

Roberts Bank Container Terminal 2 (RBT2) in Delta BC

Panel Report Completed March 2020
Too Much Harm and Risk to
Canada's Environment - no
justification

RBT2 Overview

Vancouver Fraser Port Authority (VFPA) wants to build RBT2 in one of the top Important Bird Areas (IBAs) in all of North America. An Environmental Assessment by Federal Review Panel was completed in March 2020

Roberts Bank is the very crucible of the Fraser Estuary and home to globally significant populations of birds, salmon and other wildlife.

ECCC scientists described the impacts of RBT2 as “potentially high in magnitude, permanent, irreversible, and continuous.” New peer-reviewed findings validate the biofilm/shorebird concerns presented by ECCC and others to the Panel that VFPA has tried to dismiss as unwarranted speculation. (See Slide 35 References).



RBT2 Panel Report

“ The Panel concludes that the Project would result in numerous adverse residual and cumulative effects. The proposed offsetting plan for aquatic species, totaling 29 hectares, would be insufficient to compensate for the reduction in productivity associated with a Project-induced habitat loss of 177 hectares of Roberts Bank. There would be significant adverse and cumulative effects on wetlands and wetland functions at Roberts Bank”.

***Too Much
Risk***

REVIEW PANEL
ROBERTS BANK TERMINAL 2 PROJECT

FEDERAL REVIEW PANEL REPORT FOR THE
ROBERTS BANK TERMINAL 2 PROJECT



PREPARED BY
THE REVIEW PANEL FOR THE ROBERTS BANK TERMINAL 2 PROJECT

MARCH 27, 2020

RBT2 Panel Report

The Panel Report was issued March 2020 and identified the following areas of environmental concern with adverse environmental effects to:

- Wetlands and wetland functions at Roberts Bank, including negative effects from causeway expansion.
- Dungeness crab.
- Juvenile Chinook salmon transitioning from the Fraser River to the ocean.
- Southern Resident Killer Whales – listed as an endangered species.
- Forage fish – sand lance and surf smelt.
- Barn owls – listed as an endangered species.
- Diving Birds, Great Blue Heron and Barn Swallows (if mitigation measures do not work).
- Panel concludes the proposed VFPA offsetting plan for aquatic species not sufficient to compensate for the reduction in productivity associated with 177 hectare habitat loss.
- Panel reports uncertainty in adverse effects on polyunsaturated fatty acid production by biofilm and is unable to conclude whether the project would have adverse effects on Western Sandpiper species.

The Business Case for RBT2

- ❑ VFPA's Message of Fear
- ❑ The Market Reality

VFPA's Message of Fear

“Based on our container traffic and capacity forecasts, the entire capacity of the Roberts Bank Terminal 2 Project is needed to ensure Canada is able to meet trade plans and objectives through to the mid-to-late 2030s.”

“By 2040, Central and Eastern Canadian shippers will be increasingly reliant on US ports to handle demand that cannot be accommodated at VFPA.”

“Re-routed imports will generate the greatest share of the extra costs. The annual total incremental costs for re-routed import container traffic in 2025 will be \$0.9 million, and in 2050 the annual incremental transportation costs associated with re-routed import and export container traffic will be \$281.0 million (not inflated and in 2017 USD). This is a considerable and most likely sustained economic penalty.”

Source: www.robertsbankterminal2.com

The Market Reality

- ❑ VFPA and Prince Rupert (PR) have been successful in attracting US container volumes.
- ❑ About 25% of VFPA and 75% of PR traffic – or 1.75M TEU in total – are US containers
- ❑ Despite this success, VFPA has only achieved CAGR of 2.6% over the 2008-2019 period
- ❑ VFPA's market studies continually over-estimate future demand
 - ❑ VFPA 2007 RFEI: 6.0M TEU in 2020
 - ❑ Worley Parsons 2011: 4.43M TEU in 2020
 - ❑ OSC 2012: 4.2M TEU in 2020
 - ❑ OSC 2013: 4.4M TEU in 2020
 - ❑ OSC 2014: 4.1M TEU in 2020
 - ❑ OSC 2016: 4.0M TEU in 2020
- ❑ In reality, VFPA only handled 3.4M TEU in 2019 – no increase over 2018 and 2020 year to date volumes are lower by 10.6% over 2019.

