The RailState Solution

Network of sensors produces a profile of every train:

RailState
Sensor Network

Time	Direction	Speed	Type & number for each locomotive & car	UN number

Tracks trains across the network	Builds a huge traffic database

*The Data We Gather Is **Not** Available Any Other Way*

RailState

What's Missing from Rail? Network Visibility

Ships

Trucks

3 can see the entire network in real-time

Airplane
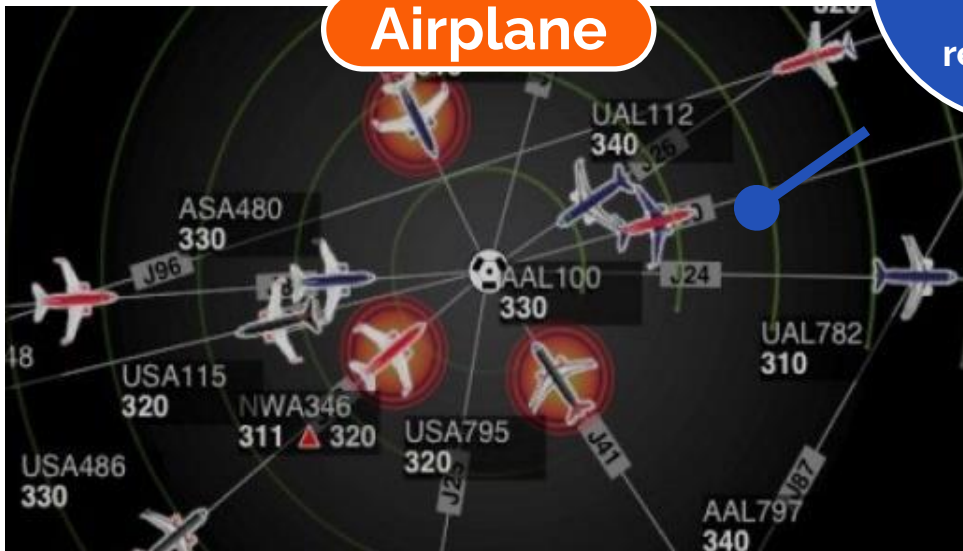
Railways

724 (Sub-No. 5) - U. ...rmance Data Reporting

			OMB Control No. 2140-0033	...piration Date: 12/31/2020
Railroad: CN	**Year: 2022**	**Reporting Week:**	**Date Week Began:**	**2022/02/19**
			Date Week Ended:	**2022/02/25**

1. Average Train Speed ...
System Average Train Sp...
Hour

			Canadian Pacific per hour	Burlington Northern Santa Fe
Coal				
Crude				
Ethanol				36.1	38
Grain	19.36	Crude oil	31.1	30.6	21
Intermodal	23.66	Grain	33.6	36.1	0
Manifest	18.69	Intermodal	37.2	**47.4**	0
Other Unit	18.56	Manifest	30.9	36.7	19.5
System (U.S. Average)	19.76	Ethanol	..	33	0
		Chemicals or allied products	..	..	..
		Automotive	..	..	0
		Fertilizer	..	..	
		Other commodities	30.2	39.6	60.2
		System-wide	33.9	39.4	27.7

