



# Northwest Indian Fisheries Commission

6730 Martin Way E., Olympia, Washington 98516-5540  
Phone (360) 438-1180

www.nwifc.org

FAX # 753-8659

---

## WORKSHOP AGENDA

### **Bayesian Statistics and Applications to Inseason Update Models and Forecasting May 15, 16, & 17, 2017**

**Location: Northwest Indian Fisheries Commission Conference Center**

---

**The workshop will start promptly at 10:00 am on Monday - May 15, 2017.**

**Tuesday's session will go from 9:00 am to 5:00 pm.**

**Wednesday's session will go from 9:00 am to 1:00 pm.**

Lunch will be provided for all attendees on Monday and Tuesday.

We are fortunate to have Dr. Catherine Michielsens leading this workshop. Catherine is the Director of Modeling and Data Management for the Pacific Salmon Commission (PSC). She has a PhD in Fisheries Science from Imperial College, University of London (UK). Her main area of expertise is in the application of Bayesian methods for fisheries stock assessment. After working for seven years in Europe on Atlantic salmon stocks in the Baltic Sea, she joined the Pacific Salmon Commission in 2007. At the PSC, her main role is to integrate the various pieces of information and data on Fraser River Sockeye and Pink salmon within the in-season assessment framework while accounting for risk and uncertainty when providing management advice.

#### **10:00 am to 5:00 pm, Monday - May 15:**

- Welcome/introductions/introductory remarks
- Introduction to Bayesian Methods
- Linear Regression exercise in WinBUGS<sup>1</sup> - Hood Canal chum inseason update model example
- Advice on debugging in WinBUGS

#### **9:00 am to 5:00 pm, Tuesday - May 16:**

- Modeling diagnostics
- Running WinBUGS using scripts and within R
- Exercises including forecast models

#### **9:00 am to 1:00 pm, Wednesday - May 17:**

- Inseason run size assessment examples
- Exercises using Lake Washington and Fraser sockeye data
- Workshop wrap-up ( $\approx$  1:00 pm)

---

<sup>1</sup> We will be using WinBUGS during the course. WinBUGS is an open access (i.e., freeware), menu-driven program for conducting Bayesian analyses. There will be users with WinBUGS experience to assist during the workshop.