

# Aquaculture Innovation Workshop #6

WORKSHOP PROGRAM  
Day 1: Monday, October 27

## CONTINENTAL BREAKFAST (7:00 – 8:00)

- 8:00 – 10:00**      **RAS 101: An Introductory Overview of the Basic Technical, Biological and Economic Elements of a Land Based Recirculating Aquaculture System, and Presentation of an Economic Model Comparing Open Net and Land Based Aquaculture**  
Steven Summerfelt and Brian Vinci, The Conservation Fund's Freshwater Institute, (TCFFI), WV, USA

## BREAK (10:00 – 10:20)

- 10:20 – 10:30**      **Welcome and Introductory Remarks**  
Catherine Emrick, Tides Canada  
Steven Summerfelt, The Conservation Fund's Freshwater Institute (TCFFI),  
Ivan Thompson, Gordon and Betty Moore Foundation, and  
Jon Carr, Atlantic Salmon Federation
- 10:30 – 11:30**      **Keynote Session: Aquaculture's Role in Sustainable and Healthy Food Systems: Public Health, Environment and Policy Considerations**  
Dr. Jillian P. Fry, Public Health & Sustainable Aquaculture, Center for a Livable Future, Johns Hopkins Bloomberg School of Public Health, MD, USA
- 11:30 – 12:00**      **Independent Aquaculture Regulatory Review for Nova Scotia: The Process, Conclusions and Recommendations of the Doelle-Lahey Panel**  
Bill Lahey, Dalhousie University, NS, Canada

## LUNCH (12:00 – 1:00)

- 1:00 – 2:00**      **'Namgis First Nation's "Kuterra" Project: Report on Performance**  
Hereditary Chief Bill Cranmer, and Garry Ullstrom, 'Namgis First Nation, BC, Canada
- 2:00 – 2:20**      **The Diversified RAS Farm**  
Justin Henry, Target Marine, BC, Canada

## Aquaculture Innovation Workshop #6

WORKSHOP PROGRAM  
Day 1 Continued

- 2:20 – 2:40**      **AgriMarine's Floating Semi-closed Containment Systems: Update on the Lois Lake Steelhead Farm and Other Projects**  
Robert Walker and Stephen Robinson, AgriMarine, BC, Canada

### BREAK (2:40 – 3:00)

- 3:00 – 3:30**      **The Business Of Aquaculture - Vertical Integration, Optimizing Value from the Fish Product and Creating Value from the Waste Stream**  
Norman McCowan, Bell Aquaculture, IN, USA
- 3:30 – 4:00**      **Developments in Recirculating Aquaculture Systems for Salmon Grow-out in Europe and Asia**  
Bjarne Hald Olsen, Billund Aquaculture, Billund, Denmark
- 4:00 – 5:15**      **Financing Aquaculture Panel Discussion**  
**Moderator, Sarah Goodman, Treetop Strategy, BC, Canada**
- Stewart Anderson, Vancity, BC, Canada
  - Catherine Emrick, Tides Canada Salmon Aquaculture Innovation Fund, AB, Canada
  - Eric Hobson, Northridge Canada, and KUTERRA, AB, Canada
  - Carsten Krome, Aqua-Spark, UT, Netherlands
  - Flora Livesey, Sustainable Development Technology Canada, ON, Canada

### **'NAKED & DRESSED' Reception**

**6:30 pm to 9:00 pm at the Vancouver Aquarium, 845 Aveson Way**

**Limited shuttle service is available between the Delta Vancouver Suites Hotel and the Vancouver Aquarium. The first shuttle departs the Hotel lobby level entrance (not the West Hastings St. entrance) at 6:15 pm, with subsequent shuttles at 6:45 pm, 7:15 pm and 7:45 pm. It will take approximately 15 minutes to travel to the Vancouver Aquarium's main entrance.**

**Return shuttle service back to the Hotel will depart the main entrance of the Vancouver Aquarium at 6:30 pm, 7:00 pm, 7:30 pm, 8:00 pm, 8:30 pm, 9:00 pm, with the last shuttle departing the Aquarium at 9:30 pm.**

**The shuttle holds 24 passengers, is free and is available on a first come, first served basis.**

## Aquaculture Innovation Workshop #6

WORKSHOP PROGRAM  
Day 1 Continued

### RECEPTION PROGRAM | “Naked & Dressed”, VANCOUVER AQUARIUM, 6:30 – 9:00

Join us at the Vancouver Aquarium for an opportunity to meet the producers and taste a variety of fish produced in land based recirculating aquaculture systems across North America. The reception will highlight and pair the talents of notable Vancouver chefs with the fresh tastes of fish produced in land-based recirculating aquaculture systems across North America. The seafood will be presented in two ways: "naked" – offering a taste of the elegantly simple to demonstrate the quality and flavour of the product, and "dressed" – infusing each chef's creativity to highlight the savoury potential and possibilities of land-raised fish.

