



2023 Railroad Emergency Response & Hazardous Materials Awareness

JEFF HANKINS | Manager of Hazardous Materials Field Operations and Emergency Response

Who and What We Are

- 32,500 Miles of Track
- ~34,000 employees
- Operating in 28 States & 3 Canadian Provinces
- ~8,000 Locomotives
- Operating approximately 1,600 trains per day
- 1.2 Million Hazardous Material Shipments in 2022
- Capital Investment of \$4 Billion in 2023
- BNSF can move 1-ton of freight approximately 500 miles on 1-gallon of fuel

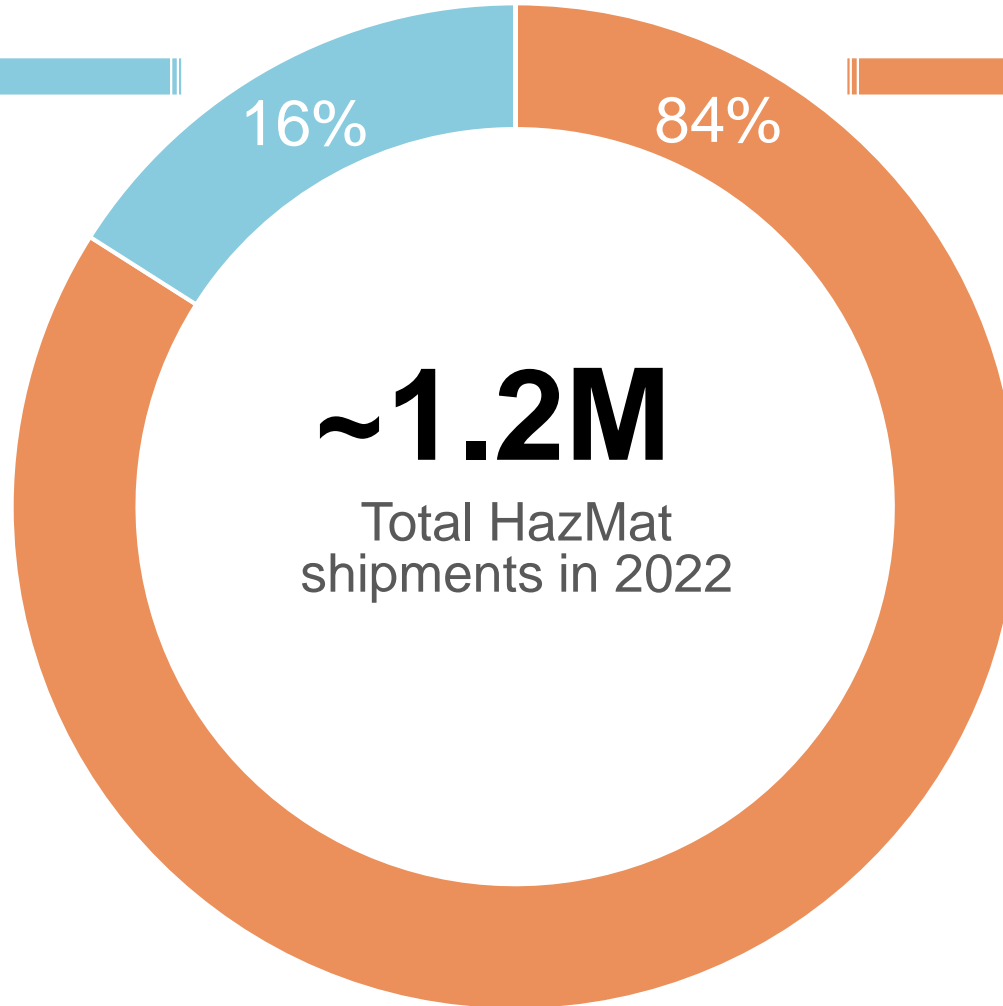


Rail Transports Hazardous Materials Safely

- Since 2000, the train accident rate is down **31%** and hazmat accident rates are down **64%**
- **99.99%** of all BNSF hazmat shipments reach their destination without a derailment caused release.

