

GREEN & WHITE

UNIVERSITY OF SASKATCHEWAN ■ ALUMNI MAGAZINE

FALL 2014

**WHY RAIN IN THE MOUNTAINS
MATTERS ON THE PRAIRIES**

**PEOPLE AND WATER:
A DYNAMIC RELATIONSHIP**

**PRESERVING SASKATCHEWAN'S
PRAIRIE JEWEL**

**PRAIRIE FLOODING:
PREPARING FOR THE UNPREDICTABLE**



**UNIVERSITY OF
SASKATCHEWAN**

contents

Fall 2014

- 02 **PRESIDENT'S MESSAGE**
- 03 **OPINION**
- 04 **REMEMBER WHEN**
- 05 **STUDENT SPOTLIGHT**
- 06 **FACULTY FOCUS**
- 08 **ON CAMPUS**
- 12 **WHY RAIN IN THE MOUNTAINS
MATTERS ON THE PRAIRIES**
✍ BEVERLY FAST
- 16 **WATER FACTS (INFOGRAPHIC)**
- 18 **PEOPLE AND WATER: A DYNAMIC
RELATIONSHIP**
✍ MERLE MASSIE
- 20 **PRESERVING SASKATCHEWAN'S
PRAIRIE JEWEL**
✍ ANDRÉA LEDDING
- 22 **PRAIRIE FLOODING: PREPARING FOR
THE UNPREDICTABLE**
✍ ASHLEIGH MATTERN
- 24 **ALUMNI ACHIEVEMENT AWARDS**
- 27 **ALUMNEWS**
- 28 **ALUMNI PROFILES**
- 30 **CLASS NOTES**
- 33 **IN MEMORIAM**

Marketplace

- 35 **SUPPORT U OF S WATER RESEARCH**
- 36 **U OF S SENATE NOMINATIONS**
- 37 **U OF S ALUMNI TRAVEL PROGRAM**
- 38 **2014-15 ANNUAL CAMPAIGN FOR STUDENTS**
- 39 **U OF S ALUMNI CARD**
- 39 **UNIVERSITY CLUB**
- 39 **INDUSTRIAL ALLIANCE INSURANCE
AND FINANCIAL SERVICES**
- 40 **TD INSURANCE MELOCHE MONNEX**
- 40 **U OF S BOOKSTORE**
- 41 **ESTATE PLANNING AT THE U OF S**
- BACK **BANK OF MONTREAL**

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Greetings my fellow alumni

It is my pleasure to address you as the interim president of the University of Saskatchewan. Over the years I have played many roles at the U of S—student, teacher, senior leader, alumnus—but I am extremely honoured to be serving the university in this capacity and look forward to the opportunities to make a difference at this institution to which we all are connected.

I was born and raised in Saskatchewan and have spent most of my professional life here as well. Throughout all my experiences I have seen the positive impact the U of S has on our community. I've observed, first-hand, the obvious agricultural impact; the entrepreneurs who are the economic lifeblood of so many communities, large and small; health care workers in every corner of the province; authors and artists who give life and colour to our collective culture; researchers, engineers and innovators who push the boundaries of what is possible; and other, seemingly countless possibilities and opportunities our education has afforded us.

Like most things in life, the university experiences times of prosperity and times of difficulty. As we commemorate those who served in battle during the Great War that started 100 years ago (see pg 11) we remember a difficult time for our university, city, province and country. We have endured the great depression, a second world war, droughts, floods and numerous recessions, and through it all, the people of Saskatchewan always band together and emerge stronger, more determined to not only overcome, but thrive.

Recent events on our own campus (see pg 8) may not match the scale of global crises, but that does not diminish the impact for us here and now. Events in one's own backyard are felt more intimately and can evoke many emotions, but thankfully we do not shy away from adversity in Saskatchewan. Much like the province with which we share a name, we will persevere. During my time as president, I will ensure that we continue to focus on our successes, continue

to grow as a top-notch academic institution, and continue to serve the people of Saskatchewan and the world by tackling those global issues that impact us most directly.

