



Operation Safe Delivery

*Enhancing the Safe Transport of Crude Oil and Other
Flammable Liquids*

Surface Transportation Board
Rail Energy Transportation Advisory Committee
March 6, 2014

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Pipeline and Hazardous Materials Safety Administration



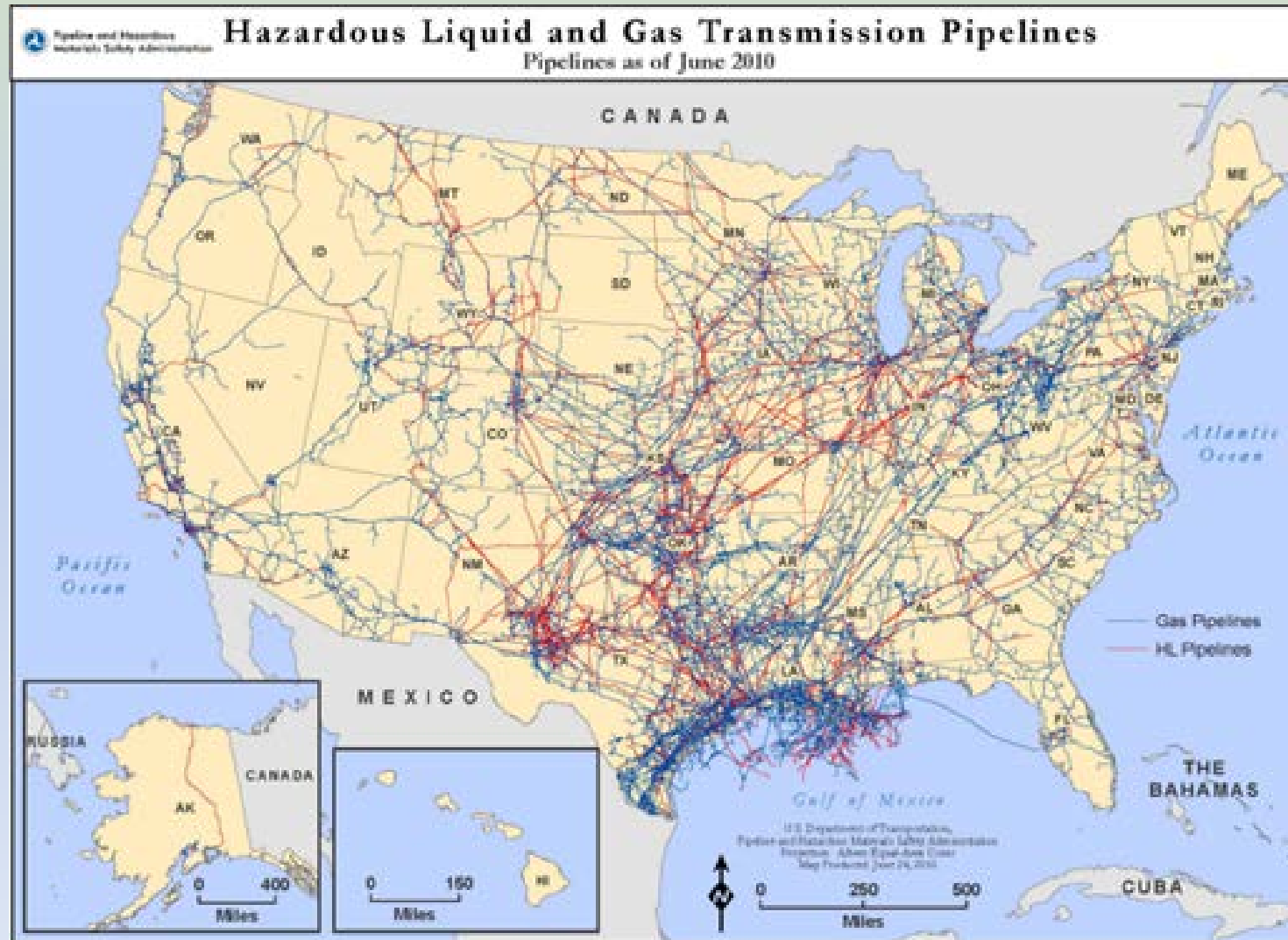
Pipeline and Hazardous Materials Safety Administration

Protect people and the environment from the risks of hazardous materials transportation.

- Safe transportation of more than 1 million shipments of hazmat moved by air, rail, highway, and water.
- Safety of over 2.6 million miles of hazardous gas and liquid pipelines.