BNSF HazMat Shipments

Intermodal or Non-Bulk

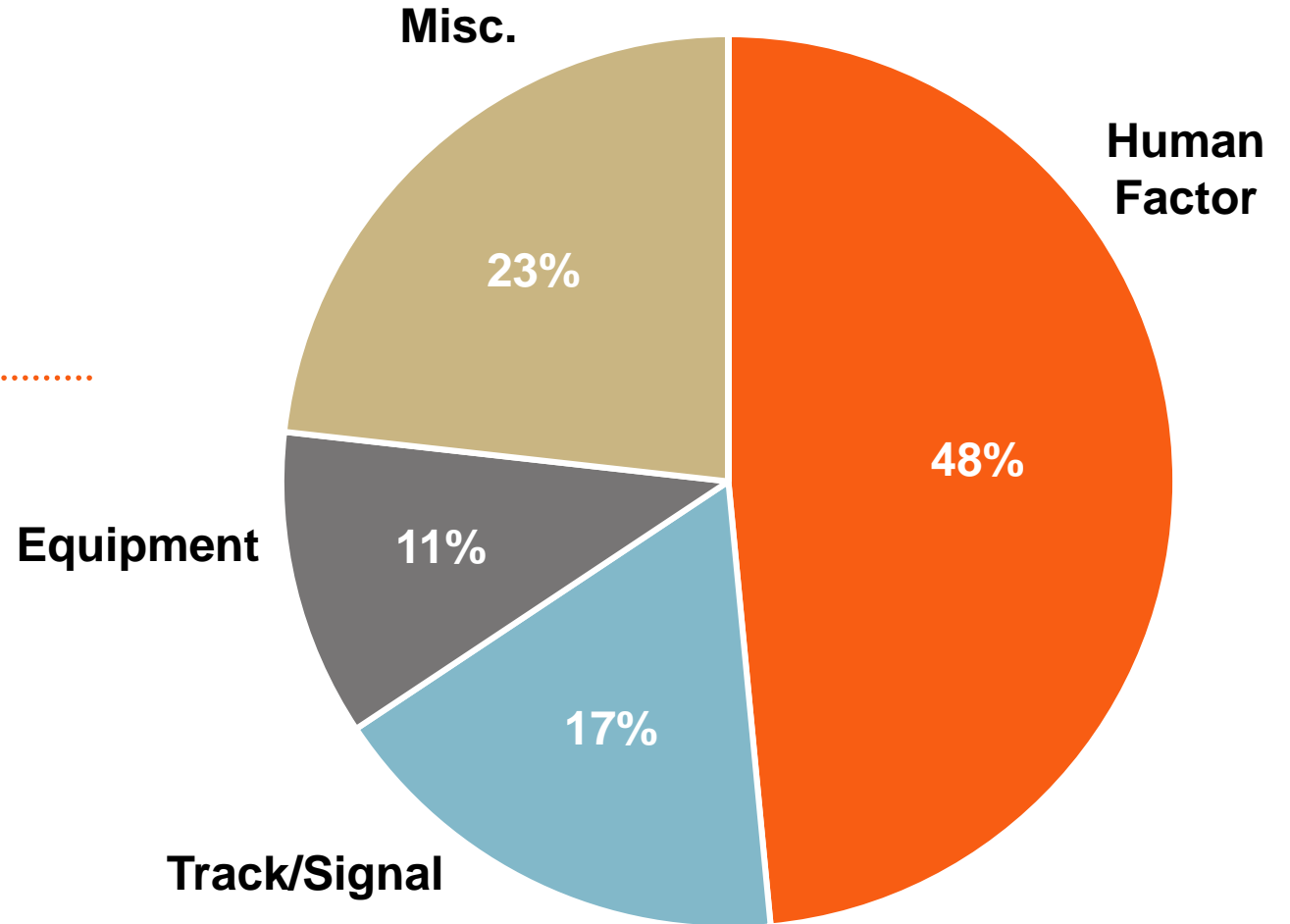


Manifest / Bulk



Prevention:

Causes for Train Accidents



BNSF REPORTABLE TRAIN ACCIDENT CAUSES - 2022

Prevention: Reducing Risk

Human Factor

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

Equipment/Mechanical

- Ultrasonic inspection
- Detector network - dragging equipment
- Technology
- Thermal/infrared scanning for warm bearing detection

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.

