BNSF Rail Safety Overview

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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

- 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.

Prevention: Risk-Reduction Efforts – Layers of Safety

Risk Identification

Incident & Injury Prevention

Incident & Injury Response

Risk ID

Proactively determine and prioritize sources of risk

Design-In Safety

Engineer out risk during equipment, facility and process design

Rules & Procedures

Set rules and procedures, culture of compliance and accountability

Safety Information

Align efforts and communicate key messages to all levels

Approaching Others About Safety

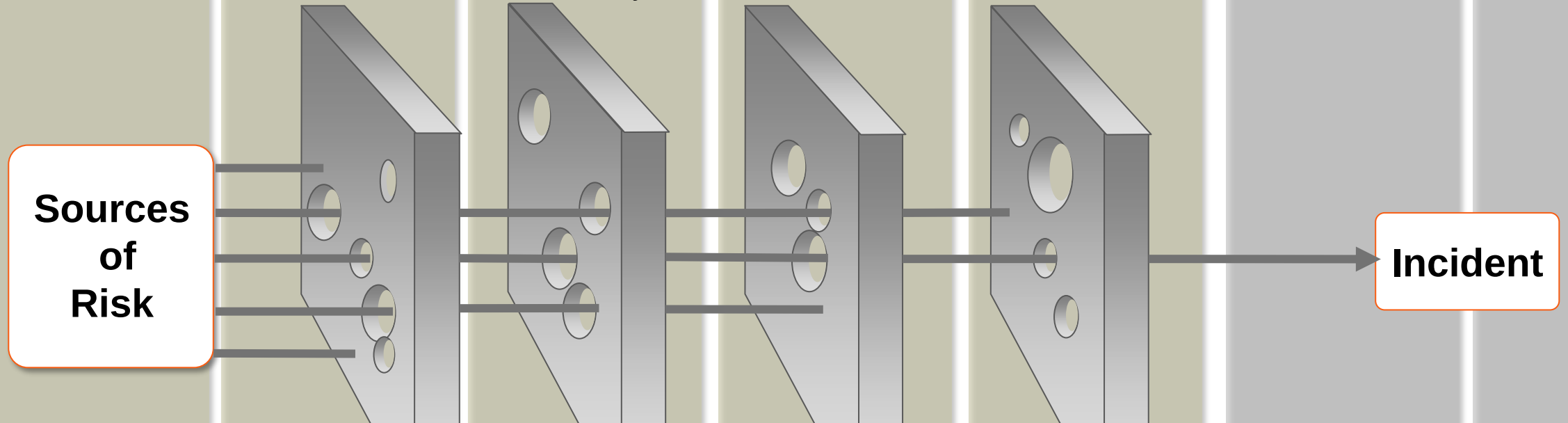
Develop people to ID, address and respond to exposure

Emergency Planning & Response

Reduce severity and impact

Re-enactment

Reduce severity and impact



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.

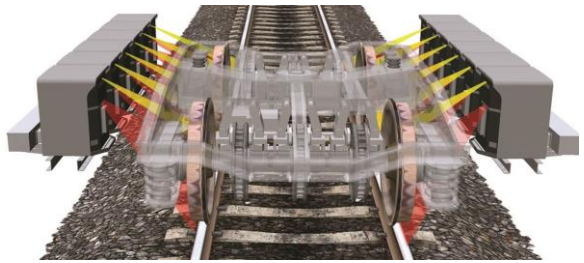
Prevention: Equipment Detection Technology

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)

