



CRACKING THE CODE (IN 3-D)

AN OPEN SOURCE DATA DIALOGUE TOWARDS A COLUMBIA
BASIN WATER MONITORING FRAMEWORK

NOVEMBER 29 - 30, COPPER POINT RESORT, INVERMERE



Cracking the Code (in 3-D) is a two-day event to develop a collective understanding for modernizing Columbia Basin water knowledge.

The conference will be put into context by Dr. Martin Carver with an updated overview of [“Water Monitoring and Climate in the Upper Columbia Basin, Summary of Current Status and Opportunities”](#) which was published for Columbia Basin Trust (CBT) in January 2017.

Kathy Eichenberger, Executive Director of the Columbia River Treaty Review for the B.C. Ministry of Energy and Mines, will provide an overview for a modernized Columbia River Treaty and the relevance of water data to this vision.

During this action-focused event, participants will craft **3-D outcomes**:

1. **DECIDE:** An understanding for what is required to catalyze a water monitoring framework towards filling important water data gaps for a watershed.
2. **DESIGN:** A vision for a Columbia Basin-specific, open access, water data hub.
3. **DO:** Cross-sector working groups to move forward on the shared water data hub and the water monitoring framework

Day 1 — **Charting the Waters** — panels will focus on holistic best practices of larger scale collaborative water monitoring initiatives; shared understanding of big data hubs; current and future water monitoring and database needs for all levels of government, industry and communities. Day one will finish with plenary dinner guests to share a First Nations water stewardship perspective. There will be an optional visit to Radium Hot Springs.

Day 2 — **Diving In** — panels will have a more in-depth focus: on-the-ground First Nations and non-First Nations community based water monitoring examples; local and regional government and industry examples; needs for shared data and collaborative monitoring work. This will be followed by a facilitated session to gather input for next steps needed in creating a Columbia Basin Water Monitoring Framework and a Basin-specific water data hub.



Who should attend?

This conference will be relevant to First Nations and non-First Nations water-related decision-makers; on-the-ground practitioners and community-based water monitoring groups; elected officials; local, regional and provincial water decision-makers and practitioners; businesses, consultants and industry sector representatives and practitioners; academia; data hub builders; problem-solvers, critical thinkers, collaborators, innovators and water leaders.

“Citizen science offers exemplary prospects for education and outreach, improving participation and thus scientific literacy, and allowing the public to feel that they have contributed to real science. With such an explosion in the number of people-powered projects, as well as maximized research and outreach possibilities, it seems likely that mutual collaboration between experts and non-experts alike is marking a new era in climate research and education.”
Nature Climate Change Vol 7 Sept 2017, Editorial

The long-term stewardship and sustainability of our water sources will transcend the traditional boundaries of all our working sectors.

This dialogue will provide an invaluable opportunity for cross-sector engagement to better understand our diverse needs and perspectives while identifying opportunities for collaborative, effective long-term solutions.

Long-term Vision for a Columbia Basin Water Monitoring Framework:

Develop a comprehensive Columbia Basin Water Monitoring Framework for Source Water Protection and Open Source Water Data Hub that is supported and implemented by a collaboration of agencies and organizations to address the knowledge gaps, improve water data management, and inform applied science-based decision-making.

1. Establish partnerships with organizations, agencies, and First Nations to support and guide the Water Monitoring Framework and Data Hub Dialogue and develop subsequent action items.
2. Prioritize regional water knowledge gaps based on the 2017 CBT report, the WWF National Freshwater Health Assessment, and other sources.
3. Identify appropriate approaches, partnerships and first steps for collecting and analyzing water data to help address knowledge gaps.
4. Expand the collaboration of agencies and organizations to address and share information regarding water knowledge gaps.
5. Develop and populate water database on open source platform.
6. Link water data with decision-making.
7. Share lessons on provincial and national scales.
8. Learn lessons from other provincial, regional scales and other best practice examples.

