

DFO Guidelines for B.C. direct that water intakes be at least 2 km or more away from documented Herring spawn areas.
-Clearly the intake location as proposed by Woodfibre LNG is well within the 2 km prohibited zone and violates the DFO Guideline.
-This violation is acknowledged by Woodfibre LNG in its response to the EAO: 'Woodfibre LNG Project Response to the Seawater Cooling System Intake Information Request' May 2015 page 18.

The Squamish River is the biggest source of nutrient rich fresh water in Howe Sound.

The red lines in the harbour area indicate the frequency and length of Herring spawn events observed along shore line areas since 2010.
Survey data John Buchanan 2010 - 2016*.

Once Through Cooling system

Proposed location of seawater intakes for cooling system.

Proposed location of warm water discharge coming out of cooling system.

Woodfibre LNG proposed Project Development Area

Proposed location of seawater intakes for cooling system.

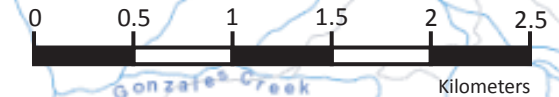
The red lines south and east of the Woodfibre Site indicate the frequency and length of Herring spawn events observed along shore line areas since 2011.
Survey data John Buchanan 2011 - 2016*.

DFO's 2 km water intake exclusion zone around Herring Spawn
(DFO - Fedorenko 1991)

Upper Atl'kitsem / Howe Sound

Watts Point

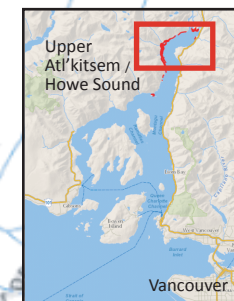
Sea to Sky Highway 99



The map shows that nutrient rich Squamish river water flows south, is deflected west at Watts Point towards to Woodfibre Creek, where it bends south and flows along the west shore.
Source: Surface Currents upper Howe Sound (Buckley, 1977)

2012 Herring spawn length 7000 meters wrongly attributed to south east of Squamish in online DFO Herring spawn map for Howe Sound - section 280.

The dashed line represents the 2 km boundary of the intake exclusion zone around Herring spawn areas as stated in the DFO Guidelines for water intakes in B.C. (DFO- Fedorenko 1991)



Locations of Pacific Herring spawn in Upper Atl'kitsem / Howe Sound 2010 - 2016* & Proposed location of Woodfibre LNG's Once Through Cooling system seawater intake and discharge

(*) 2016 data - up to date to April 2 2016.

Base source map information: ImapBC
Herring spawn survey data: John Buchanan 2010 - 2016
Map version: 7.3
Date: October 21 2016

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