I am deeply invested in the University of Saskatchewan, and I know you, as alumni, are too. Whether you show it by speaking-out positively about the university, or you quietly let your professional, community and personal achievements be a testament to the value of your U of S education, I applaud all that you do. ■

Sincerely yours,

Gordon Barnhart, CM, SOM
(BA'67, PhD'98)

Interim President, University of Saskatchewan
uofs.president@usask.ca



Water research and the U of S: a natural fit

(L-R) Graham Strickert, research associate; Howard Wheeler; Dawn Keim (BSc'10, MSc'13), postdoctoral fellow; Jay Sagin, postdoctoral fellow.

DAVID STOBBE

HOWARD WHEELER

Howard Wheeler is the Canada Excellence Research Chair in Water Security and the director of the Global Institute for Water Security at the U of S. For more information on the institute, its people and its research, visit usask.ca/water.

When I first made the decision to join the University of Saskatchewan as the Canada Excellence Research Chair in Water Security back in 2010 and leave my post at Imperial College London, I was often asked “Why now?”, “Why Saskatchewan?”, and “What opportunities will this bring?”

The answers were simple. The timing? Apt. The location? Prime. And, the opportunities? Countless.

The timing

Water security—the sustainable use and protection of water resources and protection against water-related hazards such as flooding and drought—is one of the most pressing issues of our time.

Canada, and Saskatchewan, are not immune from this global issue. In recent history, floods in Alberta, Saskatchewan and Manitoba have caused loss of life and large economic damage. Drought also remains a major risk, and there are challenges to manage water quality in our rivers and lakes.

Saskatchewan's growing population and economy need solid research to inform decisions now. We need to be able to better understand, predict and plan for an uncertain future, manage the risks of flood and drought, support economic development and protect our environment, all in a warming world.

The location

At the U of S, excellence in water research runs deep. Our commitment to establishing and developing strong research and training programs in hydrology and toxicology—and recruiting top experts—stretches back over four decades. We have over 120 researchers specializing in water under the umbrella of the Global Institute for Water Security. When combined with the expertise found in Environment Canada's National Hydrology Research Centre, where our institute is co-located, the U of S has among the world's highest concentration of water experts.

Saskatchewan is a prime location for this research concentration. The province has one of the most extreme and variable climates in the world, and with its globally-important agriculture and natural resource industries, is well situated for research into the impacts of climate and environmental change on water resources. A major focus of our institute is the Saskatchewan River Basin—a watershed half the size of France that stretches from the Rocky Mountains in Alberta, north to the boreal forest, and through the Prairies into Manitoba. Strong collaboration with the province and its Water Security Agency ensures we focus on issues of practical importance. Many water challenges experienced around the world play out within the basin, making research conducted here globally applicable.

The opportunities

The U of S has become a hub for international water expertise. We have established strong research themes focusing on climate change and water security, water quality issues and land management, socio-hydrology, and the sustainable development of natural resources and their impact on the water environment. The knowledge we have accumulated has allowed us to expand our scope to include water and health, groundwater and hydrogeology, and water and wastewater treatment technologies. We have connected our programs to prominent international networks to strengthen our work and collaboration and link our data and findings with those discovered globally.

Water is life. The U of S is committed to providing policy makers with the best information possible to lead decisions that affect our watersheds. This will help ensure clean water flows through our lakes, rivers and streams, that growth and economic development are managed sustainably and our communities are protected from the risks of flood and drought. As we continue our focus on research that helps the world manage, use and safeguard water resources, I am excited by the future prospects and can't help but be pleased with my decision to make Saskatchewan my new home. ■



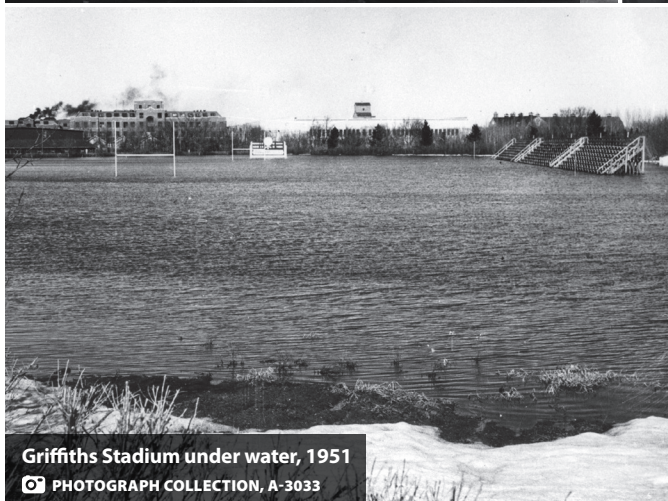
Rescuing filing cabinets in a flooded Hangar Building, 1951

