



# Aquaculture Innovation Workshop

**FINAL WORKSHOP PROGRAM**  
DAY 1: Monday, November 5

## BREAKFAST (7:00 – 8:00)

### 8:15 – 8:30 **Welcome and Introductory Remarks**

Catherine Emrick, Tides Canada; Ivan Thompson, The Gordon and Betty Moore Foundation (GBMF);  
Steven Summerfelt, The Conservation Fund's Freshwater Institute (TCFFI)

## RESEARCH OVERVIEW

### 8:30 – 9:00 **Progress Update on Two Atlantic Salmon Grow-out Trials in Freshwater Closed Containment Systems**

Steven Summerfelt, TCFFI

### 9:00 – 9:30 **Depuration and Slaughter Techniques to Optimize Atlantic Salmon Product Quality from Land-Based Closed Containment Systems Study**

John Davidson, TCFFI

### 9:30 – 10:00 **Studies on Long-Term Carbon Dioxide Exposure During Salmonid Grow-Out in Water Recirculation Aquaculture Systems**

Christopher Good, TCFFI

### 10:00 – 10:15 **UBC InSEAS Research Program to Determine Optimal Conditions for Fish Rearing**

Colin Brauner, UBC

## BREAK (10:15 – 10:45)

## CLOSED-CONTAINMENT PROJECT UPDATES

### 10:45 – 11:15 **Nanaimo Land Based Steelhead Model Aquafarm**

Steve Atkinson, Taste of BC

### 11:15 – 11:45 **'Namgis First Nation's Land Based Atlantic Salmon RAS Project**

Garry Ullstrom, K'udas Limited Partnership

### 11:45 – 12:00 **Sustainable Blue**

Jeremy Lee, Sustainable Blue

## LUNCH (12:00 – 1:15)

### 1:15 – 1:45 **Coho Salmon Production Systems at Aquaseed's SweetSpring Salmon in Washington**

Jim Terry, SweetSpring Salmon

### 1:45 – 2:15 **Atlantic Sapphire – Langsands Laks, Denmark, and Virginia, USA**

Thue Holm, Atlantic Sapphire

### 2:15 – 2:45 **Atlantic Salmon in RAS in Norway**

Frode Mathisen, Greig Seafood Ltd.



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## **BREAK** (2:45 – 3:00)

- 3:00 – 4:30**     **Panel Discussion – Challenges and Opportunities in Engineering, Design and Construction**  
Moderator: Steven Summerfelt  
Panel members: Thue Holm, Atlantic Sapphire; Cathal Dinneen, K'Udas Limited Partnership;  
KC Hosler, PR Aqua; Per Heggelund, SweetSpring Salmon; Brian Vinci, TCFFI

## **RECEPTION AND DINNER** (6:30 – 9:30)

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**FINAL WORKSHOP PROGRAM**  
DAY 2: Tuesday, November 6

## **BREAKFAST** (7:00 – 8:00)

### **ISSUES FORUM**

- 8:15 – 8:45**     **Modeling Effects of Biomass Density and Number of Fish Transfers on Estimates of Capital and Operating Costs for Atlantic Salmon Production in a Land-Based Closed Containment System**  
Brian Vinci, TCFFI
- 8:45 – 9:15**     **Use of Single-Sex and Triploid Stocks to Eliminate Early Maturation of Atlantic Salmon**  
Tillmann Benfey, University of New Brunswick
- 9:15 – 9:45**     **Breeding Atlantic Salmon for Rapid Growth and Late Maturation and the Potential to Produce all Female Salmon Eggs**  
Thoralf Solberg, SalmoBreed AS

## **BREAK** (9:45 – 10:15)

- 10:15 – 10:45**     **Strategies for Significant Heat Loss Reduction in RAS systems Using Modern Energy Recovery Equipment**  
Andrew Wright, SOS Marine Conservation Foundation
- 10:45 – 11:15**     **Process Modelling and Energy Optimization in RAS Design**  
Karl Williaume, WorleyParsons
- 11:15 – 11:45**     **Creating Value from the Waste Stream – Sustainable Aquaculture and Bioproducts Production**  
David Brune, University of Missouri

## **LUNCH** (11:45 – 1:00)



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## ISSUES FORUM (CONTINUED)

- 1:00 – 1:30**     **Advances in Feed Formulations and Feeds Specific for Recirculating Aquaculture Systems**  
Alexander Brinker, Fisheries Research Station BW, Germany
- 1:30 – 2:00**     **Developments in Sustainable Ingredients for Aquaculture Feed**  
Jason Mann, Ewos
- 2:00 – 2:30**     **Canada's Organic Standards**  
Justin Henry, Target Marine

## BREAK (2:30 – 2:45)

- 2:45 – 3:45**     **Panel Discussion - Developments in Sustainable Ingredients for Aquaculture Feed and Feeds Specific for Recirculating Aquaculture Systems**  
Moderator: Steven Summerfelt  
Panel members: Alexander Brinker, Fisheries Research Station BW, Germany;  
Shelia Lingle, Indiana Soybean Alliance; Gavin Shaw, Skretting; Jason Mann, Ewos;  
John Volpe, University of Victoria; David Brune, University of Missouri
- 3:45 – 4:15**     **Closing Discussion - Where to from here?**  
Moderator: Eric Patel
- 4:15 – 4:30**     **Closing Remarks**  
Steven Summerfelt, TCFFI

## PRE AND POST WORK SHOP TOURS

**Note:** There are pre and post workshop tours to the 'Namgis Land Based Atlantic Salmon Recirculating Aquaculture System Project. The 'Namgis project is located near Port McNeill on northern Vancouver Island, approximately a three hour drive north of Comox/Courtenay.