



July 31, 2022

The Honourable Omar Alhabra, P.C., M.P.  
Minister of Transport  
330 Sparks Street  
Ottawa, ON  
K1A 0N5

Dear Minister Alhabra:

On behalf of Canadian Pacific ("CP"), I am writing to submit CP's 2022–2023 Grain Service Outlook Report.

As required by section 151.01(1) of the *Canada Transportation Act*, this report provides an assessment of CP's ability to move grain during the upcoming 2022–2023 crop year, taking into account the total volume of grain expected to be moved.

The report also describes the process that CP undertakes each year to prepare for, and respond to, market demand for grain transportation.

Sincerely,

Keith Creel  
President and Chief Executive Officer  
Canadian Pacific



# Dedicated to Grain

Grain Service Outlook Report for the 2022–2023 Crop Year



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## Message from the President and Chief Executive Officer

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On behalf of Canadian Pacific (“CP”), it is my distinct pleasure to present our 2022–2023 Grain Service Outlook Report. This is CP’s fifth annual grain report. It describes our plan to deliver outstanding service for our grain customers.

Regrettably, the 2021-2022 Western Canadian grain crop was the smallest in over a decade as a result of severe drought conditions throughout the Prairies in summer 2021. Our total volume of Canadian grain and grain products transported during the 2021-2022 crop year is down approximately 43 percent compared to 2020-2021’s record-breaking volume of 30.62 million metric tonnes (“MMT”). CP had prepared the railway to transport much higher volumes of grain, but unfortunately, there was not more grain to move.

On a positive note, working closely with our customers, CP successfully responded to surging demand for the transportation of corn and grain products from the United States (“U.S.”) into the Canadian Prairies to supply cattle feed this past winter. We delivered more than 35,400 carloads, which represents an increase of 33,200 carloads or 1,600 percent compared to 2020-2021. This required the creation of an entirely new supply chain, demonstrating CP’s ability to be nimble and respond quickly to changing market conditions.

Overcoming adversity is the overwhelming theme of Canadian railway transportation during the 2021-2022 crop year. Our team of exceptional railroaders overcame unprecedented disruptions and extraordinary challenges to keep the railway functioning for our customers and the broader Canadian economy. For example, CP has had to overcome:

- The COVID-19 pandemic. The impact of the pandemic on the railway has been unprecedented and multi-faceted:
  - First, it required far-reaching action to keep our employees healthy and safe so they could keep operating an essential rail transportation service for Canada’s economy throughout the pandemic.
  - Second, in order to keep trains running, CP had to effectively navigate and respond to constantly changing public health restrictions across every jurisdiction where we operate, including at the federal, provincial, state and municipal levels of government.
  - Third, the Government of Canada’s vaccine mandate policy, implemented in fall 2021, required the removal of hundreds of fully trained and qualified railway employees from active service. The vaccine mandate policy for railway employees was rescinded on June 20, 2022, but Canada’s vaccination requirement to enter the country remains in place and continues to impact our cross-border operations.
  - Finally, as the Omicron wave of the pandemic hit North America in the winter of 2021-2022, CP, much like other employers in virtually every sector of the economy, had to grapple with extremely high levels of absenteeism caused by the virus. In January 2022 alone, our Canadian conductors, locomotive engineers, and engineering services personnel made 3,570 COVID-19 absentee claims. The timing of this pandemic wave could not have been worse, since it hit the railway in January and February, when winter operating conditions are the most challenging and can already have a substantial impact on our operations.
- Multiple extraordinary climate events.
  - In 2021, we had to respond to and overcome extreme wildfires during the summer months and then historic rains in the fall that caused unprecedented track infrastructure damage in some of the most challenging geography along our mainline through the B.C. mountains, a critical part of CP’s rail network that services the Port of Vancouver.
  - In early 2022, we endured persistent extreme winter conditions on the Canadian Prairies, which lasted for weeks and forced the reduction of train length and speed to ensure safety, which has the effect of lowering the overall capacity of the rail system.
  - In April and May 2022, extreme flooding in Southern Manitoba and parts of Northern Ontario threatened our ability to operate. CP has worked proactively over the past several years to build resiliency in these flood prone regions of our network by raising the track infrastructure. In spring 2022, CP raised the track in this region even higher, in some cases by several feet, to keep our

infrastructure safe and functional. This proactive work kept CP trains running during one of the worst flooding events in Manitoba's history, while other railways were out of service.

- Finally, a strike by the Teamsters Canada Rail Conference ("TCRC") in March 2022 lasted approximately 60 hours and caused weeks of avoidable disruption to Canada's supply chains.

CP responded to each of these distinct challenges with exceptional grit and tenacity. I am proud of the extraordinary work undertaken by each of our 12,000 strong railroaders to keep the rail system functioning in the face of adversity.

Looking forward, we know that the world is looking to Canada for food security, now more than ever. The Russian war against Ukraine and increasing geopolitical uncertainty in many parts of the world underscores the need for more of Canada's resources to reach global markets. Working closely with our customers, CP stands ready to move more of Canada's grain and grain products for export to global markets.

During this upcoming crop year, CP anticipates securing regulatory approval from the U.S. Surface Transportation Board ("STB") to combine with Kansas City Southern ("KCS") to create Canadian Pacific Kansas City ("CPKC"),

the first – and what I believe will be the only – single line rail network seamlessly connecting Canada, the U.S. and Mexico. Subject to regulatory approval, the future CPKC will enhance competition and routing options for shippers throughout North America, while delivering unsurpassed levels of service, safety and efficiency, generating economic growth and lowering greenhouse gas emissions. The proposed CPKC network is a transformative opportunity for Canada's grain shippers because it will directly connect production-rich CP origins in the Canadian Prairies to new export destinations in the U.S. and Mexico.

Although it is still early in the season, Statistics Canada is forecasting a more typical Canadian grain crop this year. We are hopeful that there will be more grain to move. As always, CP stands ready to deliver service excellence for our customers. As detailed in this report, CP is once again in a strong position to meet the transportation needs of our grain customers and the broader Canadian economy during the upcoming 2022–2023 crop year.



Keith Creel  
President and CEO





## Executive summary

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This report highlights CP's strong commitment to delivering for our grain customers, day in and day out. Grain is CP's largest line of business by revenue. We remain focused on growing our grain business by offering customers the most competitive transportation service and by driving efficiency through the grain supply chain. Significant capital investments by CP and our customers, and impressive innovations in the grain supply chain, continue to enhance safety, capacity, efficiency, resiliency, and performance.

### Key highlights of the 2022–2023 report:

- CP continues to lead the railway industry in safety performance. For the 16th consecutive year, CP has achieved the lowest train accident frequency among all class 1 railways in North America, as measured by the U.S. Federal Railroad Administration (“FRA”).
- Subject to regulatory approval in the U.S., a combined CPKC will provide single line service from CP's origin-rich grain network to grain outlets in the U.S. and Mexico, including direct access to 12 Gulf and Pacific ports. CP anticipates regulatory approval will be secured in the first quarter of 2023.
- Over the past year, CP has demonstrated extraordinary resilience by overcoming devastating wildfires and catastrophic flooding in the B.C. interior, extreme winter weather conditions on the Prairies, and the challenges associated with the COVID-19 pandemic.
- CP expects a typical grain crop in the 2022–2023 crop year. Statistics Canada is forecasting this year's total crop at 93 MMT and Western Canada's grain production is estimated at 71 MMT. This forecast is consistent with the expectation of our customers.
- Based on Statistic Canada's forecast and current customer expectations, CP plans to make available approximately 1,100 locomotives and approximately 15,500 grain hopper cars throughout the 2022–2023 crop year for the movement of grain, subject to market demand.
- CP plans to supply 6,000 grain hopper cars a week to country elevators, from August through mid-December, and from April to July, subject to market demand. During the winter months when the Port of Thunder Bay is closed, CP plans to supply 4,350 grain hopper cars each week, subject to market demand.
- Additionally, through most of the upcoming crop year, CP anticipates moving on average 1,050 cars of grain products each week in customer-supplied cars.
- CP is undertaking an aggressive hiring plan. We are planning to hire 2,500 employees across our network in 2022. Over 1,000 personnel in operations have been hired already this year. In fact, CP has hired more people in the first half of 2022 than it did during the entirety of 2021. In Canada, CP plans to hire 1,100 operating employees and 500 engineering employees this year. Currently, we have over 730 new employees in various stages of training across Canada.
- For the 2022-2023 crop year, CP plans to have approximately 4,000 to 4,200 operations employees deployed across the network, including approximately 3,000 to 3,200 operations employees in Canada, subject to market demand.
- This year, CP is completing its \$500 million multi-year investment to purchase 5,900 new high-capacity grain hopper cars. In total, we will have more than 7,300 new CP-owned and leased high-capacity grain hopper cars in active service by the end of 2022. The new hopper cars are already providing significant capacity gains for Canada's grain supply chain.
- Our innovative 8,500-foot High-Efficiency Product (“HEP”) train model, together with the new high-capacity grain hopper cars, is responsible for delivering an increase of more than 40 percent for the volume of grain transported per train.
- CP is continuing strong levels of capital investment to enhance the safety, fluidity, capacity, and resiliency of our rail network, building on the record capital investments CP has been able to make since adopting the Precision Scheduled Railroading (“PSR”) operating model in 2013.
- CP is well-positioned to move grain in the 2022–2023 crop year. We expect to move in excess of 25 MMT of grain and grain products, with capacity to move more during the crop year, subject to market demand.

