



## Backgrounder: Production increases at Shelter Bay and Marsh Bay open net-cage salmon farms

The Coastal Alliance for Aquaculture Reform (CAAR) has learned that Fisheries and Oceans Canada (DFO) is currently considering an application to increase farmed salmon production at a Marine Harvest Canada site known as Shelter Bay. If approved, this will mean a 35% increase in licenced production at Shelter Bay through the transfer of unused production from sites that have remained inactive for years. DFO advised there are also plans for a similar transfer to the nearby Marsh Bay site.

The Shelter Bay and Marsh Bay open net-cage salmon farms both lie along the British Columbia mainland shore of Queen Charlotte Strait – area designated by DFO as the North Island Straits Ecologically and Biologically Significant Area (ESBA)<sup>1</sup> - and recognized as an important migratory corridor for many species of birds, marine mammals and fish including Fraser River sockeye salmon.



A copy of this map can be downloaded at:

[http://www.livingoceans.org/sites/default/files/parking/media/salmonFarming\\_qcStrait\\_apr2012.pdf](http://www.livingoceans.org/sites/default/files/parking/media/salmonFarming_qcStrait_apr2012.pdf)

<sup>1</sup> <http://www.dfo-mpo.gc.ca/Library/326796.pdf>

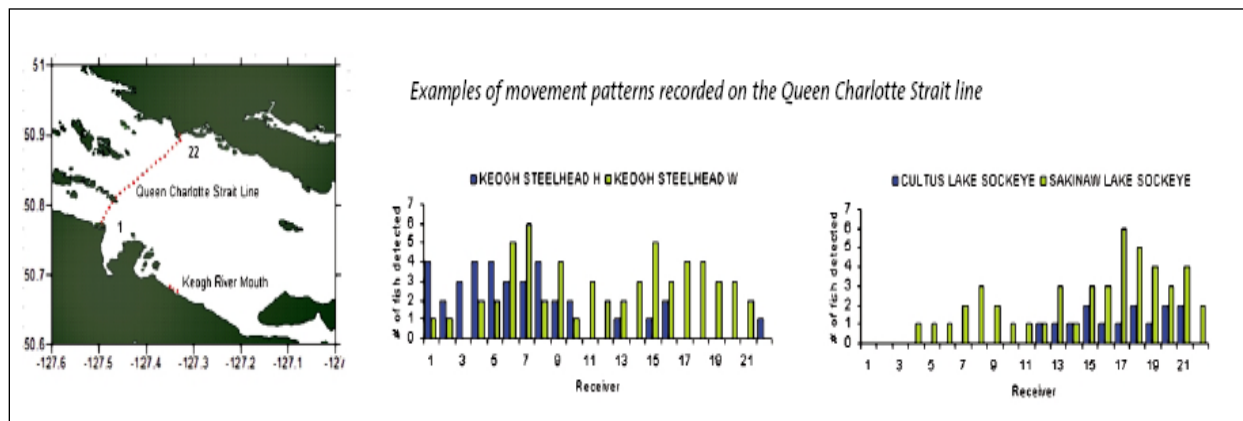
David Suzuki Foundation

Georgia Strait Alliance

Living Oceans Society

T. Buck Suzuki  
Environmental Foundation

A graphic from the 2004 Pacific Oceans Shelf Tracking (POST) project shows the movement patterns of juvenile Cultus Lake and Sakinaw Lake sockeye in the area near the open net-cage salmon farms where consolidation is being considered. Cultus Lake sockeye salmon make up one stock of Fraser River sockeye. Cultus Lake and Sakinaw Lake sockeye have both been recommended for emergency listings as endangered populations by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in 2003.<sup>2 3</sup>



Queen Charlotte Strait POST receiver line and detections of juvenile salmon at individual receivers along the line<sup>4</sup>

As part of the POST project research, these endangered stocks have been shown to suffer high levels of mortality during their early marine stages with survival rates consistently as low as 10%-30%.<sup>5</sup> New evidence<sup>6</sup> presented to the Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River in the form of a submission from Kintama Research Services Ltd. indicates the following;

