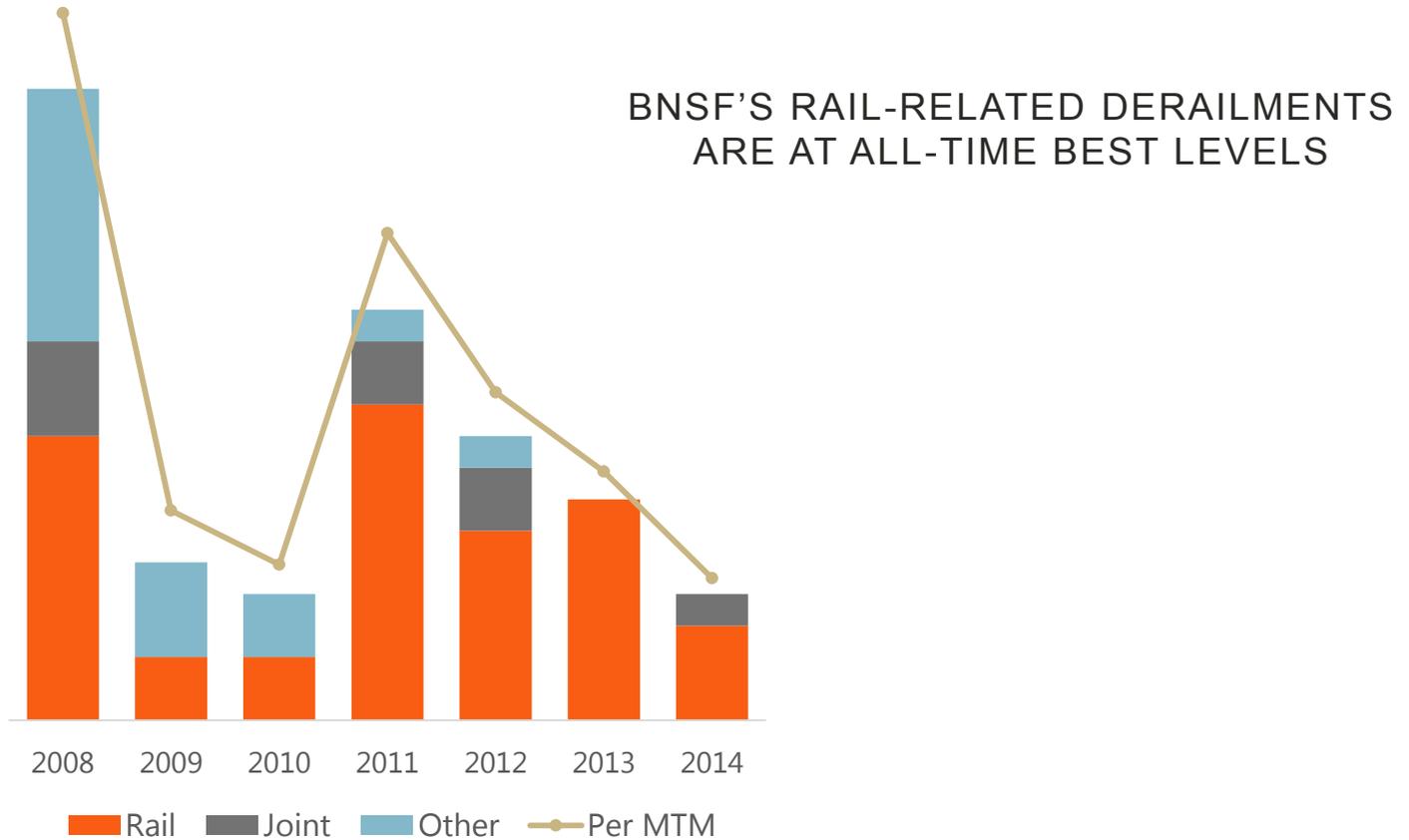
BNSF Number of Hazmat Shipments

Track Investments Reduce Incidents



Source: Association of American Railroads

All-time Low Rail Related Derailments



Track Record for Safety

Comprehensive inspection process ensures safety by identifying potential problems before they can lead to unsafe conditions



Bridge and track inspections

- More frequent than required by FRA
- Most key routes inspected 4 times weekly
- Busiest main lines inspected daily
- State-of-the-art technology

Weather & earthquake inspections

- Weather warnings 24/7 from private weather service
- Special inspection program following natural events