Prevention: Rail Equipment Detector Examples

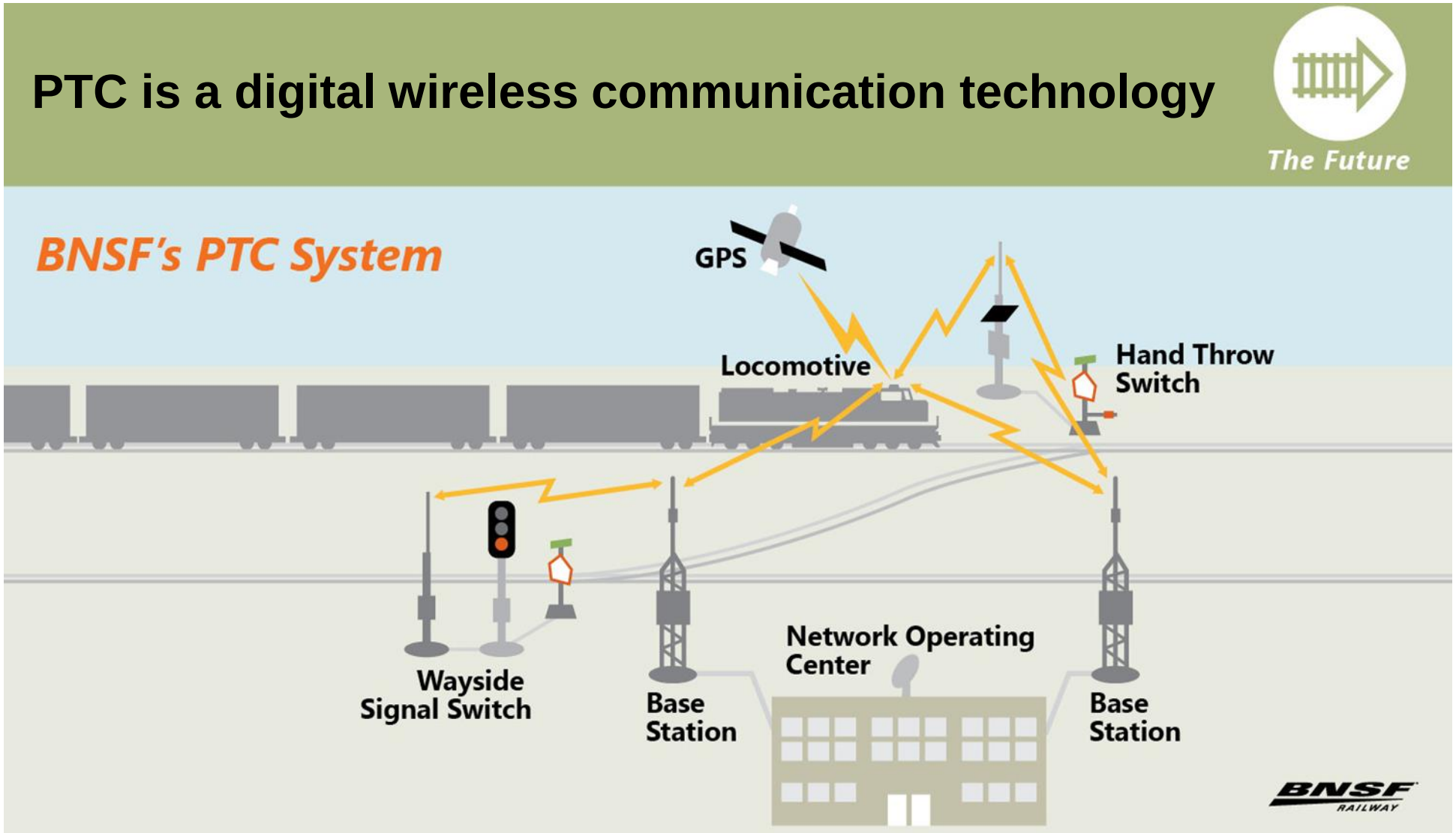
- ***Acoustic Bearing Detector (ABD)*** – Microphone-based systems used to evaluate sounds generated by specific bearing component defects

- ***Hot Box Detector (HBD)*** – Pyrometer-based system that evaluates bearing temperature history for statistical outliers; brake issues, burned off journals. Industry standard average spacing of 40 miles on Key Routes. **BNSF has average spacing of 12.3 miles in N. Idaho**