PHOTOGRAPH COLLECTION, A-3057 (STAR PHOENIX PHOTO)



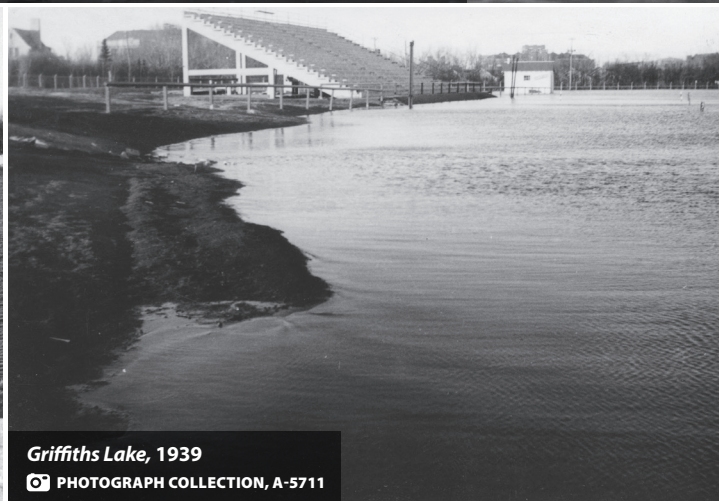
Flooded hallway in the Hangar Building, 1951

PHOTOGRAPH COLLECTION, A-3055 (STAR PHOENIX PHOTO)



Griffiths Stadium under water, 1951

PHOTOGRAPH COLLECTION, A-3033



Griffiths Lake, 1939

PHOTOGRAPH COLLECTION, A-5711

Water, water everywhere

TIM HUTCHINSON AND PATRICK HAYES (BA'80, MA'89)
UNIVERSITY ARCHIVES AND SPECIAL COLLECTIONS

Griffiths Stadium was built at its original location at College Drive and Cumberland Avenue in 1936. As early as 1939, it was under water, as captured in the photograph “Griffiths Lake.”

It appears Griffiths Stadium’s flooding problems have much earlier roots. In 1911, a City of Saskatoon referendum choose the corner of College and Cumberland as the site of a new city hospital. The site was excavated, but the funds allocated proved insufficient, and eventually the project was abandoned. Remarkably, the excavated hole—which had become a flooded pit—remained open until 1932, when an eight-year-old boy tragically drowned.

The stadium was inundated with water again in the spring of 1951, and that certainly wasn’t the last flood. “Track Meet Cancelled Due to

Flood,” proclaimed a *Saskatoon StarPhoenix* headline in 1963. An expanded Griffiths Stadium was constructed a few hundred metres east of the original location in 1967. More recently, the nearby Field House suffered some flooding issues.

The 1951 flood no doubt affected many buildings on campus, including the Hangar Building. It’s unclear if that was the first flood in the Hangar Building—though one has to wonder where the canoe came from—but it definitely wasn’t the last. According to an online scrapbook gathered for the College of Arts and Science’s centennial (alumni.usask.ca/hangarbuilding), the building “was susceptible to flooding every spring and during heavy rains.” Drama Professor Dwayne Brenna (BA’77, MA’83) recalled a memorable flood in 1986 in which he lost his lecture notes—and his hockey equipment.

