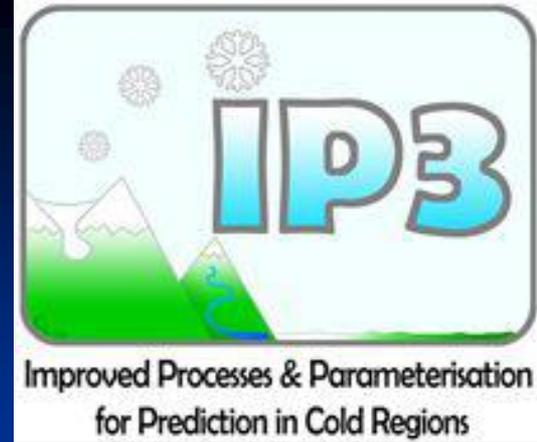


# Outreach



IP3 reaches out to the world

2006-2011



Canadian Foundation for Climate  
and Atmospheric Sciences (CFCAS)

Fondation canadienne pour les sciences  
du climat et de l'atmosphère (FCSCA)

# IP3 by the numbers!

- 4+ years
- 8 basins (+2!)
- 14 investigators
- 30 collaborators
- 10 employees
- Over 100 students
- Over 200 presentations
- Over 130 publications
- 15 workshops



# Canmore Users Workshop

## March 2008

### Wish List

Improve linkages between university scientists and users

Maintain an IP3 blog

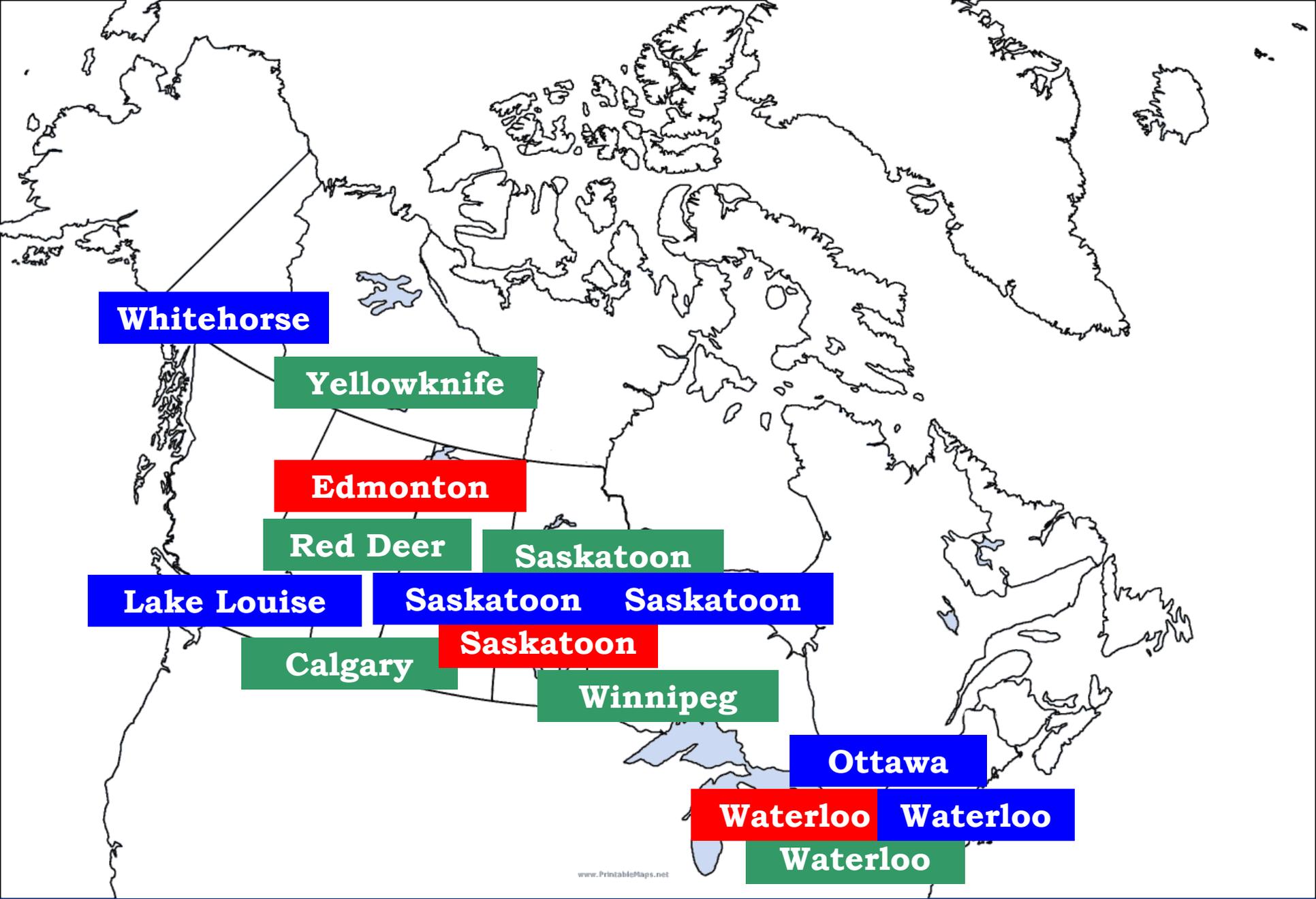
Create a regular newsletter to keep supporters updated on developments, including current and future research