CO Key Routes & Detector Spacing

Detector Spacing Average Distances Between Detectors

- Pikes Peak Subdivision** (Raton, NM to Denver) = 21 Miles
- Front Range Subdivision** (Denver to Wendover, WY) = 18.3 Miles
- Angora Subdivision** (Fort Morgan, CO to Alliance, NE) = 15.6 Miles
- Brush Subdivision** (Denver to Brush) = 20.6
- Akron Subdivision** (Brush to McCook) = 21.6

The average detector spacing on the BNSF in Colorado is 19.42 miles between detectors.

The AAR standard for detector spacing on Key Routes is not more than 40 miles between detectors.



Key Routes are in **GREEN**



www.BNSFHAZMAT.com

EMERGENCY CONTACT NUMBER 1-800-432-5452

User name or Email Password **SIGN IN**

Remember Me Forgot your password?

[Request Access as a Hazmat Contractor](#)

[Request access as a BNSF Hazmat Team Member](#)

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BNSF HAZMAT COMMITTED TO SAFETY

This site is designed to be used by community first responders, contractors and our BNSF hazmat team who work together to ensure hazmat safety at BNSF.

We value your dedication and support.

LINKS FOR FIRST RESPONDERS

[ONLINE TRAINING](#)

[COMMUNITY TRAINING](#)

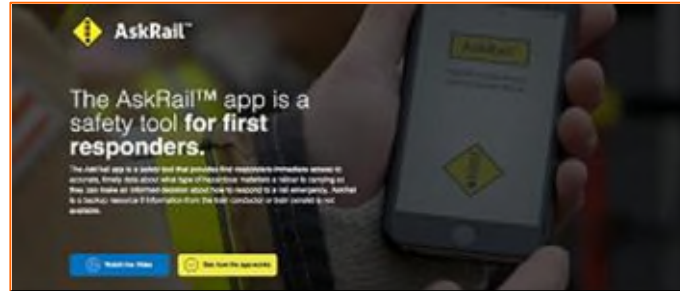
FIRST RESPONDER RESOURCES



COMMODITY FLOW REQUEST

If you are a local emergency responder, elected or emergency management official and need BNSF hazmat commodity flow reports for your emergency response planning, click below to request information about shipment in your community. These are available on a confidential basis and for security reasons are not offered to the general public.

[SUBMIT A REQUEST](#)






ASKRAIL: IF YOU ARE FIRST AT THE SCENE

Community Responders who arrive first to the scene of a rail emergency and need critical information about the contents of a railcar can rely on the AskRail mobile application.

This invitation-only mobile app provides immediate access to accurate, real-time data about each railcar on a train. This information can help emergency responders make informed decisions about how to respond to a rail emergency.

[MORE ABOUT ASKRAIL](#)

ADDITIONAL RESOURCES

-  [System Emergency Response Plan](#)
-  [Operations Lifesaver](#)
-  [Railroad Crossing Locator](#)



TRAINING

To ensure that our hazmat contractor partnerships are mutually rewarding, we offer two important outlets for sharing information best practices.

BNSF HAZMAT ONLINE TRAINING

Railroad Emergency Response Hazardous Materials Training

Prepares firefighters to respond to railway hazmat incidents. This program covers shipping papers, placards, markings that identify hazardous materials, railroad equipment identification and how to assess hazmat incidents.

LNG Awareness and Emergency Response Training

This 30-minute video covers an introduction to BNSF hazmat transportation, emergency response planning training and action, BNSF hazmat shipments, LNG-fueled locomotive awareness and BNSF fuel tender and loading processes.

Passenger Train Emergency Response Training

For BNSF and Amtrak, nothing is more important than the safety of our passengers and employees. This 30-minute training video shows how to respond safely and effectively to emergency situations involving passenger trains.

