

Opinion: Increase irrigated land area to attain food security in B.C.



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Scenic view of the Heart of the Fraser River. *GRAHAM OSBORNE / PNG*

Home to two-thirds of British Columbians, the mighty Fraser River is the lifeblood of a vast watershed that stretches from the Rockies to the Pacific. The lower Fraser Valley, one of the most productive agricultural regions in Canada, is vital to B.C.'s long-term food security.

The Fraser drains one of the most diverse watersheds in North America — for example, its vast lands contain ten of B.C.'s 14 biogeoclimatic zones. Yet many of the Fraser's 34 tributaries, or riversheds, have been damaged by human activity. That's why a comprehensive approach to heal and protect this great river, that runs through half our province, is needed.

Meanwhile, climate change has happened more quickly than expected. The 'new normal' is a recurring pattern of floods, droughts and especially wildfires. Impacts of wildfires on watershed hydrology will be far-reaching. For years to come, Fraser River water levels (high and low) and quality will be affected.

The foregoing are interwoven themes for the upcoming Blue Ecology Workshop on November 28 in Richmond. All point to the need for an all-encompassing strategy for climate adaptation and Watershed CPR (Conservation-Protection-Restoration). Look at water through different lenses. Embrace a water-first vision for setting priorities.

No longer is climate change a future scenario. It is here. At the mouth of the Fraser, the consequences of summer droughts and rising sea levels combine to impact river water quality while at the same time increasing the need for irrigation water. The critical issue, or impact, is the salt wedge and the shrinking window of opportunity for pumping fresh water from the Fraser River. This is a double whammy for agriculture.

An increase in sea levels combined with a drought flow on the Fraser River would allow ocean salt water to move farther up river in the future. This would shut down current water supply intakes for a longer period of time. Thus, it could become challenging to extract sufficient good quality irrigation water for agricultural use in Richmond and Delta.

What does this mean? Simply put, the water supply window for Richmond and Delta could be reduced from between 15 and 24 hours per day for

normal river flows in 2017, to less than 3 hours per day in the foreseeable future — due to the combination of sea level rise and drought flows.

What are the implications for food security? Facts and figures help paint a picture. B.C.'s farmers currently produce about 50 per cent of all foods consumed within the province. A 50 per cent increase in irrigated farmland — from 190,000 to 285,000 hectares — would be required within the next 20 years for British Columbians to attain food security.

The agricultural area irrigated in the Fraser Valley is already substantial, and is about 1.4 times that in the Okanagan. This is a fact that few people know.

Also, the potential build out for irrigated farmland in the Fraser Valley is about 2.4 times the area currently irrigated. This means that the Fraser Valley alone could provide two-thirds of the additional irrigated land area that is needed for food security. Think about that.

The Fraser River would be able to supply much of the water required. But delivering the water would require a huge investment in infrastructure.

We also need to apply watershed CPR to begin the process of moving the land and water back to health. A large-scale program to conserve, protect and restore the Fraser's tributary riversheds would start with a change in attitude. This is a unifying theme for the Blue Ecology Workshop. Let's work together to ensure the mighty Fraser River, one of the world's greatest salmon rivers, stays mighty for generations to come.

Ted van der Gulik is president and Kim Stephens is executive director of Partnership for Water Sustainability in B.C. in Donnelly is the member of Parliament representing Port Moody-Coquitlam and is founder of the Rivershed Society of B.C.

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