



## PCIC UPDATE September 2014

### PCIC EXPANDS ITS DATA PORTAL TO INCLUDE GRIDDED HYDROLOGIC MODEL OUTPUT

PCIC is pleased to announce the expansion of its [Data Portal](#) with the launch of the new [Gridded Hydrologic Model Output Page](#), which provides access to gridded, high-resolution projections of hydrologic simulation data for four watersheds in British Columbia, generated at PCIC using the VIC hydrological model. The [Gridded Hydrologic Model Output Page](#) joins the [BC Station Data Page](#), the [High-Resolution PRISM Climatology Page](#) and the [Statistically Downscaled Climate Scenarios Page](#).

Using this page, users can access a variety of VIC model output, including snow water equivalent, soil moisture, surface runoff (runoff), subsurface runoff (baseflow), and evapotranspiration data for a region covering the Peace, upper Columbia, Fraser and Campbell River watersheds, in three different formats, using an intuitive, map-based web interface.

Learn more about the [Gridded Hydrologic Model Output Page](#).

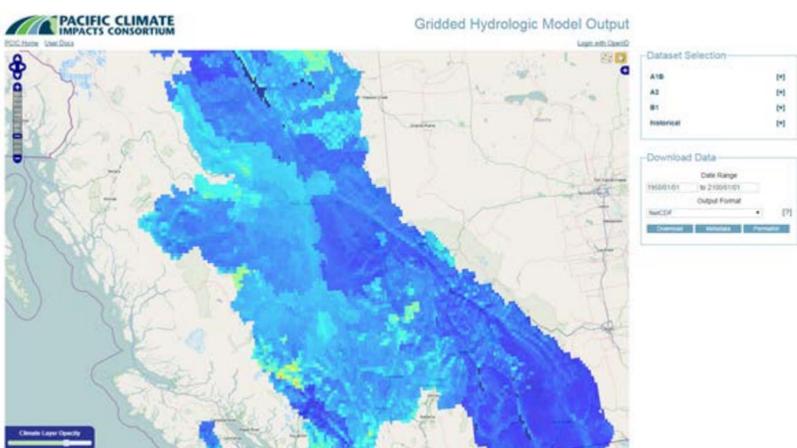


Figure 1: The user interface of the Gridded Hydrologic Model Output Portal Page.

### WCRP-ITCP SUMMER SCHOOL ON CLIMATE EXTREMES



Figure 2: Dr. Whan's group for the research project: Professor Sonia Seneviratne, Mxolisi Shongwe, Ernest Asare, Mohammad Rahimi, Rene Orth, Kirien Whan, Jakob Zscheischler.

I was recently lucky enough to attend the World Climate Research Program (WCRP)-International Center for Theoretical Physics (ITCP) Summer School on Climate Extremes in Trieste Italy. Extreme climate events have a large impact on both the environment and society. Given the increasing attention that questions related to extreme events are receiving in the scientific and wider communities, the purpose of the school was to train students in the methods used to understand observed and future changes in extremes.

The school consisted of lectures, tutorials and group research projects. The quality of the lectures and tutorials were very high, across a broad range of topics including the statistical theory underpinning extreme value analysis, detection and attribution of observed changes and the role of land-surface interactions in amplifying extreme events. Despite a full schedule and some long days, the length of the summer school allowed ample time for networking with lecturers, tutors and other students.

Over the two weeks, small groups of students worked on a research project with the guidance of an experienced tutor and lecturer. These projects gave hands on research experience on one of the topics covered in the lectures and will lead to publication as we continue the research back at our home institutions. Working closely with the group has ensured the development of close, and hopefully lasting, collaborations with other students and advisors. For me, the group projects were a standout feature of the summer school. I enjoyed the two-week immersion in a supportive and collaborative scientific environment and the opportunity to spend time thinking about a new research problem on a different aspect of climate extremes. The ongoing collaboration with group members from all over the world has been exciting and surprisingly efficient given the different time zones we are all in!

Most of the course materials are [available online](#).

