

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

**Johan Hellman, Executive Director of State Government Affairs**



# BNSF National Network

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# Ag Shuttle Network

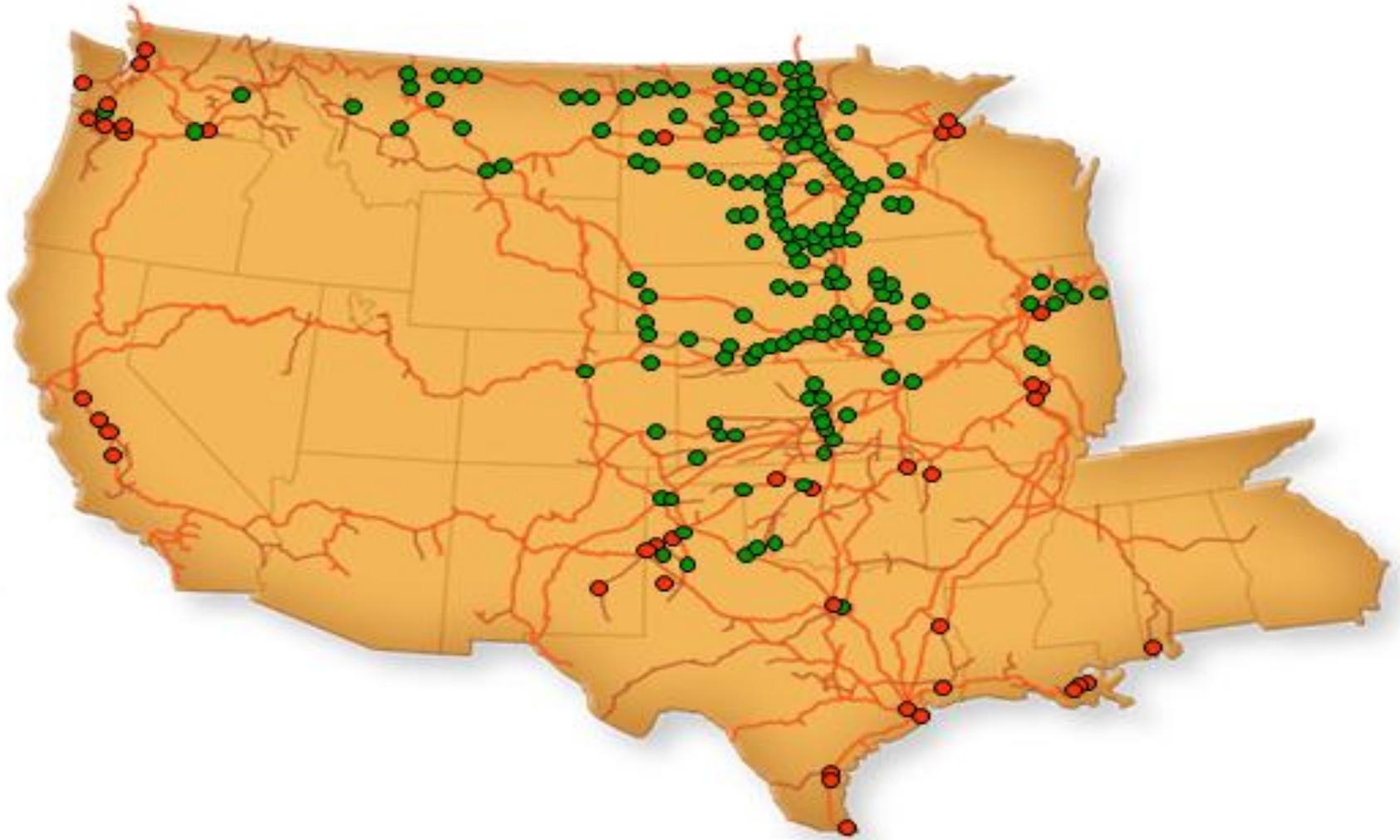
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**BNSF learned from our record with agriculture customers for building a strong supply chain network**



