Overview of U.S. Rail Traffic Grain Movement Challenges
BNSF is a Leading Railroad

- A Berkshire Hathaway company
- **32,500 route miles** in 28 states and three Canadian provinces
- **41,000 employees**
- Approximately **8,000 locomotives**
- **13,000 bridges and 89 tunnels**
- Moves **one-fourth of the nation’s rail freight**
- Operates an average of **1,400 freight trains** per day
- Serves **40 ports**
- Leads rail industry in **technological innovation**
- Unlike other forms of transportation, BNSF trains operate on an **infrastructure financed almost entirely by the railroad**
2018 U.S. Class I Railroad Volumes

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Volume</th>
<th>Share of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemicals</td>
<td>1,671,882</td>
<td>12.3%</td>
</tr>
<tr>
<td>Coal</td>
<td>4,405,513</td>
<td>32.3%</td>
</tr>
<tr>
<td>Crushed stone, sand &amp; gravel</td>
<td>1,244,030</td>
<td>9.1%</td>
</tr>
<tr>
<td>Grain</td>
<td>1,183,855</td>
<td>8.7%</td>
</tr>
<tr>
<td>Motor vehicles &amp; parts</td>
<td>856,844</td>
<td>6.3%</td>
</tr>
<tr>
<td>Petroleum &amp; petr. products</td>
<td>589,004</td>
<td>4.3%</td>
</tr>
<tr>
<td>Primary metal products</td>
<td>495,569</td>
<td>3.6%</td>
</tr>
<tr>
<td>Grain mill products</td>
<td>484,935</td>
<td>3.6%</td>
</tr>
<tr>
<td>Stone, clay &amp; glass prod.</td>
<td>394,813</td>
<td>2.9%</td>
</tr>
<tr>
<td>Food products</td>
<td>312,048</td>
<td>2.3%</td>
</tr>
<tr>
<td>All other carloads</td>
<td>311,458</td>
<td>2.3%</td>
</tr>
<tr>
<td>Metallic ores</td>
<td>303,406</td>
<td>2.2%</td>
</tr>
<tr>
<td>Pulp &amp; paper products</td>
<td>298,010</td>
<td>2.2%</td>
</tr>
<tr>
<td>Coke</td>
<td>216,440</td>
<td>1.6%</td>
</tr>
<tr>
<td>Nonmetallic minerals</td>
<td>202,310</td>
<td>1.5%</td>
</tr>
<tr>
<td>Iron &amp; steel scrap</td>
<td>198,339</td>
<td>1.5%</td>
</tr>
<tr>
<td>Waste &amp; nonferrous scrap</td>
<td>192,914</td>
<td>1.4%</td>
</tr>
<tr>
<td>Lumber &amp; wood products</td>
<td>178,831</td>
<td>1.3%</td>
</tr>
<tr>
<td>Primary forest products</td>
<td>56,491</td>
<td>0.4%</td>
</tr>
<tr>
<td>Farm products excl. grain</td>
<td>43,949</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

Originated U.S. Rail Carloads by Commodity in 2018

Total = 13.64 million
%
= share of total carloads

Data are origins, do not include intermodal, and do not include the U.S. operations of CN and CP. Source: AAR
U.S. Railroad Carloads By Commodity

Annual Rail Carloads by Commodity: 2005-2018 (millions)

- Coal
- Sand, crushed stone
- Steel, other metal prod.
- Metallic ores*
- Lumber & wood*
- Grain
- Chemicals
- Petrol. & petrol. prod.
- Motor veh. & parts*
- Pulp & paper*
- Food & grain mill prod.