About the Hangar Building

Originally constructed as an air force training facility during World War II and moved to campus in 1947, the Hangar Building was intended to be a “temporary” teaching space for the Department of Household Science. The College of Commerce moved in soon after. As early as 1951, though, the dean of commerce was beginning to worry that his college’s residence wasn’t going to be that temporary. He wrote to the president, “Even before the flood, the approaches and the interior of the building presented a very shabby appearance. These conditions were endured as long as the college had some hope of moving shortly to permanent quarters. However, as the years have passed, the fear has arisen that this temporary condition is becoming a permanent one.” Indeed, a commerce building wouldn’t be completed for another 16 years, allowing the Department of Drama to move into the Hangar Building in 1967. This “temporary” building was demolished in 1994. ■



Water worlds

✍ DEE HOBSBAWN-SMITH

I'm a tropical guy, not a desert guy," Jaivime Evaristo said from Arizona during a recent phone conversation. The U of S PhD candidate's current location is hardly tropical, but Evaristo has sequestered himself with several other scientists in a basement beneath an imported tropical rainforest shielded by the vast glass pyramid of Biosphere 2, amid the humid breath generated by nearly one hundred species of Amazonian plants. The team is there to examine stable isotopes of water, used as "tracers" to indicate where water comes from, how long it resides in a catchment (regional watershed) system, and the kind of water plants are using.

A 2010 paper published by Evaristo's supervisor, Jeffrey McDonnell, professor and associate director of the Global Institute for Water Security at the U of S, challenged the current mode of thinking about how water gathers beneath the earth's surface, a topic dear to the hearts of civic planners and watershed managers who rely on models to make sense of the physical world. Evaristo explained: "The previous view assumed that beneath the soil surface of each catchment area lies one huge tank where all water meets, infiltrates deep into the soil, recharges the water table and becomes the groundwater. At

some point, it ends up in streams."

That is not what Evaristo, McDonnell and their team have observed—in cloud forests in Mexico, in Arizona's glassed-in rainforest, in Puerto Rico and in Oregon. By studying stable water isotopes, Evaristo and his colleagues are learning that water that ends up in streams is different from water used by plants, most likely as a result of plant-based transpiration and photosynthesis. "We call it ecohydrological separation, a separation between plant water and ground water. Two water worlds—one related to plants, another related to stream flow generation and ground water recharge."

Seeing and understanding the relevance of scientific research to everyday life is not always an automatic process. "A grandmother should care in her lifespan because this [change in viewpoint] has implications for contaminant transport," Evaristo said. "Her grandkids should care because this may have to do with the relevance of climate models."

These global-scale models, used by NASA and universities, are informed by smaller-scale land-surface models that attempt to replicate the oceans, terrestrial parts and the atmosphere. He

explained that land surface models are driven by the same assumptions of one large water reservoir. "In the scientific community, the consensus is that climate change is real, driven by humans and naturally as well. It's not really a question of if the earth will survive, but if we will. That could increase uncertainty in model predictions that are meant to represent the real world. We have to have an understanding of how the world works that is representative of the real world. That we can only assess using water isotopes.

"My mission is to show myself that what we have found in Oregon, Arizona, Mexico and Puerto Rico is something that is ubiquitous in nature," Evaristo said. He has organized the scientific equivalent of crowd-sourcing, relying on pre-existing scientific sites in diverse parts of the tropical world to determine if the two-water-worlds theory is related to soil or place, or if it is more fundamental, not to do with tropics, but simply occurring in nature. "That can have immense implications on models that drive our understanding of water resources and contaminant transport from mines, a leak, or a contaminant released. We don't want that to end up in city water sources." ■



Real-time data helps provide real good drinking water

(L-R) Jeff Sereda, BSc'06, PhD'11 (Water Security Agency); Shawn Ternan (Hoskin Scientific); Helen Baulch (U of S); Jay Bauer, BSc'14 (U of S); Mike Voellmecke (Fondriest Environmental); (front) Tyler Boa (U of R).

JOHN-MARK DAVIES, BSc'92 (WATER SECURITY AGENCY)

Learn more online.

alumni.usask.ca/baulch

DERRICK KUNZ

The instruction was clear growing up. Don't swim in the lake! Urban legends abounded about the tragedy that would befall those who swam in or drank the water directly from Buffalo Pound Lake, located about half-an-hour's drive north of Moose Jaw, Sask. So we avoided the smelly, weedy lake and spent most of our time in the provincial park's circular pool. Despite the stories, people still cooked their morning catch for dinner and somehow survived to tell their fishing tales.

