“USDA Perspective on 2013/14 Rail Service Problems and Regulatory Landscape”

21st Forum APPAMEX – NAEGA
August 22, 2014
Puerto Vallarta, Jalisco, Mexico
Overview

1. 2013/14 Rail Service Issues
   • Supply and demand issues behind rail service problems
   • Impact on rail operations; grain shippers
   • Impact on grain shipments to Mexico
   • Railroad responses to current problems

2. STB proceedings to increase rail competition
Union Pacific

Track Miles – 31,868

2012 Carloads
Total – 7,330,387
Grain – 245,596
Grain/Total – 3%

Source: www.up.com
Norfolk Southern

Track Miles – 20,023

2012 Carloads
Total – 4,827,268
Grain – 146,187
Grain/Total – 3%

Source: www.nscorp.com
Track Miles – 20,740

2012 Carloads
Total – 4,857,478
Grain – 97,450
Grain/Total – 2%

Source: Wikimedia Commons
Kansas City Southern

Track Miles
3,238 U.S. - KCS
3,100 Mexico - KCSM

2012 Carloads (KCS)
Total – 378,613
Grain – 26,269
Grain/Total – 7%

Source: http://www.kcsouthern.com
Canadian Pacific

Track Miles – 6,134

2012 Carloads
  Total – 524,930
  Grain – 118,632
  Grain/Total – 23%

Canadian National

Track Miles – 6,141

2012 Carloads
Total – 1,683,262
Grain – 69,565
Grain/Total – 4%

Source: www.cn.ca
Supply Side

- Reduced Rail Capacity
- Track Maintenance and Expansion Work
- Congestion and Winter Weather
BNSF Track Capacity Work

Terminal & Line Capacity Expansion Projects

Major line and terminal projects by region, route and subdivision (sub)

North Region
1. Bellingham Sub: two staging tracks and one power switch project
2. Devils Lake Sub: three siding projects
3. Dickinson Sub: four siding tracks
4. Falldbridge Sub: two siding projects
5. Forsyth Sub: six siding projects
6. Glasgow Sub: six segments of double track
7. Hillsboro Sub: four siding projects
8. Jamestown Sub: one siding project plus CTC (centralized track control) across subdivision
9. Lakeside Sub: five double-track projects and one siding project
10. Zap Sub: one siding project
11. Noyes Sub: interchange tracks and siding project between Noyes and Noyes Junction

South Region
12. Fort Worth Sub: completion of the two-year Tower SS project

Central Region
13. Hannibal Sub: one siding project
14. River Sub: one double-track and one siding project
15. Sioux City Sub: one bypass track and one siding project
16. Barstow Sub: one siding project

Terminals
17. La Crosse, Wis: continue double tracking and signaling improvements through terminal (project started 2013)
18. Argentine Yard at Kansas City, Kan: reconfigure portion of yard to accommodate more automotive car switching and increase overall terminal throughput
19. Forsyth, Mont: extend track lengths at terminal
20. Glendale, Mont: extend track lengths at terminal
21. Lafayette Sub: continue construction of new terminal to serve customers in the Lake Charles, La., area

Bridges
Construction work is underway on some of the largest bridges on BNSF, including:
22. Falldbridge Sub: Bridge 24.8 over Washougal River in Camas, Wash.; replacement of river bridge will take more than two years to complete due to the permitting and right-of-way constraints
23. Mendota Sub: Bridges 165.58 and 110.26 near Princeton, Ill.; replacement of both double-track bridges is being combined as one project
24. St. Joe Sub: Bridge 160.76 in Tecumseh, Neb.; replace bridge across North Fork of the Nemaha River
25. Lafayette Sub: Bridge 32.06 in Des Allemands, La.; major work to the moveable bridge that crosses Bayou Des Allemands
26. New Westminster Sub: Bridge 129.3 near Coebrook, B.C.; continue work from 2013 on bridge over Serpentine River

Source: www.bnsf.com
Chicago Congestion

- Busiest rail hub in the U.S.
- 6 Class I freight railroads (BNSF, CN, CP, CSX, UP, and NS), Amtrak Passenger Rail, and local commuter rail lines
- More railroad tracks originate here than any other city
- Major distribution center for grain – mostly corn and wheat
- One of the top five areas in grain elevator capacity in U.S.
Chicago Congestion

