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and when and how much will run off to rivers. Models need to fully incorporate observations, be user friendly, and be accompanied by training and clearly written user manuals. Participants also asked that they be made aware of available data and tools because most users do not know all that is currently available and applicable to their operations.

Along with its 18-member Users' Advisory Committee, IP3 scientists are beginning to address these and many other needs expressed during the workshop. To assist with users' modeling needs, IP3 is organizing training workshops on its Cold Regions Hydrological Model (CRHM; see <http://www.usask.ca/hydrology/crhm.htm>). To continue the dialogue between IP3 scientists and potential users of our data and tools, IP3 plans to increase its outreach activities (through public events/seminars, written materials, data/model analysis, online graphical presentation, etc.) and will continue to involve water managers in scientific meetings.

Relationships between scientists, users, and policy makers who live in or interact with northern and mountain communities are crucial links that drive application of cold regions hydrological science. IP3 is committed to developing these relationships and encouraging community involvement so that water managers and other stakeholders have the information and tools needed to make well-informed decisions that protect and benefit our critical water resources.

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# MEETING

## Cold Regions Hydrology and Water Management: Bridging the Gap

**Prediction of Water Resources in Mountain and Northern Canada: What is Needed, What Can be Done—An IP3 Users/Stakeholders Community Workshop; Canmore, Alberta, Canada, 18–19 March 2008**

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Improved Processes and Parameterisation for Prediction in Cold Regions (IP3) is a research network funded by the Canadian Foundation for Climate and Atmospheric Sciences (<http://www.usask.ca/ip3>). With more than 80 members across Canada, the United States, and Europe, IP3 is devoted to the study and prediction of surface water, weather, and climate systems in cold regions, particularly Canada's Rocky Mountains and western Arctic. IP3 contributes to better understanding of ungauged basin streamflow, snow and water supplies, Arctic Ocean freshwater inputs, and sustainable management of mountain and northern water resources. These issues are important to agriculture, recreation, industrial development, regional planning, policy making, streamflow forecasting, and environmental conservation in the Canadian Rockies, prairies, and north.

In response to feedback from our 2007 annual workshop (report at <http://www.usask.ca/ip3/download/ws2/report.pdf>), IP3 developed a users' community workshop to facilitate the application of cold

regions hydrological science to water management. The meeting attracted 60 participants and was sponsored by Indian and Northern Affairs Canada, Canadian Society for Hydrological Sciences, Western Watersheds Climate Research Collaborative, Bow River Basin Council, and Northwest Territories Power Corporation.

At the meeting, water managers presented their institutional needs for hydrological data, information, and modeling tools and how IP3 could help meet those needs. The importance of siting observational networks in headwater locations and improving prediction of streamflow in small to medium basins at daily timescales was emphasized. Other observations of interest to the participants included solar radiation, stream temperature, snowpack, groundwater, and soil thaw. Canadian hydrometeorological observational networks have shrunk over the years, so this strong interest in observations is an opportunity for scientists and water managers to work together to strategically expand and enhance existing monitoring networks.

For cold regions prediction, water managers need to know when a snowpack will melt