You only have some system average statistics from 2-3 weeks ago

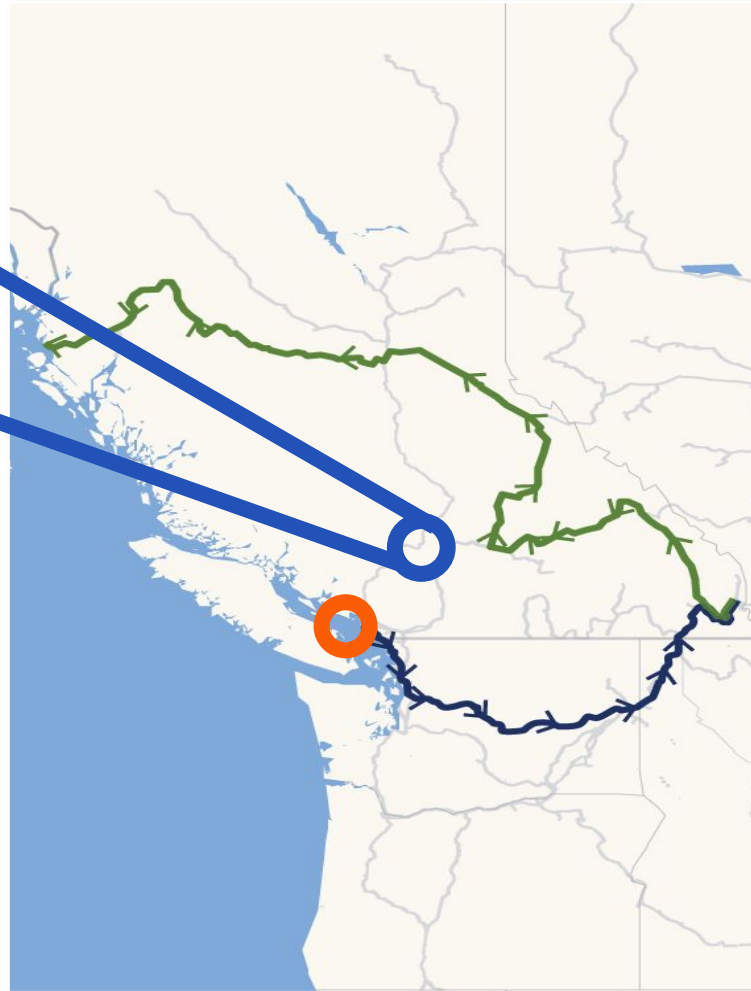**RailState**

RailState Network Across Canada

Legend:
- Active Sites
- Online soon
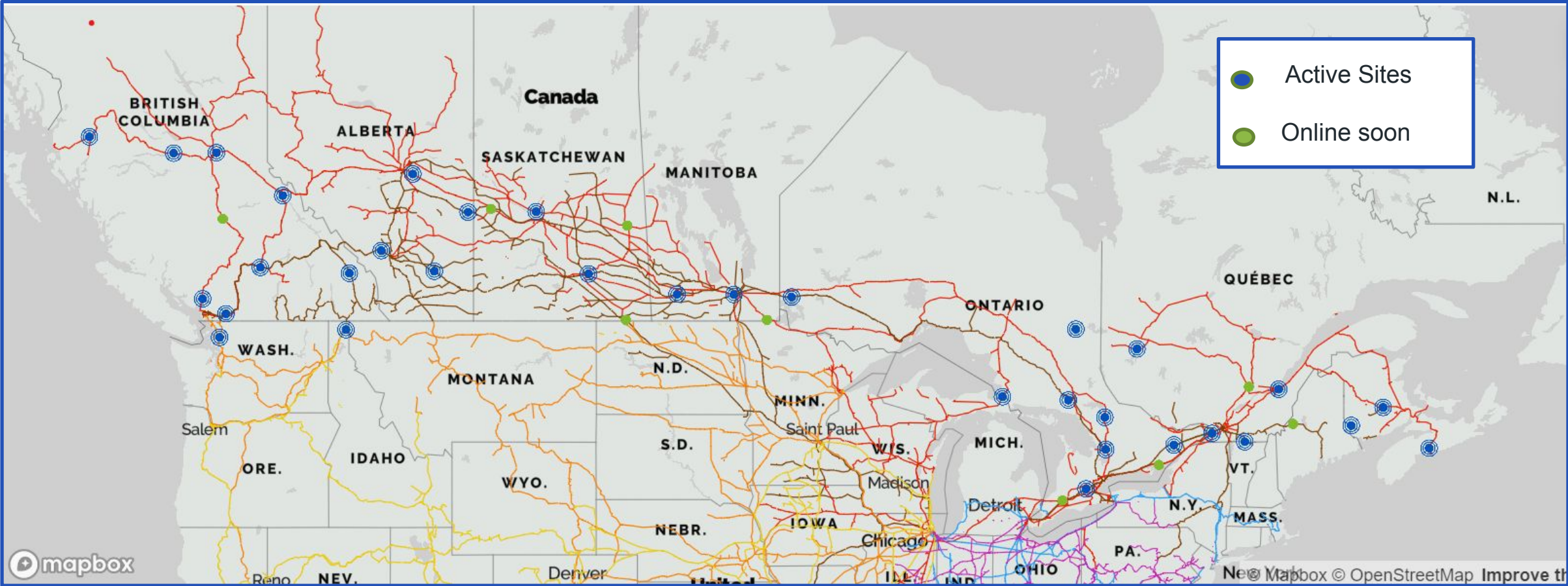
BC Rail Washouts- November 2021