Pipeline in the United States

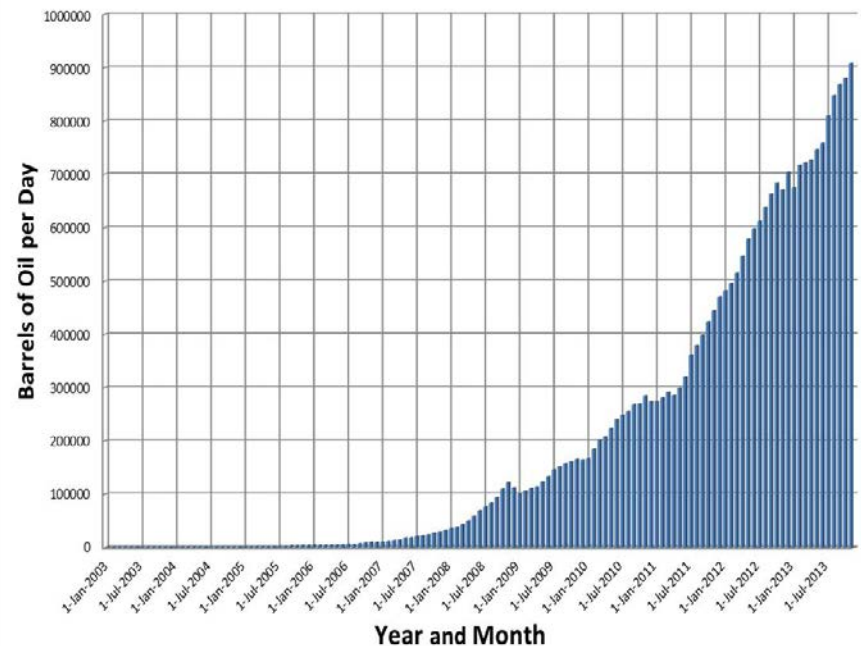




US Energy Production

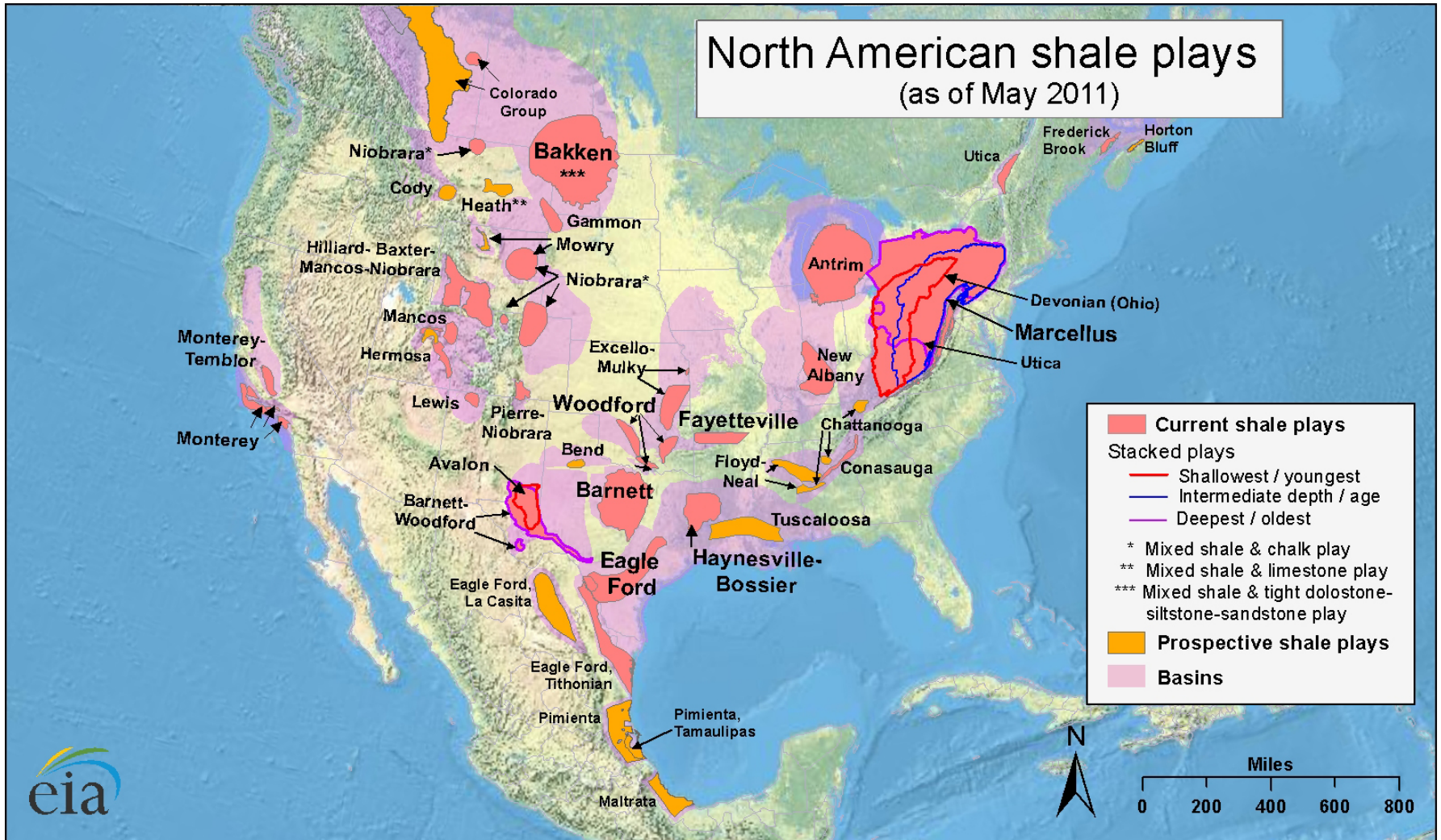
- Growth of domestic natural gas and crude oil production is revolutionizing the US energy economy.
- During December 2013, over 11 million barrels daily were produced.
- In 2013 the Bakken play produced over 10% of all US oil.
- In November 2013, over 10,022 Bakken wells produced 29 million barrels of oil, over 900,000 barrels of oil daily.