# BNSF Shuttle Network

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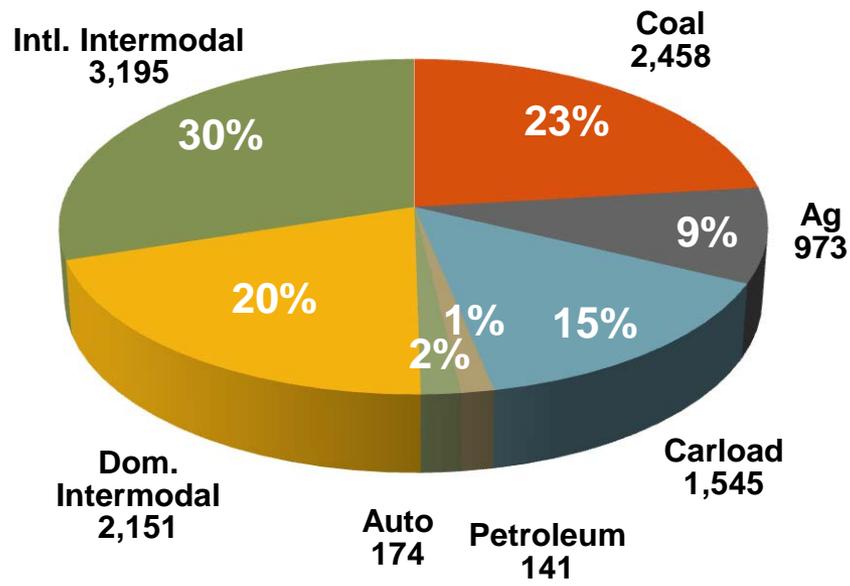


# Traffic Growth is Much Different Today

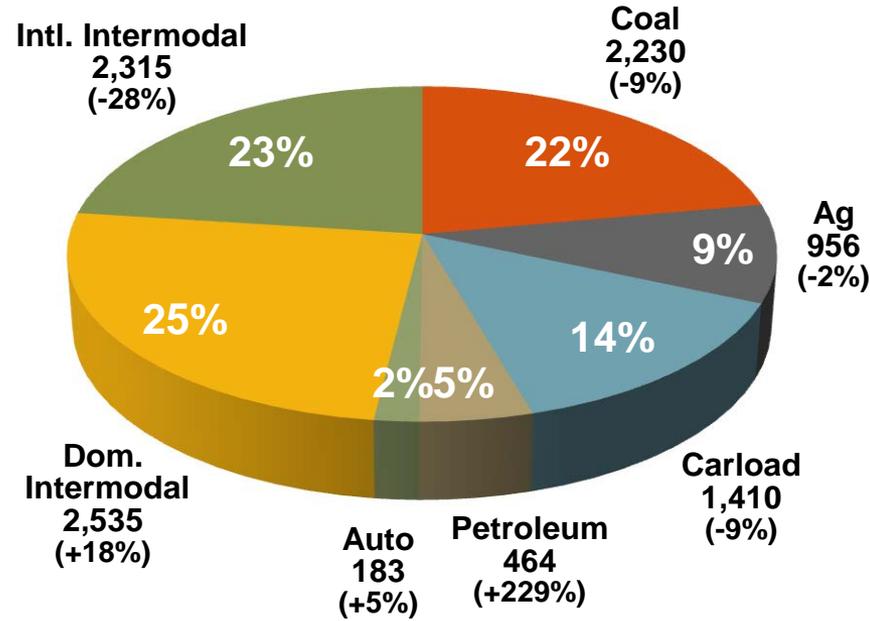
## Domestic Intermodal and Crude Growth are Game-Changers