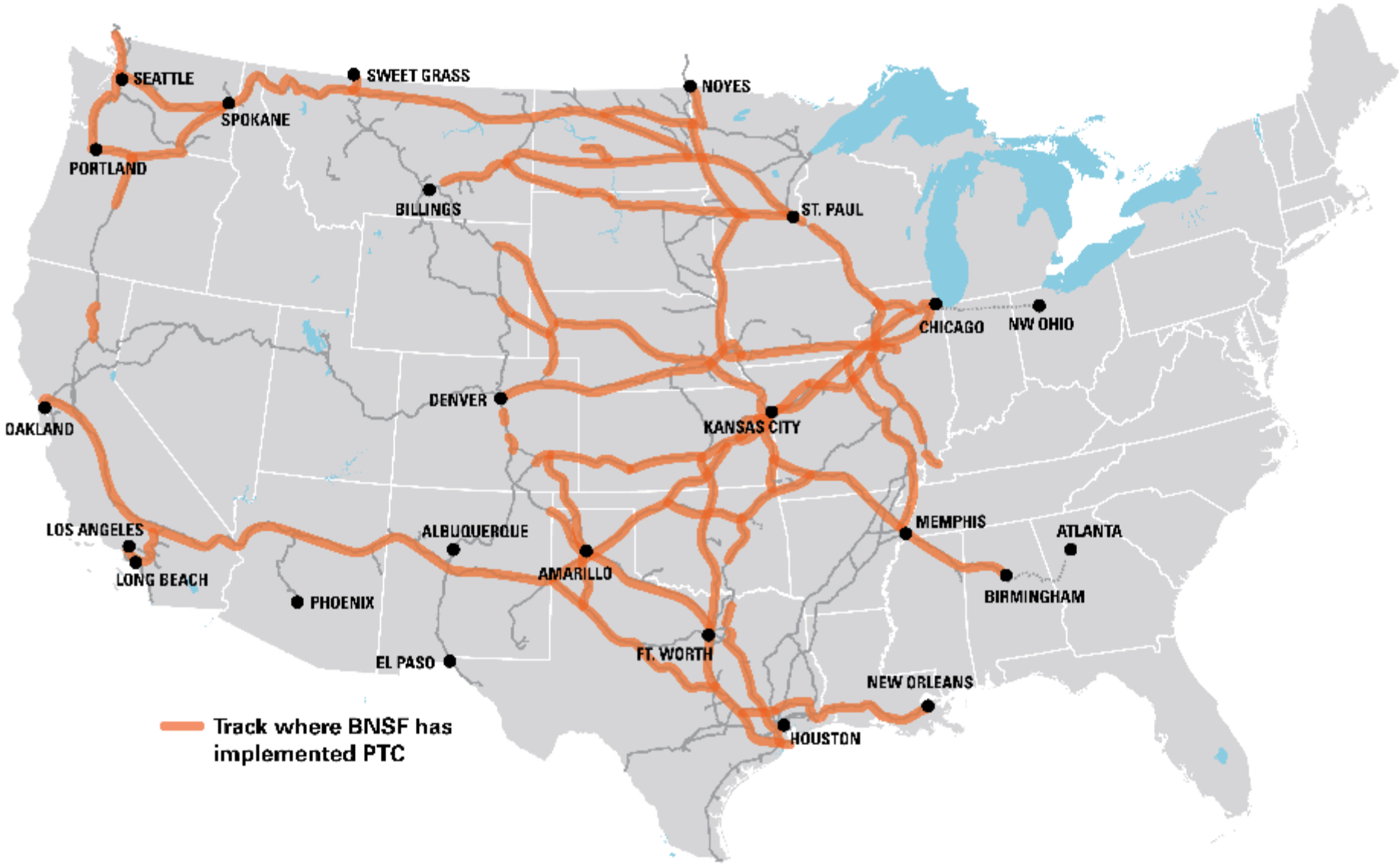


- ***Wheel Tread Inspection Detector (WTID)*** – Camera-based system that is capable of performing a visual inspection of the entire wheel plate and tread surface, identifying cracks, breaks and missing pieces

Prevention: Positive Train Control (PTC)



What is the Scope of Implementation?



Leveraging Advanced Technology: Automated Track Inspections

More Miles Tested (under load)