CP looks forward to delivering for our customers and the broader Canadian economy during the upcoming 2022–2023 crop year.

## Introduction

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CP is pleased to submit our 2022–2023 Grain Service Outlook Report to the Minister of Transport, as required by the *Canada Transportation Act*. This annual report provides an assessment of CP's ability to move grain during the upcoming 2022–2023 crop year, taking into account the total volume of grain expected to be moved.

Part 1 provides an overview of our proposed merger with KCS and the extensive benefits a combined CPKC will bring to grain customers, subject to regulatory approval in the U.S..

Part 2 demonstrates CP's extraordinary resilience in responding to the unprecedented disruptions to service caused by COVID-19, and catastrophic wildfires and washouts.

Part 3 reviews the 2021–2022 crop year, specifically CP's strong performance building a new supply chain with our customers to deliver corn and dry distillers' grains to Western Canada feed lots, CP's industry-leading safety performance,

and our collaboration with customers to understand their transportation requirements.

Part 4 looks forward to the 2022–2023 crop year. It highlights the process that CP undertakes to forecast the size of the upcoming year's grain crop, and how CP supplies the assets and resources to respond to market demand for grain transportation.

Finally, Part 5 outlines the opportunities that are possible thanks to significant investments and innovations. The section outlines CP's capital investments, which are enhancing the safety, fluidity, capacity and resiliency of the railway. It also reviews CP's deployment of technology and innovation to drive safety and efficiency gains.

Consistent with past years, this report demonstrates that CP is in a strong position to once again meet the transportation needs of our grain customers and the broader Canadian economy during the 2022–2023 crop year.



# Part 1: Canadian Pacific Kansas City<sup>1</sup>

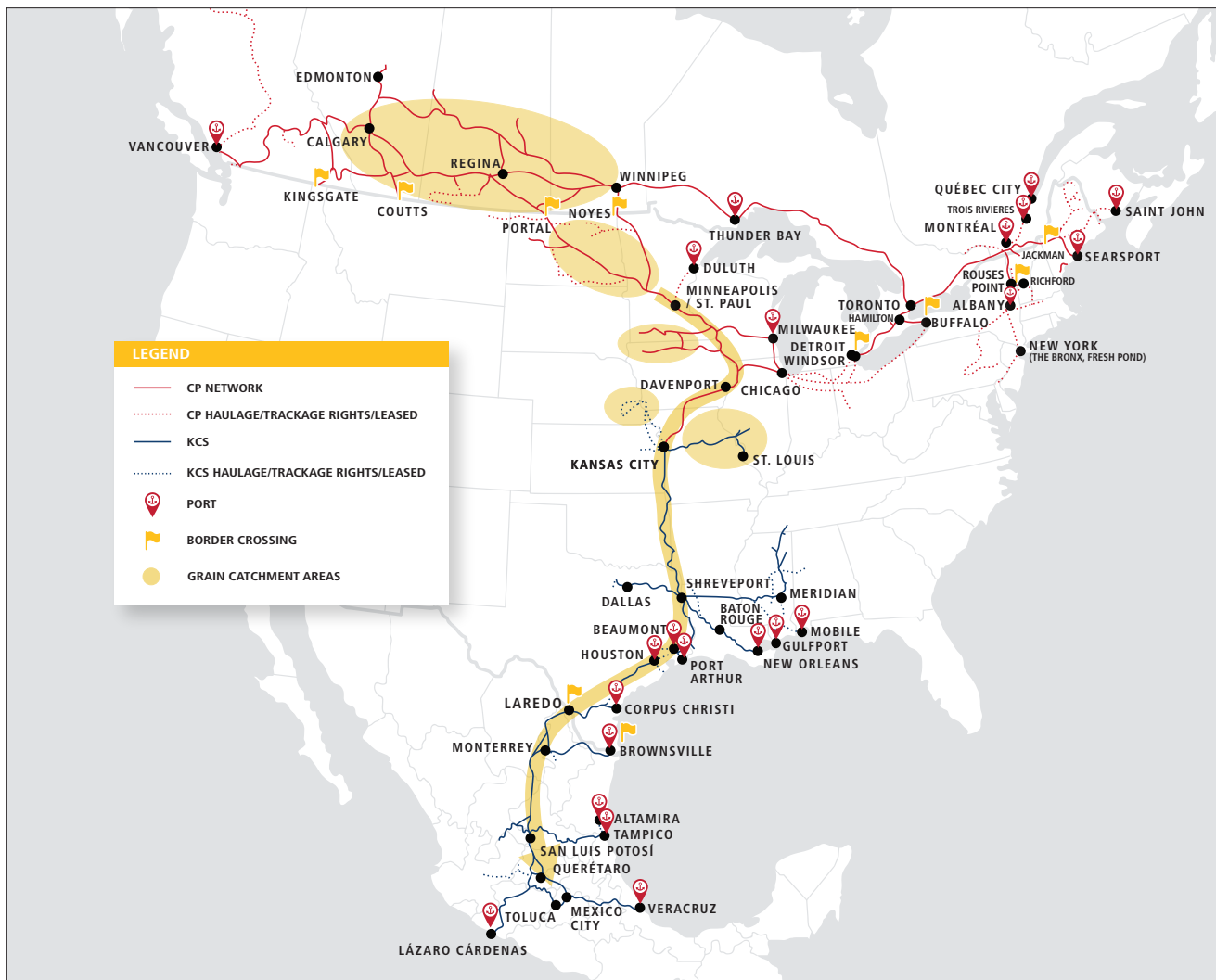
CP and KCS are seeking to combine to create the first single line rail network across Canada, the U.S., and Mexico. The proposed combination, which remains subject to approval of the U.S. STB, represents a transformational opportunity for rail customers, including grain shippers, and the North American economy.

The proposed combination will provide new longhaul routes, extend our market reach, and create expanded shipping opportunities for customers. CPKC will offer enormous benefits to Canada's grain shippers by creating an efficient, single line-haul service from CP's origin-rich grain network to U.S. and Mexican outlets, including 12 Gulf and Pacific ports, to improve the flow of grain.

The combination is an extraordinary opportunity to inject new competition and new capacity into the North American rail network, expanding options for shippers by connecting valuable agriculture products with new ports and new markets.

On Dec. 14, 2021, CP closed the transaction to acquire KCS. We expect the STB review of CP's proposed control of KCS will be completed in the first quarter of 2023. Until regulatory approval is granted, the KCS is held in a voting trust and continues to operate as an independent company. Upon obtaining control approval, the two companies will become fully integrated within three years, unlocking the full benefits of the combination.

FIGURE 1: CPKC GRAIN NETWORK



<sup>1</sup>Subject to regulatory approval by the Surface Transportation Board in the U.S.

FIGURE 2: CP AND KCS BEFORE INTEGRATION



FIGURE 3: CPKC AFTER INTEGRATION



## Part 2: Strengthening resiliency

Over the past year CP has persevered through the devastating wildfires and catastrophic washouts in the B.C. interior, extreme winter weather conditions on the Prairies, extreme flooding in Southern Manitoba, and the COVID-19 pandemic. Our commitment and drive remained constant. We overcame significant obstacles to continue delivering service for our customers. We also supported many communities along our network that were affected by the extreme weather events.

### **B.C. wildfire response**

When devastating wildfires threatened our rail network in the B.C. interior during summer 2021, multiple CP crews mobilized to help battle the fires, support impacted communities, and keep the rail supply chain functioning. By late summer, over 860,000 hectares of land had burned and some communities were left shattered.<sup>2</sup>

CP took many important actions to maintain safe operations during the B.C. wildfires. Our mechanical team designed and constructed four fire suppression trains. We deployed these trains to Spences Bridge and the Lytton Creek wildfires, Revelstoke and the Three Valley wildfire, Creston and Cultus Creek wildfire, and to northwestern Ontario as a precaution. We also brought in industrial fire fighters from as far away as Texas to support our response.

CP's Hazardous Materials and Emergency Response team has experience fighting a variety of fire types, including wildland fires, but these unrelenting fires challenged the team to adapt in new ways. CP used existing tools to help prevent new and fight existing fires along our network. Many employees stepped away from their ordinary duties to ride trains watching for fires and to transport crews throughout the region.

We were also pleased to help our neighbours, including the Cook's Ferry First Nation and Neskonlith First Nation, by providing equipment and other resources to protect structures in those communities.

