



Welcome

FROM HOWARD WHEATER

Happy New Year and welcome to the fourth edition of Water News. It was great to catch up with many of you at our New Year party held in January at the University Club on campus.

2012 was a productive year, and I have enjoyed catching up with research progress and plans in our January meetings. Diefenbaker Day (Jan. 25) was a great success, with 17 high-quality presentations by those working in and around the reservoir. Inaugural Delta Day activities, held in conjunction with the School of Environment and Sustainability (SENS) on Feb. 1, publicized this important, but little-known, Northern environment. It also provided an opportunity to meet some of our Métis and First Nations partners, who travelled from Cumberland House to participate.



A visit from the President: University of Saskatchewan President Ilene Busch-Vishniac recently visited the Global Institute for Water Security, giving her the opportunity to meet faculty, graduate students, post-doctoral fellows and staff.

The upcoming Modelling Day (Feb. 11) and Saskatchewan River Basin Day (Feb. 12) will allow for further updates from our researchers on the work they are doing. Our big news for the Saskatchewan River Basin (SRB) project is reported on the next page – we have now been recognized as part of the World Climate Research Programme as a regional hydroclimate project.

It was a pleasure for me to welcome Roger Beachy, the new Director of the Global Institute for Food Security (GIFS), to the institute recently. Water and agriculture share a critical link, and I look forward to working with GIFS to foster and strengthen this vital connection. For those interested in this interface, the Council of Canadian Academies Report on Water and Agriculture (which I chaired with substantial input from John Pomeroy) will be published on February 26. Additionally, it was a great pleasure and privilege to welcome university President Ilene Busch-Vishniac and show her some of the work we are doing at the institute.

This Spring will be a busy one. We have a lot to look forward to, including some further major funding announcements, guest lecturers and visitors, and several activities related to World Water Day (March 22) and Earth Day (April 22). I invite you to visit the events section of our website to keep up-to-date on these activities, and many more we are currently planning.

Regards,

Howard Wheeler

*Canada Excellence Research Chair in Water Security
Director, Global Institute for Water Security*

Saskatchewan River Basin Study recognized as regional project

The World Climate Research Programme provides global leadership for research into the analysis and prediction of Earth system variability and change. A key element of its GEWEX (Global Energy and Water Exchanges) initiative is the development of Regional Hydroclimate Projects (RHPs) which provide state-of-the-art data to support the development and testing of improved models and global data sets.

GEWEX has now approved the Saskatchewan River Basin Project, developed by the Global Institute for Water Security with its national and international research partners, as an initiating RHP, one of ten regional GEWEX projects in the world and currently the only one of its kind in North America.

The Saskatchewan River Basin (SaskRB) has one of the most extreme and variable climates in the world and includes biomes of global importance, and faces the challenges of major economic development and rapid environmental change. The SaskRB Project will build on world-class observational facilities to develop new interdisciplinary science and the modelling tools needed to address the challenges of managing environmental change and uncertain water futures.

More information, including the proposal summary, is available at www.usask.ca/water.

The Saskatchewan River Basin: Quick Facts

- ✓ *The basin is fed mainly by snowmelt from the Rocky Mountains.*
- ✓ *Draining an area of about 340,000 square kilometres, the basin serves as the major water resource for three provinces and approximately three million people.*
- ✓ *It supports 80 per cent of Canada's agricultural supply.*

Highlights from the AGU Fall Meeting

The American Geophysical Union (AGU) held its annual Fall Meeting in San Francisco, December 3-7. Several GIWS members were in attendance, contributing posters, papers or oral presentations to the event.



Congratulations are in order for GIWS PhD student Chris Marsh, winner of the AGU Outstanding Student Paper (OSPA). Chris submitted work from his master's thesis to the Cryosphere Focus Group and underwent judging based on presentation, content and overall impression in comparison to other papers.

A full list of GIWS member presentations, posters and papers is available at www.usask.ca/water.

Thinking outside the water policy box

The January 2013 issue of *Water Resources Management* features an editorial piece by GIWS member Patricia Gober, professor at the Johnson-Shoyama Graduate School of Public Policy specializing in water policy.

"Given the limited ability to forecast the future climate, emphasis must shift to the human actors and social dynamics of water systems, including planning processes, work practices, operational rules, public attitudes, and stakeholder engagement," she argues. This includes outside-of-the-box strategies that incorporate principles of decision-making in times of uncertainty.