Crude by Rail Emergency Response

This web-based training is offered by the Association of American Railroads in cooperation with BNSF and six other major railroads. You decide when and where to begin this no cost course that offers a foundation to help you make basic safety decisions in the event of a railway hazmat incident involving crude oil.

www.BNSFHAZMAT.com



BNSF ON-SITE COMMUNITY TRAINING

Onsite Railroad Emergency Response Hazardous Materials Training

As a member of Transportation Community Awareness and Emergency Response (TransCAER®), BNSF provides a no-cost railroad hazardous materials familiarization course for community emergency responders. This four-hour course uses a combination of classroom and hands-on modules.

Training is conducted at the location of your choice.

BNSF CRUDE BY RAIL TRAINING

BNSF Railway offers Crude By Rail and Emergency Response Training workshops to municipal first responders. This no cost training program will provide first responders with the basic knowledge, skill and abilities to respond to incidents involving Crude By Rail (CBR). The program is delivered over 3 days (24 hours) with over 60% of the time spent on field exercises.

Commodity Flow Studies

- Is your agency interested in doing a transportation risk analysis for your area?
- Do you need information for emergency planning or security planning?
- Do you need to know what the most commonly transported hazardous materials are for your area?

The Hazardous Material Commodity Flow Study is available electronically through:

<http://www.bnsfhazmat.com>

Rail Hazardous Materials Traffic Flow (Previous 4 Quarters)

STCC NUMBER	STCC DESCRIPTION	CLASS CODE	RESIDUE CAR COUNT	LOADED CAR COUNT	RESIDUE INTER-MODAL	LOADED INTER-MODAL	TOTAL LOADED COUNT
4905752	LIQUEFIED PETROLEUM GAS	2.1	3633	2571	0	0	2571
4910165	PETROLEUM CRUDE OIL	3	1882	2233	0	0	2233
4908176	GASOLINE	3	226	1533	0	0	1533
4961605	ELEVATED TEMPERATURE LIQUID, N.O.S.	9	1370	1382	0	0	1382
4907265	STYRENE MONOMER, STABILIZED	3	1011	1056	0	0	1056
4905424	BUTANE	2.1	277	879	0	0	879
4930228	HYDROCHLORIC ACID	8	676	755	0	0	755
4905421	LIQUEFIED PETROLEUM GAS	2.1	946	629	0	0	629
4930040	SULFURIC ACID	8	513	485	0	0	485
4907428	HYDROCARBONS, LIQUID, N.O.S.	3	304	388	0	0	388
4909152	ALCOHOLS, N.O.S.	3	215	298	0	0	298
4904509	CARBON DIOXIDE, REFRIGERATED LIQUID	2.2	211	177	0	0	177
4961619	ELEVATED TEMPERATURE LIQUID, N.O.S.	9	142	138	0	0	138
4909230	METHANOL	3	101	136	0	0	136
4905419	LIQUEFIED PETROLEUM GAS	2.1	213	118	0	0	118

Response: First Responder Training

BNSF and the railroad industry train first responders in their communities under a longstanding program called “*TRANSCAER*” (*Transportation Community Awareness and Emergency Response*)

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

BNSF has trained **more than 4,000** local first responders in 2023.

