



Source: CSX and Loop Capital



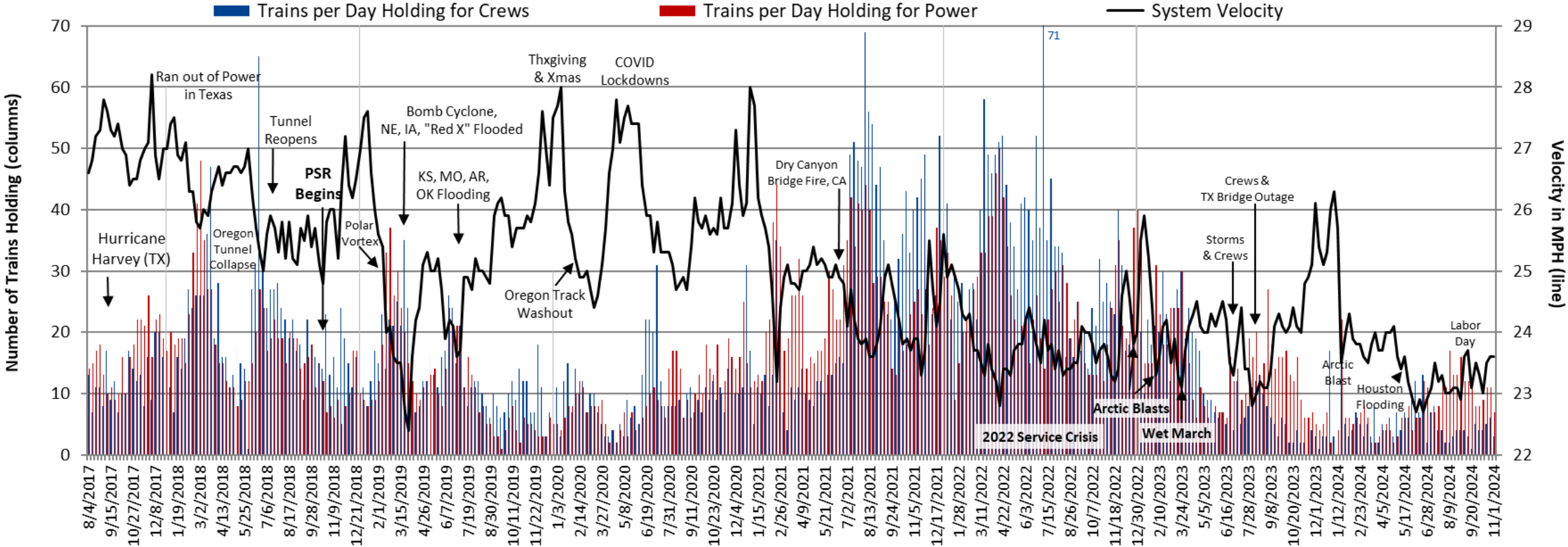
## Operations Update

Presented to RailTrends 2024 by:  
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November 14, 2024



# Union Pacific – Velocity, Trains Holding for Power and Crews, 2017-Present

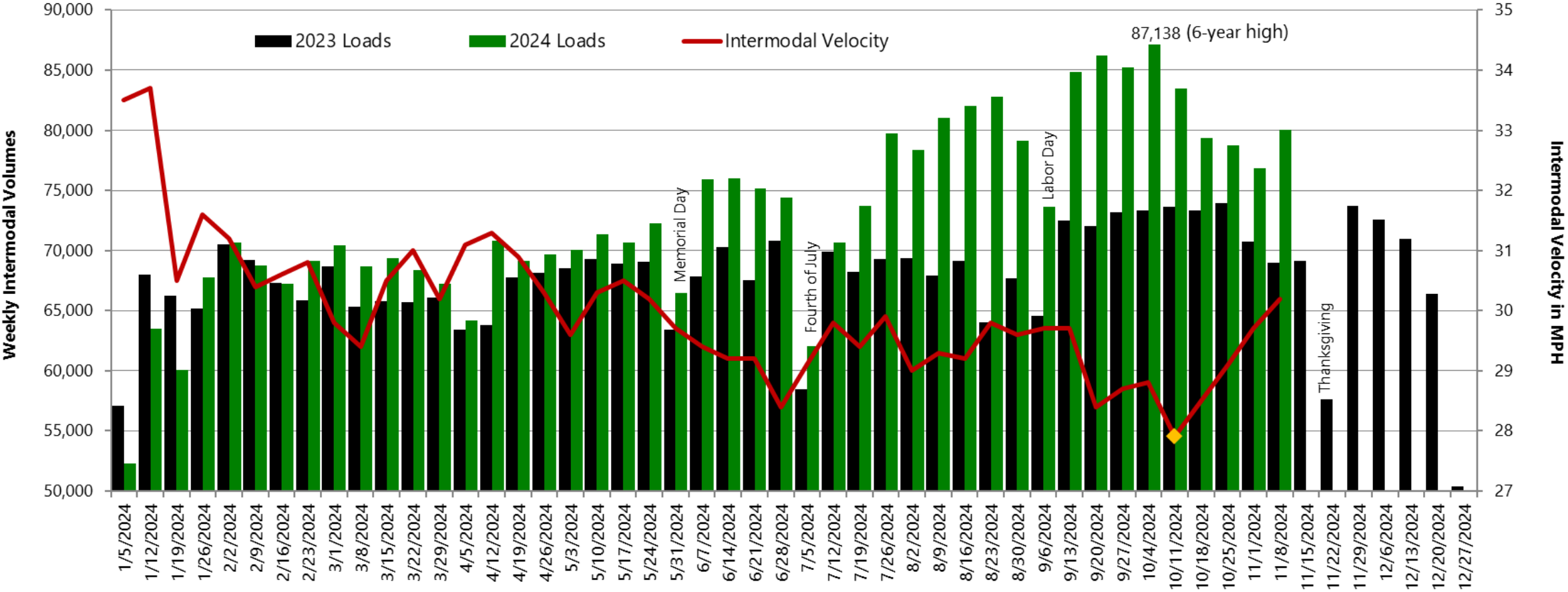
Average train speed is currently weak by historical standards, while there’s better news on crew availability (blue columns – lower is better). Union Pacific’s “Buffer Strategy” is working.



Source: Union Pacific and Loop Capital.