The Market Reality

(M TEU, VFPA + PR)	Today	2050 @ 2.6% CAGR
<u>Volumes</u>		
2019 Actual	4.61	
- Estimated US Traffic	(1.75)	
Canada Volumes	2.86	6.34
<u>Estimated Capacity</u>		
PR Capacity (est)	1.5	3.0
VFPA (excl RBT2)	4.0	5.1
WC Canada Capacity	5.5	8.1
Excess Capacity	2.64	1.76

Even without RBT2 (or efficiency improvements to increase capacity over the next 30 years), VFPA and PR have excess capacity to handle Canadian container volumes beyond 2050 RBT2 relies on attracting more US boxes from US ports. That Traffic is discretionary and with changing trade may reduce.

The Market Reality

1. VFPA estimates RBT2 will cost \$3.5 billion to bring into operation (VFPA Market Sounding Phase 1A December 2019)

- ❑ Earliest construction start is end 2021
- ❑ Seven years to bring into operation

2. Cost is bound to increase to \$4.0 billion plus

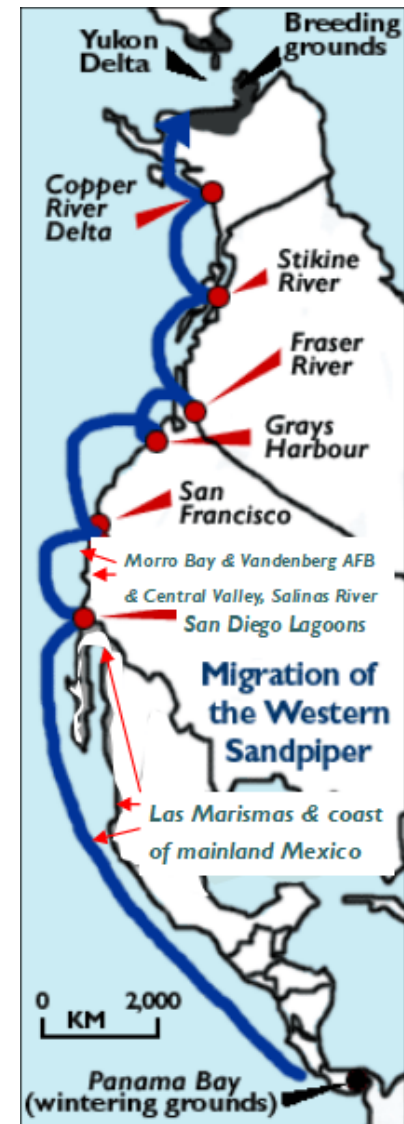
- ❑ Makes it the most expensive terminal anywhere in the world
- ❑ US container traffic is discretionary – could move elsewhere
- ❑ Already known terminal expansions means no need for RBT2

The Absolutely Unique Environment of Roberts Bank

- ❑ Roberts Bank Environmental Designations
- ❑ Biofilm and Birds

Roberts Bank - Unique Environment

- ❑ UN's Ramsar Convention – Roberts Bank (RB) designated as a Wetland of International Importance
- ❑ Birdlife International – RB identified as an IBA under threat that supports more than 50 shorebird species, some of which are globally significant species, several of which are endangered
- ❑ Critical stop on Pacific Flyway for migratory birds – Western Sandpipers in particular
- ❑ BC Wildlife Management Area – recognized as most important in Canada for biodiversity and shorebirds.
- ❑ Site of Hemispheric Importance (WHSRN)



Roberts Bank - Unique Environment

- ❑ One of the richest ecosystems in Canada due to its abundance and richness of biofilm
- ❑ Migrating Shorebirds depend on diatoms in Marine Biofilm. See *Frontiers in Marine Science* Paper Feb. 2020
- ❑ Recognized as the most important site in Canada for birds by:
 - ❑ BC Wildlife Management
 - ❑ Western Hemisphere Shorebird Reserve Network (WHSRN)
 - ❑ Birdlife International

“Intertidal mudflat biofilm in the Fraser River estuary, especially in spring when these communities are dominated by diatoms, is a rich source of lipid and essential fatty acids. These riches of energy and nutrients occur around the same time that Western Sandpipers and other shorebirds make their annual northward migration”

VFPA wants to cause “permanent, irreversible, and continuous” damage to Roberts Bank and the millions of birds that depend on it in order to attract more US-bound container traffic from Seattle-Tacoma and Los Angeles/Long Beach

Environmental Impacts of RBT2

- ❑ Key Environmental Impacts
- ❑ Other Environmental Issues

Key Environmental Impacts

- ❑ Changes in water flows, temperature and salinity degrades biofilm, an essential food source for millions of shorebirds, fish and other wildlife, especially the Western Sandpiper
- ❑ Negatively impacts juvenile salmon; this is a key rearing and transition habitat as they move from river to ocean
- ❑ Crab harvesting areas are covered over
- ❑ Increased ship traffic negatively impacts already endangered Southern Resident Killer Whales