Fewer Defects per Track Mile

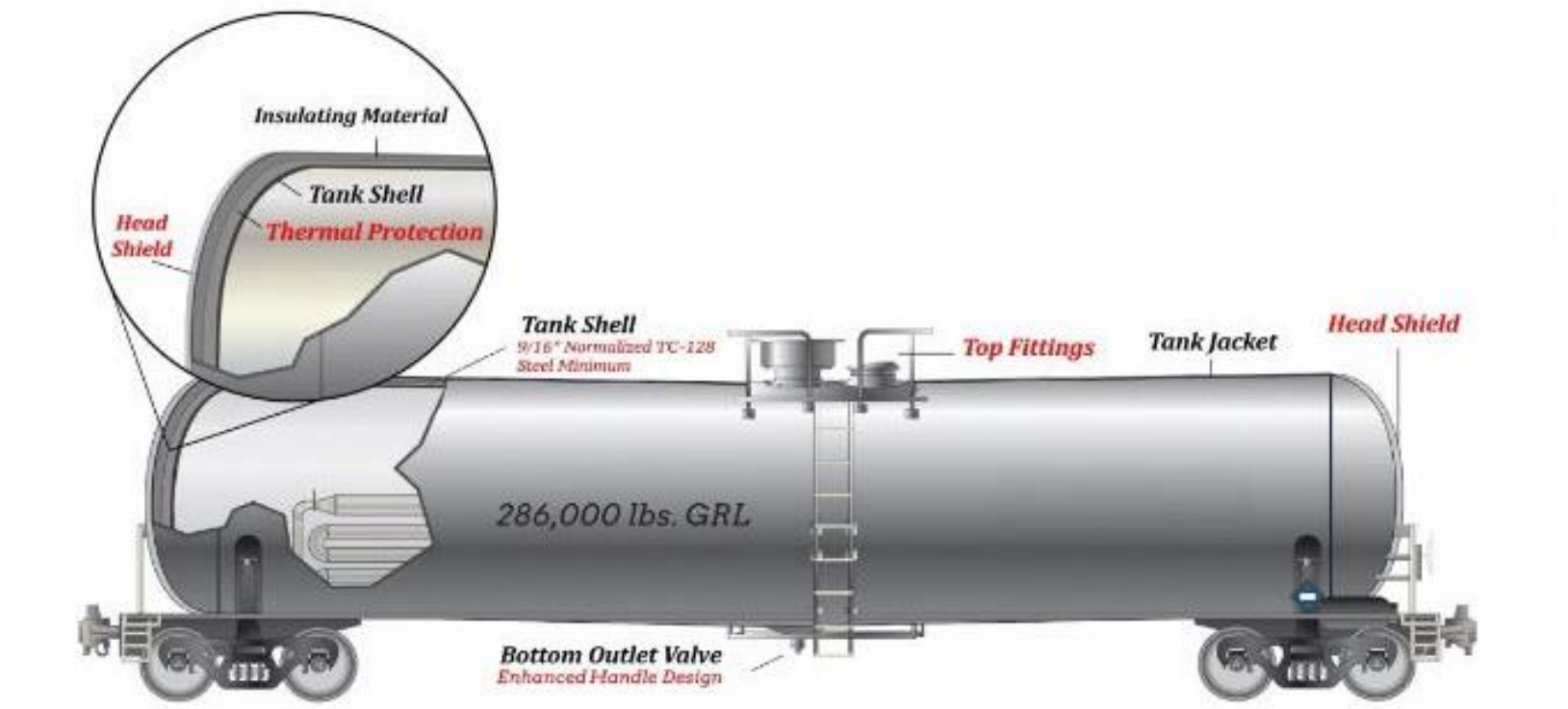
Increased Safety

Mitigation: Enhanced Tank Car Standards

Mitigation: Next Generation Tank Car

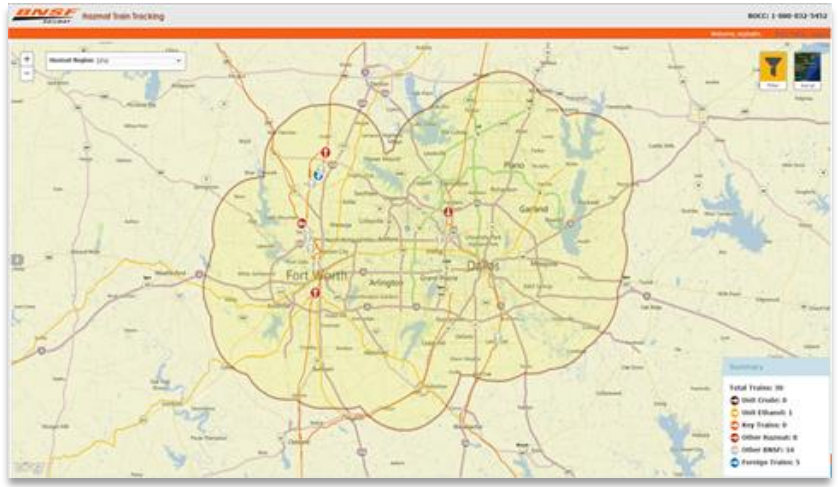
Tank cars are privately owned and customer-provided. Those built after Oct. 2015 must meet **enhanced DOT 117 design**.

As more DOT 117 cars are online, others are phased out. BNSF incentivized the move to DOT 117s and is ahead of DOT regulations. Nearly all ethanol and crude shipments on BNSF's network are in DOT 117s.