In an effort to assist local communities, CP committed \$1 million to wildfire recovery. CP donated a computer and telecommunications equipment to the Village of Lytton for the interim operation of their water treatment plant and funded the Lytton First Nation's community food hub through the CP recovery fund.

### **B.C. catastrophic washouts**

In November, an atmospheric river system caused up to 200 millimeters of rain to fall over two days in B.C., closing key arterial roads and badly damaging rail infrastructure. Washouts occurred at 32 separate locations on CP's Thompson and Cascade Subdivisions. Five of those locations experienced a significant loss of infrastructure.

The timely resumption of rail service in B.C. was made possible by a company-wide, around-the-clock effort. That response started in advance of the atmospheric river system as CP mobilized resources, crews, equipment and materials to be ready to immediately begin repairing the infrastructure once the extreme weather passed and conditions allowed us to do so safely.

The extraordinary work of CP crews enabled the restoration of the rail supply chain in just eight days. Unfortunately, the Canadian National was out of service over two weeks, which amplified the devastating impact to rail supply chains. As the work to repair the tracks continued, CP helped stranded neighbours by delivering food and generators to Indigenous communities near Spences Bridge.

Repair work continues this year in B.C. to permanently restore our infrastructure. This includes the construction of three bridges over gullies adjacent to the Thompson River where there is now a higher risk of debris flow.

### **Extreme winter weather response**

During January and February 2022, CP's operations were impacted by six weeks of extreme winter weather across the Canadian Prairies. CP's winter performance has improved dramatically since 2013, which is attributable to increased operating efficiency and fluidity on the network and significant capital investments to upgrade infrastructure. For example, even as we grappled with unprecedented disruptions in 2022, our winter performance in January and February was significantly better than our performance in 2013 during all other seasons (i.e. spring, summer, and fall) when operating conditions are more favourable. Our average train length for January and February 2022 was 7,338 feet, which represents a 19.3 percent increase compared to the other seasons in 2013. Our January and February 2022 train weight increased by 24.6 percent compared to our 2013 performance during the other seasons. Our network velocity for this past January and February increased by 14.1 percent compared to the other seasons in 2013. These metrics

<sup>2</sup> <https://news.gov.bc.ca/releases/2021FLNRO0053-001695>



demonstrate the creation of significant additional capacity on the rail system and improved customer service during the challenging winter months.

Although CP has achieved significant improvements to winter operating performance and resiliency, it must be recognized that winter performance is fundamentally a function of physics and safety. Much like winter weather unavoidably causes longer commutes for cars and trucks on highways and delays for airplanes that need de-icing to ensure safety, severe winter weather will always impact railway operations. That is a reality in a cold weather climate. To ensure safe rail operations, when temperatures drop below negative 25 degrees Celsius, a train's speed, length and weight must be reduced. These necessary operational changes lower overall system velocity, which reduces the supply chain's shipping capacity. Similarly, winter storms that cause snowfall and ice require the deployment of significant assets and resources to keep track corridors and railway yards clear and safe.

CP has achieved these significant operational improvements while maintaining its industry-leading safety position with the lowest train accident frequency among all Class 1 railways in North America for the past 16 consecutive years.

### Manitoba flooding response

Over the past decade, CP has worked proactively to anticipate flooding and build resiliency into its infrastructure and operations. In Southern Manitoba, CP raised the mainline track and bridges to mitigate the threat of spring flooding on the Red River, particularly on the Emerson Subdivision, which runs from Winnipeg to the Canada-U.S. border at Emerson, Manitoba and Noyes, North Dakota. The track bed was raised by 31 inches at the Emerson border, elevating the track to the same height as the dikes protecting the community of Emerson. In coordination with Manitoba provincial officials, CP reinforced and raised six bridges, in some cases by more than two feet. As a result of these actions, CP kept operating this past spring through the worst flood in Manitoba since 2009,<sup>3</sup> and one of the worst floods in the province's history, while other railways went out of service.

FIGURE 4: CP AVERAGE TRAIN LENGTH (FEET), 2013 OTHER SEASONS VS. 2022 WINTER

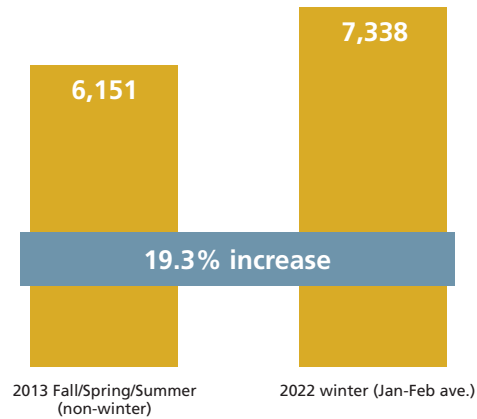


FIGURE 5: CP AVERAGE TRAIN WEIGHT (TONS), 2013 OTHER SEASONS VS. 2022 WINTER

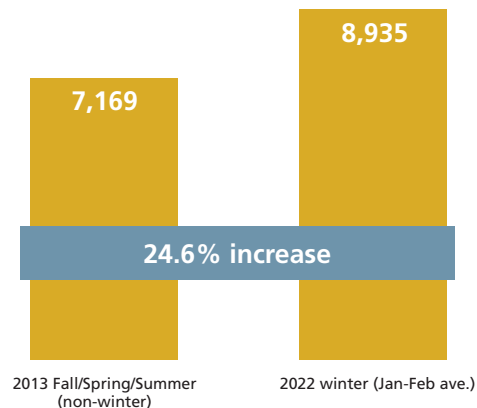
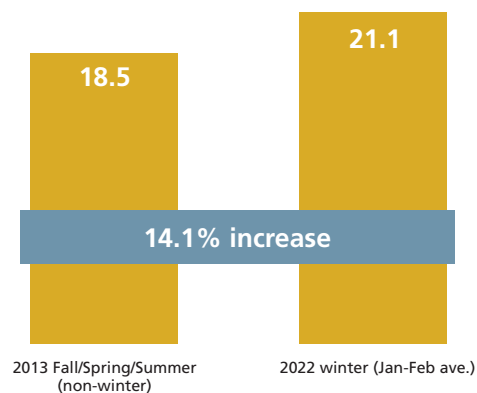


FIGURE 6: CP AVERAGE TRAIN SPEED (MPH), 2013 OTHER SEASONS VS. 2022 WINTER



<sup>3</sup> <https://www.gov.mb.ca/flooding/history/index.html>



### COVID-19 pandemic response

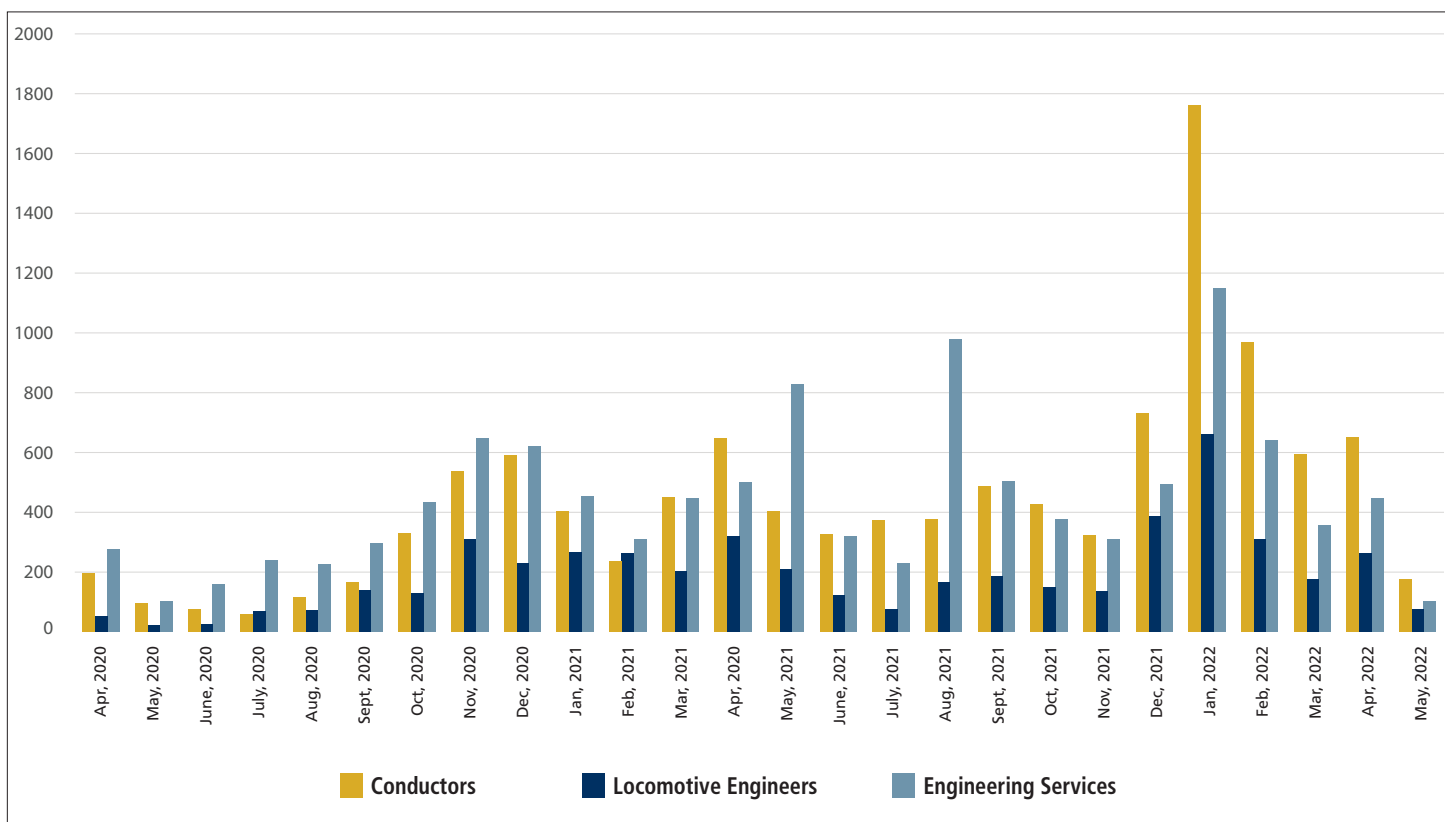
Throughout the COVID-19 pandemic, the health and safety of CP employees has remained at the heart of our decision making as we serve customers that rely on essential rail transportation. The recognition of rail as an essential service by Canadian and U.S. governments helped CP deliver for customers and the North American economy during the pandemic.

