May 1st, 1:30 PM - 3:00 PM

Oceanography of Cowichan Bay: A background view for early marine survival of Chinook and Coho salmon

Eddy Carmack  
Canada. Department of Fisheries and Oceans, eddy.carmack@dfo-mpo.gc.ca

Buzz Holling

Svein Vagle  
Institute of Ocean Sciences, Patricia Bay

Mike Dempsey  
Institute of Ocean Sciences, Patricia Bay

Jane Eert  
Institute of Ocean Sciences, Patricia Bay

See next page for additional authors

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Speaker
Eddy Carmack, Buzz Holling, Svein Vagle, Mike Dempsey, Jane Eert, Sarah Zimmerman, Moira Galbraith, Charles Hannah, Cedar Chittenden, and Bill Williams

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Oceanography of Cowichan Bay: A Background View for Early Marine Survival of Chinook and Coho Salmon

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Institute of Ocean Sciences - DFO
Outline

As a background for and ecosystem based assessment of Early Marine Survival of Chinook and Coho, a pilot study of a Cowichan Bay, a small sub-component of the Salish Sea system was launched in Spring and early Summer of 2013, and is now Continuing into 2014.

A repeat sampling grid was established in the bay and the surrounding waters, and sampled at weekly intervals for Temperature, salinity, chlorophyll fluorescence, nutrients and zooplankton; oceanographic measurements were carried out concurrently with fisheries assessments.

A longer section was carried out at monthly intervals to connect Cowichan Bay with the Salish Sea.
Sampling vessels:

Elvis
Wicklow

CURRENTS BIOACOUSTICS

MOORINGS

NET HAUL

CTD WATER SAMPLES

BOTTOM CORE GRAB

CAMERA
Sampling Stations II
Poor water quality?
Lack of healthy substrate?
Low food availability?
Elevated predators
Poor physical health?
Climate Variability/Change
All of the above?
Fostering Yukon Chinook Resilience
- Resilience Thinking -

• Resilience Is - The ability of a complex adaptive system to absorb a shock, and still maintain its function and service
• Resilience Doesn’t - Fear surprise and obsess on efficiency and optimization
• Resilience Does – Recognize ‘scale’ and connectivity; draw on the past and learn into the future; launch small experiments
This is our Early Warning System: C3O plus Coastal Community Network
The Down-Scaling of Climate Services
SUMMARY

Figure – Schematic of the oceanography of Cowichan Bay in relation to climate variability and connectivity to the watershed, lake, river, estuary Gulf Islands and Strait of Georgia.