The editorial (full title: *Getting Outside the Water Box: The Need for New Approaches to Water Planning and Policy*) is available in its entirety in January's *Water Resource Management* journal.

Building a talented team

Our post-doctoral fellows come from a variety of disciplines and backgrounds. As members, they act as ambassadors for the institute by promoting the goals and objectives of water stewardship in their own work.



Jay Sagin

Jay completed his PhD in geological sciences at Western Michigan University in 2010. His current research looks at using remote sensing and GIS (Geographic Information System) to assess links between water, animals and people within the Saskatchewan River Delta. Since joining GIWS in July 2012, a highlight for Jay has been travelling to Cumberland House and teaching local high school students how to use GIS and GPS technology.



Rebecca North

Rebecca completed her PhD in Biology at the University of Waterloo in 2008. Her thesis highlighted the important interrelationships between macronutrients and micronutrients as potential controls on freshwater primary productivity. She served as a post-doctoral fellow at Trent University for four years before joining GIWS in September 2012. Her current research interests pertain to Lake Diefenbaker and how nutrients and light control primary productivity and algal biomass in the reservoir.

"I wanted to be a part of such a dynamic and exciting institute whose focus was on water research in a part of the world where water quantity and quality were becoming a limiting resource."

-Rebecca North, post-doctoral fellow
on why she joined GIWS



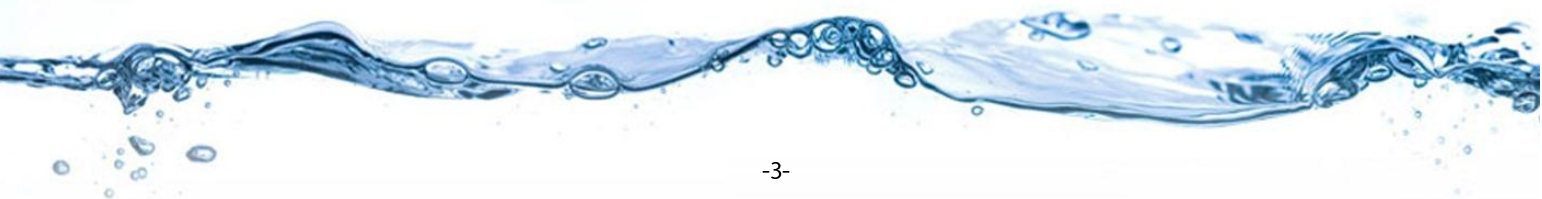
Willemijn Appels

Willemijn joined the GIWS team in December 2012, after completing her PhD at Wageningen University in the Netherlands. Her thesis involved research on surface runoff in flat, agricultural catchments throughout the Netherlands. In addition to overland flow, Willemijn will also incorporate prairie ecosystems into her research.



Sun Chun

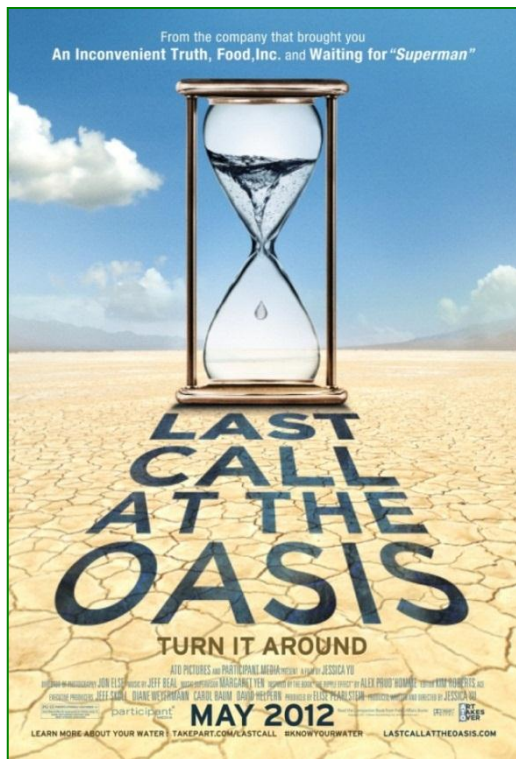
Kwok (Sun) Chun has a first-class degree from the University of Hong Kong and holds a PhD and MSc in Environmental Engineering with distinction from Imperial College London. Before joining GIWS in February 2011, Sun worked for the Hong Kong Polytechnic University and for ARUP, a global engineering consulting firm. His research interests are in statistical downscaling of climate scenarios for the assessment of nonstationary hydrological characteristics, including flood and drought.



