

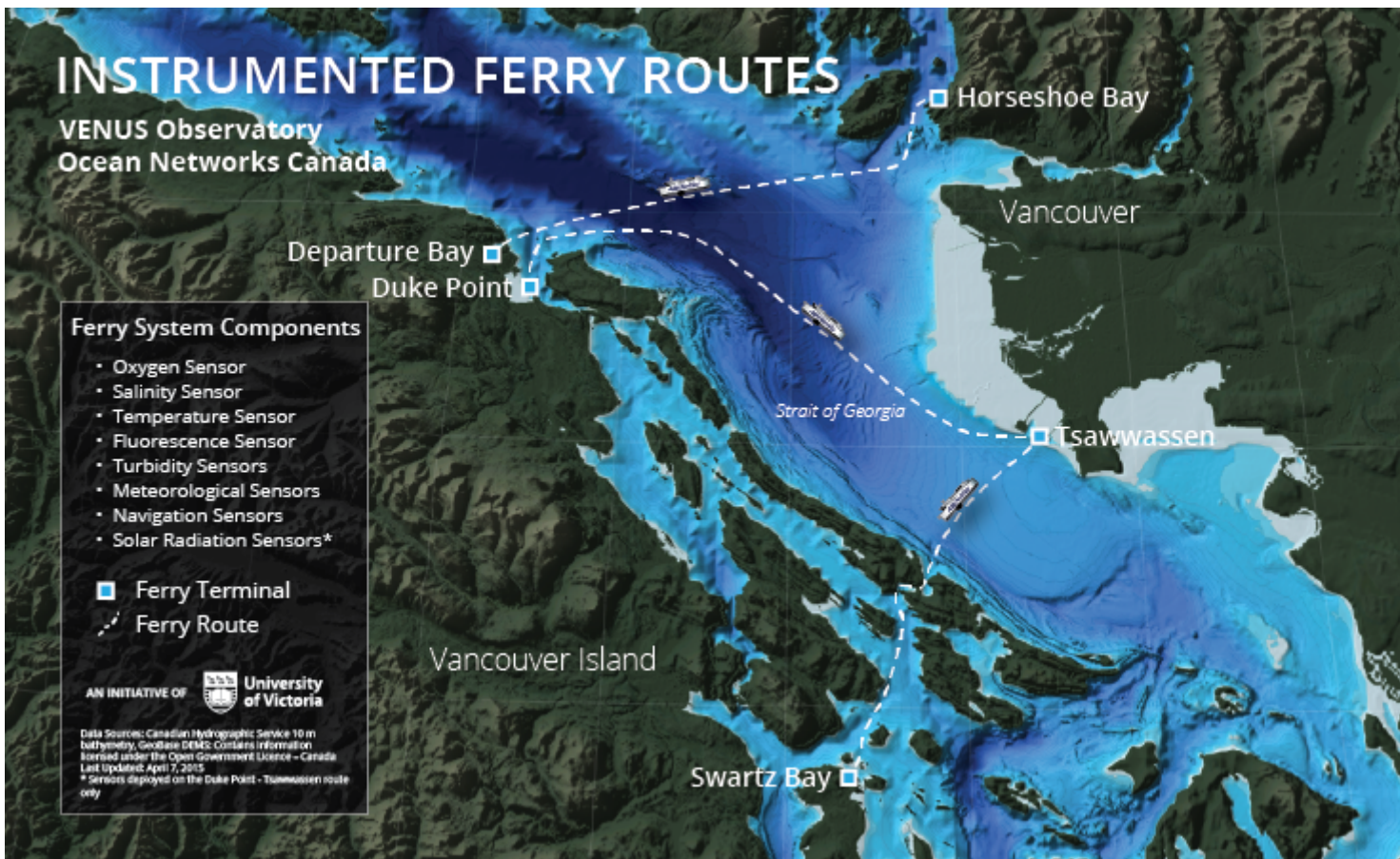
ONC now monitors Strait of Georgia with three BC Ferries

Submitted by Virginia Keast Thu, 2015-07-30 08:58

Ocean Networks Canada (ONC) recently expanded its world-class ocean observatories to include data collected from three BC Ferries.

With instrumentation in the ferries' hull and a weather station on deck, scientists can now observe ocean surface properties continuously while the ferries transit the Strait of Georgia between Vancouver and Vancouver Island.