Westbound Passing Chilliwack or Mission
Number of Trains/Day
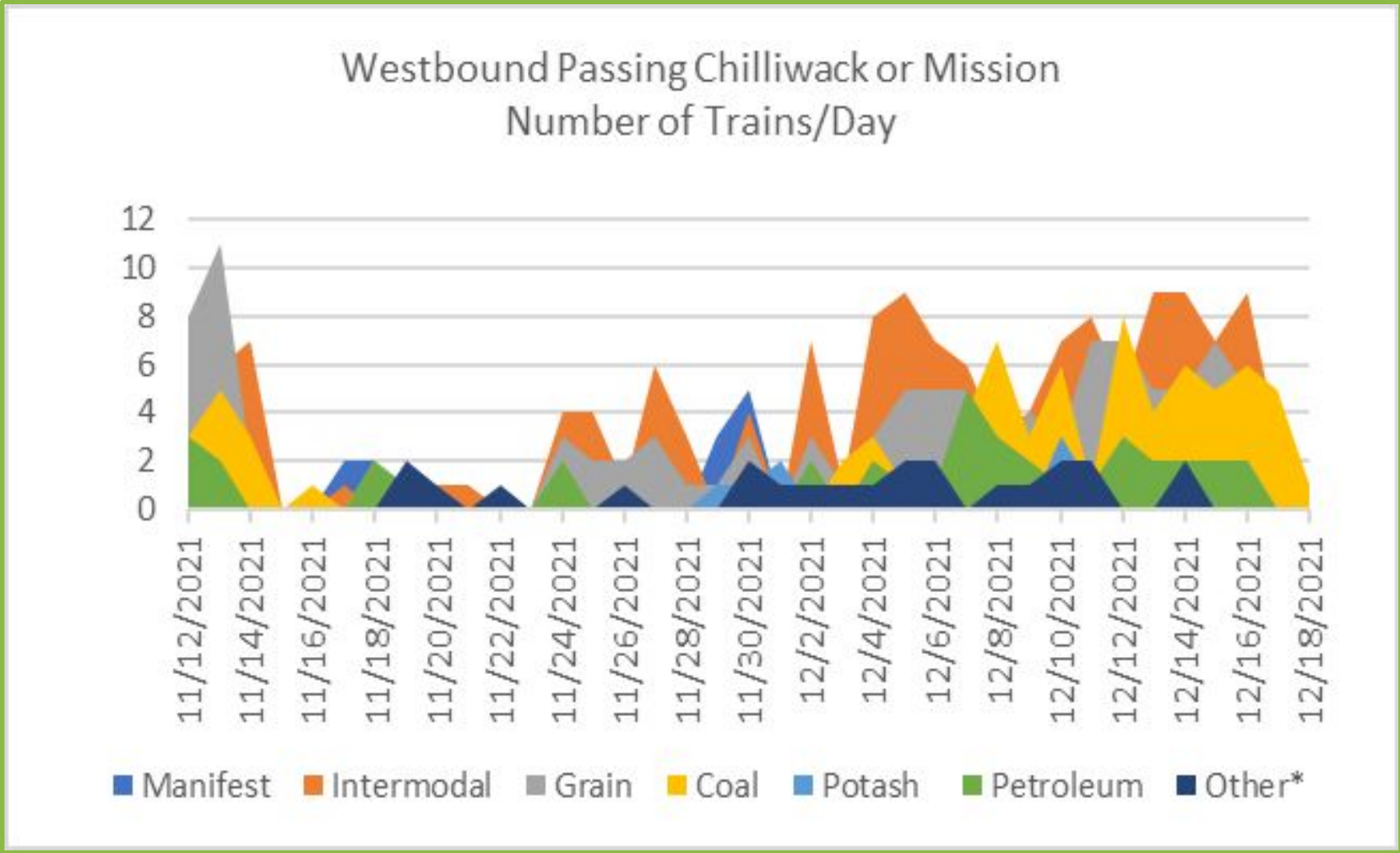
Measuring Capacity for Vancouver Grain Exports

Rail Capacity for Westbound Trains Moving to Port of Vancouver, Aug. 2021-Sept. 12, 2022
(7-Day Moving Average for Total Trains/Day Passing Chilliwack or Mission Westbound)

Actual Trains/Day

Avg. 24.1 Trains/Day for 2021-2022 Crop Year (8/1/2021-7/31/2022), excl. impact of BC washouts