# Union Pacific – Why is Speed Low? Volume Pressure from Surging Intermodal

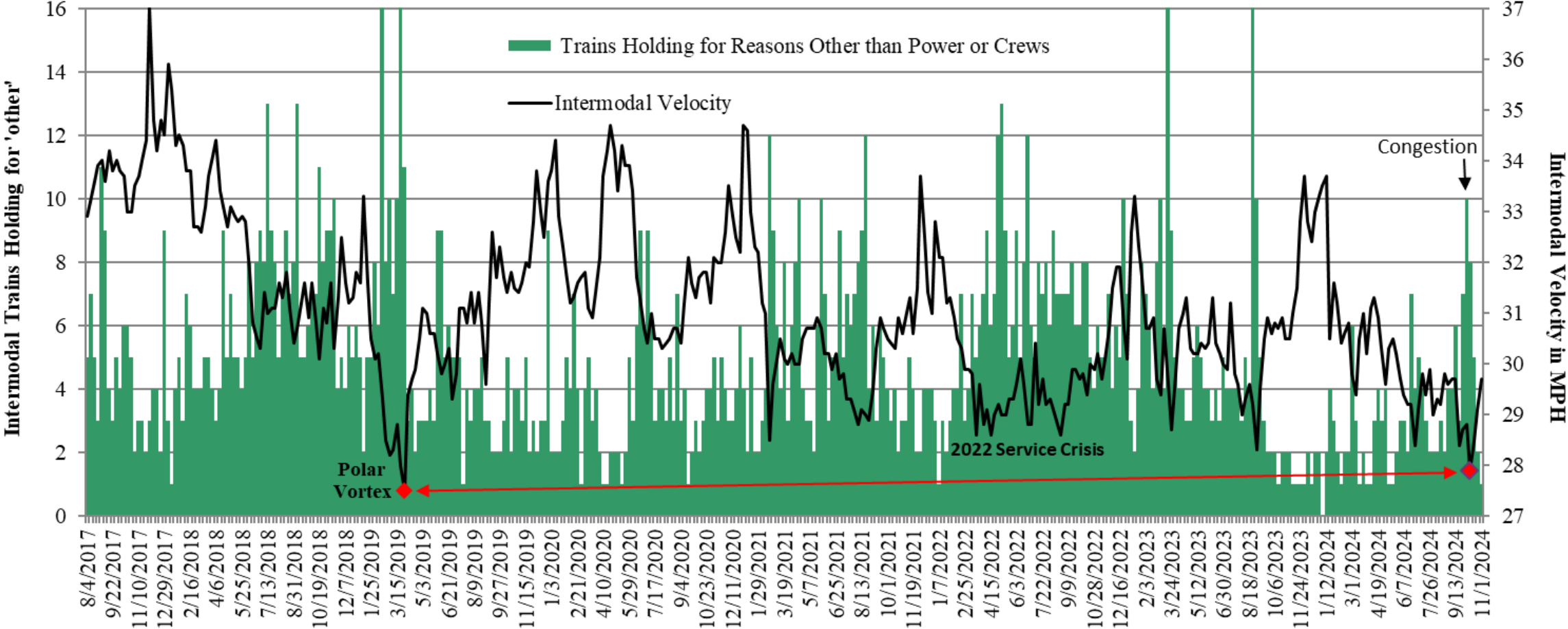
A 33% YoY surge in international intermodal in Q3 pushed total intermodal loads to a six-year high in the week ending October 4, followed by a peak in some intermodal congestion metrics the following week, tanking speed. Bend-Don't-Break is the goal...and there was a whole lot of bending going on.



Source: Union Pacific and Loop Capital.

# Union Pacific – The Recent Intermodal Speed Tough Represents a Five-year Low

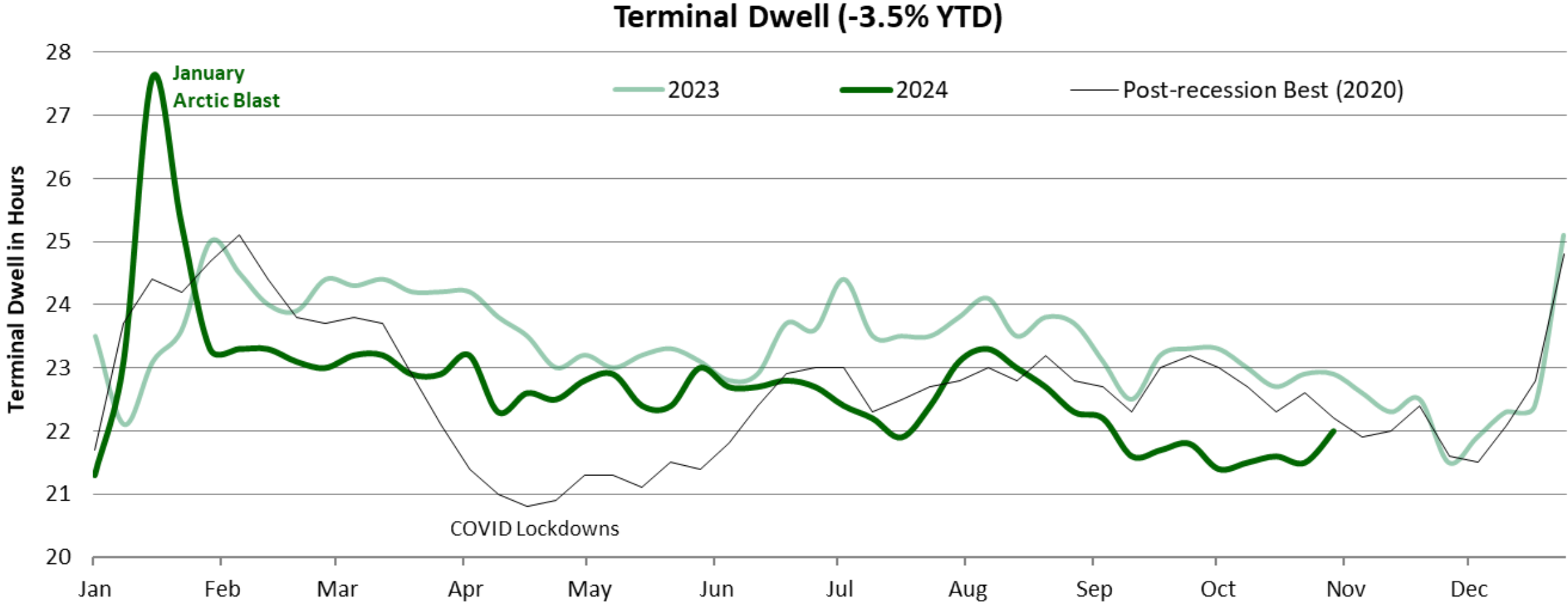
The intermodal speed bottom in the week ending October 11 was weaker than at any point during the 2022 Service Crisis, and you have to go back to the 2019 polar vortex to find slower velocity.



Source: Union Pacific and Loop Capital.

# Union Pacific – Full System Terminal Dwell Looks Good

Terminal dwell is running 3.5% lower than last year (on flat merchandise volumes) and, if you exclude the pandemic effects in 2020, 2024 is shaping up to be the best year on record.