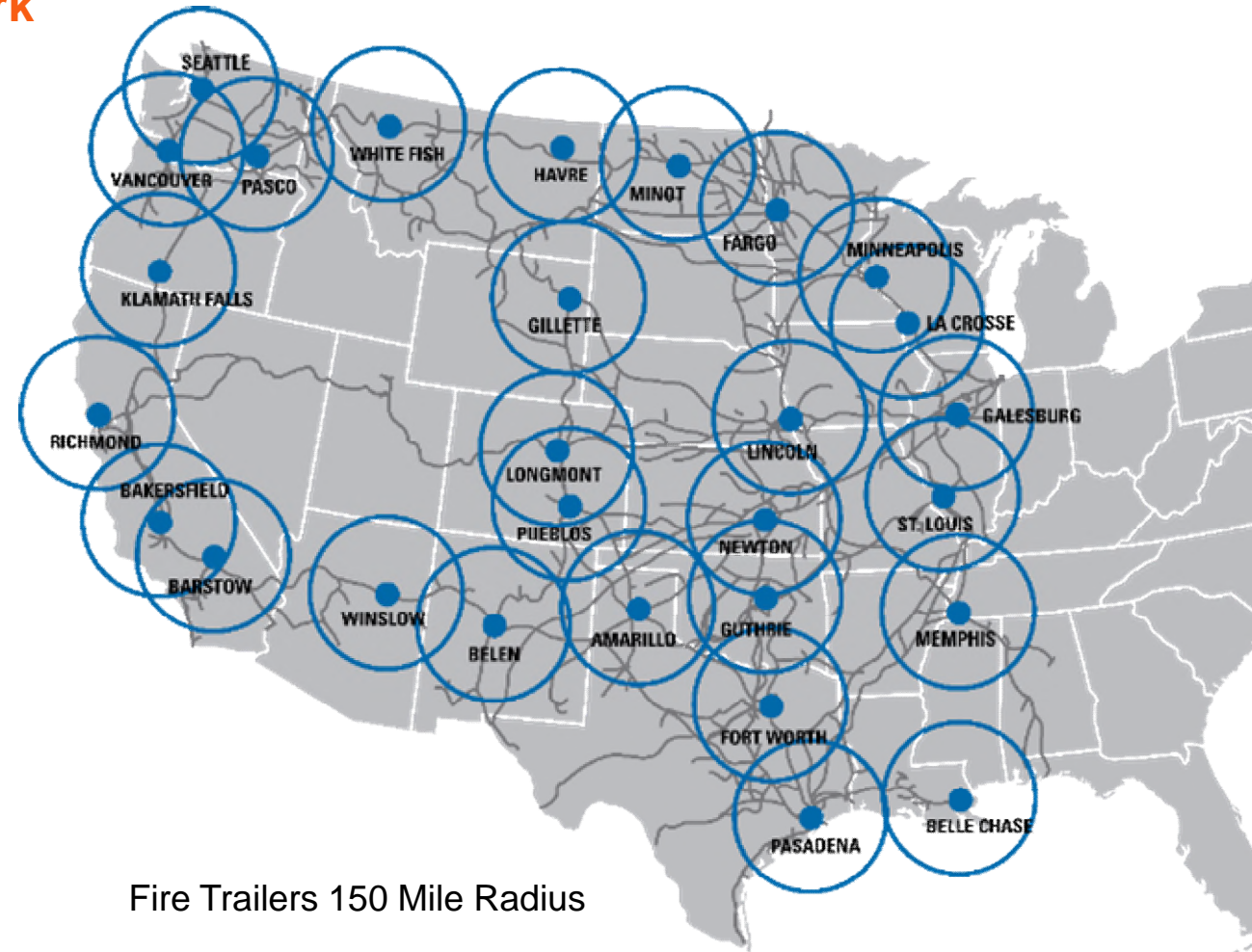
More than **128,000 emergency responders** trained by BNSF since 1996.