*Combined U.S. + Canadian carloads. If intermodal were shown on this chart, it would rise from 11.48 million units in 2005 to 14.47 million in 2018. Source: AAR Weekly Railroad Traffic

Annual Rail Carloads by Commodity: 2005-2018 (index 2005 = 100)

- Coal
- Chemicals
- Motor veh. & parts*
- Pulp & paper*
- Food & grain mill prod.
- Grain
- Sand, cr. stone
- Steel, other metal prod.
- Metallic ores*
- Lumber & wood*
- Intermodal

*Combined U.S. + Canadian carloads. If petroleum products were shown on this chart, its index would rise from 108.1 in 2010 to 259.4 in 2014 down to 161.9 in 2017 and up to 191.3 in 2018. Source: AAR Weekly Railroad Traffic
U.S. Intermodal Movements

Total U.S. Rail Intermodal Units: YTD Through December
(millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>8,286</td>
</tr>
<tr>
<td>2010</td>
<td>9,421</td>
</tr>
<tr>
<td>2011</td>
<td>11,072</td>
</tr>
<tr>
<td>2012</td>
<td>12,144</td>
</tr>
<tr>
<td>2013</td>
<td>13,208</td>
</tr>
<tr>
<td>2014</td>
<td>14,272</td>
</tr>
<tr>
<td>2015</td>
<td>15,336</td>
</tr>
<tr>
<td>2016</td>
<td>16,392</td>
</tr>
<tr>
<td>2017</td>
<td>17,448</td>
</tr>
<tr>
<td>2018</td>
<td>18,504</td>
</tr>
</tbody>
</table>

% change from prior year
- 2015: 1.4% (15,336 - 14,980 = 356, 356 / 14,980 = 0.0238 = 2.38%)
- 2016: -1.6% (16,392 - 17,448 = -1,056, -1,056 / 17,448 = -0.0605 = 6.05%)
- 2017: 3.9% (17,448 - 16,392 = 1,056, 1,056 / 16,392 = 0.0642 = 6.42%)
- 2018: 5.5% (18,504 - 17,448 = 1,056, 1,056 / 17,448 = 0.0605 = 6.05%)

Data for all years are weeks 1-52. Data are originations and do not include the U.S. operations of CN and CP. Source: AAR

U.S. Rail Carloads and Intermodal Units: 2000-2018
(millions)


Data are originations and do not include the U.S. operations of CN and CP. Source: AAR
U.S. Railroad Grain Movements

Carloads are originations
Source: AAR Freight Commodity Statistics
U.S. Rail Grain Movements 2009-2018

**Originated Carloads of Grain: 2009-2018**

**Railroads' Originated Carloads of Grain as a Percentage of Their Total Originated Carloads: 2009-2018**

**Railroads' Share of Total Class I Originated Carloads of Grain: 2009-2018**

**Originated Carloads of Grain by Class I Railroads: 2009-2018 (millions)**

Source: AAR Freight Commodity Statistics
Growth of the BNSF Shuttle Network

2000

- 69 Origins
- 32 Destinations

13 Mexico Shuttle Destinations

2018

- 248 Origins
- 103 Destinations

34 Mexico Shuttle Destinations

Shuttle Facility counts as of 8/9/2018
About 65% of Grain shuttles originate from the upper plains states of North Dakota, South Dakota, Minnesota, and Montana.
BNSF Shuttle Destinations

PNW 66%
GULF EXPORT 8%
WEST TX 7%
MEXICO 7%
CAL 5%
OTHER 8%

FY2018
Challenges???
U.S. Rail Grain Movement Volatility

U.S. Rail Carloads of Grain
(6-week moving average)

Data are 6-week moving average originations, are not seasonally adjusted, do not include intermodal, and do not include the U.S. operations of CN and CP. Source: AAR

Average Weekly U.S. Rail Carloads of Grain:

Data are average weekly originations for each month, are not seasonally adjusted, exclude intermodal, and exclude the U.S. operations of CN and CP. *from same month previous year. Source: AAR
PNW Expert Volatility

US Soybean Exports By Pacific Northwest (PNW),
PRX_RailBarge, SDU, Feb-08-19

US Corn Exports By Pacific Northwest (PNW),
PRX_RailBarge, SDU, Feb-08-19

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BNSF Investments in the Northern Corridor (2014-2018)

$6.1B
OVERALL INVESTMENTS

~$1.8B
ON EXPANSION

~$4.3B
ON MAINTENANCE
Proposal Bridge Expansion in Sandpoint, Idaho

- Second bridge span across Lake Pend Oreille
- Would improve traffic flow and provide greater capacity

Key location on our Northern Corridor for traffic moving to/from PNW