



North Dakota Public Service Commission Update on Rail Service & Safety

AUGUST 10, 2023

BNSF in North Dakota




@1,100
Employees

1,500+
Route Miles



~311,000
Carloads shipped from state
189,000 Ag
119,000 IP



\$1.5 Billion+
Invested Since 2013



Rail is Safest
Way to Move
Goods by Land

Rail Transports
Hazardous
Materials Safely

- Since 2000, the train accident rate is down **28%** and hazmat accident rates are down **78%**
- **99.99%** of all BNSF hazmat shipments reach their destination without a derailment caused release.

BNSF's Safety Overview

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- Rail is the safest mode of land transportation.
 - BNSF's safety vision is to prevent accidents in the first place.
 - BNSF has a broad-based risk reduction program.



BNSF Bridge over the Missouri River at Bismarck, Mandan

- Condition-based replacement
- Current speed & weight restrictions
- 5-year federal permitting process: 20 meetings, 25 consulting parties
- Now \$100 million project
- Work underway
- Bnsfbismarckbridge.com



Prevention: Reducing Risk

Human Factor

- Training
- Remote monitoring
- Positive Train Control
- Self reporting protocol

Equipment/Mechanical

- Mechanical inspection per AAR, FRA guidelines/rules
- Detector network - dragging equipment, Acoustic, Thermal, Vision

Track/Signal

- Enhanced track inspection training
- Continued elimination of jointed rail
- Strong capital program for tie renewal
- Technology - ground penetrating radar and enhanced geometry testing



Our ongoing focus is on instilling a culture of commitment and compliance – a culture that is sensitive to exposure and risk.

Future Technology Plays a Key Role in Driving Safety Improvements

Leveraging
Advanced
Technology,
Innovation

Prevention: Equipment Detection Technology



Technology

Acoustic Bearing Detector (ABD)

Cold Wheel Detector (CWD)

Cracked Wheel and Axle Detector (CWAD)

Dragging Equipment Detector (DED) *

High / Wide

Hot Bearing Detector (HBD)

Hot Wheel Detector (HWD)

Machine Vision System (MVS)

Truck Geometry Detector (TGD)

Truck Hunting Detector (THD)

Truck Performance Detector (TPD)

Wheel Impact Load Detector (WILD)

Wheel Condition Monitor (WCM)