Response: Incident Mobilization

BNSF pre-positions equipment across its network

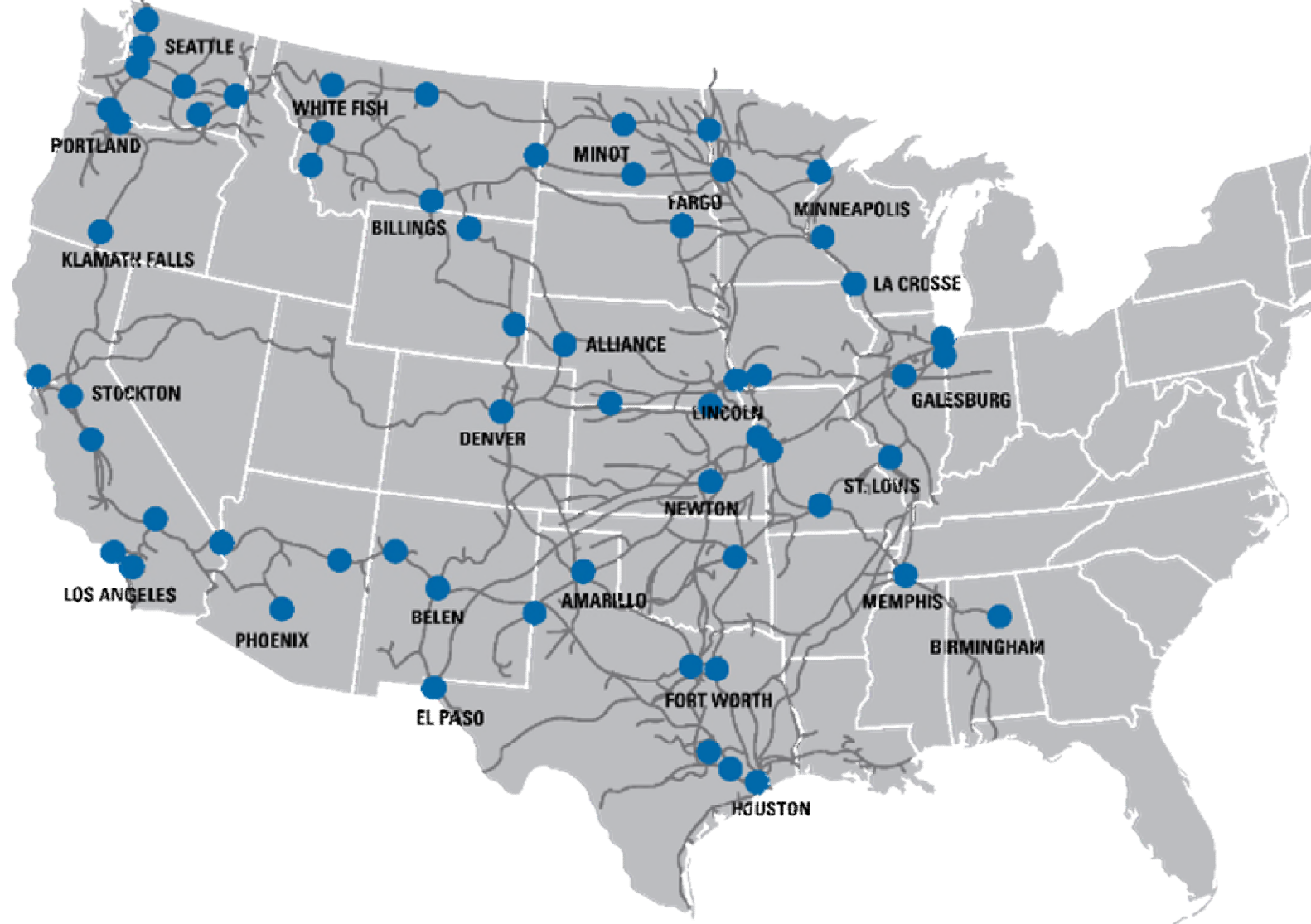
- Industrial fire-fighting foam trailers
- Emergency breathing air trailers
- Chlorine kits
- Midland kits
- Air monitoring assets



Fire Trailers 150 Mile Radius

Response: Mobilization of Prepositioned Hazmat Responders

More than
**140 hazmat
responders and 40
advisors at
60 locations**



Air Monitoring Assets

- **CTEH**

- 24-hour access to PhD Toxicologists and Dispersion Modelers
- Utilize Safer® Star Air Dispersion Model offering topographical model input

- **TacTox Kit (22 Kits total)**

- MultiRAE 4-gas monitor w/ PID, Kestrel weather meter, Solar Irradiance meter, Detector Tubes/pump, GPS, Calibration gases and equipment