AGENDA (WORKING AGENDA DRAFT)

WEDNESDAY, NOVEMBER 29, 2017

CHARTING THE WATERS

→ Day 1 Welcome/Opening: Traditional Territory Ceremony

→ Housekeeping announcements

→ Introduction to Data Hub and Water Monitoring Framework dialogue and to world renowned freshwater scientist **Dr. David Schindler** and his role in the conference of providing constructive criticism and leading audience participatory questions after each panel dialogue

- **Dr. Martin Carver** - Updated CBT Report
- **Kathy Eichenberger** - Modernized Columbia River Treaty and water data relevance

→ Holistic-whole systems: Best Practices of Collaborative Water Monitoring for Source Water Protection — from monitoring to data hubs to policy examples

- **Dr. Erin Kelly** - Northwest Territories Assistant Deputy Minister
- **Dr. Kris Stepenuck** - University of Vermont, U.S
- **Celine Davis** - Northeast Water Strategy, BC Govt
- **Donald Baird** - Environment and Climate Change Canada

→ Coffee Break

→ Overview of Data Hubs: “What are they? Do we have a shared understanding?”

- **Ben Kerr** - BC Water Portal
- **Clair Hebert** - University of Manitoba
- **Barb Horn** - Colorado State
- **Carolyn Dubois** - MacKenzie Data Stream

→ Lunch

→ All Levels of Government with Databases and Monitoring Practices: what are the current practices and future needs?

- **Mike Stainton** - Manitoba and ELA
- **David Tesche** - BC ENV:EX
- **Ramona Faust** - Regional/Municipal Government
- **Bradly Peters** - Alberta Lake Management Society

→ Coffee

→ Columbia Basin Industry on databases, monitoring current practice and future needs

- **Stephanie Stephens** - BC Hydro
- **Blair Weston** - Fortis BC
- **Kari Stuart-Smith** - Forestry: Canfor
- **Troy Jones** - Mining: Teck
- TBA - Columbia Power
- TBA - Agriculture/Tourism

→ Day One Summary — Feedback from Attendees: *What did you learn? How does it relate to vision and solutions? With constructive critique provided by participants and Dr. David Schindler*

→ Salsa & Beer: Meet 'n' Greet Poster Session — Basin Water Monitoring Groups will be available for discussion

- **SLSS** - Slocan Lake Stewardship Society/SWAMP
- **ERA** - Elk River Alliance
- **FOKLSS** - Friends of Kootenay Lake Stewardship Society
- **Living Lakes Canada** - groundwater
- **Mainstreams** - water quality program
- **CBM** - federal briefing/round table proposal: LLC/WWF/GF
- **WWF** - fresh water health assessment
- **BC water leaders** - CBM scan summary
- **ALMS** - Alberta Lake Management Society
- **BCLSS** - BC Lake Stewardship Society

→ Water Art Show by Local Artists: taking place in Copper Point Resort lobby

→ Dinner with Keynote Speaker (TBA) on water stewardship and what it means from a First Nations perspective

→ Following dinner, buses leave for Radium Hot Springs for those interested in a soak

THURSDAY, NOVEMBER 30, 2017

DIVING IN

→ Day 2 Opening with **Elizabeth Hendricks**, VP of WWF Freshwater Program: Canadian overview of freshwater health in Canada and the relevancy for the Columbia Basin

→ Examples of BC Community-Based Monitoring Practices: successes and challenges, collaborations and data sharing with government and industry

- **Julie Pisani** - District of Nanaimo

- Joanne Nelson
 - Nicole Kapell
 - Laura Duncan
 - Heather Leschied
 - Richard or Darcy
 - Lee-Anne Walker
- FN Monitoring
 - Ktunaxa SHIM/Kootenay Lake Partnership
 - Mainstreams
 - Groundwater/SHIM
 - SWAMP
 - Elk River Alliance

→ Coffee

→ Data Hubs: Smaller Scale, Region- and Sector-Specific — what have we got?

- Michael Flynn
 - Ian Parfitt
 - Dr. Gilles Wendling
 - Dr. Rick Nordine
- Canadian Mining Innovation Council
 - Selkirk College
 - Groundwater Consultant
 - Applied Database BCLSS

→ Lunch

→ Breakout Groups: *Work on dialogue outcomes*

→ Reporting Back: *Summaries presented by each working group*

→ Adjourn: *Next steps articulated*

→ Closing Remarks