Track Geometry Car



Geometry Car Inspections

- Track Surface
- Alignment
- Curve Geometry
- Gage
- Rail Wear



Railcar Defect Technology

Proactive detection improves safety and extends equipment service life



Wheel Impact Load Detector

Evaluates wheel surface defects

Warm Bearing Detection System

Monitors excess heat from wheel bearings

Wheel Detector, Drive Train Inspection

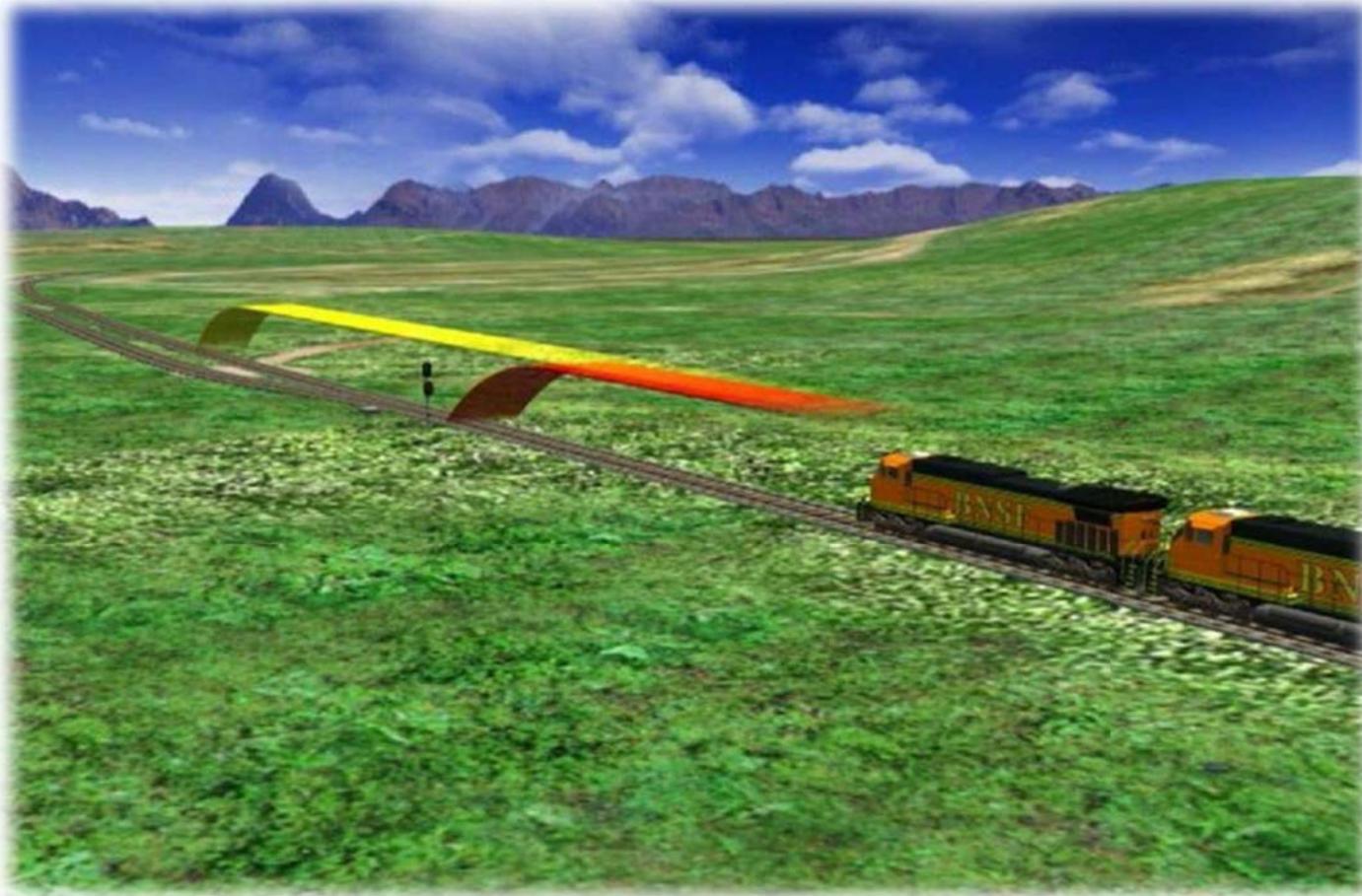
Measures wheel tread temperature

Acoustic Bearing Detector

Microphonically identifies and evaluates flaws

Positive Train Control

Predictive, advanced train control safety technology



Network Operations Center



Free Community Hazmat Training

BNSF trains 3,500 local first responders each year in communities across our network – more than 65,000 since 1996

Training includes:

- Instructor led
- Hands-on equipment in field
- Train list / shipping papers
- Placards
- Equipment
- Incident assessment



Tank Car of the Future

EVOLUTION OF RAIL INDUSTRY TANK CAR STANDARDS FOR CRUDE OIL

The railroad industry is proposing to increase the federal tank car design and construction standards for new tank cars used to transport crude oil. This proposal comes after a previous upgrade proposal which the industry voluntarily adopted and has been observing since October 2011. This graphic shows the additional tank car components included in the latest rail industry proposal.

