



PORT of
vancouver

Vancouver Fraser
Port Authority

Scrubber wash water restrictions at the Port of Vancouver

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Outline



- Port authority/Port of Vancouver
- Reasons for prohibition
- Regulatory context of scrubbers
- Prohibition at the Port of Vancouver

Vancouver Fraser Port Authority

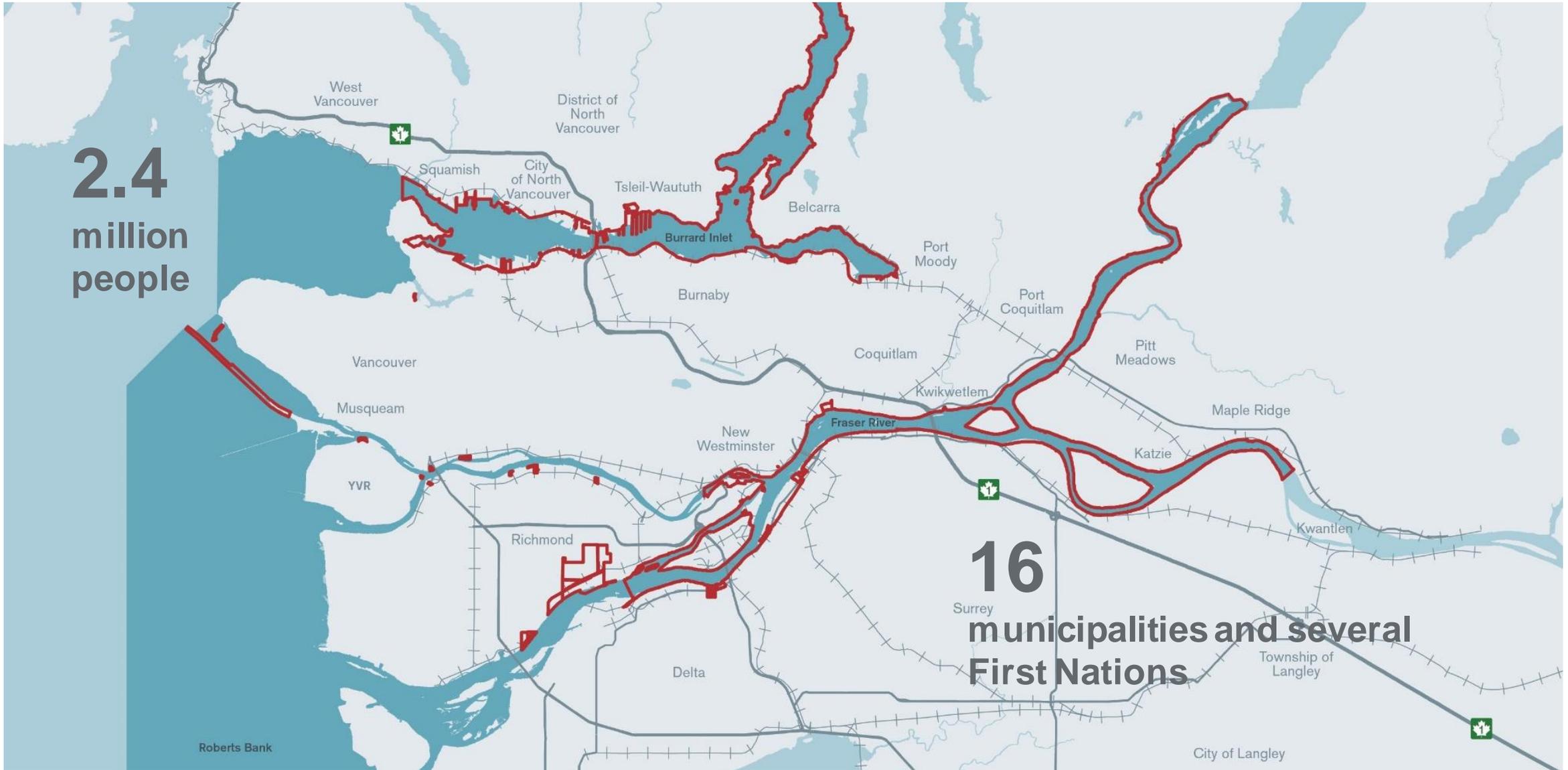


- Port authority/Port of Vancouver
- Facilitate Canada's trade objectives
- Canada Marine Act and the Port Authorities Operations Regulations

The Port of Vancouver: Canada's largest port



- Size of next five Canadian ports
- 141 million metric tonnes
- 2,834 vessel calls



Vision: For the Port of Vancouver to be the world's most sustainable port

Economic prosperity
through trade

Thriving communities

Healthy environment

Exhaust gas cleaning systems

- Scrubbers use water to remove sulphur and other contaminants from exhaust gas, which is then discharged to the marine environment
- In 2019, over 20% of vessel calls were from vessels equipped with a scrubber system
- Several ports and governments have banned scrubber wash water discharge or the use of scrubbers in their jurisdictions due to:
 - Concerns over water quality impacts of the wash water
 - Concerns over air pollution – there is evidence that scrubbers do not provide the same reductions of particulate matter compared to using low sulphur fuel



Burrard Inlet scrubber wash water distribution model and water quality assessment

