

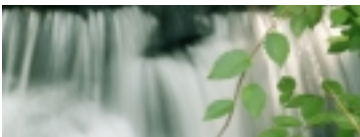
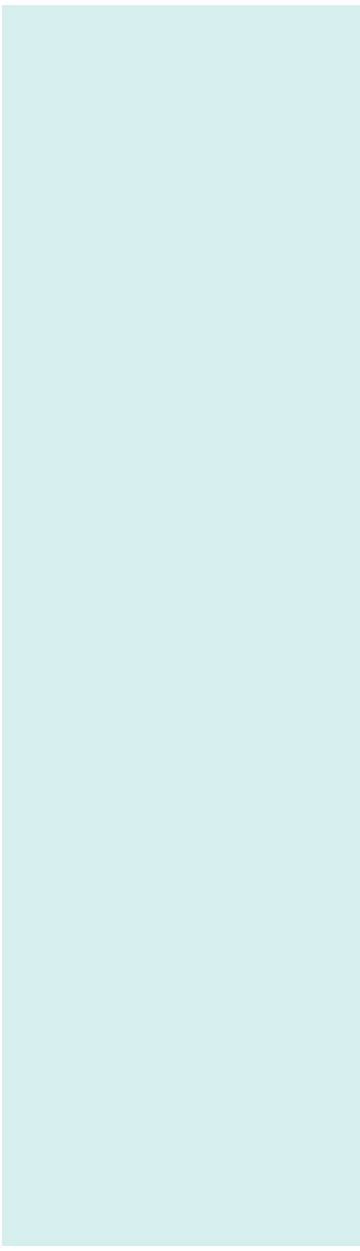


**Canadian  
Columbia River Forum  
2007**

**REPORT**

**May 30, 2007  
Cranbrook, British Columbia  
Organized by the  
Columbia Basin Trust**

*"We are all children of the Columbia."  
- Bruce Fraser, Forum Facilitator*



## **TABLE OF CONTENTS**

Background .....	2
Summary of Key Discussions .....	3
Recommendations .....	4
Appendix 1 –Working Group Discussions .....	6
Appendix 2 – Workshop Agenda .....	12

Author: Michelle Laurie, consultant to the Columbia Basin Trust,  
August 2007.



## **Background**

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This report provides a summary of the input provided by participants at the 2007 Canadian Columbia River Forum (CCRF) held in Cranbrook, British Columbia (30 May 2007). The CCRF Steering committee will review the information provided and address recommendations as required.

The CCRF is an opportunity for a variety of federal, provincial, First Nations and regional government organizations to share information and build a collective understanding about water and watershed issues in the Canadian Columbia Basin.

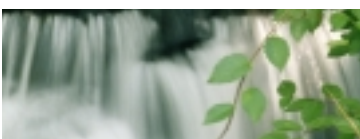
The objectives of the Forum in general are to provide and stimulate discussion. The Forum is considered a first step to:

- Sharing information and building a common understanding of the current objectives and mechanisms in place for managing the Columbia River system in Canada;
- Raising awareness and building a common understanding of water management related issues on the Columbia River system in Canada and the United States with a focus on the transboundary reach;
- Providing a reminder for the continued need for various organizations to be actively and cooperatively involved in Columbia Basin issues;
- Providing a forum for discussion, coordination and relationship-building amongst Canadian organizations and Basin residents;
- Continuing to build a collaborative, strategic relationship amongst Canadian organizations and Basin residents for dealing with Columbia River issues.

The 2007 meeting brought together 120 people from across the country from all levels of government and across Ministries in addition to First Nations, research institutions, NGOs and public citizens of the Basin. It also drew partners from the United States who have an interest in the Columbia Basin.

The workshop formally announced the recently signed Memorandum of Understanding of the CCRF which has been agreed upon by seventeen initial parties. Following the introduction, formalities and overview of the CCRF work plan and initial activities, the Forum focused on the following four topics for discussion:

1. How is the Columbia River System Managed? Overview of Columbia River Treaty and other major management agreements.
2. What are some of the major emerging water management issues in the Canadian Columbia River System?
3. What are some of the major water management issues in the US portion of the Columbia River System? How might these issues affect Canadians?
4. Climate change in the Columbia Basin – How will climate change impact the water resources of the Columbia Basin? How will climate change impact the management of water between Canada and the US?





## **Summary of Key Discussions**

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The quantity and diversity of participants led to in depth discussions throughout the one day Forum. Common themes which cut across all discussions are summarized below.