Like other employers, CP experienced acute levels of COVID-19 absenteeism during January and February 2022 as the Omicron wave hit North America. COVID-19 absenteeism impacted the whole company, particularly with Canadian employees in operations and engineering who are directly responsible for keeping trains moving

on the network. As illustrated in Figure 7, during January 2022, CP’s Canadian conductors made 1,762 COVID-19 absentee claims, which represent a 337 percent increase in absenteeism compared to January 2021. Similarly, during January 2022, CP’s Canadian locomotive engineers and engineering service employees saw COVID-19 absentee claims increase by 148 percent and 153 percent respectively, compared to January 2021.

The magnitude of this significant absenteeism was amplified by the Government of Canada’s vaccine mandate policy, which required the removal of hundreds of railway employees from active service during roughly the same period.

FIGURE 7: CP COVID ABSENTEEISM IN CANADA, APRIL 2020-MAY 2022



## Part 3: Looking back at the crop year

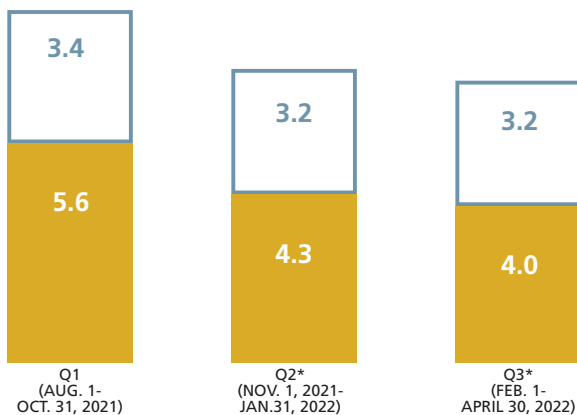
### Performance summary of the 2021–2022 crop year

Persistent dry conditions and above-average temperatures across the Canadian Prairies last summer severely impacted grain crop production. According to Statistics Canada, Western Canada had the smallest wheat and canola crops since 2007. Nationally, total wheat production fell 38.5 percent to 21.7 million metric tonnes (MMT) in 2021. Canola production decreased by 35.4 percent to 12.6 MMT in 2021.<sup>4</sup>

Notwithstanding the significant disruptions and challenges reviewed in the previous section, CP received accolades from our customers for service provided through the crop year.

As outlined in CP's 2021-2022 Grain Service Outlook Report, CP committed significant capacity on the railway for grain transportation to move more than 30 MMT to Canadian ports for export. Unfortunately, due to the decrease in Western Canadian grain production, CP's Western Canadian grain volumes are down more than 43 percent through Week 43 compared to the same time period over previous crop year. As illustrated in Figure 8, this translated to unused capacity for the movement of 9.8 MMT tonnes of grain and grain products during the first three quarters of the 2021-2022 crop year.

FIGURE 8: GRAIN VOLUME MOVED VS UNUSED CAPACITY: MMT PER QUARTER



\*Note: Volume estimates assume the Port of Thunder Bay closure from Dec. 15, 2021, to Mar. 31, 2022

Unused or excess capacity represents a significant cost to CP. CP had operating crews and locomotives ready to respond to anticipated market demand that never materialized. For example, CP is nearing completion of our \$500 million investment of our new high-capacity grain hopper cars; these assets were not fully deployed during the past crop year due to low customer demand.

Supply chain resiliency requires CP to be nimble in order to respond to shifting market conditions and customer demand. A powerful example is CP's response to surging demand for the transportation of U.S. corn and grain into the Canadian Prairies for cattle feed.

The surging demand for cattle feed in Western Canada was driven by several factors, including low domestic supply of feed grain due to last year's drought, the extreme cold weather which increased the required feed per animal by 15 percent, and COVID-related reductions in animal slaughter rates.

CP responded to the unanticipated and unprecedented demand by working with our customers, federal and provincial governments, and feeder industry associations to create a new supply chain for the delivery of U.S. cattle feed, which includes corn and dry distillers' grain, into Western Canada.

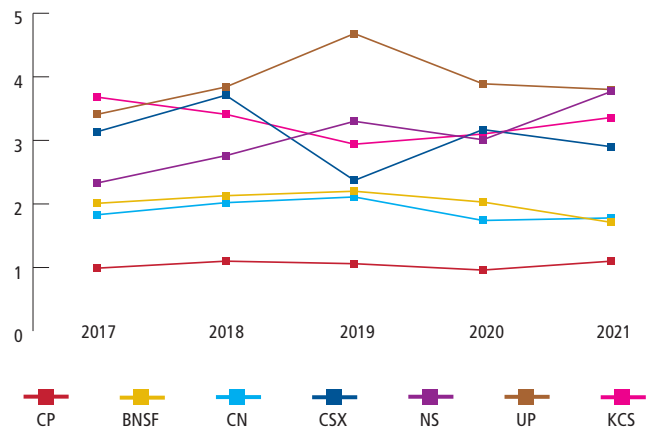
During the 2021-2022 crop year, CP moved approximately 2,200 carloads of cattle feed from the U.S. to Western Canada. This year, by contrast, CP delivered over 35,400 carloads, representing a year-over-year increase of 1,600 percent.

<sup>4</sup> <https://www150.statcan.gc.ca/n1/daily-quotidien/211203/dq211203b-eng.htm>

## Industry-leading safety performance

Safety is foundational to everything we do at CP. CP has achieved the lowest FRA-reportable train accident frequency rate among all Class 1 railways in North America for 16 consecutive years.<sup>5</sup> CP knows that safety is a journey, not a destination, and we continually work to improve safety performance. We focus on several important initiatives, including CP's Home Safe program, which is aimed at fostering a strong safety culture across the company. Home Safe is an awareness program that encourages the elimination of risky behaviour that can lead to incidents. CP has modified training for new employees to enhance the safety focus with longer instructional duration and innovative presentation methods, including simulation and video conference. CP is also expanding the implementation of technology and the use of data and analytics to detect and predict track and equipment failure.

FIGURE 9: CLASS 1 RAILWAY COMPARISON: FRA-REPORTABLE TRAIN ACCIDENT FREQUENCY RATE, 2017–2021 (PER MILLION TRAIN MILES)



<sup>5</sup> Data collected and published annually by the FRA in the U.S. shows CP as the industry leader for achieving the lowest train accident frequency rate of all Class 1 railways in North America.

## Customer and industry collaboration and communication

CP is committed to strong customer communications and responsiveness. Our grain sales and marketing team is in regular contact with customers to gain insight about their business and determine how we can meet their transportation needs.

CP also meets with agriculture industry organizations and participates at industry events across Canada, often through presentations and sponsorships.

CP is focused on delivering world-class service and results to our customers.

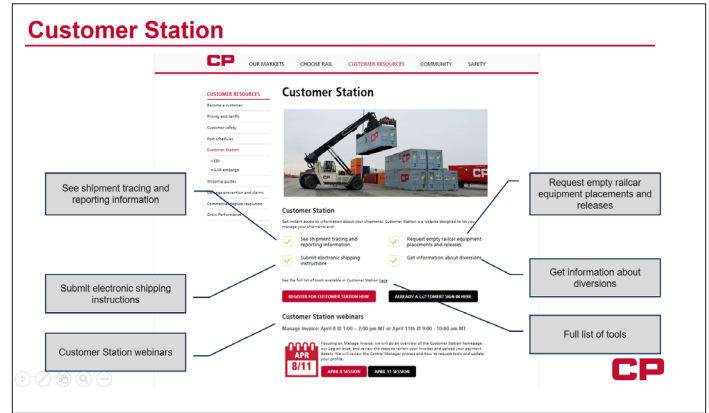
We use multiple tools to facilitate direct communications and provide access to up-to-date shipment and network information.