- **GHD**

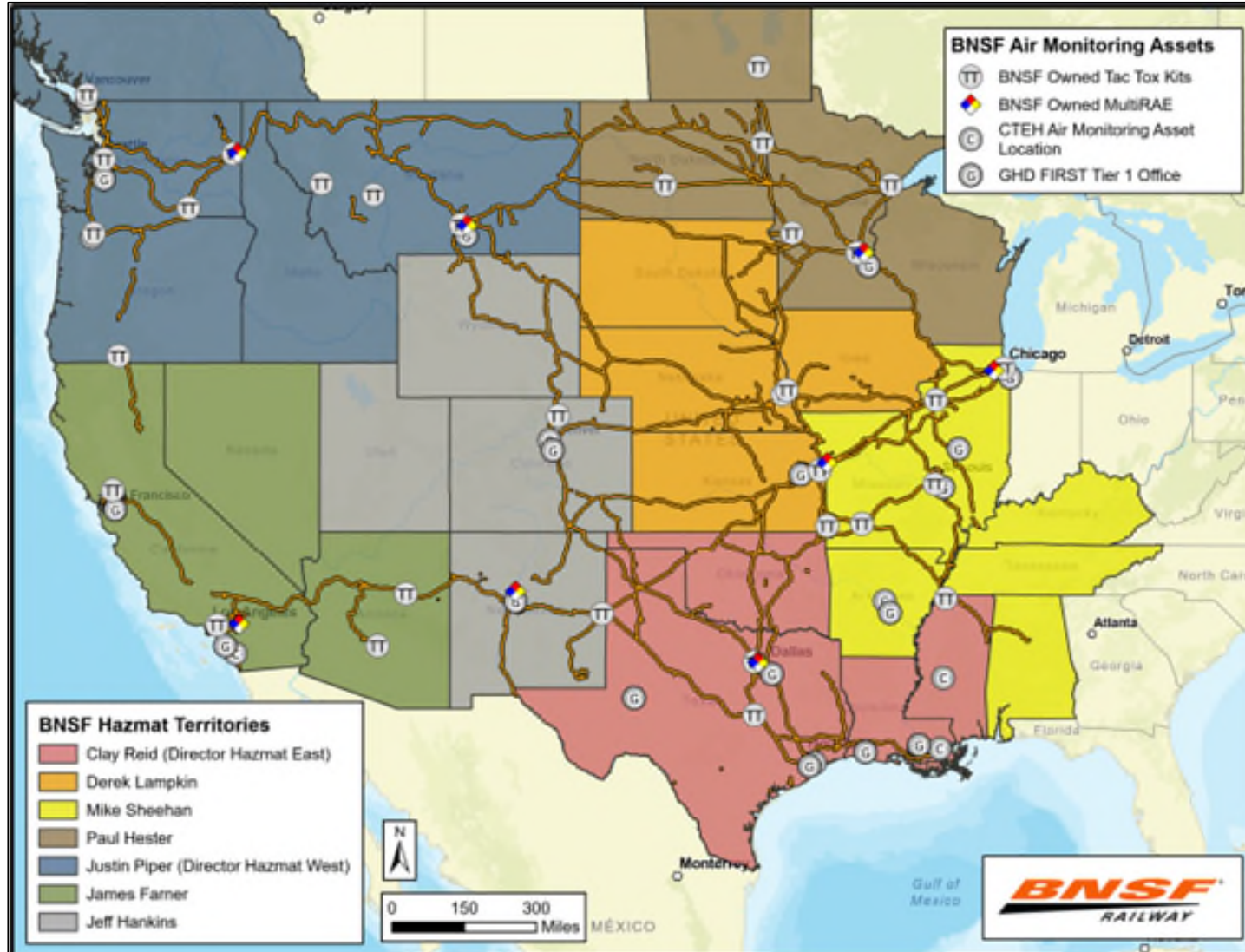
- Multi-Media sampling – Air, surface water, groundwater, soil
- GIS mapping and support

- **BNSF HazMat Manager/HazMat Emergency Response Team**

- MultiRae 4-gas monitor w/PID
- O2-H2S-Cl2-LEL-PID



Air Monitoring Asset Locations



Training Numbers

Training numbers for Colorado by year:

2023 = 220

2022 = 62

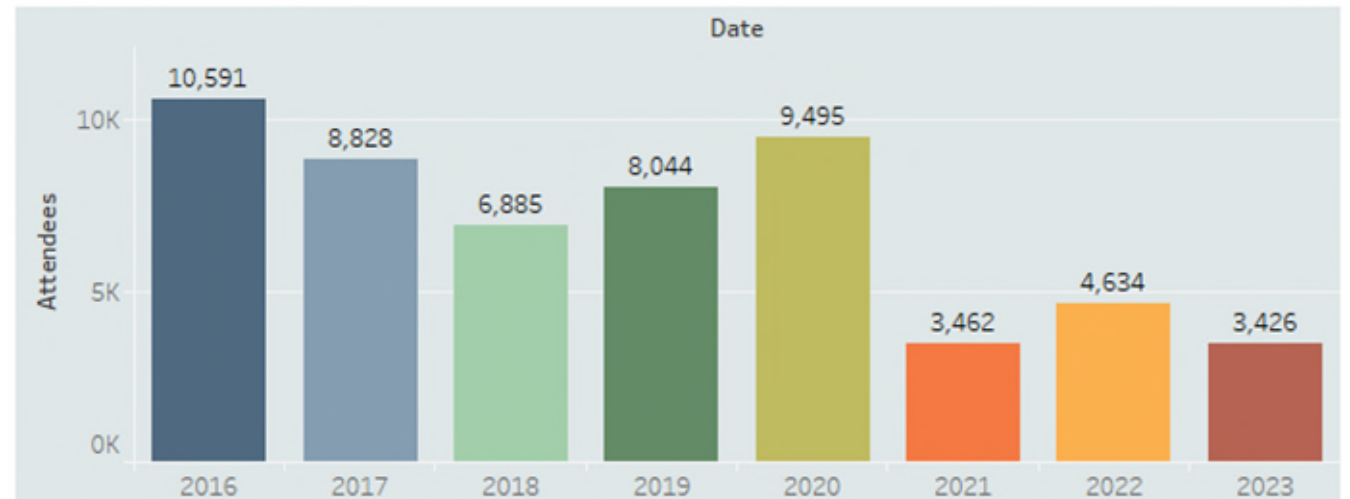
2021 = 343

2020 = 363

2019 = 301

System wide year to date is 4,168

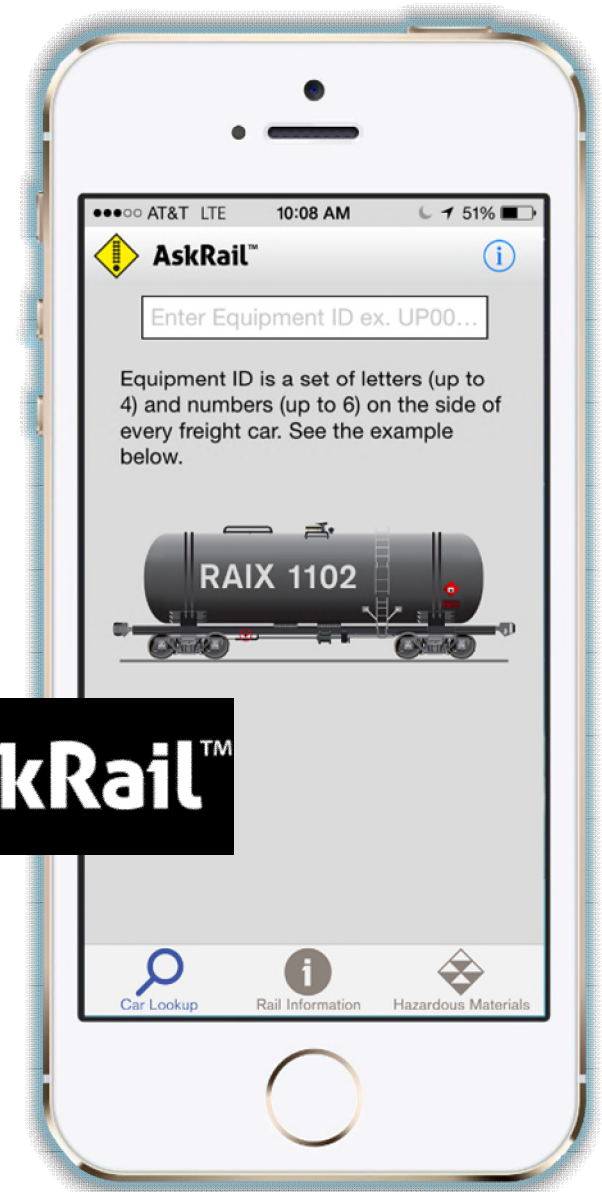
Training by Year



Still Don't Know? Then AskRail!

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AskRail - Single Car Lookup