Leveraging Advanced Technology: Automated Track Inspections



**More Miles Tested
(under load)**



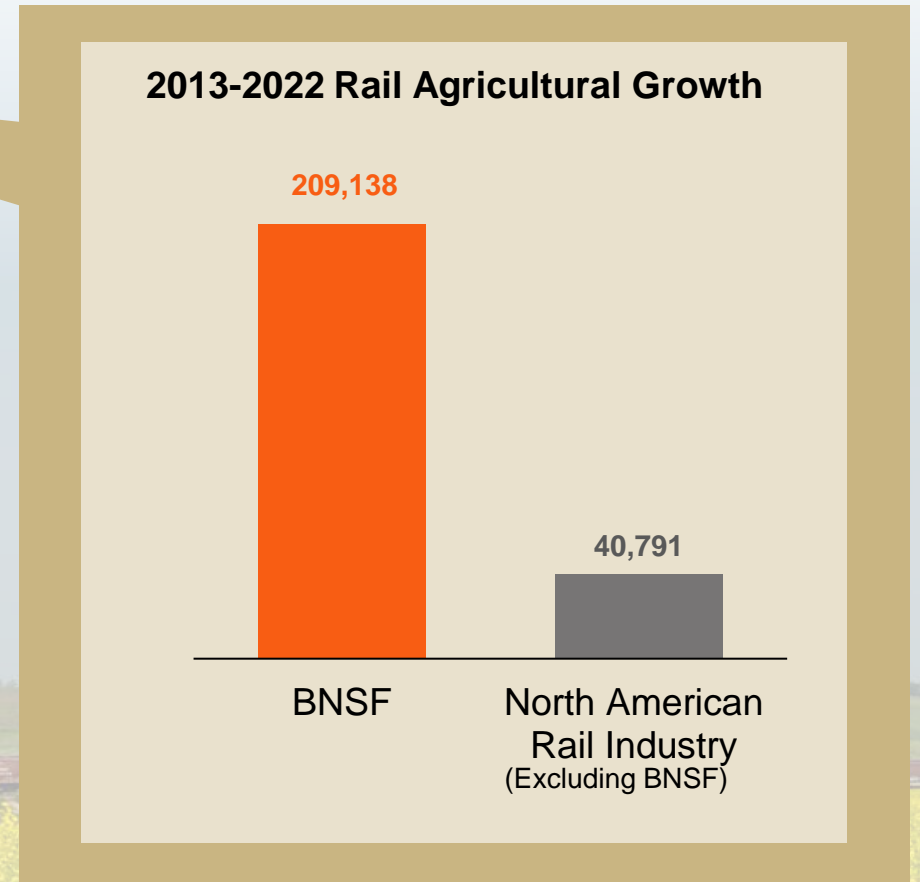
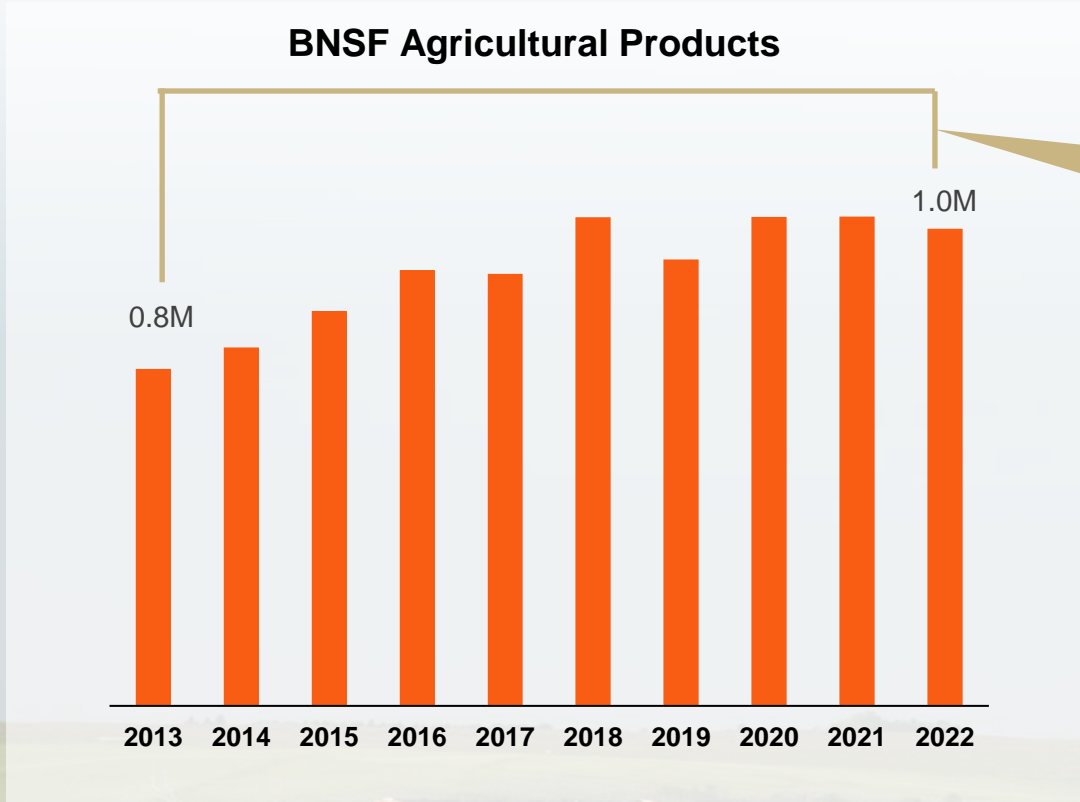
**Fewer Defects per
Track Mile**



