



Update on Western Canadian Grain – Crop Year 2022-23 Week 19

Summary:

Despite extreme cold weather in some regions and required train length restrictions, CN was able to surpass its winter supply chain capacity target of 595,000 metric tonnes, moving a total of 620,000 metric tonnes of grain and processed grain products in week 19.

CN Maximum Sustainable End-to-End Supply Chain Capacity Guidance

The capacity of Canada’s grain supply chain varies through the crop year, and multiple factors place a real limit on the volume of grain that can move through the supply chain at any point in time. The maximum sustainable capacity of the grain supply chain is also a function of the capacity and operational efficiency of the individual pieces of that supply chain, from origin to destination.

It is CN’s view that on a sustained basis, the end-to-end grain supply chain can accommodate up to 6,250 cars per week (up to 595,000 metric tonnes per week) of bulk grain and processed grain products during winter, of which approximately 900 cars per week are anticipated to be shipments of processed grain products. These maximum end-to-end grain supply chain capacity levels on CN assume that multiple conditions must be in place to achieve these levels. These conditions include, but are not limited to, the conditions noted in the chart below:

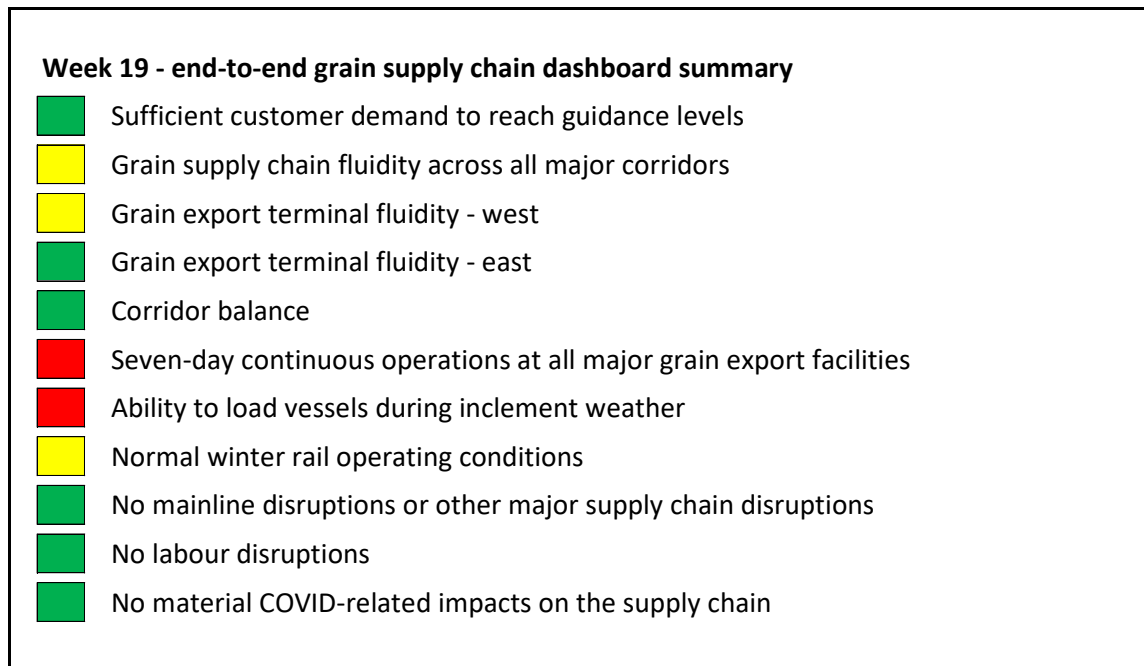


Figure 1. Weekly dashboard – conditions required to achieve maximum sustainable capacity guidance

Grain supply chain fluidity across all major corridors:

- Prince Rupert Grain terminal and certain terminals in Vancouver and saw some out of car time due to timing of inbound traffic and reduced unload counts caused by either mechanical issues or slow unloading time.

Grain export terminal fluidity – west

- Prince Rupert Grain terminal and certain terminals in Vancouver saw some out of car time due to timing of inbound traffic and reduced unload counts caused by either mechanical issues or slow unloading time.

Continuous operations at all grain export facilities:

- Prince Rupert Grain terminal does not operate 24/7.

Vessel loading during inclement weather:

- Limited ability to load vessels in rain.

Normal winter rail operating conditions:

- Extreme cold weather in certain areas of western Canada required CN to apply train length restrictions to safely move traffic.