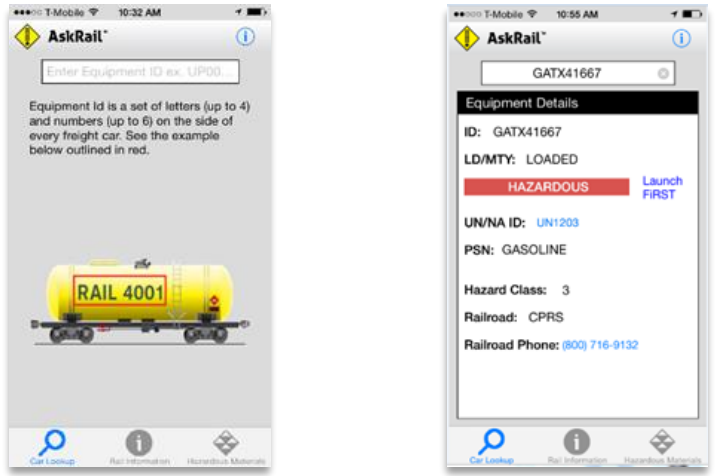


Response: First Responder Access to Information

- BNSF provides **High Hazard Flammable Train (HHFT) Reports** to State and Tribal Emergency Response Commissions and provides annual **Hazmat Traffic Flow Reports** upon request to Response Commissions, Local Emergency Response Committees, Fire Chiefs and Emergency Managers.
- BNSF **offers SECURETRAK** website, a real-time Geographic Information System tracking program, to state and/or regional fusion centers.
- Industry **launched AskRail app** to provide first responders with car-specific data for hazmat contents and railroad contacts during incident.
- BNSF **developed national inventory of resources** for first responders, staging of emergency response equipment and community notification contacts and **geographic response plans** for specific locations.
- BNSF launched **www.BNSFHAZMAT.com** website to provide information such as training and emergency response plans to first responders.



SECURETRAK Website



AskRail App

Response: First Responder Training

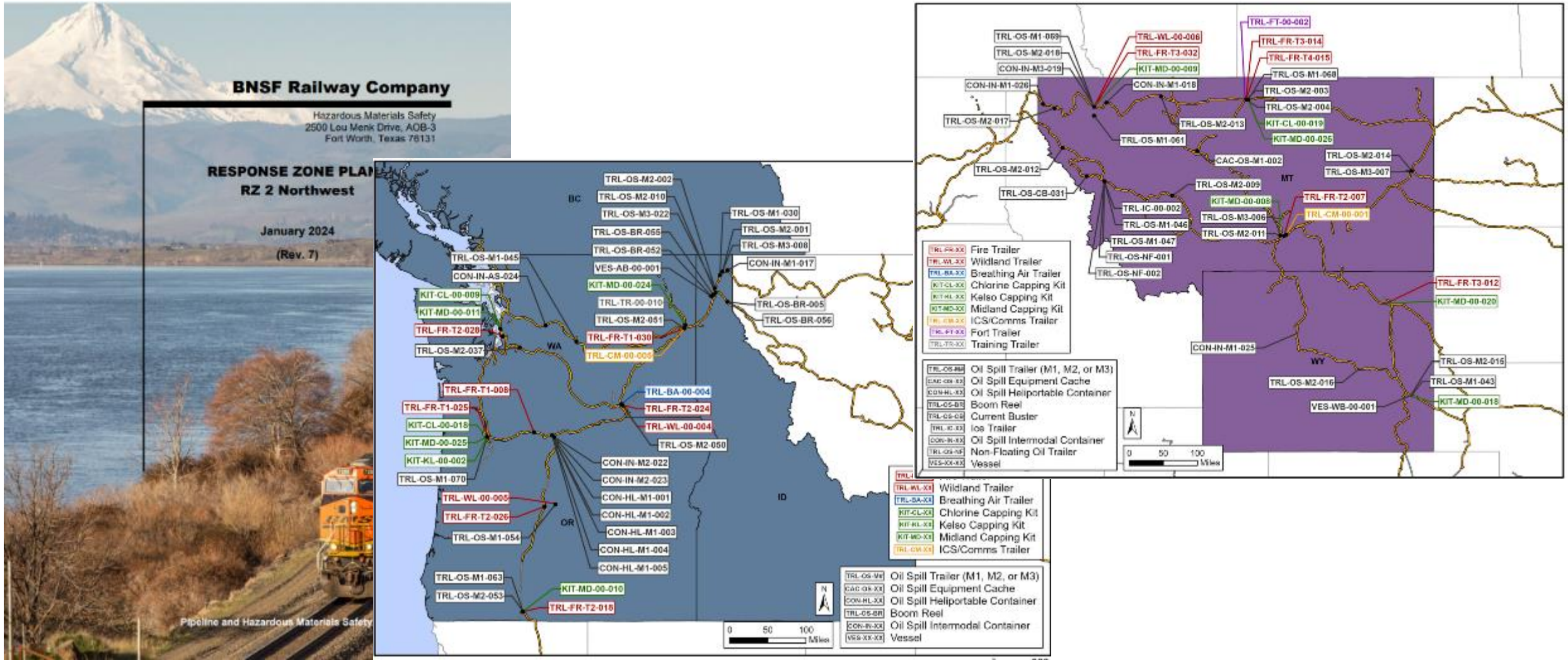
BNSF and the railroad industry train first responders in their communities under a longstanding program called *“TRANSCAER” (Transportation Community Awareness and Emergency Response)*

