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ENVIRONMENT AND SUSTAINABILITY

Plan for deeper dredging in Fraser River could have high environmental price

Proposal would destroy natural flood barriers, UBC geographer says

By Jen St. Denis

Backers of a plan to dredge the Fraser River deeper say the massive infrastructure project would create jobs and boost the shipping potential of the region.

But a geographer who has studied the river says the project would come with potentially costly environmental downsides, such as an increased risk of flooding in Richmond.

Fraser Surrey Docks, a shipping terminal located on the river, and the Surrey Board of Trade (SBOT) were recently in Ottawa to promote more federal funds for the river's upkeep (see "Fraser port pushing its global business potential" – BIV issue 1276; April 15–21).

"There needs to be a sustainable funding plan for dredging of the Fraser River and the investment needs to come from the federal government, just as they have a sustainable funding plan to dredge the St. Lawrence seaway," Anita Huberman, chief executive officer of SBOT, told Business in Vancouver.

SBOT and Fraser Surrey Docks would also like to see the river dredged deeper to accommodate the very large cargo ships that are becoming more common in shipping.

Currently, Port Metro Vancouver spends \$15 million a year to dredge the river to its current depth of 11.5 metres, and recoups around \$10 million by selling the sand to cement makers. The extra dredging proposed would deepen the river to 13.5 metres.

Making such a big modification to B.C.'s biggest river shouldn't be taken lightly, said Michael Church, a professor emeritus of geography at the University of British Columbia who has studied the Fraser.

"It's a bad idea," Church said, explaining that the Fraser River moves millions of tonnes of sand and silt every year and deposits that material on the delta where the river meets the sea.

If that process were interfered with, a chain reaction would occur that would reduce the amount of shoreline wetlands and put Richmond at increased danger from storm surges, Church said, especially as the sea level rises over the next 50 to 75 years. (The B.C. government predicts sea levels will rise by one metre over the next 100 years.)

"That sand which gets stopped in the channel doesn't get sent to the delta front to nourish the tidal flats at the front of the delta, so you lose nourishment from the delta front," Church said.

"With the rising sea level, that means that ... you'll submerge the delta front, which will then bring waves up over the tidal flat, which will attack the salt marshes and drive the salt marshes back and bring the sea against the dikes."

The current level of dredging has already reduced the amount of silt deposited on the delta from three million tonnes a year to one million, Church said.

"That land is keeping the heavy waves of the sea off the dikes and the farmland and urban settlement of Richmond behind it," he said.

"One of the consequences if you stop sand nourishment to the delta front is that you'll have bigger waves coming up across the delta top and against the dikes."

The nature of the Fraser would also mean the project would be very costly to maintain: according to Church, deepening the river would cause bigger amounts of sediment to be deposited on the riverbed, which would then have to be cleared away.

Church noted that New York City and several Gulf Coast states are now focused on regenerating coastal wetlands as a bulwark against natural events like hurricanes.

A better use of taxpayer dollars would be to gradually upgrade the existing dikes along the Fraser, Church said. Those dikes are designed to stop a "short, sharp flood" but are vulnerable to longer floods and to earthquakes.

Where should we put the port?

The Fraser River will eventually have to be dredged deeper just to keep up with shipping standards, Tom Corsie, vice-president of real estate for Port Metro Vancouver, told Business in Vancouver in an October 2013 interview.

But Harold Steves, an advocate for farmland and a Richmond city councillor, questions the push for increased shipping on the Fraser River when other terminals exist in Burrard Inlet and Roberts Bank.

"The port says they want to develop 2,600 acres of farmland further up the river," Steves said. "We're really hard pressed to maintain both agriculture and fisheries, which used to be the mainstay of this region."

Michael Church, a University of British Columbia geography professor, said it makes more sense to further develop port facilities in Burrard Inlet, a natural deep-water port that is protected from the elements.

"It's a bit of a mystery to me why Fraser Surrey Docks are regarded as so important when we have an excellent harbour in Burrard Inlet," Church said.

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