-Dr. Kirien Whan

### FALL LAUNCH OF PCIC SEMINAR SERIES

Together with our sister organization, the [Pacific Institute for Climate Solutions](#), we have kicked off another Pacific Climate Seminar Series on September 10<sup>th</sup>, with a talk delivered by Dr. Daniel Peters from Environment Canada's Water and Climate Impacts Research Centre. In his talk, titled, *Environmental Flows in a Changing Climate*, Dr. Peters gave an overview of the science of ecological flow needs in Canada, presented some recent advancements in assessment tools and hydrological model assessment and discussed ecological flow needs in a changing climate.

Our next talk will be given by Dr. John Lanzante from the Geophysical Fluid Dynamics Laboratory (GFDL). Titled, *A Guided Tour of GFDL's Statistical Downscaling Efforts*, the talk will cover the philosophies, goals and approaches that GFDL researchers are employing for the evaluation of statistical downscaling methods, and will show some early results. The talk is scheduled for September 23<sup>rd</sup> at three p.m.

See our [Events Calendar](#) for more information.

### PCIC WELCOMES NEW ADMINISTRATIVE ASSISTANT AND IT SPECIALIST

PCIC extends our warm welcome to our two new staff members, Peggy Minaker and Justin Weissig. Peggy Minaker has joined us as our new Administrative Assistant. She is working closely with the Director, the Lead for Planning & Operations and the Scientific Information Specialist to facilitate our multi-disciplinary team of scientists carrying out PCIC's applied scientific program. Our new IT Specialist/Linux Systems Administrator, Justin Weissig, is administering PCIC's servers and data archive, and providing IT support to the PCIC team.

### NEWSWORTHY SCIENCE

PCIC has released a new science brief that covers a recent article in the journal *Nature* by Kossin et al. that examines the latitudes at which tropical storms reached their maximum intensity over the 1982-2012 period. The authors find the latitudes of maximum intensity have shifted poleward in all ocean basins except the North Indian.

[Read this Science Brief.](#)

### RECENT PAPERS AUTHORED BY PCIC STAFF

Carlson, A. E., K. Winsor, D. J. Ullman, E. J. Brook, D. H. Rood, Y. Axford, A. N. LeGrande, **F. S. Anslow**, and G. Sinclair, 2014: [Earliest Holocene south Greenland ice sheet retreat within its late Holocene extent](#), *Geophysical Research Letters*, **41**, doi:10.1002/2014GL060800.

Farazadeh, M., R. Oji, **A.J. Cannon**, Y. Ghavidel, and A.R. Massah, 2014 (in press): [An evaluation of single-site statistical downscaling techniques in terms of indices of climate extremes for the Midwest of Iran](#). *Theoretical and Applied Climatology*. doi:10.1007/s00704-014-1157-4.

Gaitan, C.F., W.W. Hsieh, and **A.J. Cannon**, 2014 (in press): [Comparison of statistically downscaled precipitation in terms of future climate indices and daily variability for southern Ontario and Quebec, Canada](#). *Climate Dynamics*. doi:10.1007/s00382-014-2098-4.

Gaitan, C.F., W.W. Hsieh, **A.J. Cannon**, and P. Gachon, 2014: [Validation of linear and nonlinear downscaling methods in terms of weather and climate indices: surface temperature in southern Ontario and Quebec](#). *Atmosphere-Ocean*, **52**, 3, 211-221. doi:10.1080/07055900.2013.857639.

Matsumura, K., C.F. Gaitan, K. Sugimoto, **A.J. Cannon**, and W.W. Hsieh, 2014 (in press): [Maize yield forecasting by linear regression and artificial neural networks in Jilin, China](#). *The Journal of Agricultural Science - Cambridge*. doi:10.1017/S0021859614000392.

Tencer, B., A. Weaver and **F. Zwiers**, 2014: [Joint Occurrence of Daily Temperature and Precipitation Extreme Events over Canada](#). *Journal of Applied Meteorology and Climatology*, **53**, 2148-2162, doi:10.1175/JAMC-D-13-0361.1.

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