Required Avg. 25.7 Trains/Day to Haul 2022-2023 (or Typical) Grain Harvest
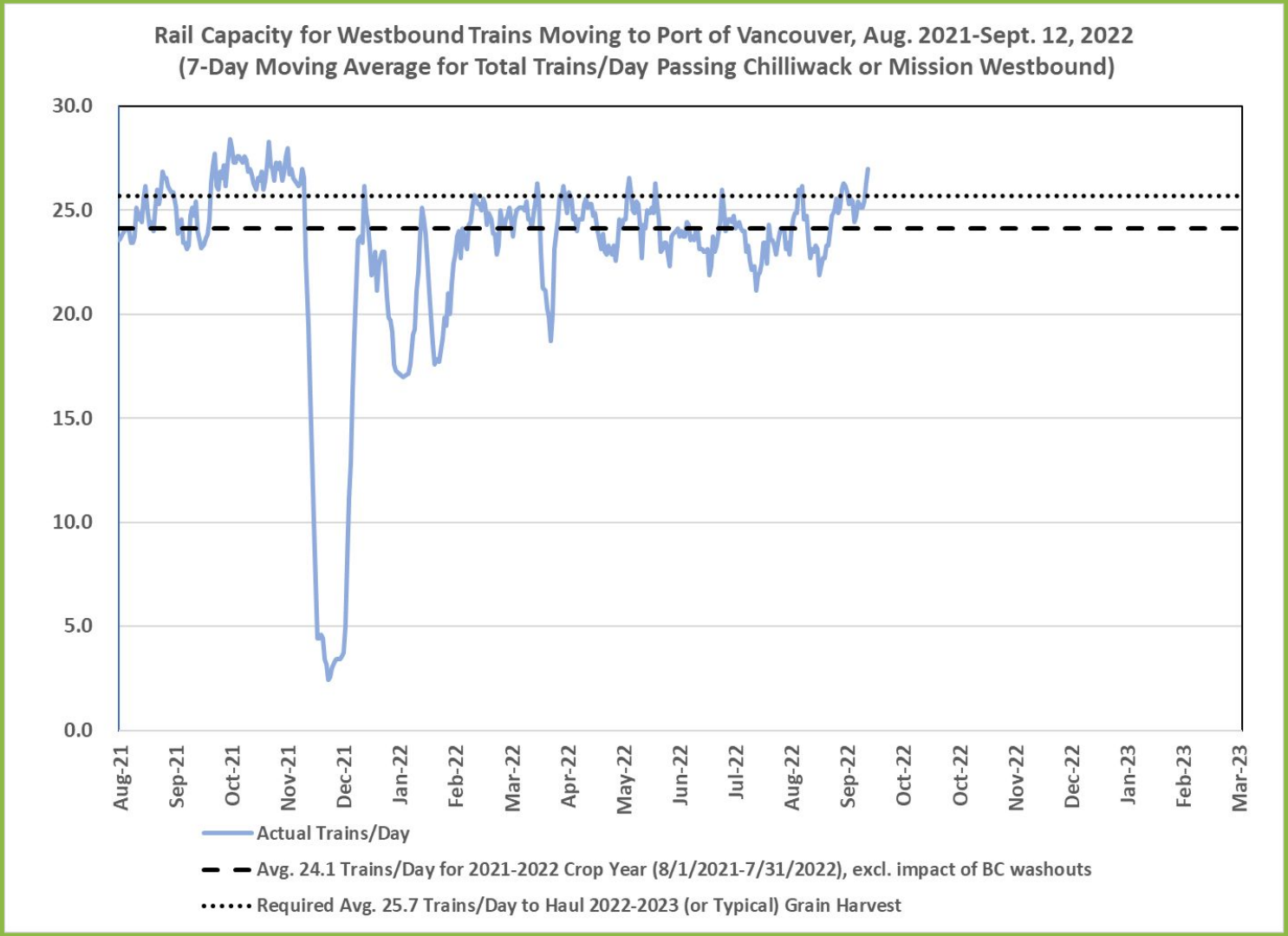
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Teck Case Study – 2021 BC Floods

RailState's Data Showed:

- When the train flow had **stopped**

- **How many trains** of each type were backed up on either side of the washout

- The **magnitude** of the railways' issues

- BNSF **traffic** between the US border and WTL was **still flowing**

- **How many** of each train type were moving over that route

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Summary

Supply chain management isn't just about VISIBILITY of CURRENT shipments, but the CAPACITY available for the NEXT shipments

- Tracking your current shipments is only the beginning

- With capacity constrained due to RR business decisions, capacity may not be available when you need it or when the railroad promised it

- The ability to grow your business depends on knowledge of the network

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Thank You

John Schmitter

303.378.5368

johnschmitter@railstate.com

www.RailState.com