Bulk grain movement:

For week 19, CN planned 6,217 bulk hopper cars, representing over 100% of the maximum end-to-end sustainable grain supply chain capacity. This total is net of any orders cancelled by customers, either after order placement in week 18 or during week 19.

Grain shipment week 19 saw extreme cold weather across some regions in western Canada and required train lengths to be restricted to safely move traffic across the network.

All North Shore Vancouver terminals saw some out of car time throughout the week due to the timing of inbound loaded traffic. Additionally, two North Shore Vancouver terminals saw reduced unload numbers due to mechanical issues or slow unloading of processed grain products. Even with these unexpected events, minimal train staging was required to manage corridor fluidity, and minimal staging is expected to occur heading into grain shipment week 20. One South Shore terminal remained heavy with CN traffic throughout week 19, requiring some orders to be spotted later to better match unload windows provided by the serving carrier.

Prince Rupert Grain terminal also saw some out of car time due to similar timing of inbound traffic and reduced unload capacity because of unexpected mechanical issues.

CN supplied 90% of planned CN hopper cars within the week requested and 93% within 24-72 hours of the end of the want week. Almost 500 cars were not spotted in the want week requested due to grain terminal issues at origin or timing of unload windows from the carrier serving the South Shore of Vancouver grain terminals.

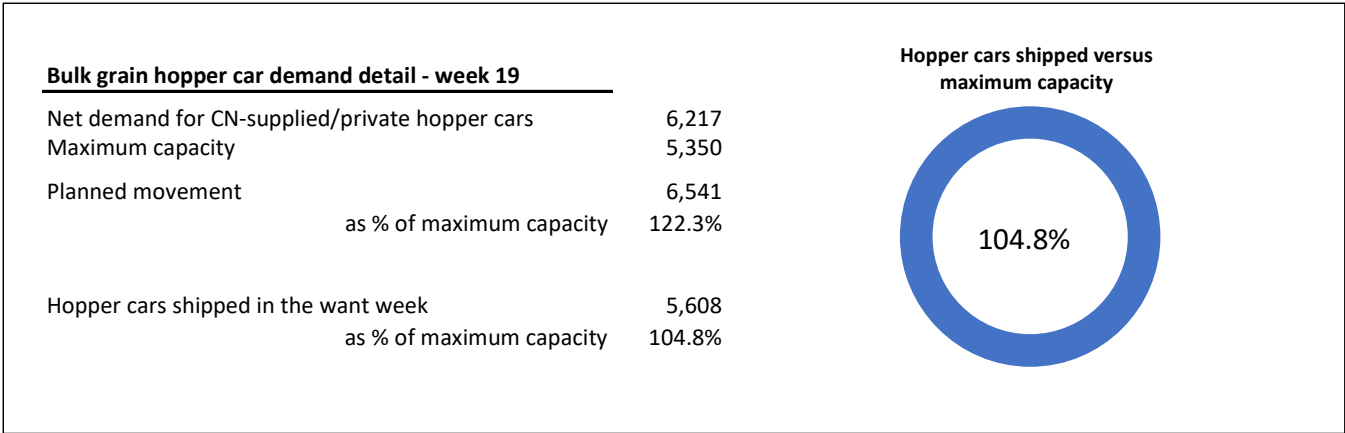


Figure 2. Bulk grain hopper car demand and demand fulfillment

CROP YEAR TO-DATE SUMMARIES



Figure 3. Crop year to-date shipments of grain and processed grain products from western Canada

CN moved 10.9 MMT of Western Canadian bulk grain through week 19 of Crop Year 2022-23. This tonnage is 7% higher versus the average of the prior three years, and 33% above last year.