Source: USDA Grain Transportation Report, July 10, 2014
Chicago Congestion

Grain and Oilseed through the Chicago Area
1996 to 2012

Source: AMS Analysis of STB’s 1996-2012 Carload Waybill Sample
Note: The Waybill Sample does not differentiate quantities that have been rebilled.
Chicago Congestion

- 48 hours from L.A. to Chicago over 2,200 miles
- 30 hours just through Chicago
- Rail lines built 150 years ago
- Largest chokepoint in U.S.
- Coldest winter on record
  a. Severe cold affects train air brakes
  b. Requires shorter trains, additional crew and locomotives
  c. Makes typical Chicago congestion even worse
Demand Side

- Increased demand from many commodity sectors
- Demand in excess of rail capacity
- 2013/2014 record U.S. and Canadian grain and oilseed harvest
  - U.S. – 553.3 million tons, 20% higher than previous crop year
  - Canada – 99.3 million tons, 27% higher than previous crop year
BNSF Total Revenue Freight Carried, Carloads

Source: AMS Analysis of Surface Transportation Board - Quarterly Freight Commodity Statistics
Canadian Service Problems

- Record harvest overwhelmed storage and transportation in Canada
- March 7, Canadian government order for CP and CN to each move 500,000 metric tons of grain per week
- Penalties up to C$100,000 per day for non-compliance
- August 7, order increased to 536,260 metric tons per week through November 29
- CN and CP cycling cars West to port locations for faster car cycling time; not east to Thunder Bay or south into U.S.
Effects on Grain Shipping

- Inadequate rail service – trouble securing railcars
- Grain backlogs
- Inadequate grain storage
- Record high rail rates
- Low grain prices, farmers not selling
System Ag Past Due Cars

Source: www.bnsf.com

Data through June 27, 2014
Grain Car Backlog and Average Days Late

Source: AMS Analysis of BNSF and CP Weekly Status Reports to Surface Transportation Board; USDA Communication with CP
Grain Car Backlog as of August 14

Note: CP Data for ND and MN are estimates
CP Data for SD is unavailable

Source: AMS Analysis of BNSF and CP Weekly Status Reports to Surface Transportation Board; USDA Communication with CP
Estimated October Grain* Storage Capacity by State - Excess/Shortage

*bushels (1,000)

June 2013 Grain Stocks
October 2013 Grain Storage - Excess/(Shortage)
June 2014 Grain Stocks
October 2014 Grain Storage - Excess/(Shortage) [estimated]

*All Grain Stocks for All Positions by State (Corn, Sorghum, Wheat, Soybeans, Barley, and Oats)
Source: AMS Analysis of USDA Grain Stocks; USDA Crop Progress (multiple reports)
Grain Production, Stocks and Storage

Sources: AMS Analysis of USDA Crop Production, Aug 12, 2014; Grain Stocks, estimated for Sept. 1, 2013.
Shift in Market Share in 2013/14

Percentage of Grain Transported by Rail by Carrier, October - August (Weeks 40 - 31)

Source: Association of American Railroads
Average Primary Railcar Market Bids per Car

Source: USDA Grain Transportation Report
Average Secondary Railcar Market Shuttle Bids per Car

Source: USDA Grain Transportation Report
Secondary Railcar Market Effect on Rail Shipping Costs: Shuttle

Index Value
(Set at 100 in Base Year, 2000)

- Shuttle Index: Tariff, Fuel Surcharge, Secondary Railcar Market Bids
- Shuttle Index: Tariff, Fuel Surcharge

Source: USDA Grain Transportation Report
Secondary Railcar Market Effect on Rail Shipping Costs: Non-Shuttle

Index Value
(Set at 100 in Base Year, 2000)

- Non-shuttle Index: Tariff, Fuel Surcharge, Secondary Railcar Market Bids
- Non-shuttle Index: Tariff, Fuel Surcharge

- Widespread Service Disruptions
- Record U.S. Grain Export Year
- Russian Grain Export Ban
- Hurricane Katrina

Source: USDA Grain Transportation Report
Weekly Average Corn Basis

Cents per Bushel over the Near-term Futures Contract

Source: AMS Analysis of USDA Livestock and Grain Market News
Sources of Mexican Grain