### *Economics*

A major concern expressed is the increased demand for water on both sides of the border. This led to acknowledgement that the availability of water resources is being impacted and will be more so in the future due to changing conditions of industries which demand water such as agriculture. There is also recognition that new industries such as those focused on recreation will rely more on water resources in the future. Compensation is an issue for those that are storing water and those who benefit from this. Lastly, the commodification of water and what this might mean in the future should be explored more deeply.

### *Governance*

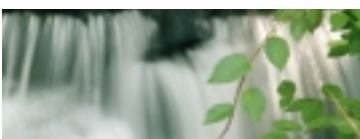
Governing the Columbia Basin's water resources is a transboundary issue and it was overwhelmingly recognized that this requires transboundary cooperation and institutions. It is suggested the Columbia River Treaty might be a mechanism to help facilitate dialogue however it must include a broader set of issues than in the past. Moreover, there needs to be involvement of aboriginal and First Nations people along with participation and consultation of local people and institutions.

### *Climate and Energy*

Climate change is a major concern in the Columbia Basin. There is a lot of uncertainty around how to plan and manage for future water flows, demand and unforeseen environmental changes. In this respect an adaptive approach is welcome to deal with shifting priorities and needs. In addition, there is recognition of the need to work within existing management frameworks for example Canada's National Green Plan and the Kyoto Protocol at the international level. Differentiated impacts in the USA and Canada along with how to reallocate water are questions that came up in discussions.

### *Ecosystem Based Approaches*

Participants emphasized that the Columbia Basin needs to be managed for a range of values and uses. There is a desire to see an emphasis beyond flood control and power generation to include human health and wellbeing, recreation and education. There was considerable discussion on the need for restoration of fisheries and salmon habitat. In recognizing the potential for a shift in priorities, it was felt that future management needs to account for changes in water demand, quality and overall flows.





### *Knowledge and Communications*

Information needs are widespread and there was a call for an increase in research, monitoring and evaluation. As it is a transboundary environment, a call for cross-border standards in data collection and analysis was made. There is recognition that the past will not necessarily guide the future in light of climate change however, knowledge transfer from the people involved in management today to those who will be working on future treaty negotiations and management is deemed important. Overall, continued public education and awareness is valued.

### *Transboundary Partnerships*

It is recognized that in managing a transboundary resource, partnerships need to be strengthened across borders. Participants at the Forum emphasized the importance of a shared understanding of problems, objectives and avenues for collaboration. Partnerships should be inclusive of diverse stakeholders including First Nations and civil society at scales spanning local to international levels. While partnerships can be challenging, it is recommended to start building trust and confidence in areas of agreement. It was suggested to use negotiating frameworks and other processes for dispute resolution outside of litigation. The CCRF should look to other successful examples of transboundary partnerships from which it can learn from.

## **Recommendations**

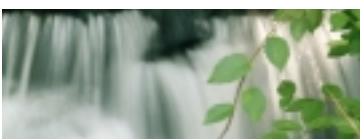
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Given the economic, environmental, cultural and social importance of the Columbia River Basin to Canadians, participating agencies at the CCRF have agreed that future collaboration can result in better decisions related to water management. While the issues are numerous, the focus will continue to be transboundary issues. The parties will strive to work on a watershed level and work across political and jurisdictional boundaries.

The Forum discussion on the nature of transboundary partnerships is particularly relevant in all aspects of the discussions which took place from standardized research protocols to the capacity of institutions to govern the complex system.

### *Recommendations:*

- *Feedback from the session is synthesized into guiding principles for future transboundary partnerships.*
- *Principles are shared and communicated with major stakeholders, in particular those in positions of research, monitoring and evaluation in order to create a basis for shared protocols and standards.*





Agreeing on principles for a transboundary partnership could strengthen transboundary cooperation and identify if capacities exist to work through identified issues including preparing for future Treaty negotiations. It is suggested that issues of concern to the Basin including an increasing demand for water and the commodification of water are explored and communicated to the Basin so that all stakeholders can provide input into future decision making processes. The uncertainty of climate change will require an adaptive management approach and it is suggested that capacities and needs are assessed to ensure the Basin is equipped to reduce vulnerabilities.

*Recommendations:*

- *Research and communications to Basin stakeholders on identified issues of concern is strengthened.*
- *Adaptive capacity and needs of Basin residents and stakeholders in dealing with climate change is assessed.*

Environmental flows refer to water provided within a river, wetland or coastal zone to maintain ecosystems and the benefits they provide for people. It is clear that flows are changing from the impact of both economic activities and environmental change. The Forum stressed that management of the Columbia Basin should be for a range of values. As knowledge and experience on environmental flows exists all over the world it would be wise to learn from other's experiences.