**Increased
Safety**



BNSF Agricultural Products Remains the Industry Leader



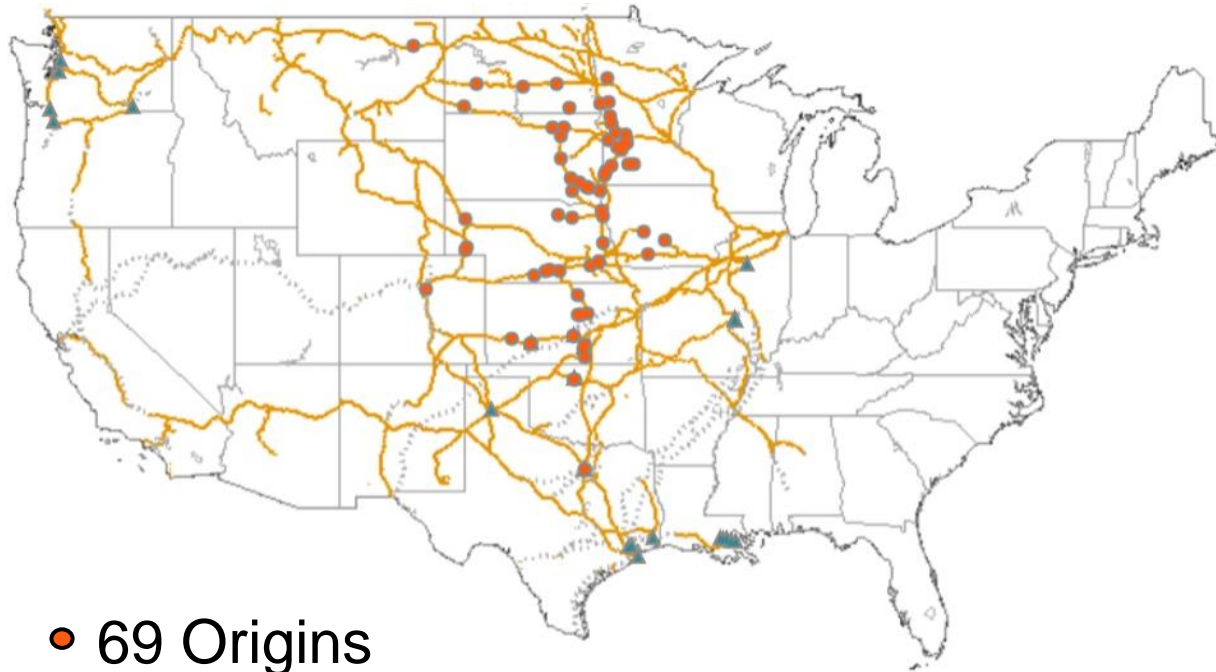
Renewable Fuels & Agricultural Products

- Sustainably transporting low-carbon renewable fuels such as renewable diesel, biodiesel, renewable naphtha and sustainable aviation fuel.
- Supporting transportation needs for the shipment of renewable fuels feedstocks such as vegetable oils, recycled animal fats, used cooking oils and greases.



Growth of the BNSF Shuttle Network

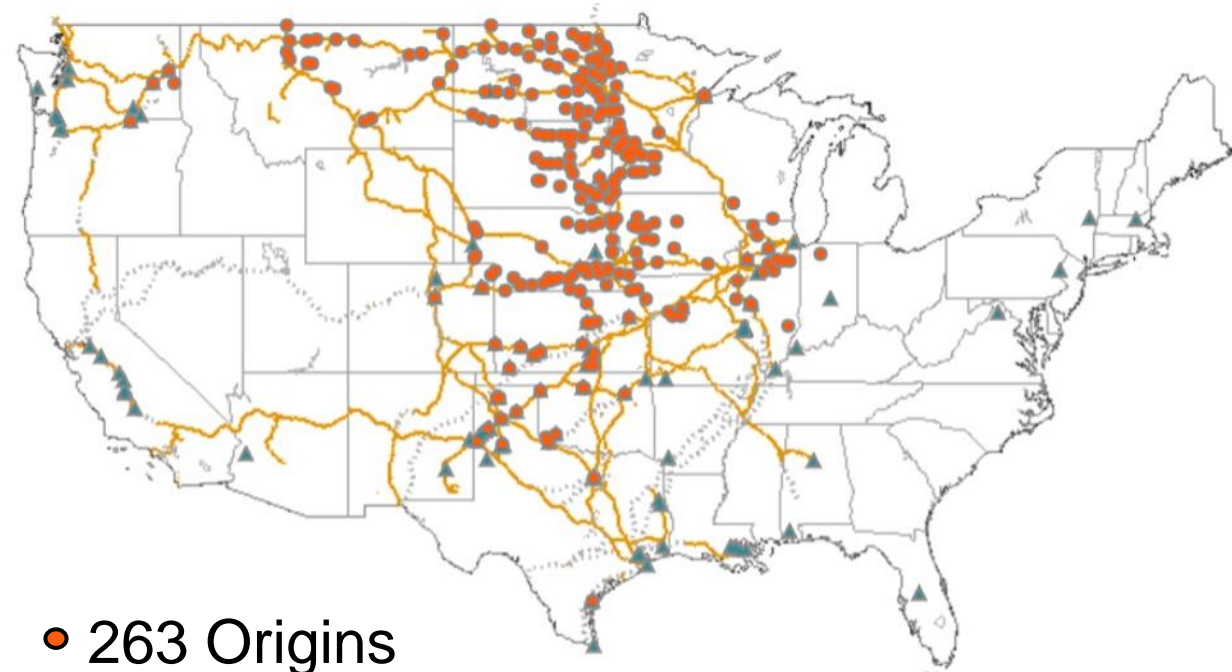
2000



- 69 Origins
- ▲ 28 Destinations

13 Mexico Shuttle Destinations

2023



- 263 Origins
- ▲ 118 Destinations

38 Mexico Shuttle Destinations

BNSF
RAILWAY



DEC