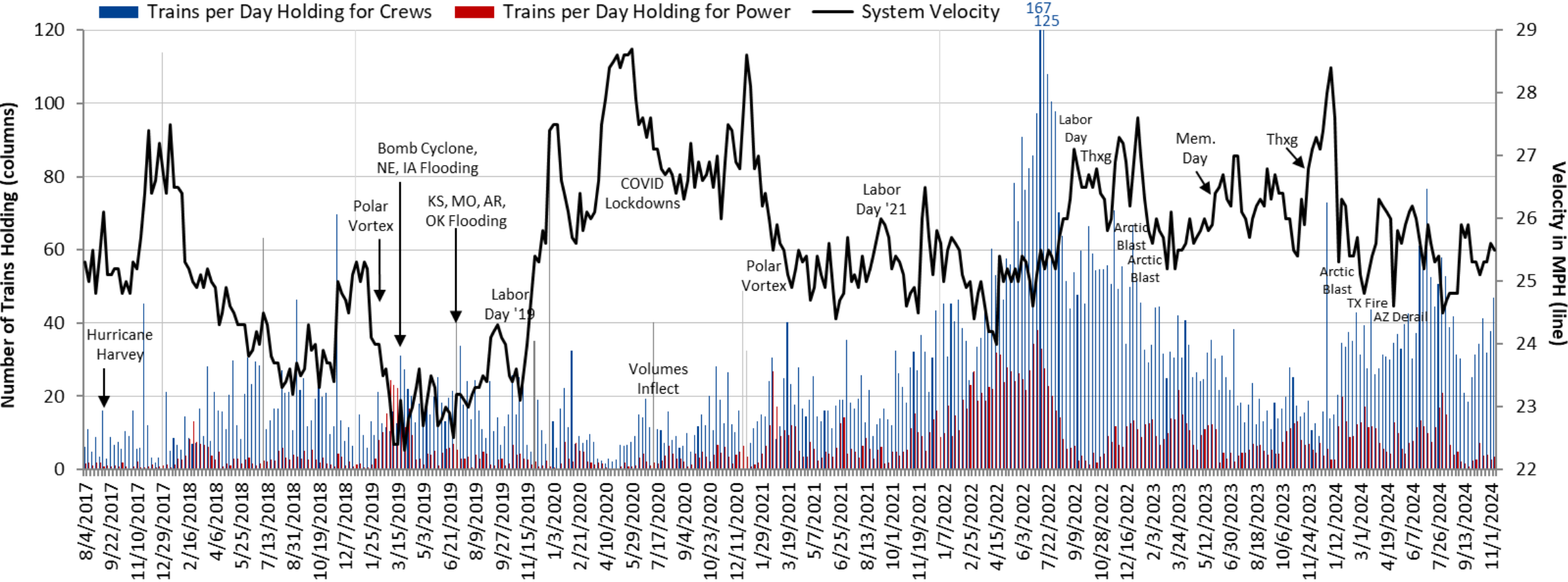
Source: Union Pacific and Loop Capital.

## Union Pacific – Conclusions

- Volume pressure from surging international intermodal bottomed network efficiency in the week ending October 11 and continues to have a suppressive effect on full system velocity.
- Union Pacific has offset this drag on asset turns with help from lower terminal dwell.
- The net result has been 3% better car miles per day year-to-date versus 2023.
- The crew buffer strategy is working and was critical during the Q3 intermodal spike. The railroad also has ample locomotive power with more than 10% flex available.
- Looking forward:
  - Are we going to see a winter intermodal surge as importers try to beat tariffs? Probably.
  - In the event of a trade war, UP's agricultural customers would be a primary target of foreign tariffs on US export grain.
  - Volume growth? Finally?? UP hauls 16% fewer loads today than it did 10 years ago and 13% fewer loads than it did 20 years ago. Can we at least stop shrinking please.

# BNSF – Velocity, Trains Holding for Power and Crews, 2017-Present

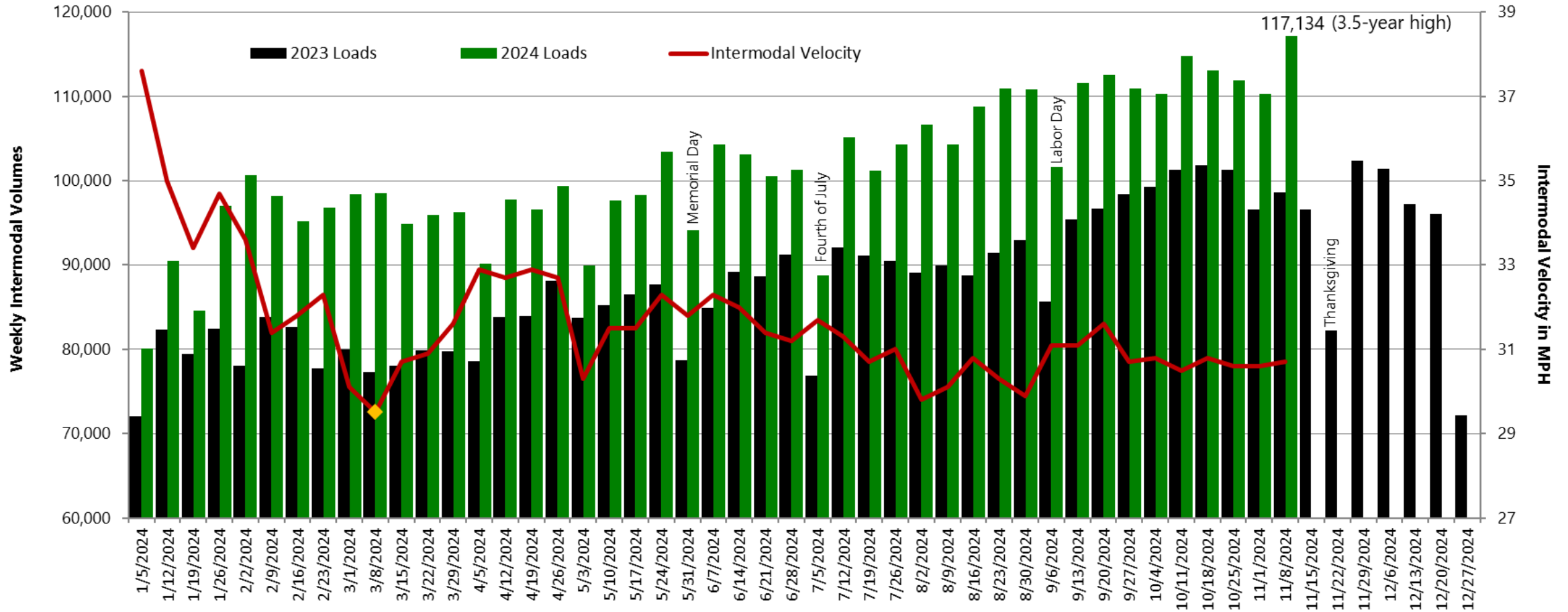
Full system velocity approximates its long-term average while trains holding (delayed) for crews is above trend. BN is in better shape with regard to power (locomotive) availability.



Source: BNSF and Loop Capital.

# BNSF – Volume Pressure from Intermodal

BNSF intermodal has been surging all year (+16% YTD) in contrast to what was primarily a Q3 spike for Union Pacific (+8% YTD but +19% in Q3.). As a result, volume pressure on the operation has been more consistent.