*Recommendations:*

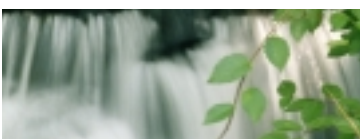
- *Research experiences on environmental flows in other transboundary watersheds and adapt lessons learned to the context of the Columbia Basin.*

Ensuring that future stakeholders of the Columbia Basin are well informed and equipped to manage a complex situation requires ongoing knowledge transfer. People with an interest in the Basin, in particular youth, need to be continuously engaged in discussions, learning and sharing of experiences.

*Recommendations:*

- *Communications and awareness raising activities should continue and be strengthened.*
- *Involve youth in the Basin's water management activities in order to foster intergenerational knowledge sharing and learning.*

The Canadian Columbia River Forum was formally established by the seventeen members who entered into a Memorandum of Understanding (MOU) in February 14th 2007. They will use the discussion, feedback and recommendations from the Forum held in Cranbrook (30 May 2007) to guide future work plans and activities.





## **APPENDIX 1 - Working Group Discussions**

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### **1. HOW IS THE COLUMBIA RIVER SYSTEM MANAGED? – OVERVIEW OF COLUMBIA RIVER TREATY AND OTHER MAJOR MANAGEMENT AGREEMENTS OF THE COLUMBIA RIVER SYSTEM.**

The aim of this workshop was to gain participants' views of key issues and possible implications in management of the Columbia River System, including the Columbia River Treaty. There was recognition of positive aspects of the current system such as addressing flood issues. Additional positive steps in management included mention of environmental clean-up by industry on the river (i.e. Tech Cominco/Celgar Pulp). Still, a host of issues were sighted by the various working groups which have been grouped below into five cross-cutting themes.

- **Economics**
- **Governance**
- **Climate and Energy**
- **Ecosystem Based Approaches**
- **Knowledge and Communications**

#### **Economics**

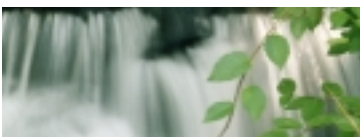
- Commodification of water including exports/trade
- Revenue back on the ground – i.e. direct compensation/mitigation to regions affected from local revenue (BC Hydro, CPC, Fortis....)

#### **Governance**

- Aboriginal rights and First Nation's involvement
- Local governance/participation/consultation on management and benefits
  - i.e. need to address a cumulative dissatisfaction with failure to provide equity in CRT process & subsequent impacts in the Basin and with residents
- Re-negotiation of Columbia River Treaty 2014 in a more holistic manner including broader values/issues, different legislative processes and a sustained commitment.
- Role of Libby dam in the Treaty (currently it is a not-treaty dam).
- Capacity to govern in the fact of increasing complexity? i.e. Rigidity of current institutions & jurisdictional territoriality
- Need for more transboundary cooperation

#### **Climate and Energy**

- Old technology for dams
- Alternative and clean energy
- Climate Change





### **Ecosystem Based Approaches**

- Managing for broader set of uses and values: 'ecosystem approach', i.e. beyond floods and power generation to include human health, recreation and education
- Restoration and management of fisheries (i.e. salmon habitat)
- US Endangered Species Issue
- Water quality, i.e. there is decrease in water quality (pollution, spill temperature) at expense of full range of values
- Water demand and future changes in demand
- Issues associated with population growth such as management of flood plain development
- Waste water treatment

### **Knowledge and Communications**

- Education and awareness to the public
- Knowledge transfer from today to future negotiators preparing for the period between 2014 to 2024
- Giving attention to the possibility of a non treaty environment?

In both realizing and dealing with above issues, various implications were noted:

#### **Economics:**

- Costs for:
  - infrastructure
  - comprehensive ecosystem management
  - changing values
- Regulation of water as a commodity

#### **Governance:**

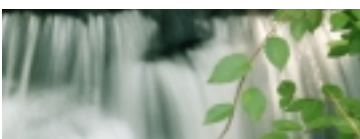
- Potential for Basin voices not being heard, loss of local control over water regulation
- Need to understand trade offs
- New frameworks needed and/or use existing to their full potential, i.e. can use institutions like Columbia River Treaty to facilitate fully collaborative, superior solutions, more productive dialogue
- Understanding that both Treaty and Non treaty management is in operation