Key Environmental Impacts

- ❑ Locating the island on the subtidal edge of the mudflat bank blocks fish species moving in and out on tidal cycles
- ❑ Removes a significant area – approx. 18% of the bank frontage - of “living space” for species
- ❑ Prevents species feeding on invertebrates in riparian vegetation marshes and flat that will have been covered over
- ❑ Removes a large area of ocean floor production that can never be replaced



Other Environmental Issues

- ❑ Expanding the causeway eliminates a significant area of biofilm critical for migratory birds such as the Western Sandpiper
- ❑ Increased light pollution negatively impacts and confuses birds
- ❑ RBT2 would degrade the critical stopover on the Pacific Flyway, impacting millions of shorebirds, in apparent contravention of the Migratory Birds Convention Act
- ❑ In 2005 Environment Canada stated that further port development on Roberts Bank risked breaking the chain of the Pacific Flyway



Other Environmental Issues

- ❑ Doubles the number of port trucks on already-congested roads causing traffic chaos.
- ❑ Air pollution from port truck traffic recognized as a major health hazard
- ❑ Rail routes through the Fraser Canyon are already close to capacity, limiting number of containers that can move by rail
- ❑ Noise and air pollution is damaging to neighbouring residential areas and wildlife
- ❑ Cumulative impacts of the project never properly considered

VFPA's consultants underestimated or completely ignored many of these issues, particularly given that VFPA was never required to consider impacts beyond the project site itself

Environment and Climate Change Canada (ECCC) Opposition to RBT2

- ❑ Scientific views of RBT2
- ❑ Identified Risks of RBT2

ECCC Opposition to RBT2

ECCC is the federal Ministry mandated with “the preservation and enhancement of the quality of the natural environment, including water, air and soil quality”. ECCC’s scientists are vehemently opposed to RBT2 (See Slide 35 References):

- ❑ “ECCC disagrees with the Proponent's conclusion that the Project, with the implementation of proposed mitigation measures, would result in no residual effects to coastal birds other than for diving birds.”
- ❑ “ECCC characterizes the Project's residual adverse impacts on biofilm due to predicted changes in salinity as potentially high in magnitude, permanent, irreversible, and, continuous. ECCC's confidence in the EIS's predictions is characterized as low.”
- ❑ “In particular, impacts to biofilm could potentially implicate the long-term viability of Western Sandpipers as a species (IBID). ECCC similarly characterizes impacts to Western Sandpipers as potentially high in magnitude, permanent, irreversible, and continuous.”

ECC Opposition to RBT2

ECCE states that the RBT2 port expansion degrades inshore habitat containing Biofilm – essential to many shorebirds, salmon and other wildlife, The man made island “.... changes tidal flows, and coastal geomorphology, with a permanent loss of wetlands.”

ECCE scientists have identified the many risks of RBT2:

- ❑ Lower salinity inland of the man-made island
- ❑ Pond river water would flow over intertidal biofilm where the Western Sandpipers now feed on biofilm
- ❑ Salinity trigger that produces omega 3 critical to migratory birds and other species would be turned off
- ❑ Fewer marine type diatoms, with those unable to generate fatty acid pulses to the levels required by Western Sandpipers.

Business in Vancouver - December 2018 - Marc Garneau - “We must remember that we can have the best-quality products and the most ambitious trade agreements in the world, but none of that will matter if we don’t move our goods efficiently and reliably to markets.”

But it appears another federal ministry – Environment and Climate Change Canada – didn’t get that memo. Or if it did, it has other priorities – like protecting the western sandpiper from a container terminal expansion at Roberts Bank.

ECCE’s scientists are extremely concerned about the adverse impacts of RBT2 – why aren’t their voices been listened to?

Other Groups Opposed to RBT2

Other Groups Opposed to RBT2

- Against Port Expansion in the Fraser Estuary
- Audubon
- BC Nature
- Birdlife International
- Birds Canada
- Boundary Bay Conservation Committee
- Burns Bog Conservation Society
- David Suzuki Foundation
- Delta Naturalists
- Ecojustice
- Fraser River Coalition
- Fraser Voices
- Friends of Semiahoo Bay
- Friends of the San Juans
- Garden City Conservation Society
- Georgia Strait Alliance
- Great Blue Heron Society
- International Ornithological Society
- Little Campbell Watershed Society
- Nature Canada
- North Shore Wetland Partners
- Orca Conservancy
- Raincoast Conservation Foundation
- West Coast Environmental Law
- Western Hemisphere Shorebird Reserve Network
- White Rock Naturalists
- Wilderness Committee

Opposition to RBT2 is not simply NIMBY-ism – there are wide ranging concerns with this project.