HIGH CAPACITY PRESSURE RELIEF VALVE

Current Standard:
No requirement

Latest Rail Industry Proposal:
Requires a high capacity pressure relief device to protect against a rise in internal pressure resulting from fire. Provides for faster release of product.

TOP FITTINGS PROTECTION

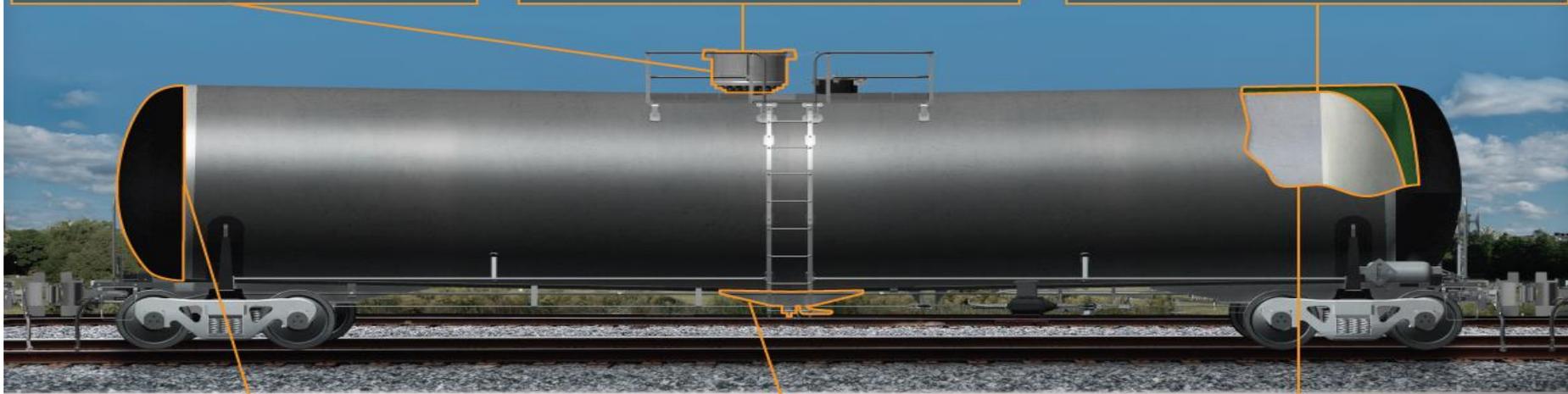
Current Standard:
Requires top fittings protection to protect the integrity of valves and fittings used to load product in the event of an accident.

Latest Rail Industry Proposal:
Contains the same requirement.

STEEL TANK

Current Standard:
Requires a minimum 1/2 inch thick steel tank for unjacketed cars and a minimum 3/8 inch thick steel tank for jacketed cars.

Latest Rail Industry Proposal:
Requires a minimum 3/4 inch thick steel tank.



HEAD SHIELDS

Current Standard:
Requires minimum 1/2 inch thick half height head shields at both ends of the tank car to improve puncture resistance.

Latest Rail Industry Proposal:
Requires 1/2 inch thick full-height head shields at both ends of the tank car.

BOTTOM OUTLET HANDLES

Current Standard:
No requirement

Latest Rail Industry Proposal:
Requires bottom outlet handle reconfiguration to prevent the handle from inadvertently opening the bottom outlets in the event of an accident.

JACKET AND THERMAL PROTECTION

Current Standard:
Requires a minimum 1/2 inch thick steel tank OR a 3/8 inch thick steel jacket.

Latest Rail Industry Proposal:
Requires the addition of both a 1/2 inch thick steel jacket around the tank car and thermal protection.

Source: Association of American Railroads, February 2014

Environmental Benefits

- Fuel efficiency
- Air quality
- Reduced traffic
- Energy innovation



BNSF[®]

RAILWAY