Originations of grain shipped to Mexico by rail:

• Nebraska – 57%
• Kansas/Missouri – 22%
• Louisiana/Texas – 12%
• Canada – 3%
• Minnesota – 2%
• Iowa – 2%
• North and South Dakota – 1%

Source: AMS Analysis of 2012 Surface Transportation Board Waybill Sample
Capital Investment

BNSF

- $5 billion total expenditures
- $1 billion to increase capacity on the congested Northern Corridor in response to booming energy industry
- Adding second mainline track between Minot, ND, and Glasgow, MT
- Adding sidings on multiple ND line segments to relieve congestion
- Purchasing 500 locomotives and 5,000 tank cars
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Source: www.bnsf.com
Capital Investment

Union Pacific

• $4.1 billion total expenditures
• $1.73 billion for infrastructure replacement
• $680 million for facility projects
• Install double track and sidings at Eagle Pass, TX, and 43 miles of second main track on the Sunset Corridor
• Build and extend sidings along the I-5 corridor and near El Paso, TX, New Orleans, LA, and Shreveport, LA
• Purchasing 229 locomotives
Capital Investment

Norfolk Southern

- $2.2 billion total expenditures
- Expand yards in Bellevue, OH, and Rutherford, PA
- Build a 3.2 mile siding in Goshen, IN
- Extend siding in Shenandoah Junction, WV
- Replace bridge in Monroe, MI
- Purchase additional locomotives and freight cars
Capital Investment

CSX

- $2.3 billion total expenditures
- Over half of total expenditures dedicated to core infrastructure, including intermodal hub in northwest Ohio
Current Surface Transportation Board (STB) Proceedings

- EP 724 United States Rail Service Issues
- EP 665 Rail Transportation of Grain, Rate Regulation Review
- EP 661 Rail Fuel Surcharges (Safe Harbor)
- EP 722 Railroad Revenue Adequacy
- EP 711 Competitive Switching
EP 724 United States Rail Service Issues

- April hearing on rail service issues found many industries suffering from rail service
- Discovered 2014 grain harvest in jeopardy due to delayed fertilizer shipments
- STB ordered BNSF and CP to report on weekly fertilizer movements over six-week period
- In June, STB ordered BNSF and CP to report on weekly grain movements until backlog resolved
- On August 18, STB ordered BNSF and CP to report additional weekly service metrics; ordered CP to provide updated plan and timeline to address backlog
EP 665 Rail Transportation of Grain, Rate Regulation Review

• STB’s current rate challenge processes are too expensive and complex for agricultural shippers

• Proposed methods are inexpensive, formula-based:
  1. Arbitration and Mediation
  2. Ag Commodity Maximum Rate Methodology
  3. Two-Benchmark Test
In 2007, STB:

a. Allowed mileage-based but prohibited rate-based fuel surcharges

b. Prohibited fuel surcharges to recover more than fuel costs

c. Recommended the U.S. No. 2 Diesel index as “safe harbor” index to measure changes in fuel costs for fuel surcharge programs

In 2013, STB found BNSF overcharged Cargill $181 million in fuel surcharges 2006-2010 but took no punitive action because BNSF used safe harbor index

In 2014, STB revisiting safe harbor concept
EP 722 Railroad Revenue Adequacy

- Under current STB methodology, some railroads are close to point of being “revenue adequate”

- Under current guidelines, once revenue adequate:
  - Regulatory landscape may change
  - Differential pricing subject to scrutiny
  - Rate increases should be justified by railroads

- Exploring methodology for measuring revenue adequacy and framework of new regulations
EP 711 Competitive Switching

- Current law allows STB to establish switching to promote competition

- National Industrial Transportation League (NITL) proposed simplified new rules in 2011:
  1. Shipper located within 30 miles of an interchange
  2. 240 percent or greater Revenue-to-Variable Cost Ratio (R/VC) or 75 percent or more volume

- USDA, DOT, NITL found minimal impact to railroad revenue with possible lower rail rates due to competition

- STB has not yet reached a decision
EP 711 Competitive Switching

- To PNW
- Railroad B
- Shipper location
- Railroad A
- 30-mile radius for reciprocal switching
- To Southeast poultry markets
- To the Mississippi Gulf

Source: USDA AMS