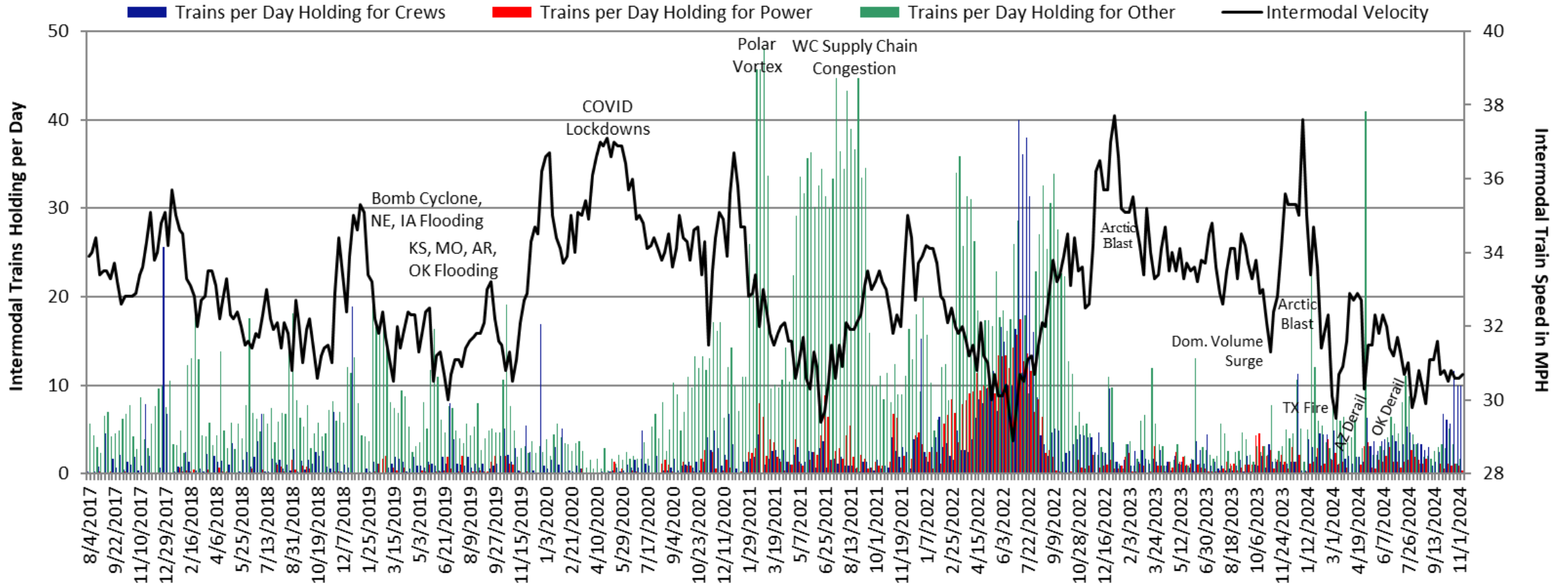


Source: BNSF and Loop Capital.



# BNSF – Intermodal Velocity, 2017-Present

While BN has so far weathered the international intermodal storm in 2024, current intermodal velocity is still sitting 7% below it's long-term average.

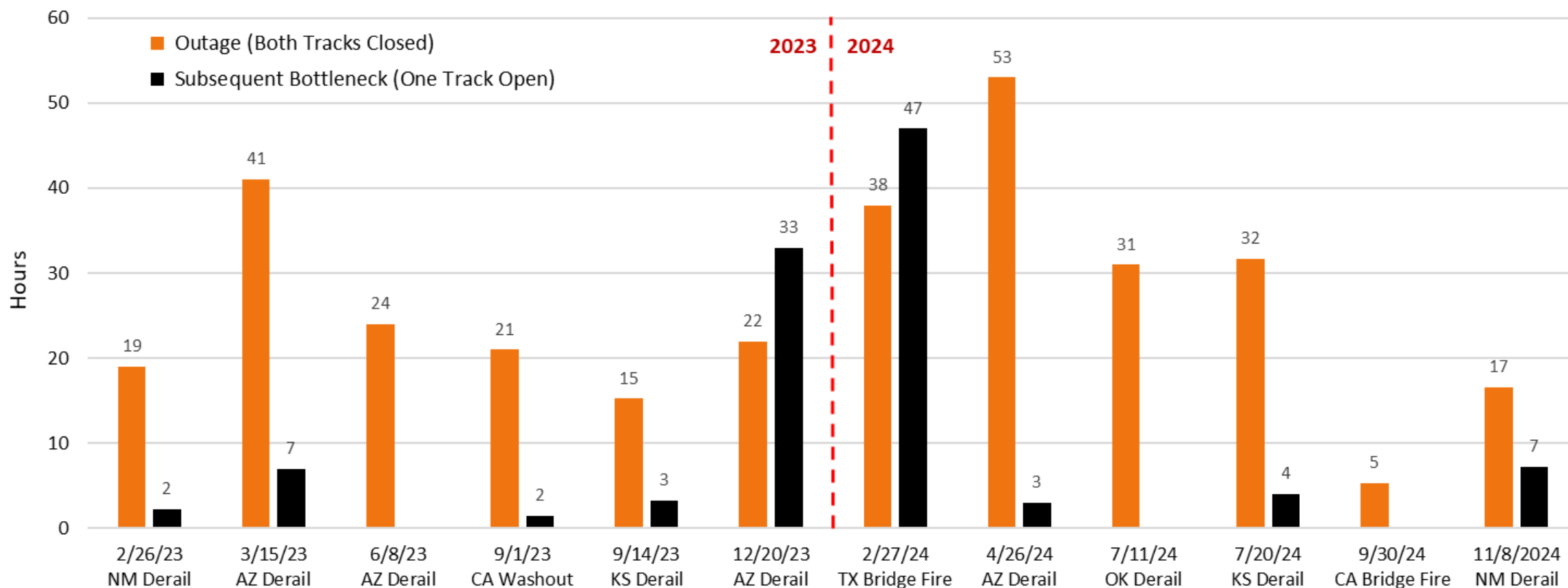


Source: BNSF and Loop Capital.

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## Another Headwind: BNSF Has Been Unlucky on the Southern Transcon This Year