Units in thousands

**2006**  
Total 10,637



**2013**  
Total 10,093  
(-5%)

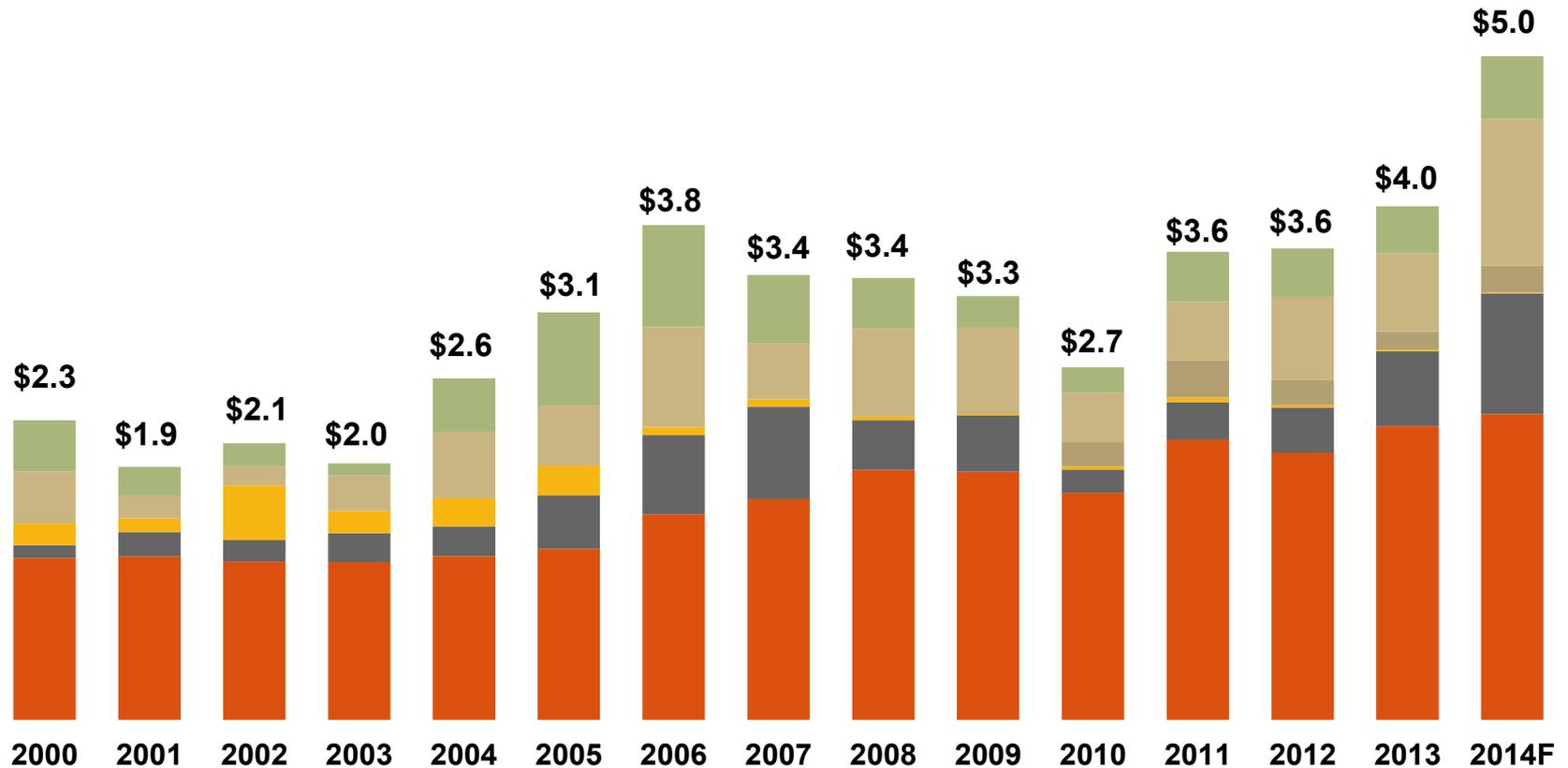


Source: BNSF revenue support; petroleum excludes LPG.

# Capital Commitments

\$ Billions

■ Replacement Capital ■ Expansion ■ Other ■ PTC ■ Locomotive ■ Equipment



# Investing in the Future



In 2014, BNSF will invest **\$5 billion** across our network.

The 2014 capital program focuses on the Hi-line.