#### The chefs and producers for the evening are:

- Sous Chef Joanna Astudillo, Vancouver Aquarium host chef preparing Sustainable Blue Arctic Char;
- Executive Chef Ned Bell of the Four Seasons Hotel Vancouver, YEW seafood + bar preparing Target Marine Coho Salmon;
- Chef Karen Barnaby of Albion Fisheries preparing American Mariculture Sun Shrimp and Sumas Lake Aquafarm Tilapia;
- Chef David Hawksworth of the Hawksworth Restaurant preparing KUTERRA Atlantic Salmon;
- Executive Chef Chris Mills of JOEY Restaurants preparing Bell Farms Steelhead;
- Chef Frank Pabst of the Blue Water Cafe preparing Little Cedar Falls Steelhead;
- Chef Vikram Vij of Vij's Restaurants preparing Target Marine Sturgeon; and
- Chef Tomoki Yamasaki of Hapa Izakaya preparing an array of sushi using the featured seafood.

#### Reception Program

- 6:30 pm – Reception Start
- 7:20 pm – Kuterra Video First Showing
- 7:50 pm – Remarks
- 8:30 pm – Last Call for Food and Bar; Kuterra Video Second Showing
- 9:00 pm – Reception End
- 9:30 pm – Last Shuttle to Hotel

For you, the dress code is business casual ... for the fish, it's a whole different story.

Limited shuttle service from the Delta Vancouver Suites hotel and a “no-host” bar will be available.

# Aquaculture Innovation Workshop #6

WORKSHOP PROGRAM  
Day 2: Tuesday, October 28

## CONTINENTAL BREAKFAST (7:00 – 8:00)

- 8:00 – 9:00**     **White Paper on Feed Ingredients and the Reduction of Dependence on Marine Harvested Products for Aquaculture Feeds**, Fredric T. Barrows, USDA Agriculture Research Service and Wendy B. Sealey, U.S.D.I., Fish and Wildlife Service  
Wendy Sealey, US Fish and Wildlife Services, MT, USA
- 9:00 – 9:30**     **Enterra Feed: Commercializing a Natural Insect-Based Process that Imitates Nature to Grow Renewable Food for Animals and Plants: Natural Protein, Oils And Organic Fertilizer**  
Brad Marchant, Enterra Feed Corporation, BC, Canada
- 9:30 – 10:15**     **Land Based RAS and Open Pen Salmon Aquaculture: Comparative Environmental Assessment**  
Brian Vinci, TCFFI, WV, USA

## BREAK (10:15 – 10:40)

- 10:40 – 11:00**     **Off-flavors in Recirculated Aquaculture Systems: Status on Current Knowledge on Organisms Producing Off-flavors and a Recent Example of Mitigation of Off-flavor Problems in a Recirculated, Experimental System**  
Niels Jorgensen, University of Copenhagen, Denmark
- 11:00 – 11:45**     **Nofima Atlantic Salmon in Closed-Containment Systems Research Update**  
Bendik Fyhn Terjesen, NOFIMA, Norway
- 11:45 – 12:15**     **Freshwater Institute RAS Grow-out and Depuration Research Update**  
Steven Summerfelt, TCFFI, WV, USA

## LUNCH (12:15 – 1:15)

- 1:15 – 1:45**     **Taste of BC Aquafarm Report on Ozonation and Enhanced Waste Treatment**  
Steve Atkinson, Taste of BC, BC, Canada and Steven Summerfelt, TCFFI, WV, USA
- 1:45 – 2:15**     **Biosecurity Considerations in Water Recirculating Aquaculture Systems Design**  
Brian Vinci, TCFFI, WV, USA

## Aquaculture Innovation Workshop #6

WORKSHOP PROGRAM  
Day 2 Continued

**2:15 – 2:45     "Wasted" Waste: Exploring the Potential of Utilizing Kuterra's Effluent Stream in a De-Coupled Aquaponics System**

Andrew Riseman, University of BC, BC, Canada and  
Erin Latham, Elsel Consulting, BC, Canada

**BREAK (2:45 – 3:15)**

**3:15 – 4:45     Design and Engineering Panel with Moderator, Brian Vinci, TCFFI, WV, USA**

This panel will commence with a series of short presentations on advances in key areas, followed by panel discussion:

- **Large-Scale Biosolids Dewatering**  
Bjarne Hald Olsen, Billund Aquaculture, Billund, Denmark
- **CO<sub>2</sub> Removal**  
KC Hosler, PRAqua/In-Situ Inc., BC, Canada
- **CO<sub>2</sub> Removal and Building Ventilation**  
Jacob Bartlett, Pranger Enterprises, IN, USA and  
Steven Summerfelt, TCFFI, WV, USA
- **Effluent Reduction and Nutrient Capture by Linking RAS with AquaPonics Technology**  
Tom Losordo, Pentair Aquatics, NC, USA

**4:45 – 5:00     Wrap-Up**

Eric Patel, Tides Canada, BC, Canada

**CONFERENCE CLOSE (5:00)**

### SAVE THE DATE

Save the date for Aquaculture Innovation Workshop 2015 tentatively scheduled for  
**Wednesday, October 14 – Friday, October 16, 2015**  
in Shepherdstown, West Virginia, USA

Mark your calendar now, dates to be confirmed shortly.