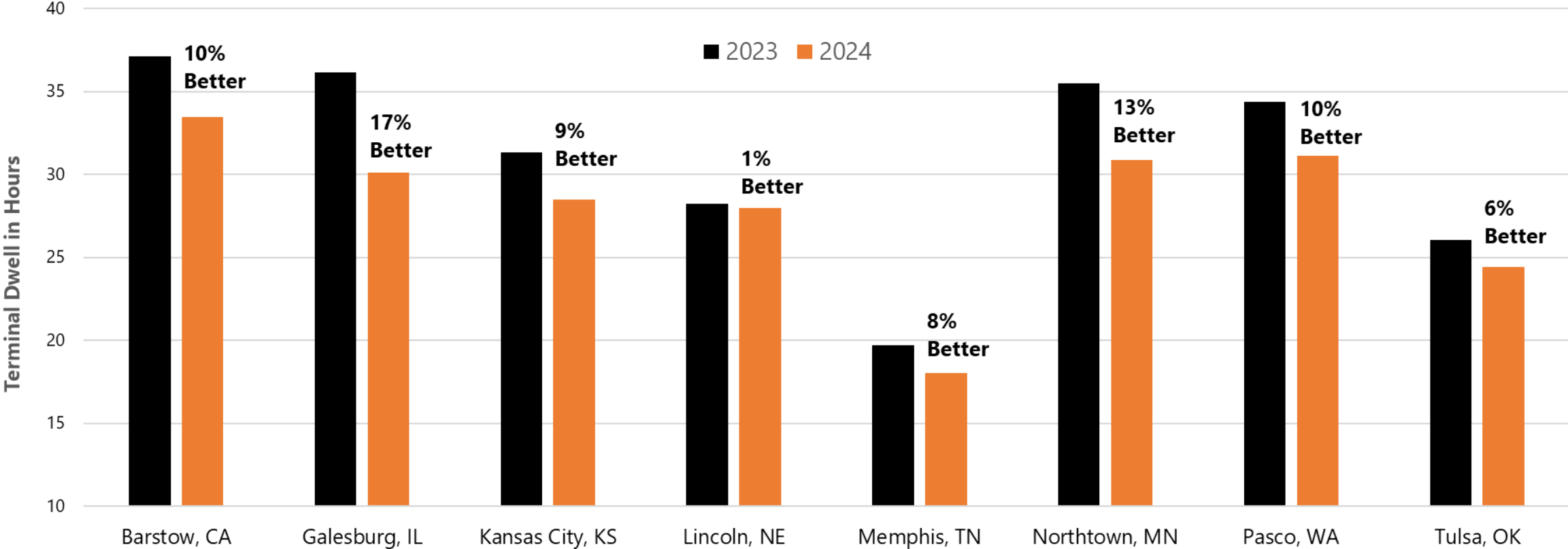
About 40% of all loads touch BN's Southern Transcon, between LA and Chicago, and domino effects can impact another 10% of its business. Fluidity this year has been interrupted by multiple outages. Year-to-date these total 176 hours, which is already 24% higher than full year 2023.



Source: BNSF and Loop Capital. Most of the Southern Transcon is double track. Note that total derailments on BNSF (not just the Transcon) are down in 2024 vs. 2023.

# Tailwind: BNSF's Yard Improvement Program

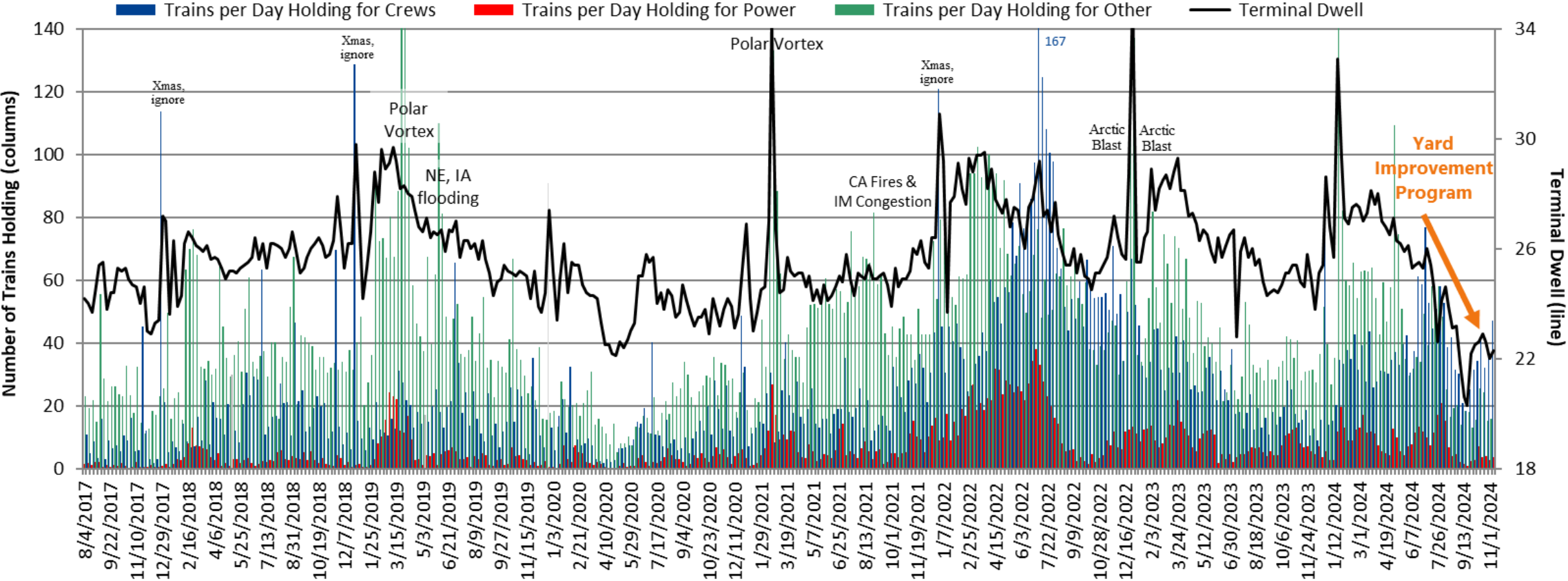
Starting in March, BNSF has made a big push leveraging its expertise in intermodal terminals to improve its yard operations, beginning with its eight hump yards, below. Results have been impressive, with an average dwell improvement of 9%. For perspective, about 23% of BN's volumes transit these yards. In Q3, this program was extended beyond the humps to BN's larger flat switching yards.



Source: BNSF and Loop Capital. Comparisons are weekly averages between 3/1/24 and 11/1/24 vs. the same period in 2023.

# Tailwind: Broader Terminal Dwell Impact

The end result: A structural improvement in dwell to 22 hours, currently, from an average of ~26 historically.



Source: BNSF and Loop Capital.