Fatally Flawed VFPA Studies

Fatally Flawed VFPA Studies - 1

In the same manner that VFPA's market studies for RBT2 have been wildly inaccurate and skewed to conclude what VFPA wanted, the scientific studies underpinning the EIA rely on questionable science:

- ❑ The partisan VFPA-funded science has never been independently peer-reviewed
- ❑ International experts independent of the VFPA state that the VFPA science is heavily flawed:

Prof. PG Beninger, Université de Nantes, France

"I do not believe that the Proponent (VFPA) have presented a scientifically credible case, or in fact any case at all, for the innocuity of the proposed RBT2 project with respect to the Roberts Bank mudflat ecosystem, and the biofilm- shorebird dimension in particular. I recommend that the Panel reject the Proponent's proposal for RBT2".

- ❑ Birdlife International (a global partnership of conservation organizations) says the Fraser River Important Bird and Biodiversity Area is in danger because of port development.

VFPA's flawed EIA will have severe impacts on the Western Sandpiper, other shorebirds, crabs, salmon, herring and orcas.

Fatally Flawed VFPA Studies - 2

VFPA is Desperate:

- It is on the biofilm issue where the Port is most vulnerable. Port now realizes nobody is buying the Port story on biofilm.
- New Port-created biofilm video is not independent – done by consultants who are under contract to the Port
- New Port Biofilm Manual is a red herring – cannot be completed without further research prior to RBT2 approval
- New Scientific American article describes how RBT2 threatens migratory birds:
 - the independent science overwhelmingly supports the Environment Canada position regarding the importance of fatty acids and lipids. Their existence in biofilm is essential for migratory birds success, which the Port has consistently tried to downplay
 - RBT2 changes salinity negatively impacting the biofilm and therefore putting migration at risk
 - Need to understand why Roberts Bank biofilm is so important to migration success and then protect it

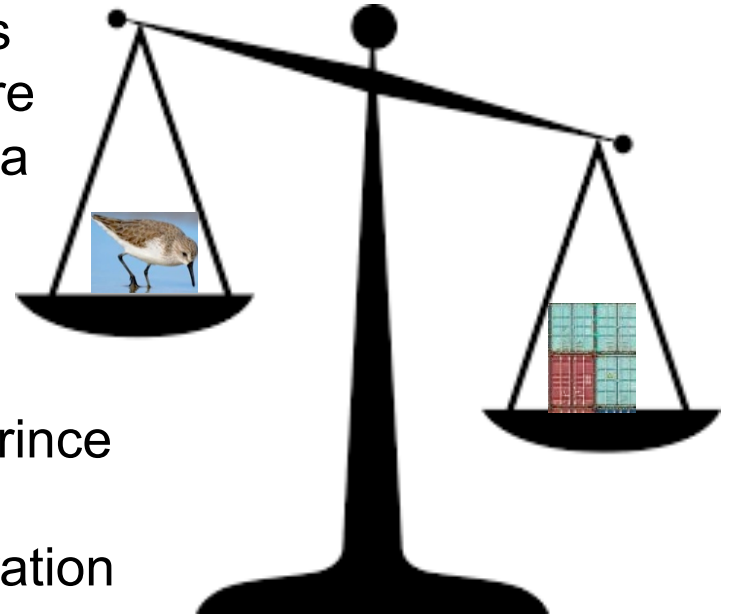
Review Panel Mishandling

- ❑ Failure to Exercise Full Authority
- ❑ Patent Bias Favouring VFPA

Failure to Exercise Full Authority

The Canadian Environmental Assessment Agency (CEAA) Panel failed to exercise its full authority, resulting in an insufficient and inadequate review for a project of this magnitude:

- ❑ The Panel proceeded with public hearings despite incontrovertible evidence that there was insufficient information to proceed to a hearing
- ❑ The Panel did not consider alternatives to RBT2 (such as new planned projects in Prince Rupert), whereas the Environmental Assessment Act allows for such consideration
- ❑ The Panel did not call independent experts despite the Act's provisions allowing for such experts