Let's Talk About Water event

Last Call at the Oasis

The GIWS Student Outreach Committee is holding a free public film screening at the Roxy Theatre on April 18 to kick off Earth Day events.



Last Call at the Oasis examines the important role water plays in our lives, exposing the defects in the current system and depicts communities already struggling with its ill-effects.

A pre-movie reception is scheduled for 5:30 pm, with the movie starting at 6:30 pm. An expert panel will follow the screening, including Dr. Jay Famiglietti, who is featured in the film, as well as representation from other water stakeholders.

This event is funded by GIWS, the GIWS Student Outreach Committee, the School of Environment and Sustainability (SENS), the SENS Student Association (SENSSA) and the Toxicology Graduate Student Association. Funds raised will be matched by the coordinating agency, CUAHSI (Consortium of Universities for the Advancement of Hydrologic Science, Inc.).

World Water Day events

Paper and poster session

The Global Institute for Water Security, in partnership with the Canadian Water Resources Association (CWRA) and Engineers Without Borders, is proud to present a World Water Day paper and poster event on March 22. This year's theme, *Water Issues at Home and Abroad*, aims to raise awareness about how Saskatchewan is playing a vital role in addressing water issues with international applicability. The event will be held on the U of S campus in Physics 175 and is scheduled to start at 8:30 am.

A call for papers and posters has been sent to students, post-doctoral fellows and other young professionals whose research relates to water security. Presentations are to be approximately ten minutes in length, with an additional 5 minutes for questions and answers. Interested participants are invited to contact Anna Cole, Agriculture and Agri-Food Canada (anna.cole@agr.gc.ca) by Feb. 28. Please include a topic title, a description of your work, author information and whether you would like to do a paper, poster or both.

Public lecture by Howard Wheeler

Following the paper and poster session, there will be a public lecture by Howard Wheeler, GIWS director and Canada Excellence Research Chair in Water Security.

His lecture, titled *Water Security in the Prairies: Progress and Prospects for the Global Institute for Water Security*, will showcase the research highlights of the institute in its first two years and outline its plans for future interdisciplinary research at the global scale.

The event is scheduled to take place at 4 pm at Convocation Hall in the Peter MacKinnon Building on the U of S campus. A question-and-answer session will follow the lecture.

This public lecture is free and all are welcome to attend.

Upcoming events and important dates

Feb. 21-22: Marmot Creek Basin Workshop

Designed to celebrate the half-century of knowledge and technology derived from Marmot Creek, and to plan for future science in the basin. More information can be found on the Centre for Hydrology website: www.usask.ca/hydrology.

March 4: GIWS Distinguished Lecture

The GIWS Distinguished Lecture Series returns with a visit from Dr. Tony Jakeman, Director of the Integrated Catchment Assessment and Management (iCAM) Centre at Australian National University's Fenner School of Environment and Society. Further details will be posted on the GIWS website soon.

March 5: GIWS Lecture

Joseph Guillaume, PhD student with the National Centre for Groundwater Research and Training at Australian National University, will be speaking. Further details will be posted on the GIWS website soon.

March 18-21, 2013: CWN Conference

The Canadian Water Network (CWN) is hosting their annual conference in Ottawa. GIWS director Howard Wheeler will be part of a session on agriculture and food production on Tuesday, March 19. More information can be found on the CWN website: www.cwn-rce.ca/.

March 22, 2013: World Water Day

See Page 4 for GIWS World Water Day events.

April 18, 2013: Last Call at the Oasis screening

See Page 4 for more details about this event.

May 26-30, 2013

The Canadian Meteorological and Oceanographic Society (CMOS), Canadian Geophysical Union (CGU) and Canadian Water Resources Association (CWRA) are holding the 1st Joint Scientific Congress in Saskatoon this spring. More information can be found on the CMOS website: www.cmos.ca/congress2013/.

For up-to-date event listings and more information, we encourage you to visit www.usask.ca/water regularly.



Water News is produced and distributed triannually (spring, fall and winter) by the Global Institute for Water Security at the University of Saskatchewan.

Do you have a story, news item or event you'd like to see profiled in an upcoming issue? If so, please send your contribution to Lesley Porter, Communications Specialist for GIWS: lesley.porter@usask.ca.



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