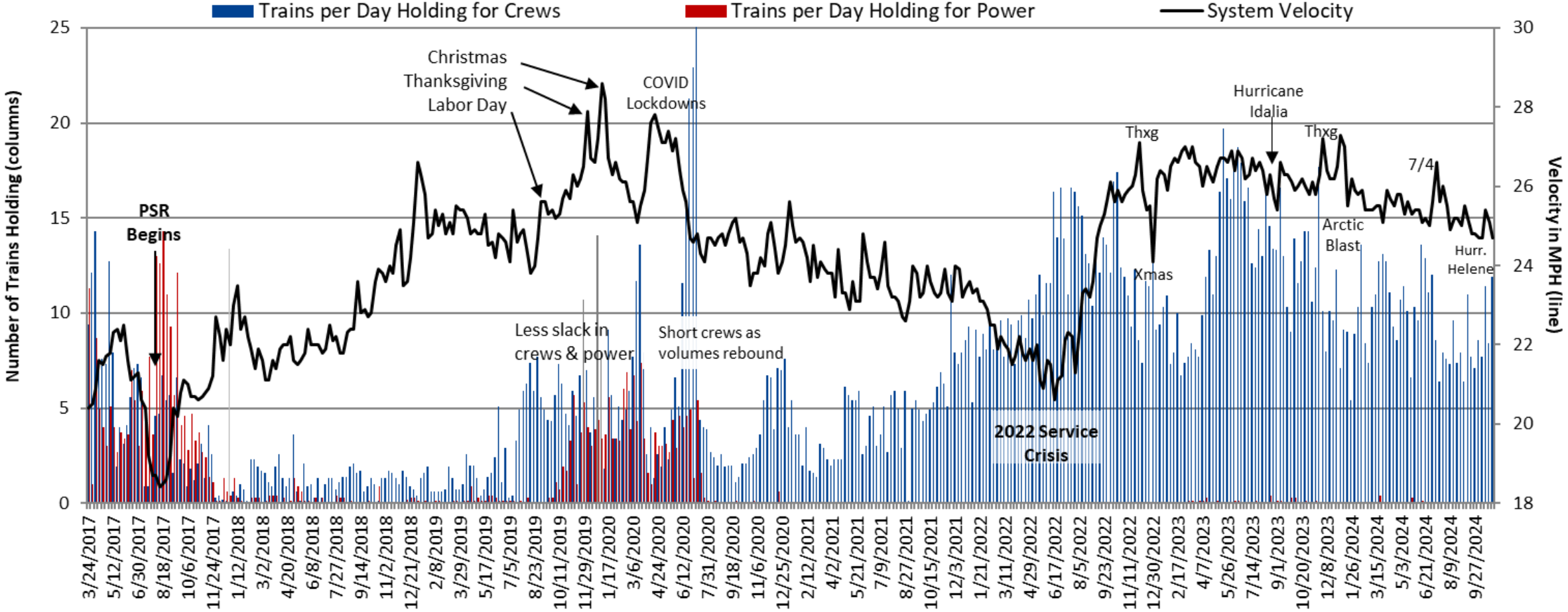
## BNSF – Conclusions

- Volume pressure from surging international intermodal has taken its toll on the operation, but in a more manageable and consistent manner than the unexpected gut punch taken by Union Pacific.
- With the yards and terminals in good shape, a bit more speed once intermodal volume pressure subsides, and healthier crew reserves are the final ingredients.
- Looking forward:
  - Growth DNA. With the recent STB spotlight on the absence of industry volume growth, BNSF is, at least, the tallest midget\*. It's the only one of the Big-4 to have grown volumes over the last 20 years, it invests more capital for growth, expects to grow, and plans for growth.
  - Public comments by Berkshire Hathaway executives this year make clear they're unhappy with BN's industry-lagging operating ratio. Be alert for any changes that sacrifice long-term growth for short-term margin.
  - BNSF has higher tariff risk than most of its peers; primarily from weaker intermodal volumes if everything in the boxes suddenly gets more expensive, and retaliatory tariffs from the rest of the world on US export grain. Intermodal and grain account for more than half of sales at BNSF.

\* No offence to actual midgets.

# CSX – Velocity, Trains Holding for Crews, 2017-Present

In our view, CSX was the best running railroad in North American last year but has come off the boil a bit this year. The Baltimore bridge collapse, ILA strike, and three hurricanes back-to-back didn't help.



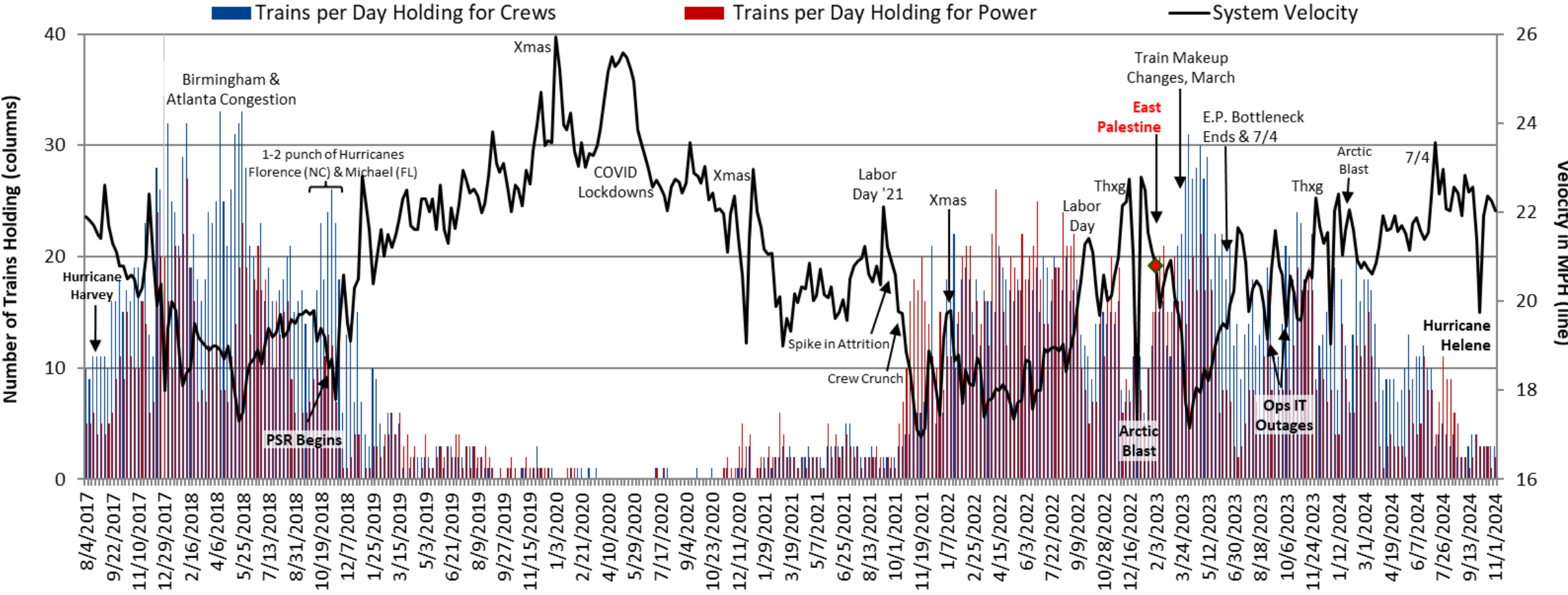
Source: CSX and Loop Capital.

## CSX – It's All About the Culture

- CSX management has embarked upon a bizarre experiment where they're trying to get their employees to not hate them. Good luck with that.
- Their thought process goes something like this:
  - Volume growth requires good service, which requires good execution, which requires motivated and engaged employees.
- This is why we're seeing CSX bargain early and individually with the labor unions.
- The two key actors are CEO Joe Hinrichs and COO Mike Cory.
- It's the holy grail if they can pull it off, although it will take many years. But the sooner you start...
- United Parcel Service is a good example of what's possible.

# Norfolk Southern – Velocity, Trains Holding for Power and Crews, 2017-Present

After three meltdowns in eight years, in December 2022 NS committed to building more resiliency into its network, primarily as it relates to crew capacity. Hurricane Helene was the first stress test. How did it do?