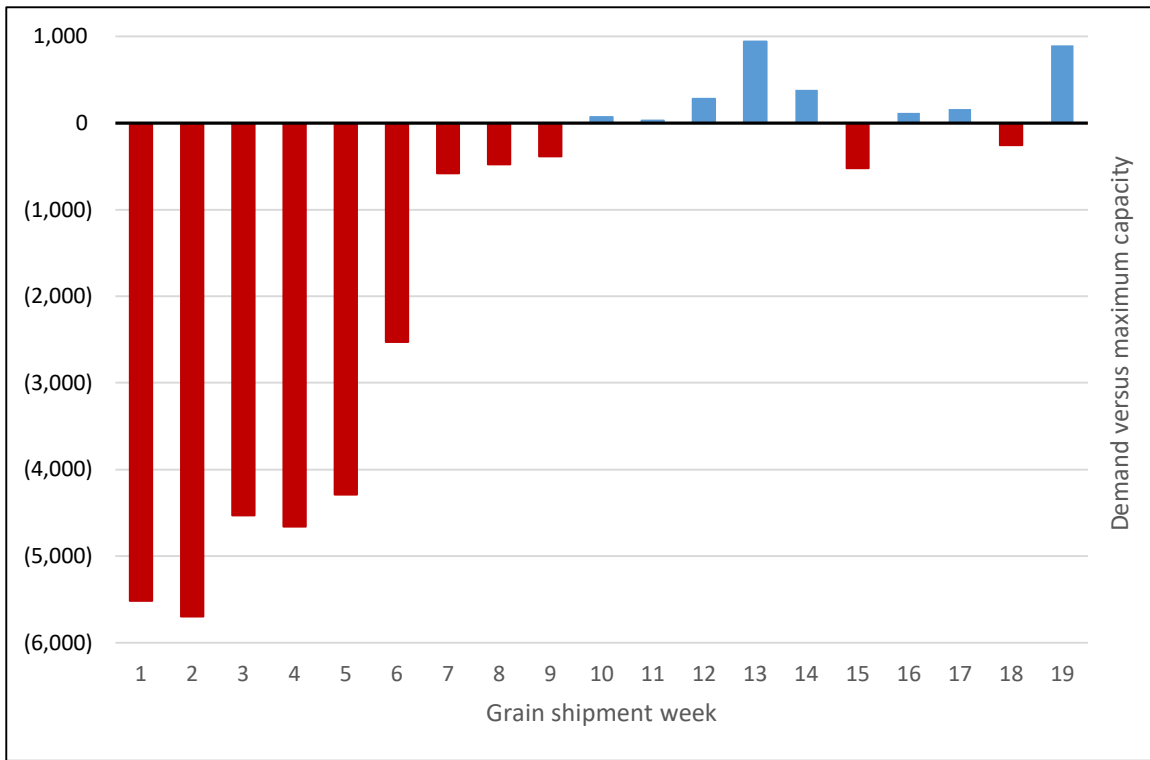


Figure 4. Customer demand for bulk grain movement via hopper car in relation to maximum end-to-end sustainable supply chain capacity on CN for bulk grain movement

Approximately 27,000 hopper cars' worth of available grain supply capacity on CN went un-utilized over 19 weeks of the crop year, representing approximately 2.5 million metric tonnes. This was due in large part to the impact of historically low grain supplies available for movement during the first six weeks of the crop year.

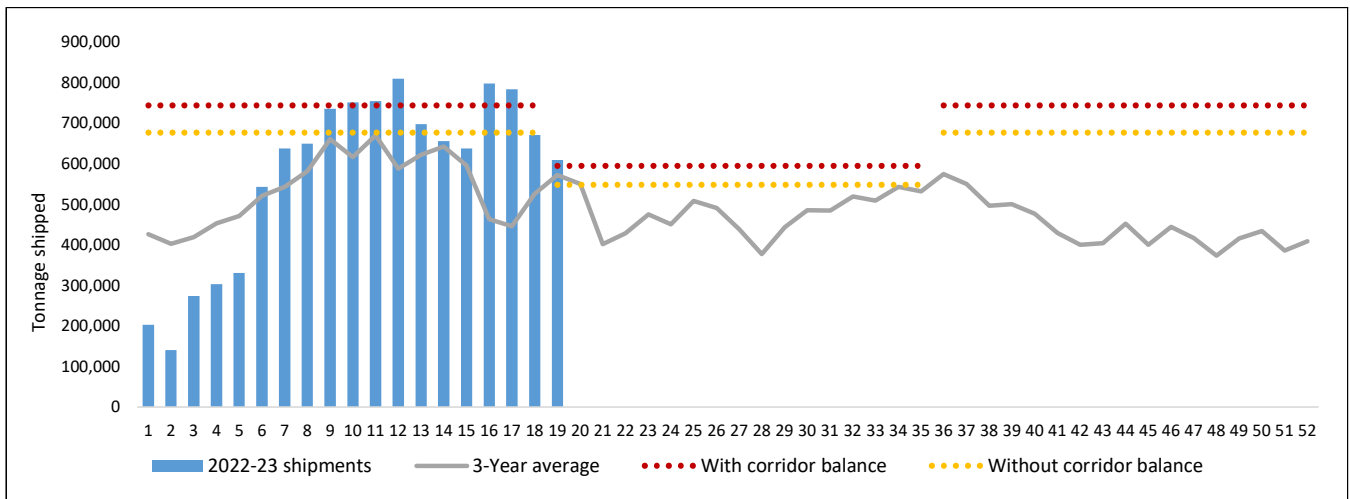


Figure 5. Weekly shipments of grain and processed grain products from western Canada on CN versus maximum end-to-end sustainable supply chain capacity guidance