Table 1: Bakken Oil Production in North Dakota 2003-2013



Unconventional Oil and Gas

A Game Changer

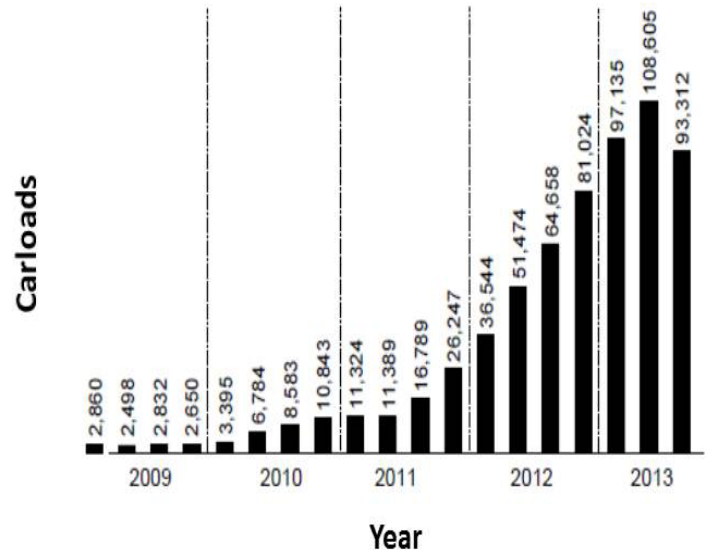




Crude Oil Transport

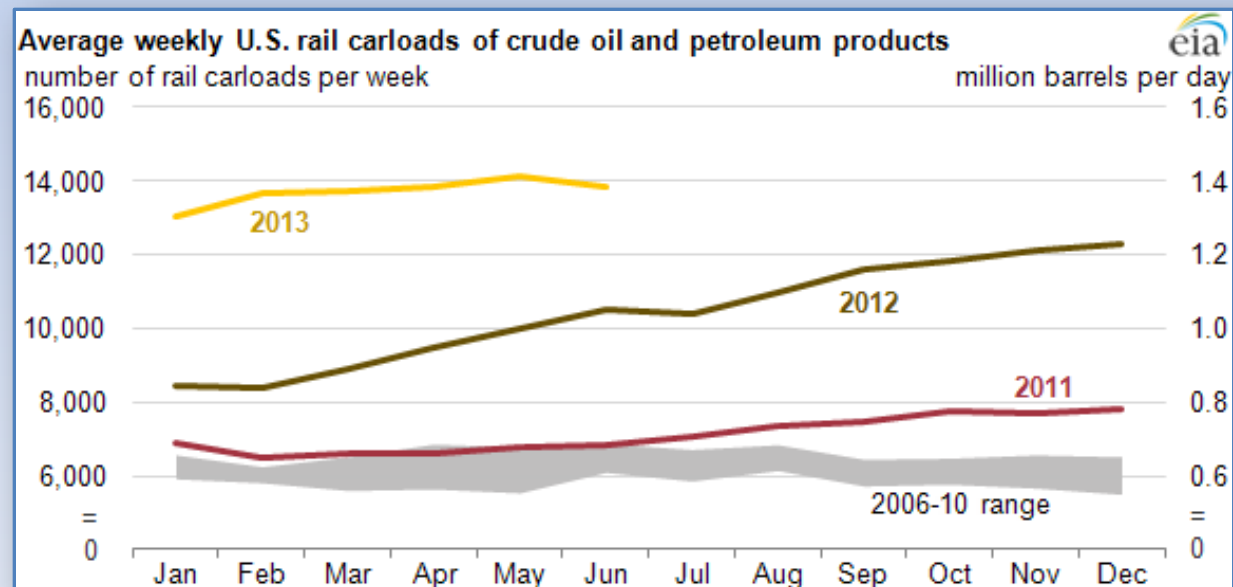
- Increased energy production results in increased transport by all modes.
- The volume of crude oil moving by rail has quadrupled in less than a decade due to increased production.
- Rail volume has increased, but accidents have declined by 43 %.
- Accidents involving hazmats are down 16 %.
- Increased use of unit trains of 100+ cars of a single commodity.