Modelling impacts

- To predict dispersion of scrubber wash water
- One-month duration of vessels at berth or anchorage
- Two scenarios modelled – some vessels with scrubbers, all vessels with scrubbers
- Assess potential effects on water quality
- Evaluate and predict potential contaminant levels in Burrard Inlet

Scrubber wash water study – outcomes and limitations

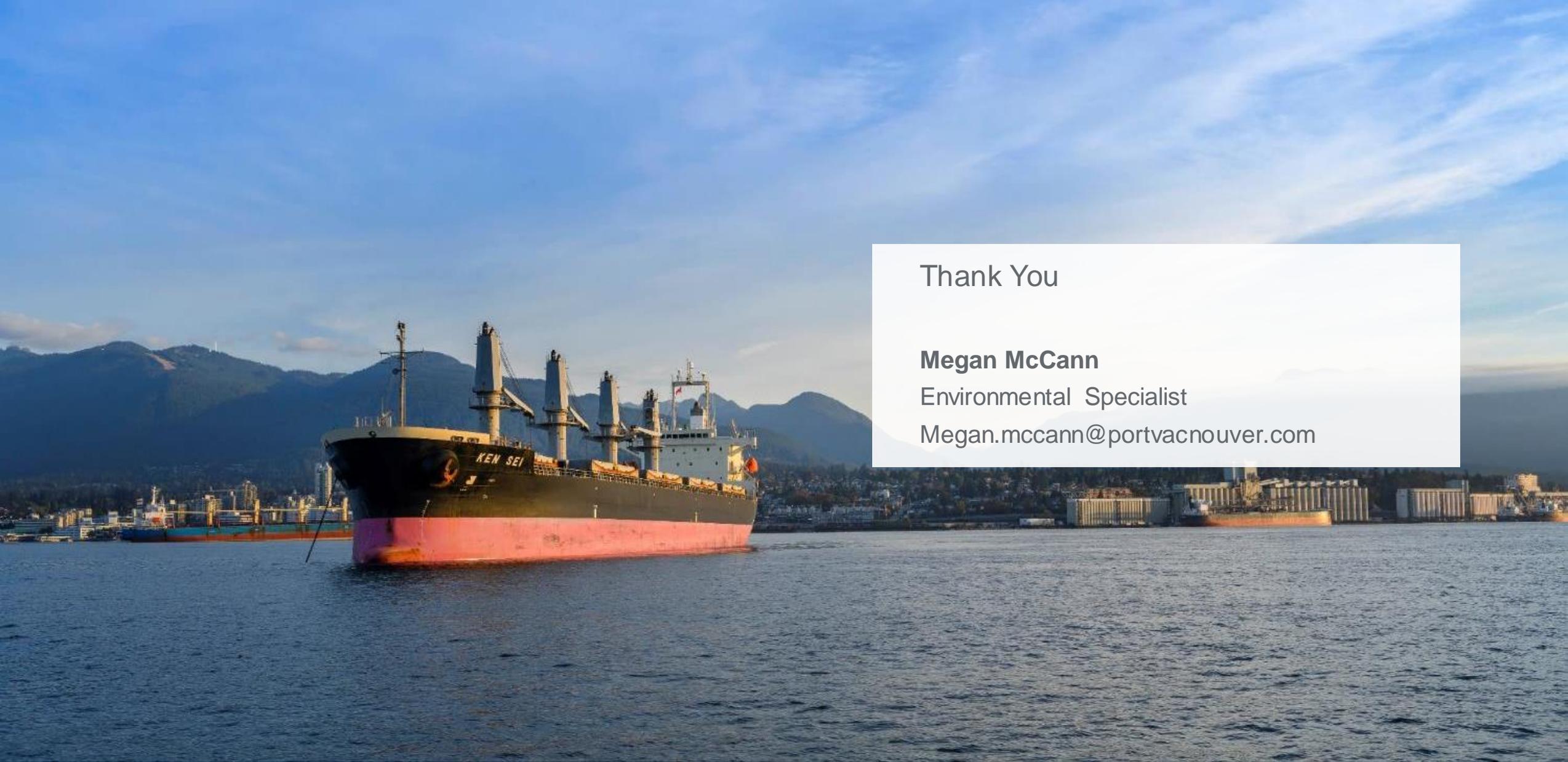
- Outcomes of the study:
 - Results indicated exceedances of water quality guidelines
- Limitations of the study:
 - Wash water discharges from vessels as they transit to berth or anchorage
 - The fate of contaminants, how they may bind to sediments, or bio-accumulate in invertebrates, fish, and marine mammals
 - Background levels of contaminants in Burrard Inlet
 - Longer-term cumulative effects
 - The buffering effects of sea water
 - Vessels in the Fraser River; which has potential for greater flushing however freshwater has less buffering capacity

Scrubbers: Regulatory context

- IMO guidelines for exhaust gas cleaning systems (scrubbers) that include discharge water quality criteria.
- Canada: Scrubber wash water discharge is allowed under federal Vessel Pollution and Dangerous Chemicals Regulation (Canada Shipping Act, Transport Canada)
- Port Authorities: Canada Marine Act and Port Authorities Operations Regulations

Phases of restrictions on scrubbers





Thank You

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