**Customer Station:** A web based self-service option for shipment tracking and information, pipeline visibility, equipment status, bulletins and customer alerts.

**Customer Service:** Customers can reach CP representatives at our Network Service Centre day or night via toll-free telephone (1-888-333-8111), email or online messaging (“log an issue” feature).

**Service Delivery:** Dedicated single point of contact for large complex Intermodal and Carload accounts. Customers are provided with escalation contacts for any service concerns.

**Specialized Teams:** CP’s specialized service teams assist our customers on a full range of matters including asset management, customs reporting and waybills.



### Customer Advisory Council

CP has established a Customer Advisory Council, which provides important feedback on a range of customer service initiatives to enhance service and supply chain integration.

CP looks forward to continuing direct and open dialogue with customers and industry representatives during the upcoming 2022–2023 crop year.

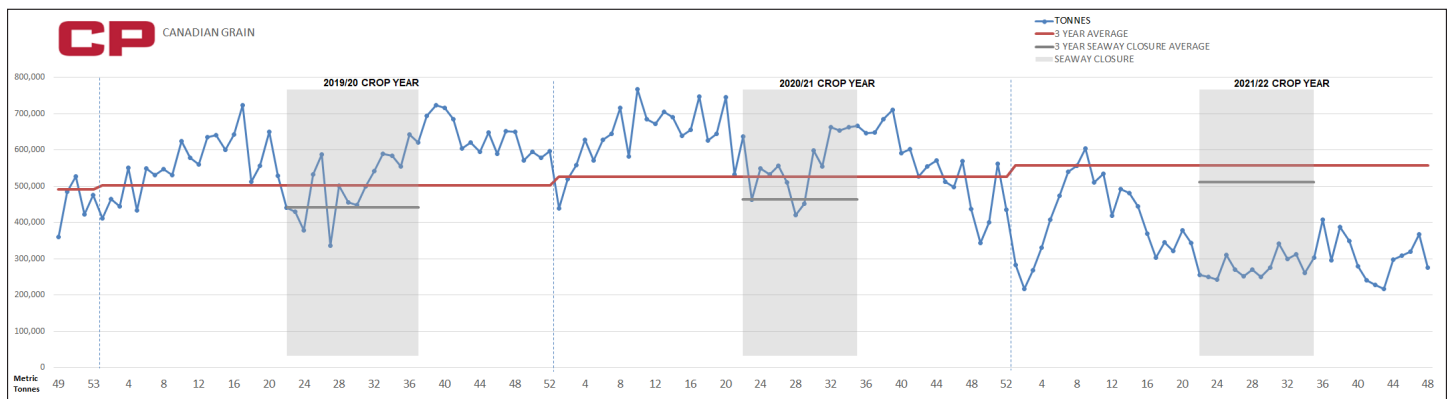


Network Services Centre  
24/7 & 365 Days/Year

## CP grain performance scorecard

In an effort to increase the transparency of our weekly grain performance in Canada, CP developed an online supply chain scorecard. The scorecard reports CP's performance for each previous week in the grain crop year and it includes, when necessary, detailed information on internal or external factors affecting the transportation of grain on CP's network.

FIGURE 10: CP'S SUPPLY CHAIN SCORECARD



## Elevator of the Year award

G3 Pasqua is the most recent winner of CP's annual Elevator of the Year award.

CP recognized G3's Pasqua facility for achieving high volumes from a single loading point while consistently demonstrating efficient railcar loading and a strong commitment to safety during the 2020-2021 crop year.

CP will announce the 2021-2022 crop year Elevator of the Year award in the fall of 2022.



## Part 4: Looking forward to grain service excellence in 2022–2023

### Hopper car targets for the 2022–2023 crop year

CP is well-positioned to move grain in the upcoming 2022–2023 crop year. CP is planning to supply 6,000 grain hopper cars each week with CP-owned equipment, from August through mid-December, and from April to July, subject to market demand.

CP anticipates a slow start to the crop year as the anticipated carry-in volume of Canadian grain is approximately 6 MMT, the lowest carry-in volume in more than 15 years, and seeding is delayed across most of the Prairies. The low carry-in volume is primarily driven by the 10-year low grain crop and high global demand for Canadian grain. The typical average carry-in volume is 11 MMT.

The Port of Thunder Bay is a major outlet for Canadian export grain moving by vessel on the St. Lawrence Seaway. Winter weather typically forces the Port of Thunder Bay and the seaway to close from mid-December to March. CP plans to supply 4,350 grain hopper cars with CP-owned equipment each week during this period, subject to market demand.

In addition to these supply forecasts, CP anticipates moving, on average, 1,050 cars of grain products each week in customer-supplied equipment through most of the upcoming crop year, subject to market demand. On a weekly tonnage basis, this equates to 683,850 MT of grain and grain products during the spring, summer and fall periods, and 523,800 MT per week during the winter months when the Port of Thunder Bay is closed.

Figure 12 provides CP's quarterly grain and grain product volume targets. With the cooperation of all elements of the supply chain and assuming demand is robust, CP hopes to exceed these supply forecasts. CP expects to move more than 30 MMT of grain and grain products during the 2022–2023 crop year. This target includes all Canadian grain and grain products moved by CP. While it is still early in the year, customers believe that the upcoming year's Canadian grain production will be approximately 71 MMT.

FIGURE 11: CP GRAIN AND GRAIN PRODUCT PERFORMANCE TARGET FOR THE 2022–2023 CROP YEAR (MT PER WEEK)

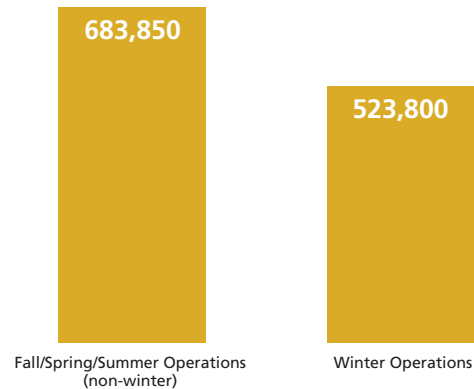
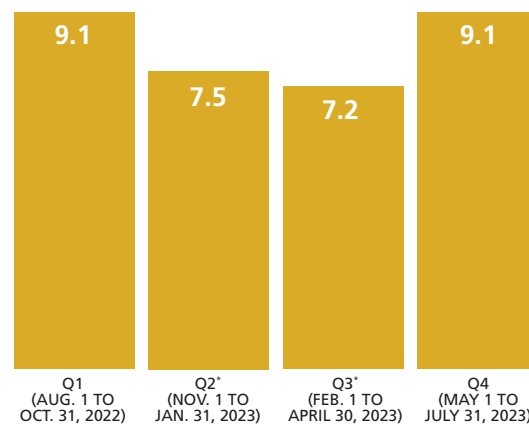


FIGURE 12: CP GRAIN AND GRAIN PRODUCT PERFORMANCE TARGET BY QUARTER FOR THE 2022–2023 CROP YEAR (MMT PER QUARTER)



\*Note: CP grain and grain product performance target by quarter for the 2022–2023 crop year (MMT per quarter).

## Forecasting the crop size

We understand the desire of the government and other stakeholders to gain insight about the supply chain's ability to move grain, in support of producers and the broader Canadian economy. However, at the beginning of the crop year, it is challenging to obtain an accurate forecast for the size of the upcoming crop. This timing challenge is amplified in years when the harvest occurs later in the fall. When forecasting the crop size, we work with our customers to gain a firm understanding of their specific forecasts and expectations for the upcoming crop year. Precise customer forecasts are critical to CP's resource supply planning. In an effort to refine and validate customer forecasts, we review the five-year historical averages and the latest Statistics Canada predictions on production and carry-in for the upcoming crop year.

Although it is still early in the year, CP anticipates the 2022-2023 Western Canadian crop will be 71 MMT, which is above the previous five-year average of 69 MMT. The 2021-2022 crop year carry-in volume for Western Canada is projected to be 6 MMT, the lowest carry-in volume in more than 15 years, and 5 MMT lower than the 10-year average of 11 MMT.