GRAIN SHIPMENT WEEK 19 – SHIPMENTS OF GRAIN AND PROCESSED GRAIN PRODUCTS

	Vancouver	Prince Rupert	Thunder Bay	Churchill	N. America Domestic	Total	Carloads
Week 19 (metric tonnes)							
All Grain Supply Chains	341,892	115,210	81,673	0	81,335	620,110	6,541
YTD Shipments (million metric tonnes)							
Common Hopper Fleet	4.2	1.7	1.3	0.0	0.7	7.9	83,603
Customer-supplied equipment ¹	1.9	0.1	0.1	0.0	1.0	3.0	32,082
Total^{2,3}	6.1	1.8	1.4	0.0	1.7	10.9	115,685

¹ includes bulk and processed grain moving in hopper cars and vegetable oil moving in tank cars
² Totals above exclude bulk or processed grain shipped in intermodal containers
³ Totals may not add up due to rounding

Figure 6. Shipments of grain and processed products from western Canada on CN by primary destination and equipment type

COMMON CN-SUPPLIED HOPPER FLEET DETAIL

A. Car Demand and Order Planning

- Week 19 net car orders were 5,507. Changes to grain shipment demand in week 19 included:
 - 121 orders rationed
 - 51 orders cancelled throughout week 19.

<i>Common Hopper Fleet</i>		Week 18 Complete (Nov 27 to Dec 03)					Totals	Week 19 Latest	Week 20 Preliminary
		Vancouver	Prince Rupert	Thunder Bay	Churchill	N. America Domestic			
Demand	Total Customer Orders	2,579	1,309	883	0	787	5,558	4,991 ⁽²⁾	5,304 ⁽²⁾
	Invalid Customer Orders	0	0	0	0	0	0		
	Terminal Authorized Orders ⁽¹⁾	2,579	1,309	883	0	787	5,558 ⁽¹⁾		
	Cancelled Orders	(18)	(10)	(21)	0	(16)	(65)		
	Total Net Orders	2,561	1,299	862	0	771	5,493		
	Contracted Orders						5,021		
Spot Orders						472			
Planning	Net Planned Orders	2,361	1,299	862	0	751	5,273		
	Planned Contracted Orders						5,021		
	Planned Spot Orders						252		
	% of Net Orders that were Planned						96%		

Note:
 (1) New customer requests vetted for validity as per grain car ordering rules in CN Tariff 9000
 (2) Number of cars requested before order cut-off time for want week - yet to be reviewed for validity

Figure 7. Summary of customer orders for CN-supplied hopper cars

B. Car Spotting Performance

- 5,112 empty cars spotted in week 19.
- 90% spotting performance against the current week’s plan
- 93% of planned orders spotted in want week or within 24-72 hours of the end of the want week

<i>Year 2022 Week 19 Spotting Performance</i>	Spot Plan			Cars Spotted			Spotting Performance	Unfilled orders rolled to next week
	Planned	Cancelled	Net Plan	Last Week	Current Week	Total Spotted		
Current Week Plan Authorized New Orders	4,893	(51)	4,842	88	4,266	4,354	90%	488
Prior Week's Orders (rolled forward to current week)	610	(9)	601	-	473	473	79%	128
"Add-in" Cars Ordered after weekly plan is set	-	-	-	-	39	39		
Pre-Spots Early spotting of next week's orders	-	-	-	-	103	103		
Railway shuttles	-	-	-	-	231	231		
Total	5,503	(60)	5,443	88	5,112	5,200		

Figure 8. CN spotting performance in relation to confirmed and planned orders for CN-supplied hopper cars

C. Order fulfilment detail highlights

- Almost 500 cars were not spotted in the want week requested due to either grain terminal issues at origin or timing of unload windows from the carrier serving the South Shore of Vancouver grain terminals.