It seemed like a modern wonder that the water treatment plant was—and still is—able to take water from the lake and deliver clear, clean drinking water to a quarter of the province's people.

Providing quality water more efficiently has motivated Helen Baulch, assistant professor at the University of Saskatchewan's School of Environment and Sustainability and the Global Institute for Water Security, to lead the first project of its kind in Western Canada, deploying an observation buoy on Buffalo Pound Lake.

Originally from Toronto, Ont., Baulch comes by her interest in water naturally, having spent her summers on Lake Huron. She earned

an undergraduate degree in biology from the University of Waterloo, her masters from the University of Alberta and a PhD from Trent University. The opportunity to work with the water institute attracted Baulch to the U of S. "I like the fact we work as a group on water related issues and address complex problems as a team."

The team for this project includes fellow U of S researchers John Giesy, Paul Jones, Karsten Liber and Karl-Erich Lindenschmidt, Peter Leavitt from the University of Regina, and staff from the Buffalo Pound Water Treatment Plant and the Saskatchewan Water Security Agency. Baulch said, "We have the tools and technology, and they have decades of data. There is a lot of research we can do to better understand the lake and its water quality."

In June, the research buoy was anchored in the lake. Its weather station measures temperature, light and wind speed, while below the surface, a series of sensors measure oxygen, carbon dioxide, chlorophyll and pH levels, water temperature, and light penetration. "Every two hours, the station 'calls' in and updates a website with data," explained Baulch.

"Prairie lakes tend to be naturally nutrient

rich. Warm temperatures and ample nutrients increase algal activity, and some species have negative effects on taste and odor." Blooms of cyanobacteria, or blue-green algae, give the water a murky, greenish hue and are one of the main culprits behind the unpleasant taste and smell. Baulch explained that the treatment plant does a very good job of filtering and treating water before it reaches the faucet. Now staff at the treatment plant "can see what's happening in the lake so they can adapt and change" plant operations, allowing them to use treatment processes and chemicals more efficiently, ultimately saving money.

The buoy will be removed from the lake in the fall and return at least the next two springs. "We're already talking about continuing past the three years planned for the project." With additional funding, it's possible for buoys to show up in other lakes in the future. Cautiously optimistic, Baulch said, "Understanding changing lake conditions is important to people on the Prairies, but first, let's see how the next three years go."

As for those stories about the lake, like any urban legend there may be some truth to them, but there's an entire generation of us that did go in the lake, and I'm still here to write about it. ■



Balancing Act

✍ DERRICK KUNZ

Markus Hecker paints contrasting views of water he experienced as a young boy. One was watching Jacques Cousteau explore the uncharted depths of the ocean—an underwater world yet unseen by human eyes. The other of the Elbe and Rhine rivers being so polluted from Cold War-era industrialization that they were unsafe for residents to touch.

The latter abruptly interrupted the mystical images of the former with the harsh reality that our water is very susceptible to human abuses. Both piqued Hecker's curiosity to understand the delicate balance between using water for our benefit and reducing impact on the environment and ecosystems.

Now a Canada Research Chair with joint appointments at the U of S School of Environment and Sustainability and the Toxicology Centre, Hecker is studying what human society is releasing into water and its impact on the aquatic ecosystem and human health. "In the 1980s and 90s we obtained a pretty good understanding of the risks posed by metals and certain industrial chemicals in water and how to deal with them," said Hecker. "But there is an ever increasing number of so-called emerging contaminants that we have very limited or no information on with regard to their toxic properties, and we need to

better understand what their impact is on the quality of water for animals and humans.

"For a municipal water treatment plant, there's a potpourri: pharmaceuticals, personal care products, hormones like estrogens from birth control pills, BPA from water bottles and plastic containers—most of that ends up in our wastewater," explained Hecker. "Treatment plants, even really sophisticated ones, aren't designed to take most of these chemicals out."

We do not understand the extent or ramifications of pollution in our Canadian waterways yet, but Hecker used the feminization of male fish from elevated estrogen levels in some European waterways as a precautionary example. "In some streams we are seeing massive feminization, or demasculinization, of male fish downstream of wastewater treatment plants. What effect does that have on the fish populations?" Or on the entire ecosystem? Or people who drink the water and eat the fish?