Table 2: Originated Carloads of Crude Oil on Class 1 Railroads



Significant Rise in Crude Oil Shipments by Rail

- Limited pipeline capacity and geography of refineries favoring light crude has increased use of rail.
- The increase in rail shipments is projected to continue.





Recent Bakken Crude Oil Derailments

- Plaster Rock, NB

January 7, 2014, 16 cars derailed, 8 hazmat)

- Casselton, ND

December 20, 2013, 20 of 106 tankers derailed

- Aliceville, AL

November 8, 2013, 25 of 90 cars derailed

- Lac-Megantic, QE

July 6, 2013, 74 cars derailed, 47 fatalities





Operation Safe Delivery

Comprehensive approach to address risks, prevent derailments and reduce consequences of flammable liquids by rail.

- Product testing and analysis
- Inspections and enforcement
- Rulemaking
- Partnerships
- Public Outreach
- Aggressive Actions



Emphasis on prevention and mitigation.



Rulemaking

- **September 6, 2013: Advanced Notice of Proposed Rulemaking (ANPRM)** to improve the crashworthiness of DOT 111 tank cars.
- **December 5, 2013:** Comment closing date - **100,000** comments were received.
- **March 2014: NPRM** being finalized to include enhancements to rail operational procedures.



Non-Regulatory Actions

- **August 2, 2013:** The FRA issued **emergency order** for railroads to properly secure rolling equipment.
- **August 7, 2013:** PHMSA and FRA issued **safety advisory** recommending railroads take additional action to eliminate risk.
- **November 6, 2013:** PHMSA and FRA issued a **safety advisory** reinforcing the importance of proper characterization, classification, and selection of a packing group for Class 3 materials.
- **January 2, 2014:** PHMSA issued a **safety alert** advising Bakken crude may be more flammable than traditional heavy crude oil.
- **January 25, 2014:** Secretary of Transportation issued an **Emergency Order** requiring shippers of petroleum crude oil to ensure crude oil is properly analyzed and classified prior to transportation



Enhanced Enforcement

- **Operation Classification:** Unannounced inspections and testing of crude oil samples to verify classification.
 - **August 2013:** Launch of “Operation Classification.”
 - PHMSA tested for VP, BP and other characteristics on 14 samples.
 - Coordinating efforts with Transport Canada and North Dakota.
 - **February 5, 2014:** PHMSA has initiated enforcement action on 3 shippers.



The Secretary's Call to Action

- In January, 2014, Secretary Foxx issued a **Call to Action** to rail company CEOs and energy association leadership.
- January 16, 2014, Secretary Foxx met with petroleum and railroads industry to discuss crude oil safety.
- 30-day proposed changes focused on:
 - Proper classification and characterization
 - Operational controls to lessen the likelihood of accidents
 - Tank car and rail track integrity
- Voluntary improvements were identified (February 2014).
- PHMSA and FRA are continuously engaged with stakeholders to ensure progress and effectiveness of safety improvements.



Industry Actions

- Association of American Railroads Letter of Agreement To DOT includes
 - Routing Considerations
 - Speed Restrictions
 - Distributed Power
 - Emergency Response
- Bakken Crude Oil Producers – sharing of crude oil testing/analysis data and methodology



Next Steps

- Consider other regulatory actions and will explore all regulatory avenues.
- Continue to work with shippers and carriers to address safety gaps and issues
- Continue Operation Classification and enhance outreach efforts to better educate the regulated industry, emergency responders and the public about crude oil and rail safety.



Operation Safe Delivery Website

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Operation Safe Delivery: Enhancing the Safe Transport of Flammable Liquids

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Call to Action

In response to recent accidents involving crude oil shipments by rail in the U.S. and Canada, U.S. Transportation Secretary Anthony Foxx has issued a "Call to Action," calling on rail company executives, associations, shippers, and others to discuss how stakeholders can prevent or mitigate the consequences of rail accidents that involve flammable liquids. [See recent Call to Action letter from Secretary Foxx.](#)

Nearly a million shipments of hazardous materials move throughout the U.S. each day. While most of these shipments reach their final destinations without incident, accidents can and do occur. DOT remains committed to the safe transport of flammable liquids by all modes of transportation, including the nation's 140,000 mile freight railroad network.

Action Plan