# Capacity Improvements

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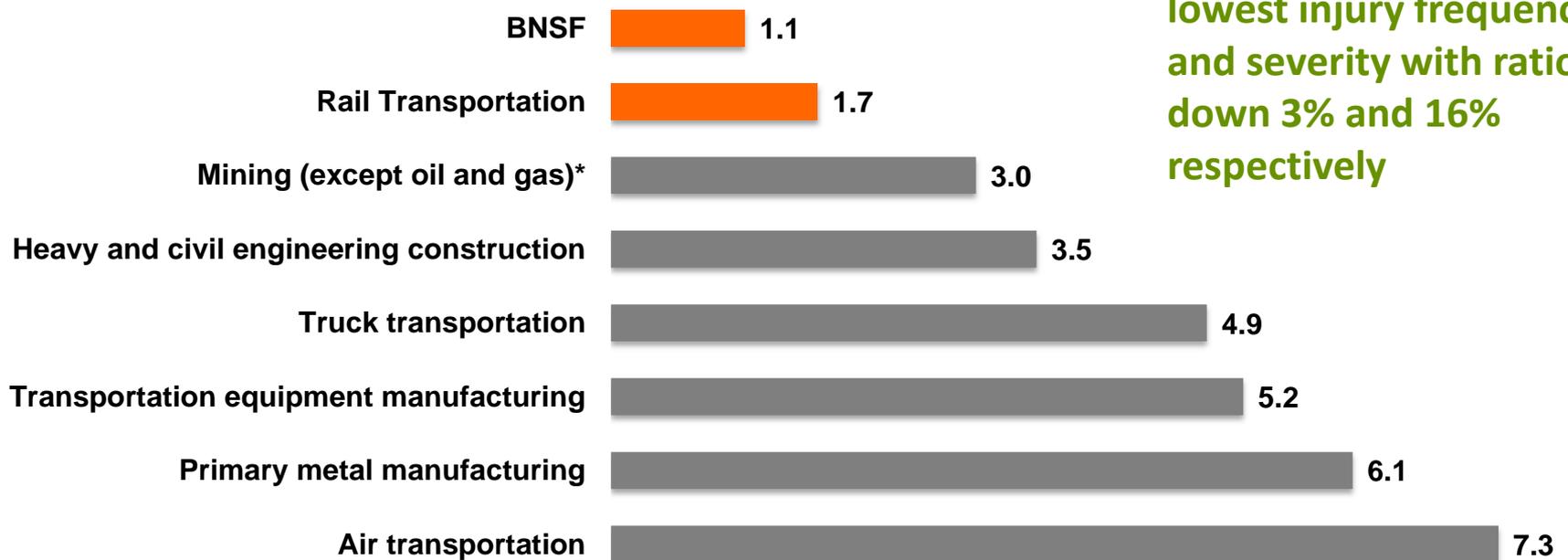


- **Additional locomotives:** more than **400 locomotives added** since last fall and more than **100 new locomotives** this quarter. Active fleet is up **900 locomotives** year-over-year.
- **Additional employees:** more than **5,000 additional employees** in 2014, a large portion will be dedicated to the Northern Corridor.
- **Infrastructure investments**

# 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



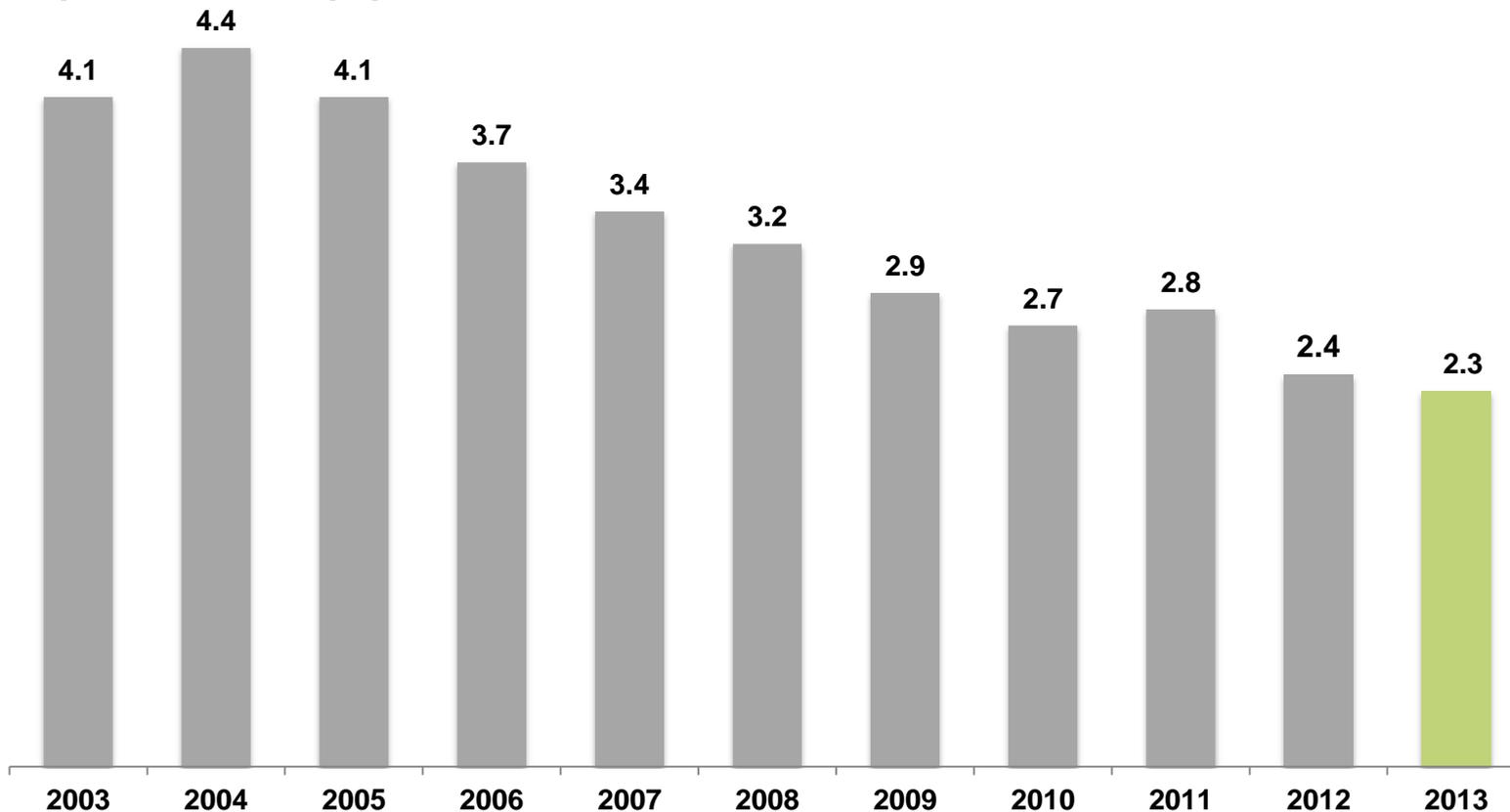
**2013 was BNSF's all-time lowest injury frequency and severity with ratios down 3% and 16% respectively**