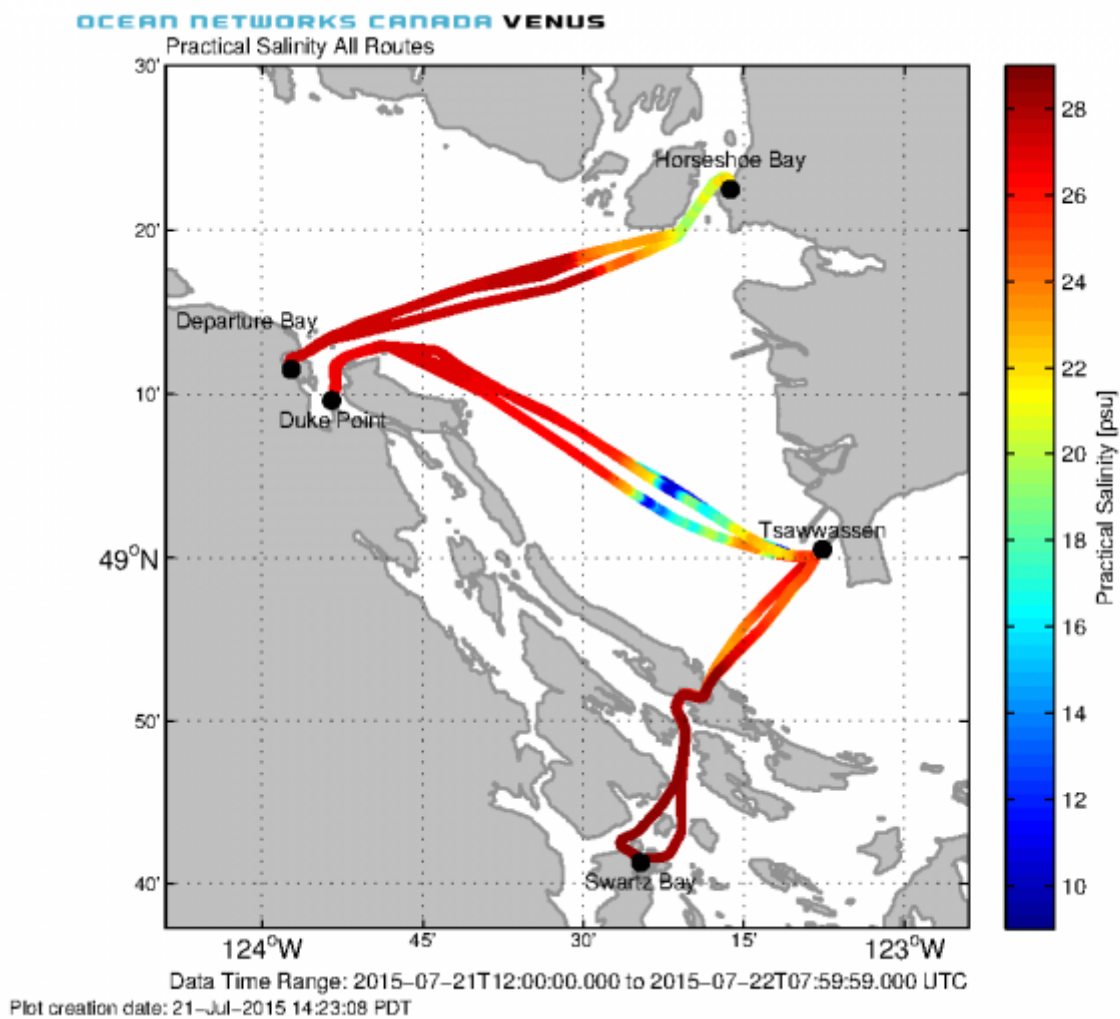
Read the news release: [ONC teams up with BC Ferries to monitor Canada's busiest waterway.](#)



ONC ferry surface monitoring systems collect complex, high-resolution data on three BC Ferries routes crossing the Georgia Strait: (top) *Queen of Oak Bay* (diagonal) Queen of Alberni and (bottom) *Spirit of Vancouver Island*.

The strait is a vital waterway to understand and is of great interest to scientists around the world. "The Fraser River is the single largest influence on the nature and character of the strait," says Richard Dewey, Associate Director of Science Services at ONC. "It has a great impact on ocean circulation and marine life, including the salmon and herring fisheries."

The ferries collect data on a variety of major seasonal physical and biological processes including the Fraser River plume and spring phytoplankton bloom.



Map of salinity from all three ferries. Daily maps are available via ONC Data and Tools.

The customized ferry surface monitoring system is built into the ship's hull below the waterline at mid-ship to measure these seawater properties:

- oxygen
- temperature
- salinity

- turbidity
- chlorophyll
- organic matter

A weather station, combined with communications equipment, is mounted on the upper decks of the ferry. Together, they capture high-resolution measurements of sea surface and atmospheric conditions every 10 seconds. The data are freely available in realtime, via the Internet.



A sharp boundary appears in the Strait of Georgia during the annual Fraser River freshet. This sediment-laden fresh water, which is less dense than salt water, spreads in a shallow plume at the sea surface. Photo: Ed McNichol

The large amount of high resolution data collected along all three routes will continue the long-term time series initiative begun in the early 2000's by Jim Gower, satellite oceanographer with Fisheries and Oceans Canada.

?Having studied the west coast waters for decades, I see the ferries data filling an important gap, particularly over the long-term,? says Gower. ?Continuous monitoring of near-surface water supports a wide range of scientific studies in the Georgia Strait, including my specialty, remote sensing, that helps us better understand this dynamic region.?

Related links:

- [Publication: Wang, Chuning. ?Oxygen Budgets and Productivity Estimates in the Strait of Georgia from a Continuous Ferry-based Monitoring System.? \(2012\)](#)

Related stories:

- [Spring 2015: Spring Bloom arrives early](#)
- [Spring 2014: Spring Bloom observed in BC Ferry Data](#)
- [January 2013: BC Ferry system generates over 48 plots each day](#)
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