Panel Bias Favouring VFPA

- The Panel allowed VFPA to make closing remarks at the end of each day of public hearings; no others were permitted closing remarks
 - VFPA used each day's closing remarks to challenge or discredit any evidence given that VFPA didn't like; there was no opportunity for rebuttal
- The Panel allowed VFPA to make assertions at the Hearings without asking for evidential support for such assertions
- The Panel blocked participants from presenting materials on alternative means of carrying out the RBT2 project



Panel Bias Favouring VFPA

- ❑ Hearing participants were limited as to comments or questions that they could present and were not allowed to ask questions of the Panel. The Port Authority had no such limitations
- ❑ The Panel accepted and allowed VFPA closing remarks in which the Port disparaged and discredited the ECCC science.
- ❑ The Panel never received ECCC scientists closing remarks - written but buried in Ottawa



The Panel failed to exercise their full authority under the Law and repeatedly displayed bias in favour of VFPA.

Political Interference in Process

Conclusions

Conclusions

- ❑ The Panel Report identified significant adverse environmental impacts that cannot be mitigated.
- ❑ Several First Nations and Indigenous Groups have concerns or are otherwise opposed to RBT2.
- ❑ RBT2 is NOT required to meet Canada's future trade requirements
 - ❑ The Pacific Gateway has sufficient capacity until at least 2050
- ❑ VFPA wants to cause “permanent, irreversible, and continuous” damage to Roberts Bank”, recognized as the most important site in Canada for birds
 - ❑ The project will have a devastating impact on biofilm, the key food source for migrating Western Sandpipers and other birds
- ❑ In addition to endangering the Western Sandpiper, the RBT2 project will have significant negative impacts on Fraser River salmon, crabs, and Southern Resident Killer Whales (Orcas)

Conclusions

- ❑ Light, noise, air and traffic pollution will have indeterminate impacts on external communities
 - ❑ VFPA were not required to consider these external impacts

- ❑ ECCC scientists, opposed to the RBT2 project, declared that it will cause permanent and irreparable harm to Roberts Bank
 - ❑ Their full opinions were never considered by the Panel during the Public Hearings due to political obstruction
 - ❑ Many other nature and conservancy groups also oppose RBT2

- ❑ VFPA's studies were never peer-reviewed and independent scientists have opined that they are fundamentally flawed
 - ❑ The Panel declined to consider evidence from independent scientists, despite having latitude to do so

- ❑ The Panel displayed blatant favouritism towards VFPA and prevented opponents from presenting relevant information

Conclusions

- ❑ The Federal Government has muzzled its scientists and is now covering up these opinions by illegally ignoring FIA request
- ❑ RBT2 simply poses unacceptable environmental risks for no economic benefit for Canada
 - ❑ Any company or financial institution that associates themselves with this project will be complicit in the possible extinction of the Western Sandpiper and irreparable harm to other species
- ❑ The Panel and the Federal Government's handling of this process – the unfair favoritism shown to VFPA, muzzling of government scientists, and failure to comply with FOI requirements – will ensure that any environmental approval of RBT2 will face years of legal challenges
- ❑ The Precautionary Principle, enshrined in Canadian legislation – if there is significant risk then do not carry through the activity that will cause that risk (RBT2)
- ❑ May violate the Equator Principles for project funding

References

Slide 2 and 12 – Frontiers in Marine Science” February 2020 “*Peak Abundance of Fatty Acids From Intertidal Biofilm in Relation to the Breeding Migration of Shorebirds*” Peter J. Schnurr, Mark C. Drever, Robert W. Elner, John Harper and Michael T. Arts

Slide - 11 Birdlife Intl. Important Bird Areas in Danger:

<https://birdlife.maps.arcgis.com/apps/Cascade/index.html?appid=29852f78dcd84de3adf5fed4f16465fb>

Slide 19 - ECCC Presentation to Review Panel, May 27 2019 “Roberts Bank Terminal 2 Shorebirds and Biofilm”

<https://www.ceaa.gc.ca/050/documents/p80054/129827E.pdf>

Slide 19 – ECCC to Panel Feb 2018

<https://iaac-aeic.gc.ca/050/documents/p80054/121632E.pdf>

Slide 24 – Prof. Beninger written submission to Review Panel – Review of VFPA Report on Biofilm Dynamics

<https://iaac-aeic.gc.ca/050/documents/p80054/129234E.pdf>

- Prof. Beninger – Closing Remarks to Review Panel

<https://iaac-aeic.gc.ca/050/documents/p80054/131064E.pdf>

References

- Slide 25 Scientific American Article

<https://www.scientificamerican.com/article/slimy-mudflat-biofilms-feed-migratory-birds-and-could-be-threatened/>