#### **Ecosystem Based Approaches & Climate Change:**

- Need for more balance in the system and recognition of different needs/priorities/uses
- Climate change will have differentiated impacts in US and Canada, need to re-examine water allocation mechanisms

#### **Knowledge and Communications:**

- Ongoing monitoring, funding, etc for programs such as the Columbia River Integrated Environmental Monitoring Program





## 2. WHAT ARE SOME OF THE MAJOR EMERGING WATER MANAGEMENT ISSUES IN THE CANADIAN COLUMBIA RIVER SYSTEM?

This workshop highlighted key issues emerging in the Canadian Columbia Basin. While representing a diversity of views, there was a fair amount of agreement on key issues. They are summarized below.

### **Economics:**

- Development impacts of new industry/sectors such as recreation

### **Governance**

- Priorities are transboundary: i.e. water quality, fisheries, power, etc.
- Need for transboundary dialogue, watershed management board
- Inclusion of the geographic sub-basins of the Okanogan and Kettle
- National security includes safety in flood control and drinking water
- Columbia River Treaty re-negotiation and changes
- Inclusion of First Nations in renegotiation, management and policy making dialogues

### **Climate Change**

- Capacity to deal with planning, future changes, uncertainties
- Education
- Need ongoing unbalanced impacts in the basin may shift priorities, needs, interests
- Need to work within national and international agreements such as the Kyoto Protocol and Canada's National Green Plan

### **Ecosystem Approach**

- Better understanding of link between health of the river and human health
- Contaminants such as Polybrominated PBDC's, Diphenyl, ethers
- Water quality
- Loss of wetlands
- Balance of needs such as power with other identified priorities such as wildlife, recreation and archaeology.

### **Water Allocation:**

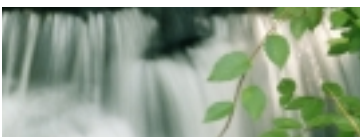
- Demand from within Canada as well as USA
- Scarcity
- Adaptive management as strategy to regulate flow

### **Water Conservation:**

- Public involvement, awareness, education
- Water metering
- Incentives for social/behavioural change

### **Salmon Restoration:**

- Link to First Nations
- Protection of fisheries





### 3. WHAT ARE SOME OF THE MAJOR MANAGEMENT ISSUES IN THE US PORTION OF THE COLUMBIA RIVER SYSTEM? HOW MIGHT THESE AFFECT CANADIANS?

Discussions regarding management of the Columbia River System in the US were less in depth than that regarding management in Canada. Note, most participants at the Forum work or live in Canada.

#### **Economics and Industry**

- Wholesale water exports to the US under the NAFTA. Once sales begin they can't stop.
- Alternative to ground water for agriculture

#### **Governance**

- Future of water management will be multi-faceted
- Need for US to share Basin with Canadians for increased benefits on both sides of the border
- Pending water rights in the US

#### **Climate and Energy**

- Proposed Hydro action

#### **Ecosystem Based Approaches**

Flows:

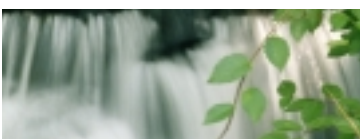
- Need to manage and use water more effectively
- Restoration and management of flows for in-stream and out of stream issues such as flows for irrigation and fish enhancement
- Construction of new storage sites in the US
- Upstream compensation for downstream benefits
- Increased demand for water

#### **Fisheries/Salmon/Environment:**

- US Federal Dams needs to mitigate for Canadian salmon stocks in the Columbia River
- Biological studies/research

#### **Information Needs**

- Transboundary standards for data collection and analysis
- Water metering
- Research, Monitoring and Evaluation





#### 4. CLIMATE CHANGE IN THE COLUMBIA BASIN – HOW WILL CLIMATE CHANGE IMPACT THE WATER RESOURCES OF THE COLUMBIA BASIN? HOW WILL CLIMATE CHANGE IMPACT THE MANAGEMENT OF WATER BETWEEN CANADA AND UNITED STATES?

The responses to this question focused on impacts to the ecosystem in general. There was limited time to explore impacts on water resources and management in depth.