Hecker's research seeks to find out which of the tens-of-thousands of chemicals that are currently in use end up in our water, at what concentration they are present, which ones are harmful or beneficial, if they naturally break down and at what rate, and what they do to the ecosystem and human health.

"We need to better understand the risks and balance them against what is safe," said Hecker, highlighting the fact that eliminating all chemicals in modern society is not feasible.

The U of S Aquatic Toxicology Research Facility—the only one of its kind in Canada—helps Hecker gain that much needed understanding. The self-sufficient facility can house almost any type of fish, including endangered and native species like sturgeon, pike and whitefish, and allows researchers to control experimental water conditions—such as temperature, pH levels and concentration of various chemicals—to solve real-world problems.

Hecker said that we still have a lot to learn in understanding and mitigating risks to our water. As an academic researcher, he is in a position to work with both industry and government to find the balance between progress and policy. And he is training the next generation of researchers who will continue to make a difference.

"We derive great benefits from chemistry, but we have to take care to not negatively impact wildlife and people. There is still a lot that we don't know."

Like Cousteau, Hecker is exploring uncharted territory to help us understand, and be good stewards of, our water. ■



EXECUTIVE DIRECTOR'S CONTROVERSIAL DISMISSAL TRIGGERS LEADERSHIP CHANGES

Editor's Note: Just as the spring issue of the Green & White was at the printers, many of you received a series of emails from the alumni office about changes in leadership at the U of S. Much has been written at the U of S, by media outlets and on social media about the events. Here is some context and a brief recap of what happened, as reported in On Campus News and on news.usask.ca.

For about two years now, the University of Saskatchewan has been trimming budgets to avoid a projected deficit. Instead of across-the-board cuts, the entire university participated in a process to prioritize activities, both academic and non-academic, to align budget cuts with strategic priorities at the university—a process called TransformUS. Visit transformus.usask.ca for details.

A series of projects to move plans forward were announced, and Robert Buckingham, executive director at the university's School of Public

Health, publicly expressed his disagreement with decisions regarding the school on May 13, distributing a letter and confidential documents to the official opposition of the Legislative Assembly and local media outlets.

Senior university leaders—including Brett Fairbairn (BA'81), provost and vice-president academic, and Ilene Busch-Vishniac, president—decided to dismiss Buckingham for breach of contract.

Buckingham released his dismissal letter to the media, causing public outcry over the decision to revoke his tenure, which he would have had access to after his term as executive director ended later in the summer of 2014. Claims that academic freedom was under attack at the U of S became a rallying cry, and calls for accountability quickly intensified.

The next day, May 15, Busch-Vishniac reversed the decision to remove Buckingham's tenure (he was not restored to his role as executive director) and assured everyone that academic freedom was "sacrosanct" at the U of S.

Opposition to Buckingham's dismissal, and the scale and scope of changes in general, gained momentum, and an emergency meeting of the

U of S Board of Governors was called for May 19. Prior to the meeting, Fairbairn resigned from his position as provost. He will retain his academic position as a history professor and has subsequently accepted a position at the Johnson-Shoyama Graduate School of Public Policy at the U of S.

On May 21, Susan Milburn (BComm'78, MBA'80), chair of the Board of Governors, announced the dismissal of Busch-Vishniac without cause; she will retain her tenure as a professor in the College of Engineering, as stipulated in her employment contract. Milburn also announced the Honourable Gordon Barnhart (BA'67, PhD'98) as interim president.

Barnhart anticipates serving in the role for 12 – 18 months, the time it is expected to take to find the next president. Barnhart's focus will be to move the university forward. (see Progress on pg 9).

Ernie Barber was appointed interim provost and vice-president academic, a position he held once before in 2007-08. Finding a permanent replacement is expected to take place after a new president is in place, allowing the president to weigh-in who will join the senior leadership team. ■

For more information on these and other U of S news stories, visit news.usask.ca



Interim President Gordon Barnhart (BA'67, PhD'98) informs the campus community of the recommitment to mission at the U of S

PROGRESS ALLOWS UNIVERSITY TO RE-FOCUS ON MISSION

After taking the summer months to evaluate the financial situation and consult with members of the campus community, including students, faculty, staff, alumni and donors, Interim President Gordon Barnhart and Interim Provost Ernie Barber announced the university will replace TransformUS with a smaller set of projects that make sense for the university to pursue and advance its mission.