**CP's operational plan is calibrated to the available capacity throughout the supply chain. This includes the capacity available at in-country elevators and port terminals, and other facilities such as canola crush and container stuffing operations. Our forecast assumes that the entire supply chain, including the critical portion through Vancouver, will run at or near capacity throughout the entirety of the crop year.**

FIGURE 13: CP CROP PRODUCTION FORECAST PROCESS



Actions taken by other supply chain players can have a significant impact. For example, farmers will sometimes hold onto their grain, preferring to wait for market prices to improve. It is also important to recognize that the crop size can naturally fluctuate from year to year. For example, during the 2021-2022 crop year, the industry experienced a dramatic reduction of grain production of approximately 30 MMT compared to the 2020-2021 crop year.<sup>6</sup> Even smaller variations between the crop forecast and the actual crop size have major impacts on rail operations. For example, the 2017-2018 crop was originally forecasted at approximately 65 MMT but was actually closer to 71 MMT, a variation of nearly 10 percent. That extra 6 MMT of grain and grain products represents an additional 66,000 grain hopper cars, or 590 grain unit trains, to be placed, loaded, delivered, unloaded and in most cases, deposited in a vessel.

<sup>6</sup> Statistics Canada. CANSIM 001-0017. Estimated areas, yield, production, average farm price and total farm value of principal field crops.

## Responding to changing market dynamics

CP's business model drives capacity by leveraging operational efficiency and velocity. The railway adjusts to changing market demand, but it takes time to create additional capacity on the system because this requires the deployment of assets and human resources.

CP recognizes that the world is looking to Canada for food security, now more than ever, due to the Russian war against Ukraine, geopolitical instability, and global supply chain disruptions. CP stands ready to move more of Canada's grain and grain products for export to global markets.



FIGURE 14: CP'S GRAIN ELEVATOR NETWORK

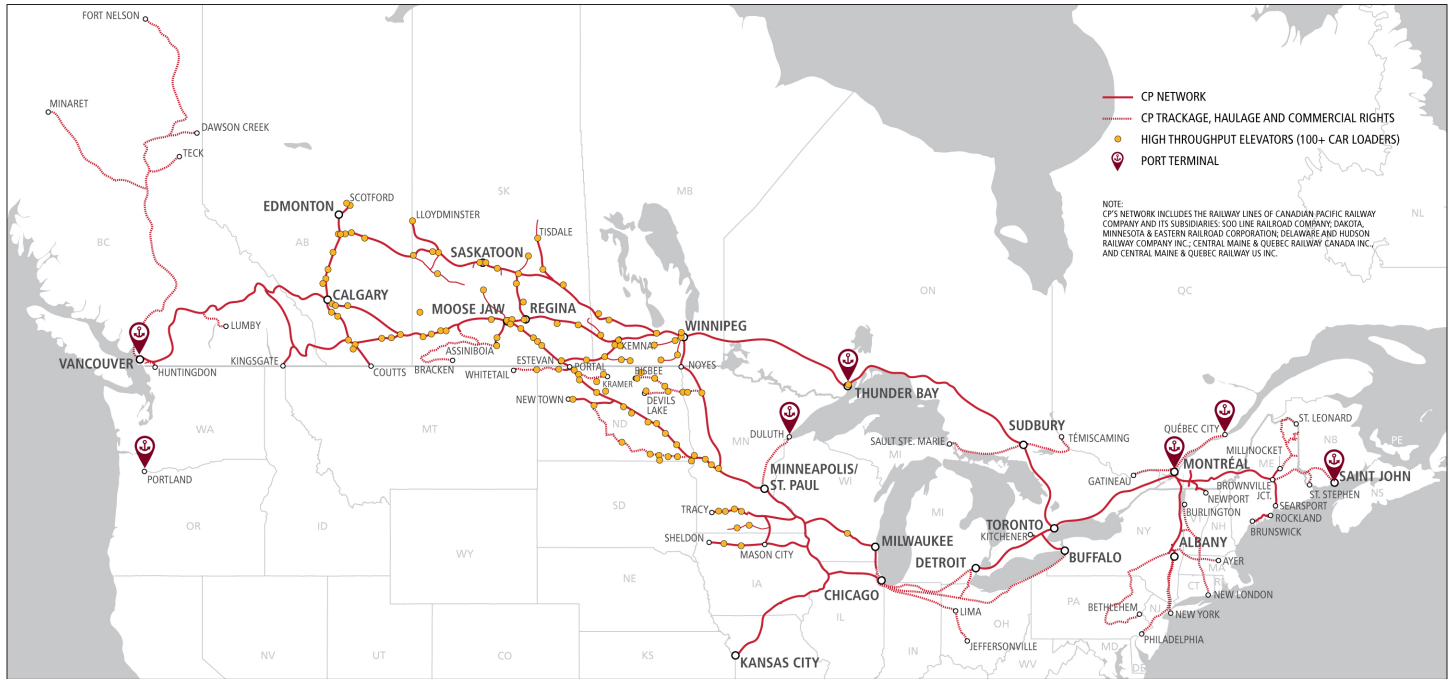
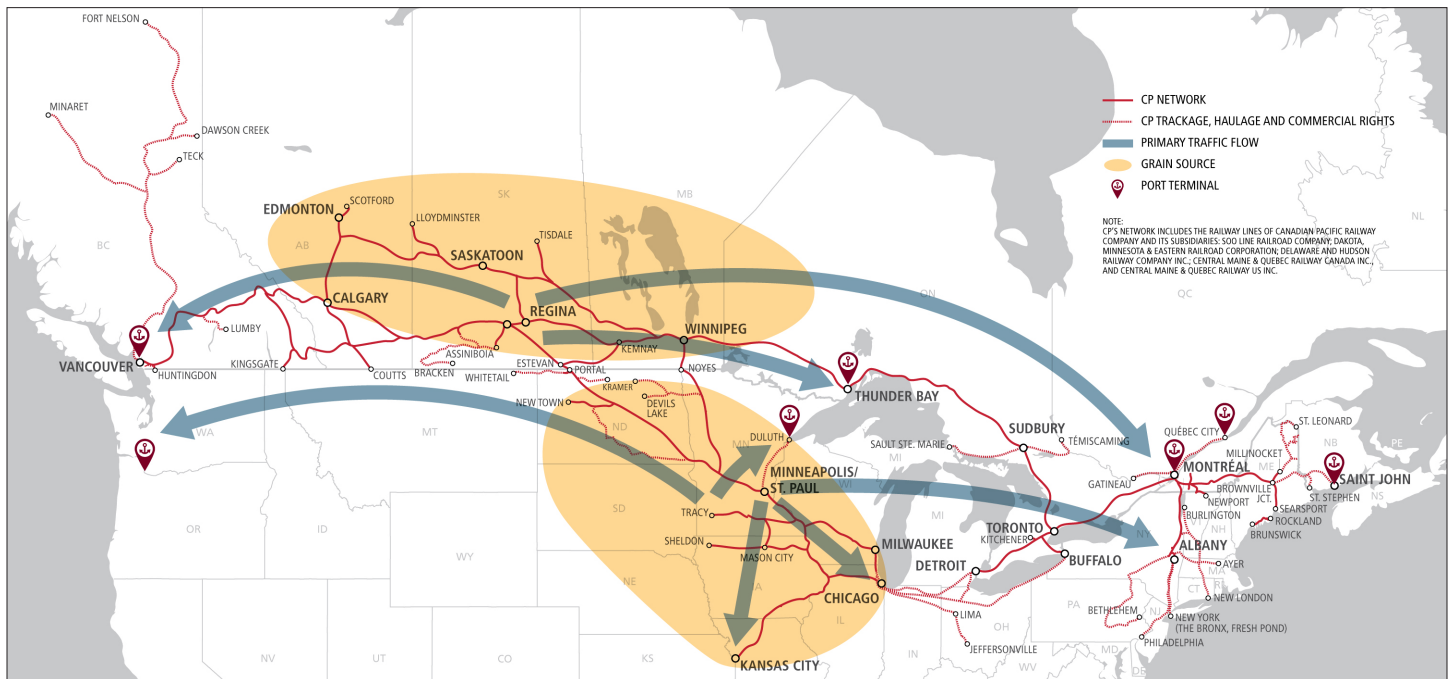


FIGURE 15: GRAIN FLOWS



## Locomotives and hopper cars

Between 2013 and 2021, CP undertook a robust locomotive modernization program, which modernized 411 locomotives in the fleet. Equipped with the latest technology, these locomotives significantly improve reliability and performance.

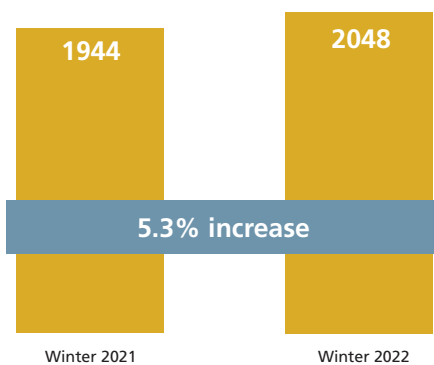
For the upcoming crop year, CP plans to make available approximately 1,100 locomotives, and up to 15,500 grain hopper cars, in service, subject to market demand.