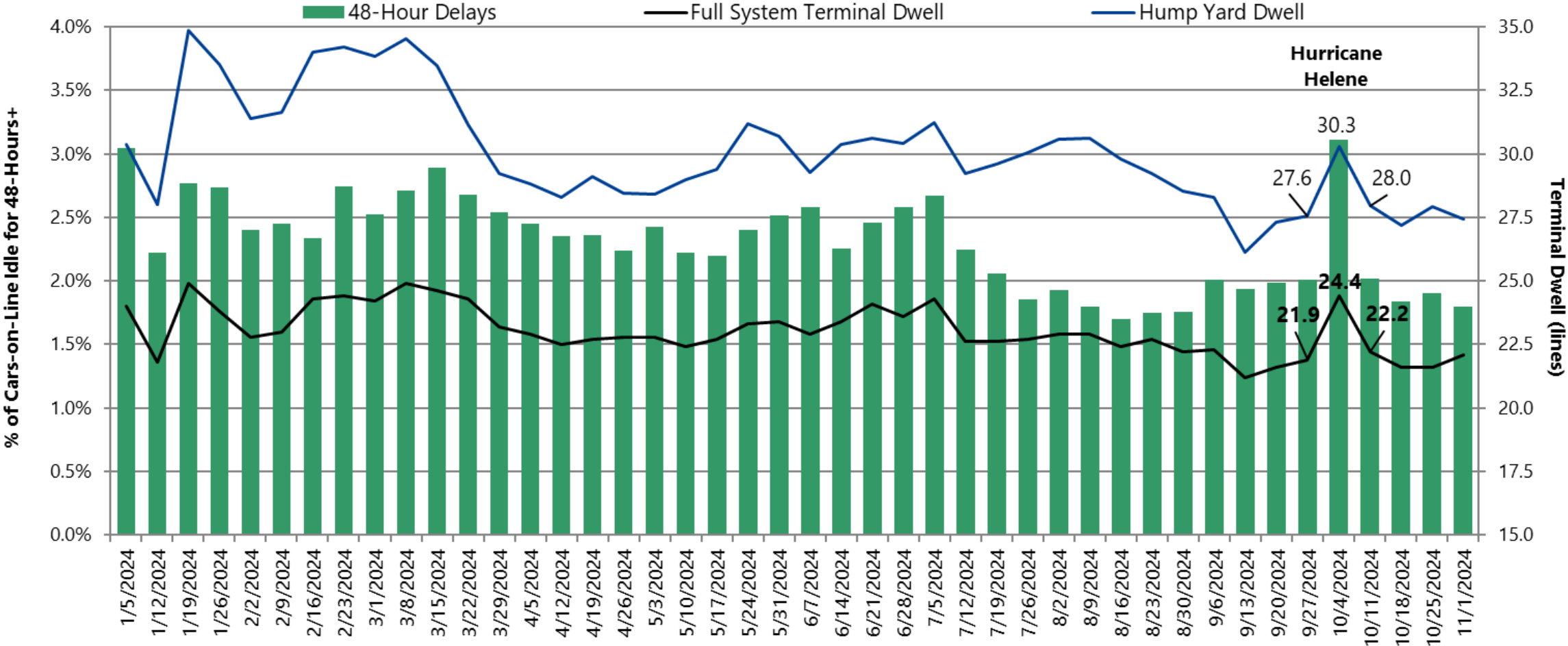


Source: Norfolk Southern and Loop Capital.



# Norfolk Southern – Demonstrating Resiliency

In addition to velocity, the immediate snapback from Helene was corroborated by manifest on-time performance, first mile/last mile, and the dwell-related metrics below. Thoroughbred gets an A+



Source: Norfolk Southern and Loop Capital. Hump Yard Dwell is an unweighted average of the railroad's six humps.

# Growth Patchwork

The industry's patchwork of YoY volume growth so far this century...

Consolidated, Originated, YoY Volume Growth for Union Pacific, BNSF, CSX, and Norfolk Southern																	
Year	Intermodal	Coal	Chemicals	Ag	Aggregates	Autos	Petroleum Products	Building Materials	Grain Mill Products	Metals	Waste & Scrap	Food	Paper & Forest	Metallic Ores	Nonmetallic Minerals	Other	TOTAL
2001	-3%	5%	-5%	-0.5%	5%	-7%	-0.3%	-3%	4%	-10%	-7%	4%	-10%	-24%	-14%	1%	-1%
2002	5%	-3%	2%	-3%	-2%	4%	-1%	2%	2%	2%	2%	-1%	-5%	15%	4%	-9%	1%
2003	8%	1%	4%	4%	4%	-2%	-1%	4%	1%	0.4%	8%	0.04%	4%	-3%	2%	11%	4%
2004	9%	1%	2%	-0.1%	3%	-3%	4%	3%	-3%	6%	7%	-4%	-4%	-0.3%	3%	-1%	4%
2005	6%	1%	-2%	-0.004%	6%	-2%	4%	1%	5%	-3%	-3%	3%	-3%	-3%	-3%	1%	3%
2006	5%	4%	-1%	4%	2%	-6%	4%	-7%	-1%	7%	0.2%	4%	-7%	2%	-15%	6%	3%
2007	-2%	-1%	4%	-1%	-7%	-5%	4%	-12%	-3%	-7%	0.2%	-1%	-9%	-6%	-1%	-2%	-2%
2008	-3%	4%	-2%	4%	-6%	-21%	3%	-12%	10%	-7%	-2%	-13%	-6%	4%	-7%	-4%	-2%
2009	-15%	-13%	-12%	-16%	-23%	-34%	-11%	-25%	-5%	-46%	-27%	-15%	-23%	-61%	-16%	-12%	-17%
2010	14%	2%	10%	12%	16%	17%	11%	9%	5%	45%	14%	-1%	2%	136%	4%	-0.5%	10%
2011	5%	0.5%	3%	-3%	7%	9%	12%	6%	-4%	12%	-2%	0.2%	1%	16%	1%	6%	4%
2012	3%	-11%	-1%	-8%	6%	17%	48%	7%	-0.5%	1%	-5%	2%	0.2%	-1%	-5%	5%	-0.5%
2013	4%	-4%	1%	-9%	9%	5%	32%	4%	-4%	-1%	1%	-1%	2%	-7%	4%	-7%	2%
2014	6%	3%	3%	15%	14%	5%	16%	7%	6%	5%	1%	-2%	2%	7%	5%	13%	6%
2015	0.1%	-13%	-2%	2%	-2%	3%	-12%	-7%	-1%	-15%	-11%	-3%	-5%	-13%	-10%	13%	-4%
2016	-2%	-19%	2%	7%	-3%	1%	-22%	-3%	-3%	-7%	7%	0.3%	-8%	-25%	-2%	11%	-5%
2017	4%	8%	1%	-3%	14%	-7%	-13%	1%	-1%	5%	4%	-2%	-2%	14%	-1%	-4%	3%
2018	5%	-1%	4%	3%	2%	-1%	16%	2%	2%	7%	1%	1%	0.2%	4%	-12%	5%	4%
2019	-5%	-9%	-1%	-7%	-9%	-3%	10%	-1%	-4%	-8%	-7%	-3%	-3%	-0.1%	5%	1%	-5%
2020	-0.4%	-23%	-2%	7%	-17%	-18%	-16%	-0.3%	2%	-13%	-0.02%	-1%	-5%	-26%	-10%	2%	-6%
2021	3%	8%	4%	0.4%	1%	-2%	-8%	3%	1%	18%	13%	4%	9%	46%	-1%	-2%	4%
2022	-5%	2%	0.4%	-5%	9%	4%	-4%	-4%	1%	-9%	-1%	6%	-3%	-8%	-4%	-13%	-3%
2023	-5%	-0.4%	-0.3%	-9%	4%	12%	11%	-2%	1%	5%	2%	1%	-4%	-0.4%	-7%	-4%	-2%
2024E	9%	-14%	4%	10%	-10%	2%	10%	0.4%	4%	-4%	0.02%	0.001%	4%	-6%	-8%	2%	3%