##### **Flows**

- Earlier spring run off
- Reduced snow pack and less rain
- Glacial melt

##### **Information Needs**

- Past trends will not necessarily guide the future

##### **Environmental Change**

- Droughts and wildfires
- Ecosystem decline
- Increased wind
- Increased CO<sub>2</sub> emissions
- Habitat changes and species extinction

#### NATURE OF TRANSBOUNDARY PARTNERSHIPS TO RESPOND TO ISSUES

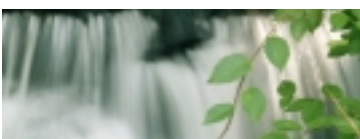
This question led to ideas of what characteristics a partnership may have with regards to transboundary issues. They might be considered a first step in developing principles for a future transboundary partnership.

##### **Governance**

- Inclusive
- Visionary and forward thinking
- Strong leadership with links to the Columbia Basin
- Cooperative agreements, willingness to work by consensus
- Reduced need for legislative routes to problem solving
- Negotiation frameworks for problem solving
- Adaptive approach with ongoing reflection, learning and change on as need basis
- Treaty that addresses full range of management objectives
- People of the Basin must have the final say

##### **Partnerships**

- Inclusive of all scales and diverse stakeholders such as local, state, provincial and federal governments as well as non-governmental organizations, civil society/residents and First Nations
- Recognition of country specific interests by all countries
- All partners treated equally





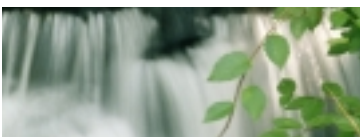
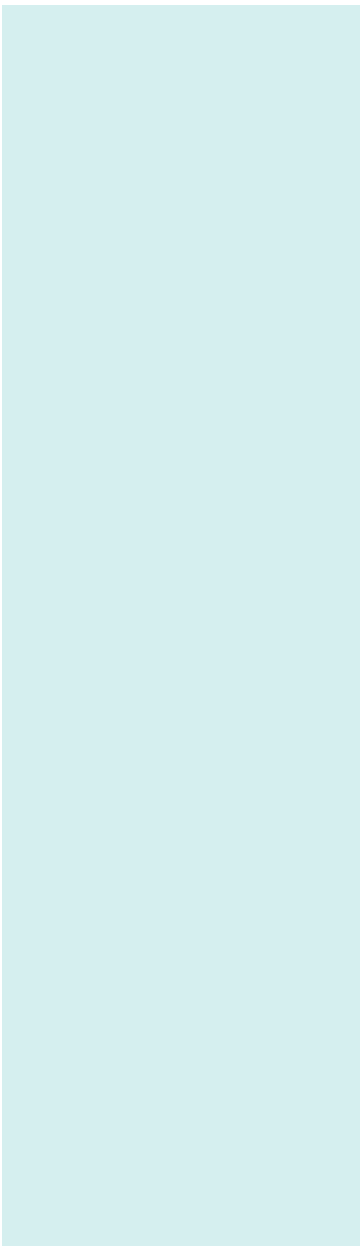
- Formalized working relationships/structure of the International Columbia Basin including participation of all interests including major groups and minority groups

### **Trust building**

- Demonstration of best practice within home county, i.e. efficient use of water
- Build on common points of interest, strengths – i.e. environmental concerns
- Common language and understanding by all countries
- Realize the value of the issue countries are working on to the population

### **Increased coordination and information sharing**

- Agreement and shared understanding of problem definition and objectives
- Open and transparent communication between all stakeholders
- Technological/scientific partnerships and collaboration on key issues such as water quality, water quantity, species habitat management, etc.
- Forum or avenue to identify and address emerging issues
- Learn from best practice examples such as:
  - Canadian Columbia River Forum – multi-stakeholder, loose structure
  - Great Lakes Water Authority (GLWA model)
  - Partnerships initiated by First Nations and Tribes may hold power through historical relationships and interests





## **APPENDIX 2 - Workshop Agenda**

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Canadian Museum of Rail Travel  
57 Van Horne Street South  
Cranbrook, British Columbia  
Wednesday May 30, 2007

### **DISCUSSION TOPICS**

- **How is the Columbia River System Managed? Overview of Columbia River Treaty and other major management agreements.**
- **What are some of the major emerging water management issues in the Canadian Columbia River System?**
- **What are some of the major water management issues in the US portion of the Columbia River System? How might these issues affect Canadians?**
- **Climate Change in the Columbia Basin - How will climate change impact the water resources of the Columbia Basin? - How will Climate Change impact the management of water between Canada and the US?**

**8:00 am Registration**

**8:30 - 9:30 am Welcome  
Forum Opening**

Opening First Nations Prayer

Introduction by Facilitator - Bruce Fraser (Forum agenda and objectives)

Welcome Introduction on the Benefits of Collaboration

- Mayor Ross Priest, Cranbrook
- Chief Sophie Pierre, Chair of Ktunaxa Tribal Council