## Operating crews

Figure 16 provides a snap-shot of the number of CP's operations employees (conductors and locomotive engineers). Unlike other North American Class 1 railways that have reduced employee headcounts over the past year, CP has increased the number of operations employees compared to last winter.

FIGURE 16: AVERAGE NUMBER OF CANADIAN OPERATIONS EMPLOYEES (CONDUCTORS AND LOCOMOTIVE ENGINEERS), WINTER 2021 VS. WINTER 2022



CP is growing with our customers. To meet anticipated demand for rail transportation, CP is undertaking an aggressive hiring plan in 2022. We are hiring 2,500 employees across our network this year. In Canada, CP plans to hire 1,100 conductors and 500 engineering services personnel in 2022. Over 1,000 operations personnel have been hired year-to-date. In fact, CP has hired more people in the first half of 2022 than it did during the entirety of 2021. There are 730 new employees in various stages of training across Canada.

For the 2022-2023 crop year, CP is planning to have approximately 4,000 to 4,200 operations employees deployed across the network, including approximately 3,000 to 3,200 operations employees in Canada, subject to market demand.

# Part 5: Unparalleled innovation, investment, and sustainability

## Grain hopper car investment

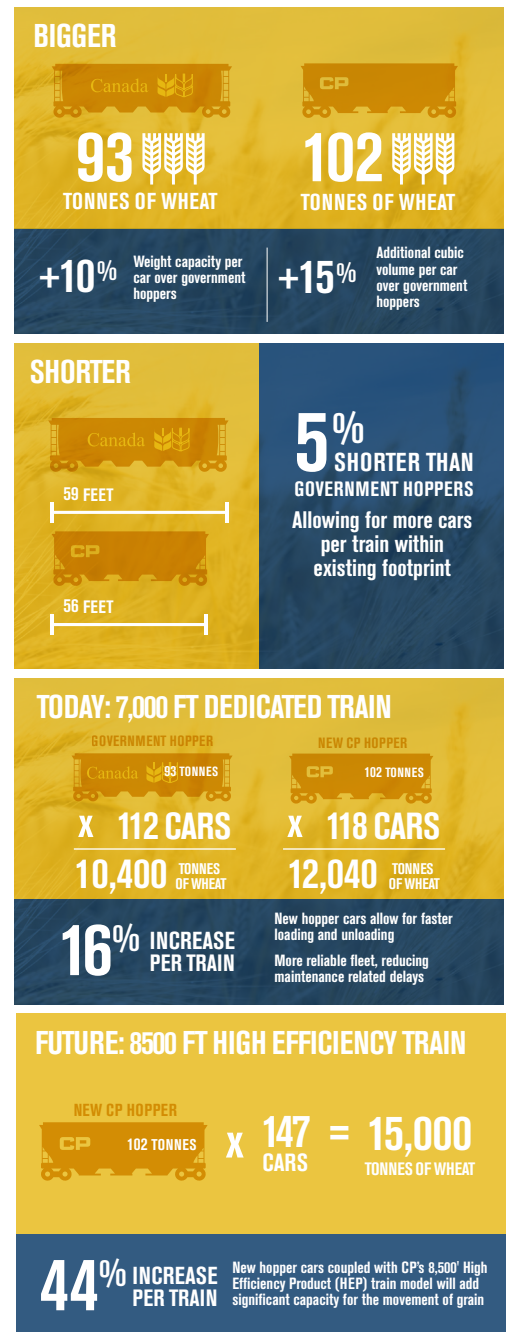
In 2018, CP announced plans to invest more than \$500 million to acquire 5,900 new high-capacity grain hopper cars as part of our commitment to the agriculture sector.

The new hopper cars are designed to be shorter, wider and lighter, and carry more grain than the old hoppers being retired from CP's fleet. The new hoppers feature a three-pocket design that can be loaded and unloaded more efficiently than the old four-pocket Government of Canada cars. They can handle more than 15 percent greater volume and 10 percent greater load weight than traditional cars, while featuring a shorter frame that enables more cars to be used on a train of the same length. The hoppers feature newly manufactured components that are more reliable, significantly reducing maintenance-related delays. With the new high-capacity hopper car, a train of the same length as today (7,000 feet) will have 16 percent more capacity.

As of July 2022, CP has more than 6,300 owned and leased new high-capacity grain hopper cars in our fleet. Our grain customers can expect to see more than 7,300 new hoppers in active service by the end of 2022, enabling us to transport more grain in each train.



FIGURE 17: BENEFITS OF CP'S HOPPER CAR INVESTMENT



## HEP train model

To effectively compete and grow, the Canadian grain supply chain must continually generate new efficiencies and drive innovation. CP is answering that call with our 8,500-foot HEP train model, which uses 147 new high capacity grain hopper cars. In collaboration with our customers, the 8,500-foot HEP train model is changing the Canadian grain landscape for years to come.

CP is excited about the enhanced capacity of the 8,500-foot HEP train, particularly when used in conjunction with our new high-capacity grain hopper cars. The new hopper cars carry 15 percent more volume and 10 percent more weight compared to the cars they are replacing. Combined, these two changes significantly increase the capacity of the grain supply chain. An 8,500-foot HEP train carries in excess of 40 percent more grain than the 7,000-foot train model when combined with the additional capacity of the new hopper cars.

Origin high-throughput (“HTP”) elevators earn economic incentives to load 8,500-foot trains clear of the main track in 16 hours or less. An HTP facility capable of loading an 8,500-foot HEP train clear of CP’s main track in 16 hours or less, using a loop track, is an extremely efficient model. The train’s composition remains intact with both the locomotive and hopper cars throughout the loading process. The customer uses CP’s locomotives to move the train through the loop track to facilitate the loading of hoppers with grain, which takes 16 hours or less. Once the train is loaded, our crew

pulls the train from the customer’s facility onto CP’s main line track for transport to destinations across North America. All new greenfield 8,500-foot-capable HTP elevators built on CP’s network will incorporate a loop track design.

There are efficiency benefits to using this new model, including reduced loaded dwell time since the locomotive remains with the hopper cars, and increased reliability as locomotives maintain train air brake pressure during the loading process. In turn, this expands elevator capacity, thereby allowing grain companies to buy more grain from producers. This also enhances the resiliency of the supply chain; a Panamax vessel is filled by four 8,500-foot HEP trains compared to six of the historical train model, which is necessary for faster recovery when there are disruptions to grain movement.

CP looks forward to the continued expansion of capacity throughout the grain supply chain. We are working with our customers to upgrade the balance of the existing network infrastructure to the 8,500-foot HEP model, and to add new 8,500-foot-capable loop track elevators at strategic locations. Today, 40 percent of elevators we serve accommodate the loading of 8,500-foot HEP trains.

Through strong collaboration with customers, CP is creating significant new capacity levels and is driving strong efficiencies in the grain supply chain.



## Dedicated Train Program

CP's Dedicated Train ("DT") program has been in place since the 2014–2015 crop year. This commercial program for car supply gives shippers the ability to lock in capacity for a 12-month period, providing flexibility and control over their supply chain during the crop year. Customers choose the corridors where they will ship and how many trains they require to fulfill their shipping needs. They choose where trains are to be loaded and when presented with multiple options, they determine the order in which these trains are placed.

The strength of the DT program is that it is reciprocal: It commits CP to provide capacity to a customer, and in return, the customer commits to use that capacity. If CP fails to provide the agreed capacity to a customer or the customer fails to use the allocated capacity, there are reciprocal penalties.

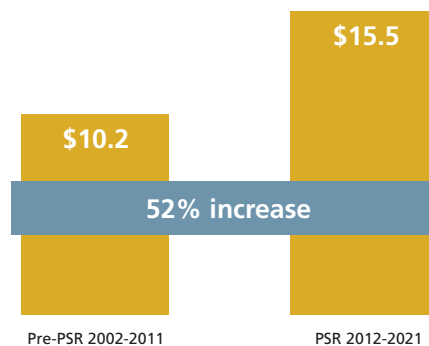
Customers that choose to not participate in the DT program can order hopper cars through the open distribution program, which allows customers to request railcars from CP with two weeks' notice.

## Capital expenditure

CP is maintaining strong levels of capital investment in 2022. We are planning to invest approximately \$1.55 billion this year, which is aligned with our investments in the recent past. Our 2022 capital plan builds on the more than \$14.3 billion of capital investment made by CP between 2012 and 2021.

CP's capital investments have increased significantly since 2013, after CP began practicing PSR. As illustrated in Figure 18, CP's capital investment over the past decade is 52 percent higher, in 2021 dollars, than it was in the decade prior, before CP adopted the PSR operating model. The discipline of PSR has allowed CP to invest to expand capacity, enhance resiliency, increase efficiency, and improve safety performance, all of which generates significant benefits for our customers and the competitiveness of Canada's economy.

FIGURE 18: CAPITAL INVESTMENT, PRE-PSR VS. PSR (\$ BILLIONS, 2021 DOLLARS)



## Capacity-enhancing projects

For 2022, the following eight projects are currently underway, each of which will enhance the capacity of the grain supply chain.