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

BNSF trained **more than 7,000** local first responders in 2023.

More than **140,000 emergency responders** trained by BNSF since 1996.

Response Preparedness – N. Idaho



Geographic Response Plans

BNSF GRPs focus not only on ‘how to respond’, but also present specific geographic information about ‘where to respond’

Though railroad GRP development is not regulatorily driven, GRPs voluntarily developed by BNSF include (but are not limited to):

- Upper Mississippi River GRP (jointly developed by BNSF and CP and subsequently provided to EPA Region 5)
- Flathead River GRP
- Kootenai River GRP
- Lake Pend Oreille (integrated in Region 10 NWACP – 2020)
- Lower Colorado River GRP
- Upper Colorado River GRP
- Upper and Lower Deschutes River

BNSF has additionally identified agency-developed GRPs relevant to waterbodies along BNSF’s track network and has adopts their use where geographically relevant. I.e., UMRBA UMR Pool-Specific GRPs.

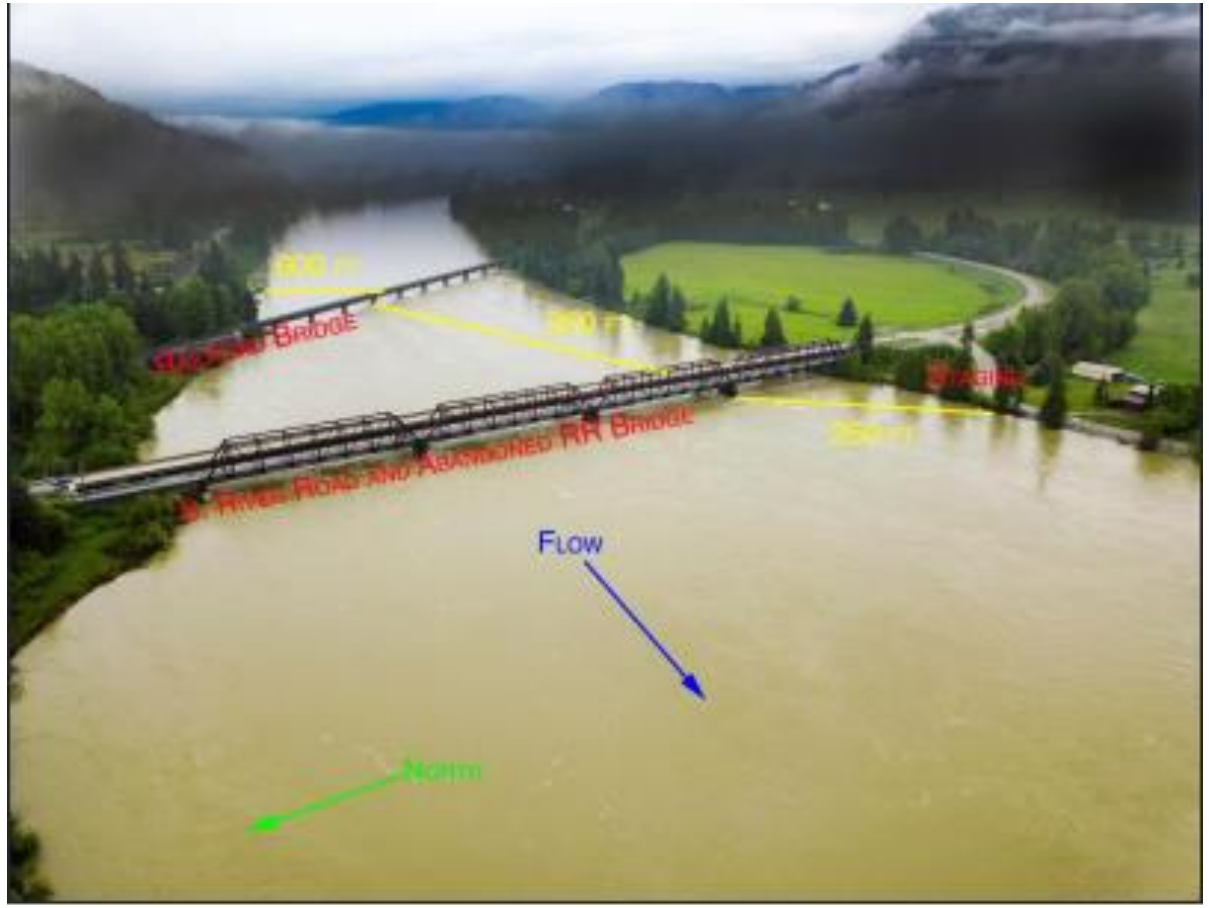
BNSF Drill and Exercise Program

- WA State COSPR
- OR State COSRP
- CA State COSRP
- MN State COSRP
- BC OSRP
- PHMSA COSRP
- **Whitefish LERP

June 13 ‘23 WCD Table Top Summary:

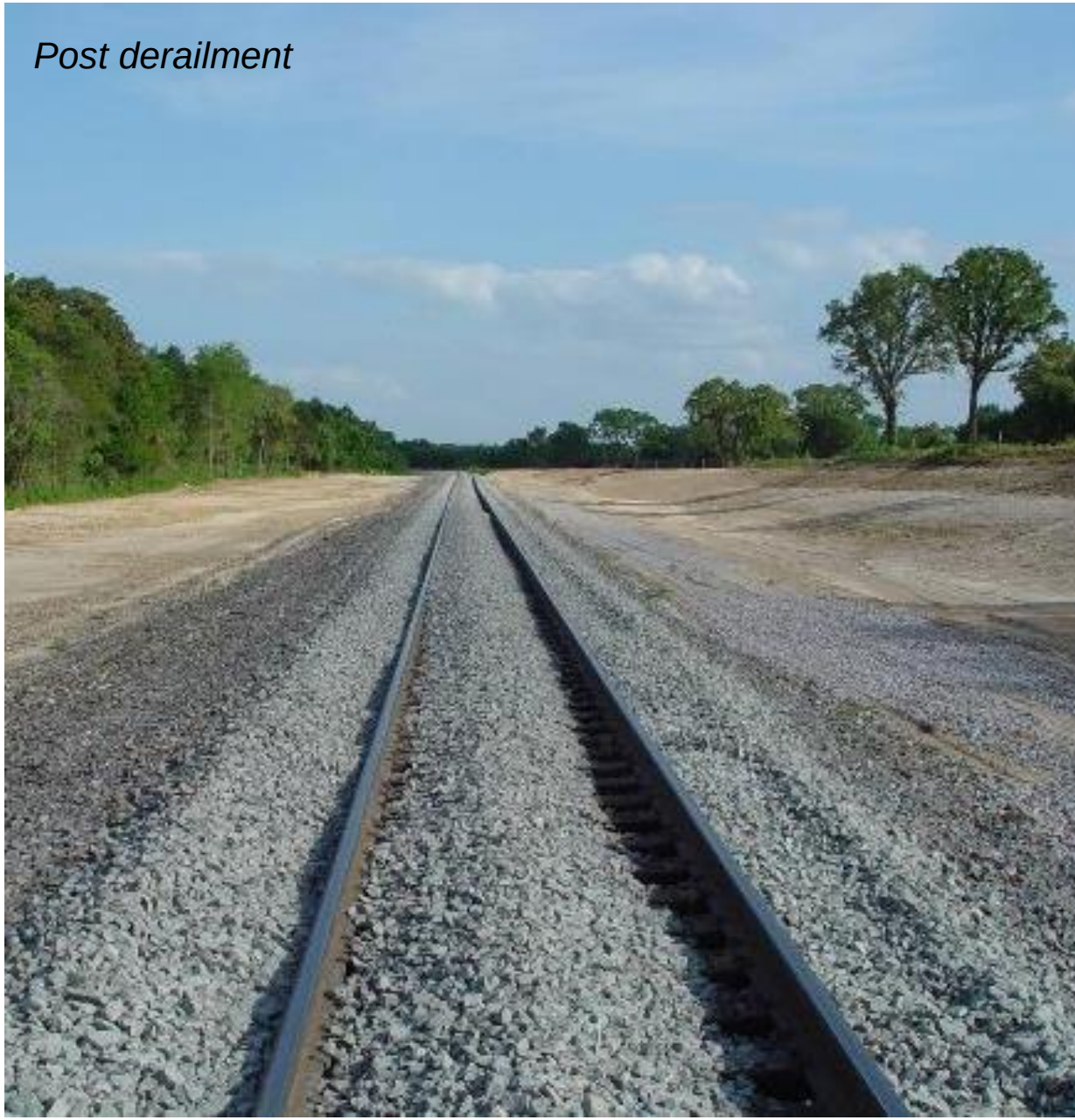
“BNSF brought together a diverse group of stakeholders to respond to a significant spill scenario on the Columbia River. This drill successfully demonstrated BNSF’s contingency plan under a worst case scenario. We appreciate the cooperative integration of trustees and others into the BNSF team.