# 2013: Safest Year in History

From 1980 to 2013 rates for accident, employee injury and crossing collisions fell by over 80%

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



# 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



# Network Operations Center



# BNSF's Next Generation Tank Cars

## 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.

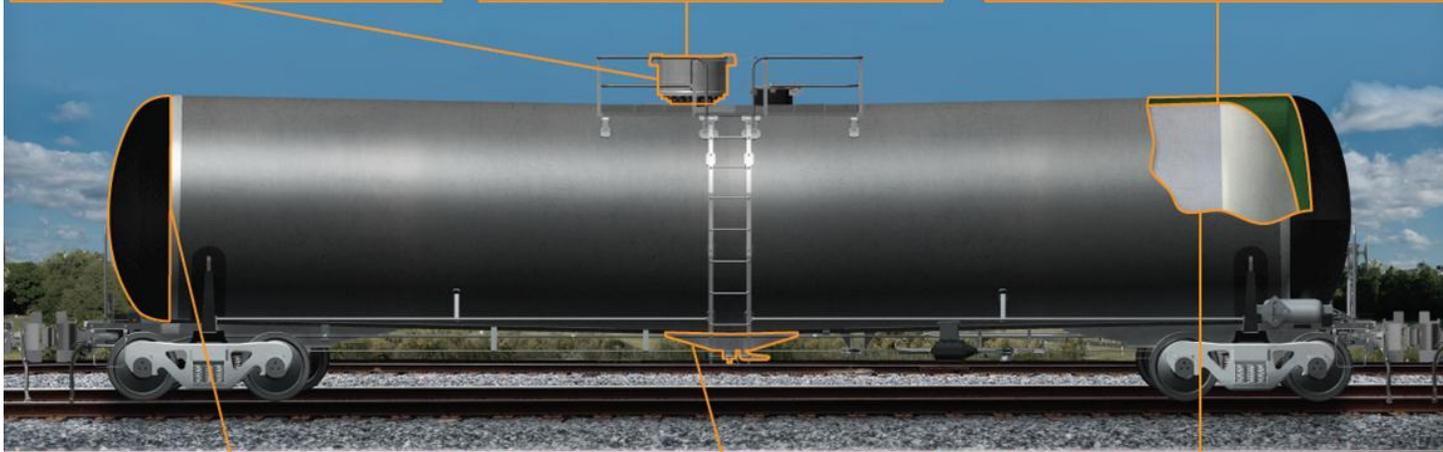
### STEEL TANK

**Current Standard:**

Requires a minimum 1/2 inch thick steel tank for unjacketed cars and a minimum 3/4 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