The projects listed below represent CP's current plans. Individual projects are subject to change because the health of the network demands flexibility to adjust capital investment in response to changes in market demand and operational requirements.

Location	Subdivision	Project description/notes
Red Jacket	Broadway	Extending siding to 12,200 feet.
Selim	Nipigon	Extending siding to 14,000 feet.
Struthers	Heron Bay	Extending siding to 12,200 feet.
St. Paul-Dunn Crossover	River	Installing a new single Centralized Traffic Control ("CTC") at east end of Dunn yard and track upgrades to Red Rock spur.
Davenport CTC	Davenport	Installing 39 miles of CTC between Nahant and Deer Creek.
Marquette CTC	Marquette	Installing 24 miles of CTC between Sabula and Bellevue.
Ottumwa CTC	Ottumwa	Installing 10 miles of CTC between Fruitland and Heinz.
Marquette Broken Rail Detection	Marquette	Installing 59 miles of BRD between Marquette and River Junction.
Seymour	Laredo	Constructing a new 12,000 foot siding.
Linby	Ottumwa	Extending siding to 12,200 feet.

## Technology and innovation

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CP is at the forefront of predictive analytics in the rail industry. Using patented technology, CP gathers data on locomotives, railcars, and track infrastructure with wayside and rolling stock sensors that are strategically located across the network. CP's data analytics is replacing manual processes with automation, which provides the ability to optimize the service offering while improving safety.

A powerful example of industry-leading detection technology and predictive analytics is CP's remote safety inspection portal, which is located on the Maple Creek Subdivision in Saskatchewan. The inspection portal uses

more than 35 cameras to scan a train in real time at track speed, which generates 72 high-resolution images per car and 100 gigabytes of data per train. An undercarriage imaging system inspects the underside of passing railcars and locomotives, enabling CP to identify missing bolts, bent or broken brake rigging, open bottom gates, and broken coupler systems.

The application of detection technology and powerful data analytics helps predict and prevent issues before they occur. This helps CP run one of the most efficient and safest railways in the industry.



## Sustainability

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Sustainability at CP is rooted in our long-standing legacy of building for the future. CP innovates to meet the needs of all stakeholders, including employees, customers, shareholders, suppliers, communities, and society. We recognize that integrating sustainability into our business processes is imperative to growth and long-term success as an

organization. CP's stakeholders are increasingly engaging in CP's sustainability performance, management, measurement and public reporting practices.

CP's Hydrogen Locomotive Program and the solar farm at our headquarters in Calgary, AB, are two important projects that are advancing sustainability performance.

## Hydrogen Locomotive Program



In December 2020, CP announced that it would design and build North America's first line-haul hydrogen-powered locomotive using fuel cells and batteries to power the locomotive's electric traction motors.

This is a globally significant project that positions CP at the leading edge of decarbonizing the freight transportation sector. CP will continue to focus on finding innovative solutions to transform train operations and adapt the business, positioning CP and the industry as leaders for a sustainable future.

The work builds on our prior experience with testing low-emitting locomotive technologies, including biofuels, compressed natural gas and battery-powered solutions. Nearly the entire freight locomotive fleet of all railway operators in North America consists of diesel-powered units, representing the industry's most significant source of GHG emissions.

On November 1, 2021, CP announced it will expand the scope of the Hydrogen Locomotive Program with a \$15 million grant from Emissions Reduction Alberta ("ERA"). This investment builds on the \$15 million CP is investing in the project. The grant supports an increase in the number of hydrogen locomotive conversions from one to three and adds hydrogen production and fueling facilities. The program will create a global centre of excellence in hydrogen and freight rail systems in Alberta.

To support hydrogen locomotive operations, the project will include the installation of hydrogen production and fueling facilities at CP railyards in Calgary and Edmonton. The Calgary fueling facility will include an electrolysis plant to produce hydrogen from water. This facility will operate on renewable power from solar panels at CP's headquarters campus and produce zero greenhouse gas emissions. The Edmonton facility includes a small-scale steam methane reformation system that will generate hydrogen from Alberta's natural gas resources. The system will be constructed to accommodate the possible future addition of greenhouse gas capture equipment.

CP has focused on energy-saving initiatives as a core component of our sustainability practices. Since 1990, we have improved our locomotive fuel efficiency by more than 40 percent through a variety of programs and technology deployments. The application of leading practices, emerging technologies and relationship building across the value chain and industrial sector will remain critical as CP addresses the climate change challenge.

### CP Solar Farm

On March 21, 2021, CP announced the completion of the solar energy farm installation at its Calgary headquarters. The project is one of the largest private solar farms in Alberta. It spans approximately five hectares and provides covered parking for up to 500 employee vehicles.

CP's solar energy farm generates up to five megawatts of electricity while avoiding an estimated 2,600 tonnes of carbon emissions a year, equal to taking approximately 570 cars off the road.



## Conclusion

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Moving grain is in CP's DNA, and has been for more than 100 years. We remain focused on growing our grain business by offering the most competitive transportation service for our customers and by driving next-level efficiency throughout the grain supply chain.

As outlined in this report, CP is well-positioned to respond to the anticipated market demand for grain transportation during the upcoming 2022–2023 crop year.

We will continue to build on record investments to improve safety, fluidity, capacity and resiliency across our transcontinental rail network. We are also deploying technology and innovation to improve safety and efficiency, while reducing GHG emissions, across the system.

CP remains committed to strong collaboration with customers in the supply chain to understand transportation demand forecasts and to ensure alignment and open communications throughout the supply chain. These factors are essential to maximizing the overall performance of Canada's grain supply chain.

We encourage customers and other interested stakeholders to monitor CP's grain performance during the 2022–2023 crop year by consulting our supply chain scorecard.

As always, CP looks forward to delivering for our customers and the broader Canadian economy during the upcoming 2022–2023 crop year.





## Forward-looking statements

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This report contains certain forward-looking information within the meaning of applicable securities laws in both the U.S. and Canada relating, among other things, to Canadian Pacific's operations, priorities and plans, anticipated financial and operational performance, including business prospects, market drivers and outlook, planned capital expenditures, anticipated revenues and the source thereof, programs and strategies (including financing strategies). This forward-looking information also includes, but is not limited to, statements concerning expectations, beliefs, plans, goals, objectives, assumptions and statements about possible future events, conditions, and results of operations or performance.

Forward-looking information may contain statements with words such as "anticipate", "believe", "expect", "plan", "financial expectations", "key assumptions", "outlook", "guidance", or similar words suggesting future outcomes.

With respect to the pending KCS business combination, we can provide no assurance when or if the combination will be completed. Completion of the combination is subject to the receipt of final approval from the STB of the CP-KCS control application by December 31, 2023. There can be no assurance of receipt of this final approval by December 31, 2023 or, if received, the successful integration of KCS.

Undue reliance should not be placed on forward-looking information as actual results may differ materially from the forward-looking information. Forward-looking information is not a guarantee of future performance.

By its nature, CP's forward-looking information involves numerous assumptions, inherent risks and uncertainties that could cause actual results to differ materially from the forward-looking information, including but not limited to the following factors: changes in business strategies; general North American and global economic, credit and business conditions; risks in agricultural production such as weather conditions and insect populations; the availability and price of energy commodities; the effects of competition and pricing pressures; industry capacity; shifts in market demand; changes in commodity prices; inflation; changes in laws,

regulations and government policies, including regulation of rates; changes in taxes and tax rates; potential increases in maintenance and operating costs; changes in fuel prices; uncertainties of investigations, proceedings or other types of claims and litigation; labour disputes; risks and liabilities arising from derailments; transportation of dangerous goods; timing of completion of capital and maintenance projects; currency and interest rate fluctuations; effects of changes in market conditions and discount rates on the financial position of pension plans, including long-term floating rate notes and investments; climate change; various events that could disrupt operations, including severe weather, droughts, floods, avalanches and earthquakes as well as security threats and governmental response to them, and technological changes, and the pandemic created by the outbreak of the novel strain of Coronavirus and its variants (and the disease known as COVID-19) and resulting effects on economic conditions, the demand environment for logistics requirements and energy prices, restrictions imposed by public health authorities or governments, fiscal and monetary policy responses by governments and financial institutions, and disruptions to global supply chains.

The foregoing list of factors is not exhaustive. These and other factors are detailed from time to time in reports filed by CP with securities regulators in Canada and the United States. Reference should be made to "Item 1A – Risk Factors" and "Item 7 – Management's Discussion and Analysis of Financial Condition and Results of Operations" in CP's annual and quarterly reports filed on Form 10-K and 10-Q, respectively.

Forward-looking information is based on current expectations, estimates and projections and it is possible that predictions, forecasts, projections, and other forms of forward-looking information will not be achieved by CP. Except as required by law, CP undertakes no obligation to update publicly or otherwise revise any forward-looking information, whether as a result of new information, future events or otherwise.