Strategy Testing and Evaluation



Restoration of sites

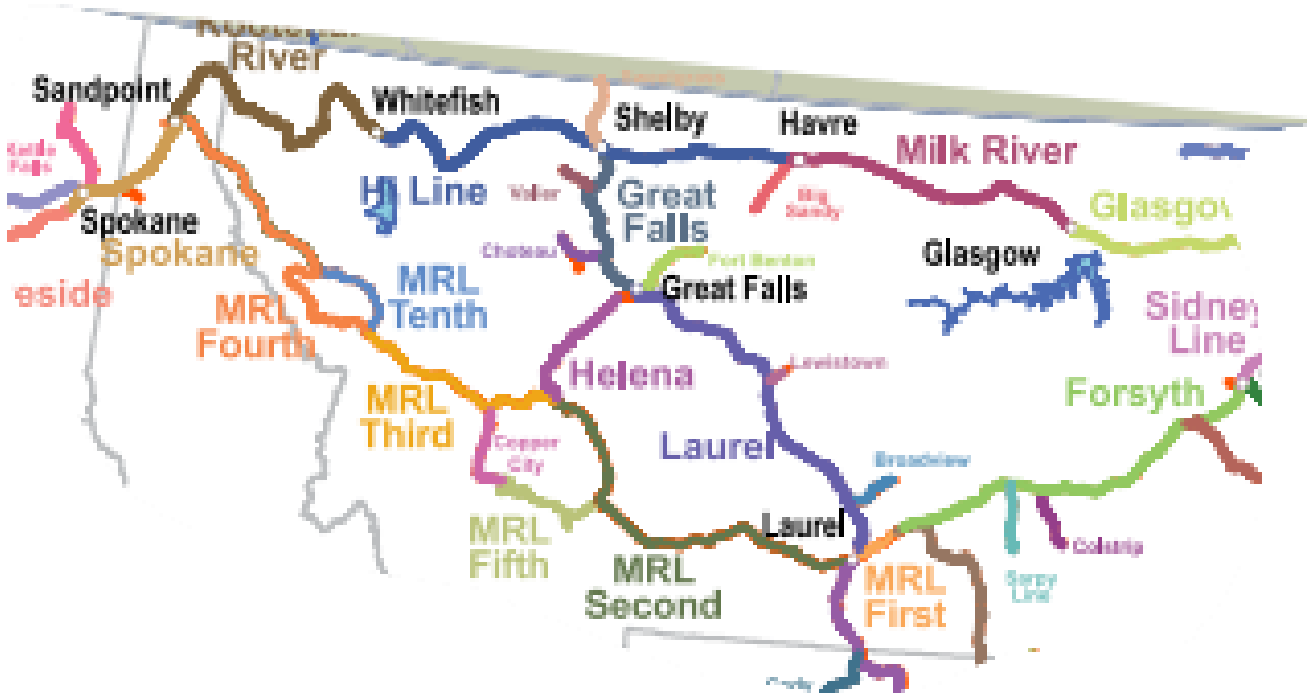
- BNSF is responsible for mitigation of the spill and any restoration tasks
- BNSF contracts with pre-approved consultants and contractors to perform the remediation and restoration
- State agencies oversee the work and BNSF must obtain their concurrence before a site is acceptably closed



Montana Rail Link Subdivsion

BNSF System Map by Subdivision

Montana Rail Link Subdivision



Sandpoint Junction Connector – Completed August 6, 2023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