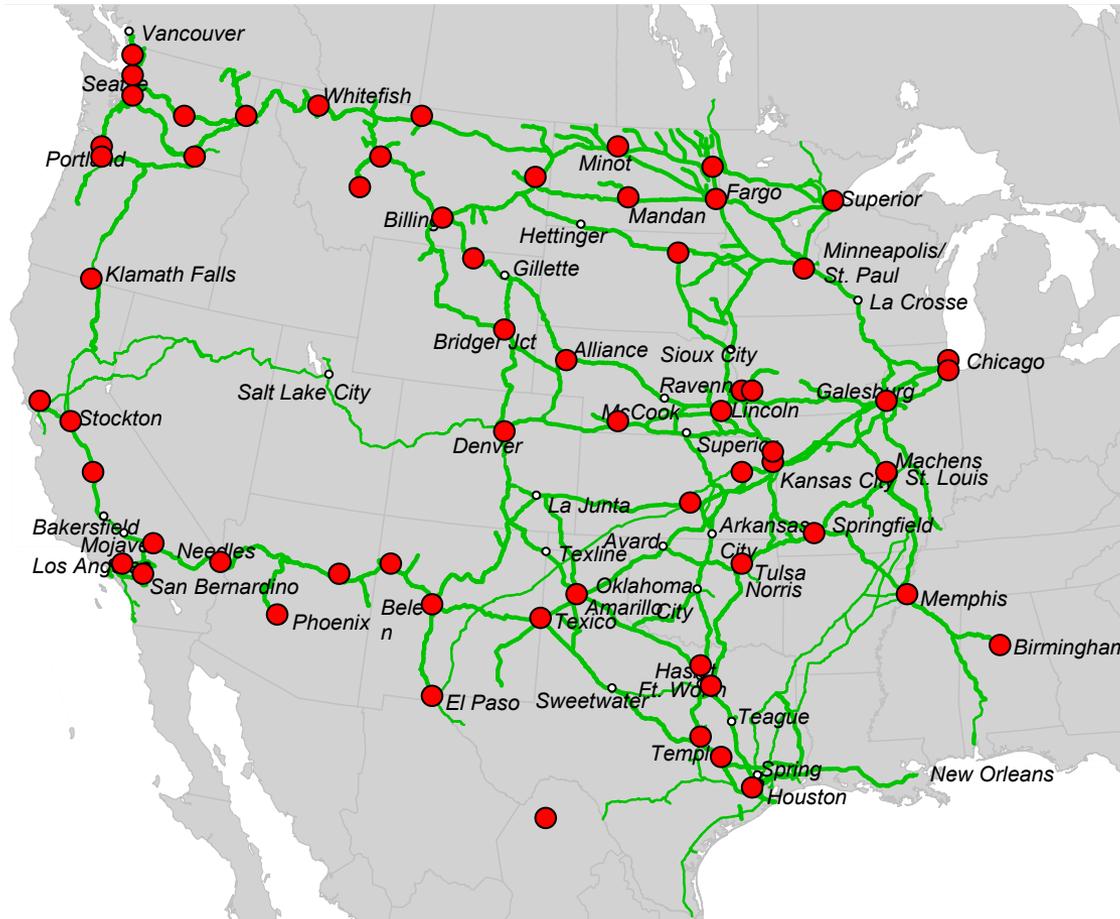
**Current Standard:**  
Requires a minimum 1/2 inch thick steel tank OR a 1/4 inch thick steel jacket.

**Latest Rail Industry Proposal:**  
Requires the addition of both a 1/4 inch thick steel jacket around the tank car and thermal protection.