Archive location for data

Need to produce an integrated IP3 legacy: transferable knowledge, models, state of science, future road map, synthesis

Availability of simple to understand media information

Outreach for new techniques, data and models allowing an improved awareness of tools available, helping the public become more aware of modeling as a tool for water management



**Whitehorse**

**Yellowknife**

**Edmonton**

**Red Deer**

**Saskatoon**

**Lake Louise**

**Saskatoon**

**Saskatoon**

**Calgary**

**Saskatoon**

**Winnipeg**

**Ottawa**

**Waterloo**

**Waterloo**

**Waterloo**

# IP3 User driven meetings

- Winnipeg – Manitoba Hydro, Parks Canada and Manitoba Water Stewardship
- Red Deer – Prairie Habitat Joint Venture
- Columbia Basin Trust
- Yellowknife – INAC water resources
- Edmonton – Alberta government hydrologists

## NEWSLETTER

# Improved Processes and Parameterisation for Prediction in Cold Regions



DECEMBER 2010

### Science Outreach

#### IP3 Northern Science Presentations in Yellowknife

IP3 scientists presented their northern research findings at two different Yellowknife events during the fall 2010. On the evening of October 4th, Bill Quinton gave a public presentation at the Prince of Wales Northern Heritage Centre on "Consultation and Discussion of Permafrost Thaw Impacts on Northern Water Resources" to an enthusiastic audience. The following morning, IP3 northern science was shared with approximately 40 water resource professionals. The following sessions were presented: John Pomeroy, "IP3 Research: Background and Early Results"; Chris Spence, "IP3 Research in the Subarctic Shield"; Phil Marsh, "IP3 Research in the Western Canadian Arctic"; and Al Pietroniro, "Improvements in Prediction Science during IP3 and IPY". Presentations can be accessed from <http://www.usask.ca/ip3/outreach.php> "other IP3 outreach events". Media coverage included interviews with John Pomeroy on both CBC North television and radio.

### Workshop Report

#### Cold Regions Hydrology Model (CRHM) Workshop in Yellowknife

On October 4th, 2010, a CRHM workshop was held at the Yellowknife Ski Club in Yellowknife, Northwest Territories. John Pomeroy led thirty participants from a variety of backgrounds including water resource management, engineering consultants and research modelers from the Government of Northwest Territories, Water Resources Division—Indian and Northern Affairs Canada, Environment Canada, SRK Consulting, Golder and Associates, Northwest Territories Power Corporation and BC Ministry of Energy, Mines and Petroleum Resources in a successful workshop. Many thanks go out to Bob Reid and the Water Resources Division of Indian and Northern Affairs in Yellowknife for providing the venue for the workshop.



Yellowknife workshop participants enjoyed a barbecue lunch and a walk on the ski trails after a presentation from Phil Marsh.



