Effect of Timber Harvesting and Roads on Small vs. Large Peak Flows
“Most Heated Debate in Forest Hydrology”

ONE-DAY WORKSHOP
THURSDAY MARCH 18, 2004 (9:00am – 5:30pm)
University of British Columbia
Asian Centre, 1871 West Mall (Auditorium)
Vancouver, Canada

To date scientists and professionals alike have not agreed on what extent forest management affects peak flows and whether small and large peak flow events are affected in the same ways. Paired-basin studies that have been used in the past to address these questions are often limited to the mean peak flow response because observations of sufficient duration to quantify the pre- and post- harvest peak flow regime are typically lacking. This lack of long term data makes it virtually impossible to relate forest harvesting impacts to peak discharge event frequency (i.e. return periods), fueling considerable conjecture and debate in the forest hydrology community regarding “large” peak discharge events (an indeed, around the very definition of a large event).

In recent years, distributed physically based hydrologic modelling at heavily instrumented watersheds has emerged as a new research approach with potentials for contributing constructively to this debate on the impact of forest management on peak flow regimes.

We invite the BC forest hydrology community to this informal one-day workshop organized specifically to present the state of knowledge and to encourage discussion from all concerned. In order to provide a balanced perspective from the research community, Dr. Walt Megahan (retired forest hydrologist from the USDA Forest Service) and Professor Gordon Grant (Oregon State University) have been invited to participate and contribute to the workshop.

Workshop is organized jointly by University of British Columbia and University of Washington, Seattle.

Chair: Prof. Younes Alila (UBC) Co-Chair: Prof. Dennis Lettenmaier (UW)

For more information on the program for this workshop check the website: http://www.forestry.ubc.ca/

PROGRAM

Thursday, March 18th

8:00 to 9:00 Registration
9:00 to 9:15 Workshop Organization and Logistics
9:15 to 9:30 Opening Statement by Younes Alila, Faculty of Forestry, University of British Columbia

Morning Session Chair: Dr. Walt Megahan (retired Forest Hydrologist with USDA Forest Service)
9:30 to 10:00
A brief history of the Distributed Hydrology Soil Vegetation Model (DHSVM)
Mark Wigmosta, Chief Scientist, Pacific Northwest National Laboratory, Richland, WA

10:00 to 10:30
Overview of the long-term watershed experiments in British Columbia
Eugene Hetherington (retired forest hydrologist with Canadian Forest Service) and Rita Winkler (research hydrologist with BC Ministry of Forests)

10:30 to 11:00  Morning Coffee Break

11:00 to 11:30
Peak flow responses to clear cutting and roads in the maritime regions of the Pacific Northwest: A preferential hillslope perspective, Joseph Beckers, Komex International Ltd., Burnaby, British Columbia

11:30 to 12:00
Forest harvesting influences on the peak flow regime in the Interior snow dominated watersheds of south eastern BC: An investigation using long-term numerical modelling, Markus Schnorbus, University of British Columbia

12:00 to 12:30
Snowmelt runoff processes and modelling for three small catchments draining a glaciated valley wall, Dan Moore, FRBC Chair in Forest Hydrology, Departments of Geography / Forest Resources Management, University of British Columbia

12:30 to 1:30      LUNCH

Afternoon Session Chair: Professor Gordon Grant (Oregon State University)

1:30 to 2:00
Virtual experiments: Towards a dialog between experimentalists and modelers, Markus Weiler, FRBC Chair in Forest Hydrology, Departments of Geography / Forest Resources Management, University of British Columbia

2:00 to 2:30
Experiences in applying DHSVM in the commercial sector: A focus on calibration and parameter transferability, Pascal Storck, 3TIER Environmental Forecast Group Inc., Seattle, WA, USA.

2:30 to 3:00
Developing Mid-Range Forecasts of Streamflow using DHSVM, Michael Miller, Department of Civil and Environmental Engineering, University of Washington, Seattle, USA

3:00 to 3:30  AFTERNOON COFFEE BREAK

3:30 to 4:00
Evaluating the impacts of climate change on water supplies using DHSVM, Matthew Wiley, Department of Civil and Environmental Engineering, University of Washington, Seattle, USA

4:00 to 4:30
DHSVM erosion and sediment transport model, Jordan Lanini, Department of Civil and Environmental Engineering, University of Washington, Seattle, USA

4:30 to 5:00    More Discussion

Evening:     BEER GARDEN AT GROUSE MOUNTAIN