Source: AAR, Loop Capital.

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# The 20-Year Growth Picture

Consolidated, Originated, Loads for Union Pacific, BNSF, CSX and Norfolk Southern						
Year	Coal	Agricultural	Intermodal	Automotive	All Other	TOTAL
2000	6,777,460	1,156,631	8,890,416	1,278,059	6,797,421	24,899,987
2001	7,130,941	1,151,236	8,657,572	1,193,812	6,481,733	24,615,294
2002	6,881,711	1,115,482	9,085,786	1,239,488	6,539,148	24,861,615
2003	6,962,698	1,158,712	9,850,328	1,218,657	6,744,871	25,935,266
2004	7,061,492	1,158,037	10,726,815	1,177,782	6,863,564	26,987,690
2005	7,161,778	1,157,996	11,400,956	1,150,676	6,885,225	27,756,631
2006	7,474,398	1,208,269	11,988,984	1,084,686	6,833,696	28,590,033
2007	7,397,689	1,195,638	11,719,160	1,025,721	6,616,999	27,955,207
2008	7,679,314	1,245,987	11,356,379	810,759	6,353,367	27,445,806
2009	6,681,350	1,041,959	9,621,891	534,049	5,011,556	22,890,805
2010	6,811,106	1,163,104	10,992,794	625,603	5,670,457	25,263,064
2011	6,843,097	1,133,763	11,586,805	684,939	5,919,102	26,167,706
2012	6,098,551	1,038,400	11,953,437	798,583	6,148,291	26,037,262
2013	5,834,397	945,737	12,485,991	839,047	6,375,211	26,480,383
2014	6,002,664	1,086,145	13,292,791	876,897	6,822,067	28,080,564
2015	5,205,780	1,103,928	13,304,652	901,368	6,457,171	26,972,899
2016	4,213,529	1,183,488	13,103,165	914,067	6,198,213	25,612,462
2017	4,548,773	1,146,646	13,622,740	854,075	6,319,782	26,492,016
2018	4,522,932	1,179,269	14,361,474	846,707	6,530,234	27,440,616
2019	4,112,031	1,098,233	13,617,836	820,348	6,371,943	26,020,391
2020	3,158,383	1,178,695	13,560,346	671,420	5,925,967	24,494,811
2021	3,426,075	1,182,918	14,014,261	660,784	6,179,386	25,463,424
2022	3,510,915	1,129,270	13,324,519	684,944	6,131,183	24,780,831
2023	3,496,363	1,026,120	12,667,421	769,456	6,210,977	24,170,337
2024E	2,981,005	1,121,264	13,854,953	783,278	6,199,071	24,939,571

20 Years

Benchmarks			
Real GDP	Industrial Production	IP - Manufacturing	Truck Tonnage
14,096	92.5	93.2	74.9
14,231	89.7	90.0	74.5
14,473	90.0	90.6	77.6
14,877	91.1	92.0	79.9
15,450	93.6	95.1	84.8
15,988	96.7	99.2	86.3
16,433	98.9	101.9	84.8
16,762	101.5	105.2	83.8
16,781	97.9	100.4	85.1
16,349	86.8	86.7	77.4
16,790	91.6	92.4	82.0
17,052	94.5	95.4	86.5
17,443	97.4	98.2	88.8
17,812	99.3	99.3	94.3
18,262	102.3	100.5	97.5
18,800	100.9	100.1	100.0
19,142	98.7	99.4	102.5
19,612	100.0	100.0	106.4
20,194	103.2	101.4	113.5
20,692	102.4	99.5	117.3
20,234	95.1	93.0	112.9
21,408	99.3	97.7	112.9
21,822	102.7	100.3	116.6
22,377	102.9	100.0	114.6

2003 to 2023 Growth

-50%	-11%	29%	-37%	-8%	-7%
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2003 to 2023 Growth

50%	13%	9%	43%
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Source: AAR, St. Louis Fed, American Trucking Associations. Ag is 96% grain. 2024E applies the 2024 YTD growth rates through 9/7/24 to 2023 volumes. Real GDP in billions. IP and Truck Tonnage are index values.

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## Public Companies Mentioned in this Report

CSX Corporation (CSX:\$36.52-BUY)

Norfolk Southern Corp. (NSC:\$271-BUY)

Union Pacific Corporation (UNP:\$242-HOLD)

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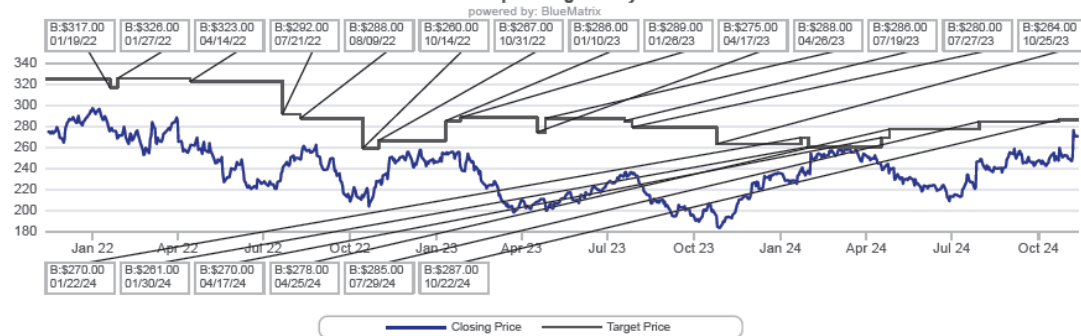
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**Norfolk Southern Corp. Rating History as of 11/11/2024**



**CSX Corporation Rating History as of 11/11/2024**



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			IB Serv./Past 12 Mos.	
	Count	% of total	Count	% of total
BUY	133	57.33%	13	9.77%
HOLD	97	41.81%	4	4.12%
SELL	2	0.86%	0	0.00%

Source: Loop Capital Markets

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