- Workshop reports
- Student research
- Outreach announcements
- Partnership activities
- IP3 in the news



# CANADIAN ROCKIES SNOW & ICE

## 2010 Canmore Speaker Series

### **Dr John Pomeroy**

*Canadian Rockies Snow and Ice Initiative: Creating a 'Canadian Davos' in the Bow Valley*

### **Dr Gwenn Flowers**

*Water under glaciers: Why some glaciers flow fast and what this means for their survival*

### **Dr Matthias Bernhardt**

*Research on Snow and Glaciers in the European Alps*

### **Dr Tobias Jonas**

*Research, monitoring, and warning services related to snow and avalanches in Switzerland*

### **Dr Juan Ignacio Lopez-Moreno**

*Environmental change and water resources in the Pyrenees: Facts and future perspectives for Mediterranean Mountains*

### **Robert Sandford**

*Corralling the Water Hole: Avoiding Dispute and Potential Conflict Over Water in the Canadian West*

### **Dr Danny Marks**

*The Impact of Climate Warming on Snow, Climate, and Streamflow in a North American Mountain Basin*

### **Dr Shawn Marshall**

*Glacier fluctuations: what glaciers tell us about climate change*

# Online and printed publications

- IP3 primer
- IP3 short primer – Water research – Western watersheds
- IP3 short primer – Water research -Northern watersheds
- Summary of User's requests and actions
- Water in the West
- Water in the North
- Workshop reports published in the Mountain Research Initiative and Ice and Climate News
- Video and audio files available for CRSI 2010 speaker series
- Workshop presentations available from IP3 website

## Our Glaciers, Snowpacks and Rivers are in Transition

Scientists address water issues

The Saskatchewan River basin is the lifeblood of the Canadian Prairie provinces and understanding its challenges is key to the future strength and growth of this dynamic part of Canada. Melting glaciers, forest die-back, warmer winters and changes in snowfall and rainfall patterns are creating challenges for the management of Canada's water supply. To deal with emerging problems, IP3 scientists are currently working at three research sites near the headwaters of the Saskatchewan River.

Marmot Creek in Kananaskis Country, Lake O'Hara in Yoho National Park and Peyto Creek in Banff National Park are the site of research in snow accumulation, snow melt, glacier melt and runoff. The collection of weather data and snowfall information is being used to develop models for use in predicting changes in streamflow under changing climate conditions.

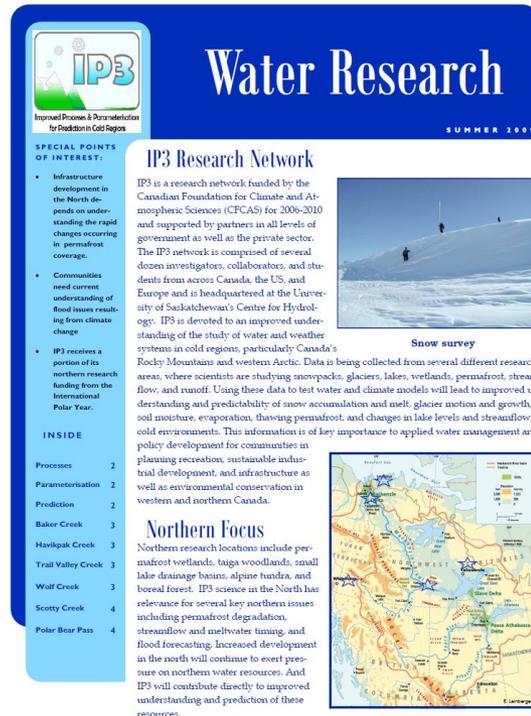
This research is being used in collaboration with various private and public enterprises. Interested user groups include Parks Canada, City of Calgary, Manitoba Hydro, Bow River Basin Council, Alberta Sustainable Resource Development, Kananaskis Country, Resorts of the Canadian Rockies, Environment Canada, Saskatchewan Watershed Authority and Alberta Environment. These user groups recognize the need for continual monitoring of upstream water production to ensure that changes in streamflow can be planned for in downstream water allocations. Further growth and development in the Prairie Provinces necessitates more reliable streamflow forecasting for our diminishing water resource to be shared.