**Introduction of the Canadian Columbia River Forum (CCRF) Memorandum of Understanding**

On behalf of CCRF

**Overview of CCRF Workplan**

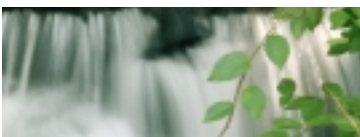
Steering Committee Members presentation

Dan Millar, Environment Canada on behalf of CCRF

**Overview of the Workshop Topics**

Facilitator, Bruce Fraser

**9:45-10:00am Refreshment Break**





## **Workshop 1**

**10:00-10:30 am**

- 1. How is the Columbia River System Managed? – Overview of Columbia River Treaty and other major management agreements on the Columbia River system.**

### **Columbia River System Management:**

- Columbia River Treaty
- Non-treaty storage
- Libby Coordination Agreement
- Kootenay Lake Operations

**Speaker: Kelvin Ketchum, BC Hydro**

**Questions and Answers – 10 minutes**

## **Workshop 2**

**10:30-12:00 am**

- 2. What are some of the major emerging water management issues in the Canadian Columbia River System?**

### **i) Mainstem Columbia – Outputs of the Water Use Planning Process:**

- Recreation
- Fish
- Reservoir Management

**Speaker: Pieter Bekker, BC Ministry of Environment**

### **ii) Water Quality and Watershed Issues:**

- On going impacts/stressors to water quality in the region and the impact to environment, community and the economy
- regional population and tourism growth and impacts on water supply and quality

**Speaker: Jolene Raggett, BC Ministry of Environment**

### **iii) First Nations Issues:**

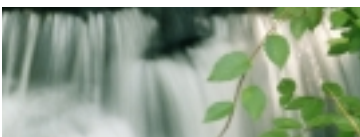
- Salmon restoration
- First Nations values associated with water

**Speaker: Speaker: TBA**

### ***Facilitated Round Table Discussion on Emerging Issues***

**12:00 -1:00      Lunch – Buffet Style – Munro’s at the Prestige Inn  
3 Minute Fresh Air Walk to the Prestige Inn**

***Please join us! Everyone invited: Speakers, Delegates and Guests***





### **Workshop 3**

**1:00 – 2:30 pm**

**3. What are some of the major water management issues in the US portion of the Columbia River System? How might these issues affect Canadians?**

**i) Biological Opinion: An overview of the legal and political process for the management of endangered species:**

**Speaker: John Shurts, Northwest Power and Conservation Council**

**ii) Biological Opinion: An overview of the impacts on Water Management:**

- General Overview
- Libby and the Kootenay River System operations

**Speaker: Jim Barton, US Army Corps of Engineers**

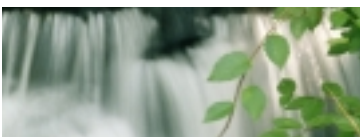
**iii) Overview of Washington State Columbia River Water Resource Management Program:**

- Components of the program: Water Conservation, Changes to Water Licensing Storage and New Sources.
- Environmental Impact Statement Process

**Speaker: Gerry O'Keefe, Washington Dept of Ecology**

***Facilitated Round Table Discussion***

**2:30-2:45 pm Refreshment Break**





## **Workshop 4**

**2:45-4:30 pm**

**4. Climate Change in the Columbia Basin - How will climate change impact the water resources of the Columbia Basin? How will Climate Change impact the management of water between Canada and the United States?**

**i) Climate Change and our changing way of life in the Columbia Basin:**

**Speakers Bob Sandford, UN Water For Life Decade**

**ii) Key Findings From the Canadian Columbia River Basin - Climate Change**

What are some of the temperature and precipitation changes we have seen in the past and what can expect to see in the future in the Canadian Columbia River Basin?

**Speaker: Kindy Gosal, Columbia Basin Trust**

**ii) Comparison of Climate Change impacts on the hydrology of the Canadian and US portions of the Columbia River Basin and what this means for transboundary water management.**

**Speaker: Alan Hamlet, University of Washington**

**iii) Climate Change in the Columbia Basin; Adaptation Strategies:**

Planning under uncertainty, what are some of the adaptation strategies that need to be considered. How do we develop policy that is more robust to a changing climate?

**Speaker: Lara Whitley Binder, University of Washington**

***Facilitated Round Table Discussion on Climate Change in the Columbia Basin., 30 minutes***

**4:30 pm Concluding Comments, Bruce Fraser**