Source: Association of American Railroads, February 2014

# BNSF Hazmat Responder Locations

212 responders at 60 locations



# Free Community Hazmat Training

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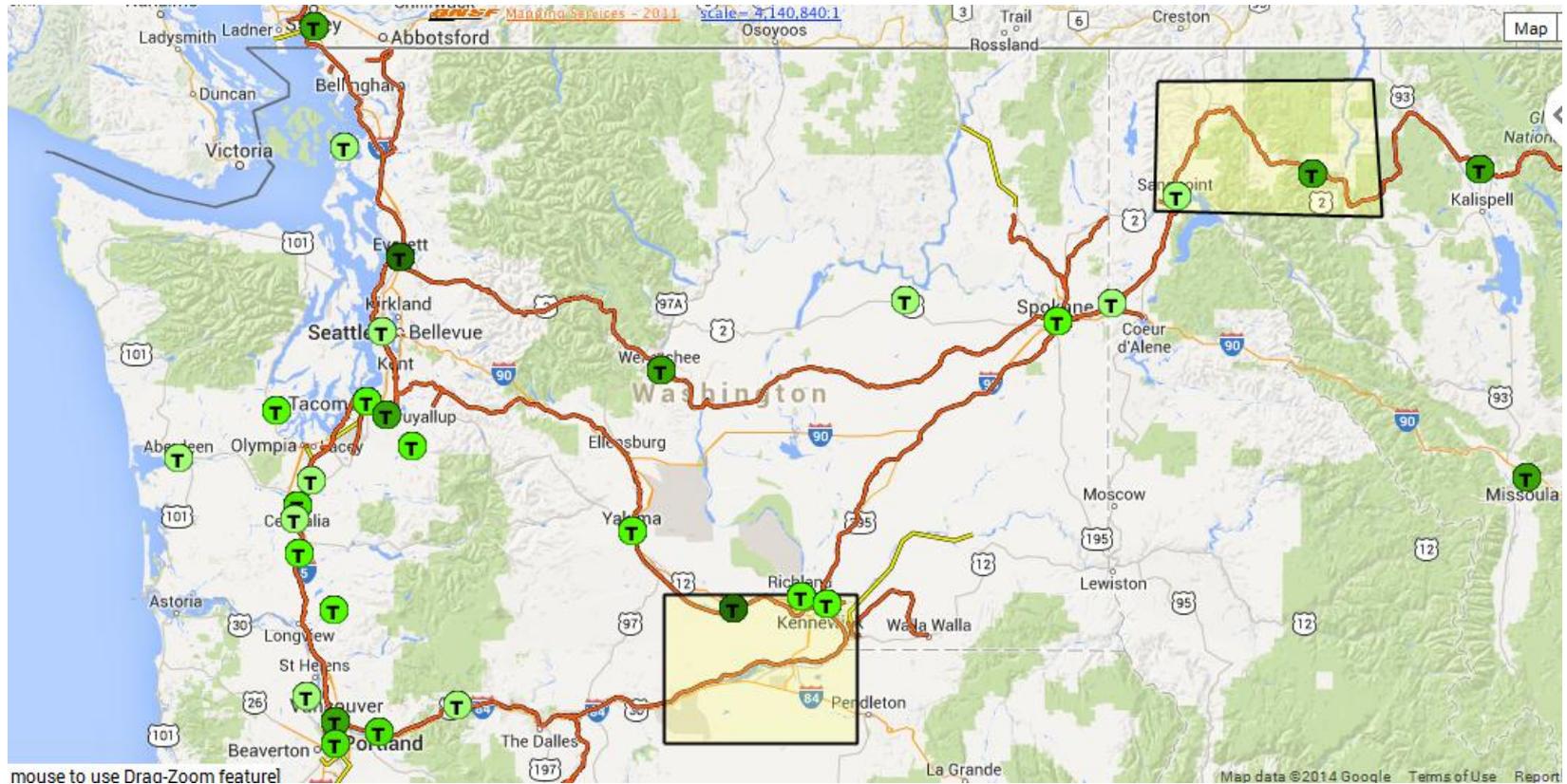
BNSF trains 3,500 local first responders each year in communities across our network – more than 65,000 since 1996

## Training includes:

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



# Hazmat Trainings in Washington State



# Specialized Hazmat Equipment

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- Industrial fire-fighting foam trailers
- Emergency breathing air trailers
- Chlorine kits
- Midland kits
- Air monitoring assets
- Current Busters



# Remediation

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## BNSF will restore the site to pre-derailment conditions



Cameron, Texas, post derailment

- Responsible for mitigation of the spill and restoration
- Contracts with pre-approved consultants and contractors
- State agencies oversee the work and must concur before a site is closed

# ***BNSF***<sup>®</sup>

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*RAILWAY*