Important areas necessary for continuing research are:

- determining the impact of changing flows in the major rivers draining the Rockies on water availability, to meet increasing downstream demand
- monitoring and predicting mountain weather, snowpacks, glaciers and streamflow in a changing climate
- the impact of declining forest cover on runoff production
- the role of mountain groundwater in maintaining streamflow in dry periods

Research is currently being produced by the IP3 research network, composed of eight universities and four federal research labs. This important work is funded through CFCAS (Canadian Foundation for Climate and Atmospheric Sciences) with funding through to end in 2010.

For more information please contact:  
Nadine Kapphahn - Outreach Coordinator - 250-960-5898 - nadine.kapphahn@usask.ca  
John Pomeroy - Principal Investigator - 306-966-1426 - john.pomeroy@usask.ca



**Water Research**  
SUMMER 2009

**IP3 Research Network**

IP3 is a research network funded by the Canadian Foundation for Climate and Atmospheric Sciences (CFCAS) for 2006-2010 and supported by partners in all levels of government as well as the private sector. The IP3 network is comprised of several dozen investigators, collaborators, and students from across Canada, the US, and Europe and is headquartered at the University of Saskatchewan's Centre for Hydrology. IP3 is devoted to an improved understanding of the study of water and weather systems in cold regions, particularly Canada's Rocky Mountains and western Arctic. Data is being collected from several different research areas, where scientists are studying snowpacks, glaciers, lakes, wetlands, permafrost, streamflow, and runoff. Using these data to test water and climate models will lead to improved understanding and predictability of snow accumulation and melt, glacier motion and growth, soil moisture, evaporation, thawing permafrost, and changes in lake levels and streamflow in cold environments. This information is of key importance to applied water management and policy development for communities in planning recreation, sustainable industrial development, and infrastructure as well as environmental conservation in western and northern Canada.

**Northern Focus**

Northern research locations include permafrost wetlands, taiga woodlands, small lake drainage basins, alpine tundra, and boreal forest. IP3 science in the North has relevance for several key northern issues including permafrost degradation, streamflow and meltwater timing, and flood forecasting. Increased development in the north will continue to exert pressure on northern water resources. And IP3 will contribute directly to improved understanding and prediction of these resources.



Snow survey



# User-group forums



IP3 User-Group Forums

[Board index](#)

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[FAQ](#) [Login](#)

It is currently Thu Aug 25, 2011 1:50 pm

FORUM	TOPICS	POSTS	LAST POST
 <b>CRHM Forum</b> CHRM - The Cold Regions Hydrology Model <p>This forum is intended to provide a way for CRHM users to request support and provide feedback related to the model's use, and also to enable peer-to-peer discussion.</p>	8	18	by <a href="#">tbrown</a>  Mon Aug 08, 2011 3:30 pm
 <b>MESH Forum</b> MESH - The MEC Surface and Hydrology Model (MEC - Modélisation Environnementale Communautaire ) <p>This forum is intended to provide a way for MESH users to request support and provide feedback related to the model's use, and also to enable peer-to-peer discussion.</p>	2	5	by <a href="#">ChrisMarsh</a>  Wed Feb 03, 2010 12:06 pm
 <b>IP3 General Forum</b> This forum provides an arena for general discussion and feedback relating to the IP3 network as a whole	2	3	by <a href="#">jpomeroy</a>  Thu Jul 29, 2010 1:47 pm
 <b>IMPORTANT To Register , Read This First!!</b> This area provides details on how to register for the IP3 forum	1	1	by <a href="#">ip3admin</a>  Mon Jan 04, 2010 1:48 pm

# Public Engagement

- Local public engagement – Lake O’Hara, Peyto Glacier, Marmot Creek, Scotty Creek
- Local public presentations – Banff, Whitehorse, Yellowknife, Canmore
- Local newsletters – Alpine Club of Canada, Parks Canada, Northern News Services
- General interest – book publication

# Next time – what works (or not!)

- CRHUG composition
- Users input
- Media contacts
- Workshops
- Blog
- Legacy