- 1) “The results continue to contradict the theory that 2007 sockeye smolts died in the Strait of Georgia, before reaching the area with fish farms; in 2007 smolt survival was substantially lower in the northern area.”
- 2) “The lower survival rate (in) the northern area (currently estimated at roughly 2/3rds of the Strait of Georgia survival rate when averaged across all years) would have profound effects on marine survival if prolonged; after 5 weeks

<sup>2</sup> [http://www.sararegistry.gc.ca/virtual\\_sara/files/cosewic/sr\\_cultus\\_sockeye\\_salmon\\_e.pdf](http://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr_cultus_sockeye_salmon_e.pdf)

<sup>3</sup> [http://www.sararegistry.gc.ca/virtual\\_sara/files/cosewic/sr\\_sockeye\\_salmon\\_e.pdf](http://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr_sockeye_salmon_e.pdf)

<sup>4</sup> Image sourced from Pacific Shelf Tracking Project poster *Tracking marine animals in the coastal ocean 2005*

<sup>5</sup> Welch, DW et al., *Freshwater and marine migration and survival of endangered Cultus Lake sockeye salmon (Onchorhynchus nerka) smolts using POST, a large-scale acoustic telemetry array* Canadian Journal of Fishery and Aquatic Science, Vol. 66, 736-750 (2009) doi:10.1139/F09-032

<sup>6</sup> <http://www.cohencommission.ca/en/submissions/ViewASubmission.php?sub=1127>

smolts would be reduced to only ~1/10th the number that would survive in the Strait of Georgia.”

- 3) “This level of higher mortality would be sufficient to fully explain the 10-fold decline in Fraser sockeye survival seen since 1990.”

This is the only fine resolution research on salmon migration and usage of the area.

Earlier environmental assessments for Shelter Bay and Marsh Bay rated the significance of the direct residual effects for potential introduction and/or transmission of disease and parasites including sea lice from farmed fish to wild fish populations as “**Intermediate**”.<sup>7</sup> These assessments only considered the current levels of production at these sites and did not consider any increases above those levels. Given the new research since the original environmental assessments, indicating potential adverse residual effects on these endangered stocks of sockeye salmon, CAAR is calling the rating into question and feels that the significance should be raised from “**Intermediate**” to “**High**”. It would be reckless for DFO to allow additional farmed salmon production to be introduced at either the Shelter Bay or Marsh Bay sites.

Also entered into evidence during the Commission’s Aquaculture Hearings was a Memorandum for the Minister of Fisheries and Oceans entitled **Licensing Decisions for British Columbia Aquaculture during the Cohen Commission** and dated July 27, 2011.<sup>8</sup> The following is contained in the exhibit;

- “For aquaculture, consistent with the overall approach to Cohen, it is recommended that decisions be postponed for applications for new marine aquaculture sites or for substantial amendments to existing marine aquaculture licences where there is potential for a substantial increase in the environmental footprint.”

Any increase of farmed salmon production will result in a substantial change to the environmental footprint of these salmon farms with regards to Fraser River sockeye salmon. Transferring production of paper fish from licenced sites that have remained inactive for years if not decades and which are far from the migration corridors of Fraser River sockeye salmon to these two active sites flies in the face of the Ministerial directive.

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<sup>7</sup> CEAA Screening Report, Marine Harvest Canada Proposed Finfish Aquaculture Facility at Shelter Bay, Richards Channel, BC, DFO Path 09-HPAC-PA3-00546, CEAR/FEAI 09-01-51834, Table 1, page 14  
CEAA Screening Report, Marine Harvest Canada Proposed Finfish Aquaculture Facility at Marsh Bay, Richards Channel, BC, DFO Path 09-HPAC-PA3-00547, CEAR/FEAI 09-01-51835, Table 1 pages 13 & 14

<sup>8</sup> Exhibit #1595 <http://www.cohencommission.ca/en/Exhibits.php?num=16>