Actions taken have put the university on much more stable financial ground. Cost-cutting measures have resulted in \$25 million in permanent operating savings. Additionally, ongoing investment revenues have increased by approximately \$7 million per year as a result of policy changes and the return to more historically normal investment returns. A projected \$3 million and \$7 million deficit, this year and next year respectively, will be addressed through prudent spending and reasonable decision making.

Putting \$3 million dollars into perspective, Barnhart compared the savings needed to making a \$100 household purchase and being 60 cents short.



Barnhart summarized the recommitment to the university's mission in four main areas:

- the academic and administrative leadership of the U of S is determined to pursue a change agenda aimed at strengthening our place among Canada's top 15 research-intensive universities;
- while we know that we are, in many ways, an excellent university in a world-class environment, there are also many ways in which we are not all that we would like to be;
- achieving our institutional goals requires on-going prioritization and examination of all that we do to ensure that our resources are aligned with our academic priorities; and
- having come through a challenging and difficult year, we believe that it is important that our students, faculty, staff and external communities be offered clear proof of our commitment to delivering the best experience and outcomes for all our stakeholders in both education and research.

Barber noted that, upon reflection, TransformUS tried to do too much in a time that was too short, and it allowed the urgent to outweigh the important. He also acknowledged the work done to evaluate programs will continue to be very valuable resources to help guide decisions.

Priority actions, linked directly to the university's mission of teaching and research, were created in consultation with the campus community, including senior administrators, deans, executive directors and unit heads. Barber emphasized that decisions are not made or finalized, but a first step in ongoing consultations.

Priority actions are:

- speed up the delivery on our commitment to Aboriginal achievement, including a representative workforce, student success and research;
- continue the restructuring of the College of Medicine, including finding a new financial model for its support and improving both research activity and student outcomes;
- deliver on the promise of inter-professional health education and inter-disciplinary health research;
- continue plans to reorganize graduate studies and strengthen support for graduate students;
- continue the ongoing transformation of our library collections, facilities, capital and services;
- continue re-organization and revitalization of centrally organized teaching and learning activities and functions, including the Centre for Continuing and Distance Education, Media Access and Production (eMAP) and the University Learning Centre;
- focus on the creation of inter-disciplinary and cross-college academic programming that has been deemed important to our university;
- align our administrative services to support and facilitate our academic mission is a priority; and
- re-evaluate proposed mergers or amalgamations of academic units before any action is taken.

In addition to these priorities, the deans, executive directors and administrative heads will use the work undertaken in the past year to make internal changes to college and school programming and to administration, consistent with the university's mission. ■



CAMPUS CONSTRUCTION UPDATE

Aerial view of the Gordon Oakes – Red Bear Student Centre in August.

■ GREG PENDER, THE STARPHOENIX

The Gordon Oakes – Red Bear Student Centre is taking shape. The structural steel for the roof was completed in early June, and the steel supports are in place for the application of the Tyndall stone exterior, which has begun. Mechanical equipment continues to be installed in the basement, and electrical work is underway. Construction is slightly behind schedule with the project completion now expected to be early 2015.

P.R. Hotels Ltd. is completing hotel construction drawings and seeking approvals and permits. Construction on the site located between College Drive and Griffiths Stadium is expected to start in early 2015.

A request for proposals for an **ice facility and arena** in College Quarter, near the Saskatoon Field House, closed July 14, 2014. The university is performing due diligence on the proposals

and conducting interviews with proponents to determine the feasibility of proceeding.

Health Sciences D and E Wings are fully occupied and in use including the parkade, Health Sciences bookstore, Tim Hortons and the library. Renovations to B Wing continue, and A Wing renovations will commence following the completion of B Wing.

What we now refer to as A Wing is the original Health Sciences Building constructed in 1948. The building was expanded in the 1970s and 1980s with the addition of the B and C Wings respectively. ■



MILBURN WILL NOT SEEK RE-ELECTION TO BOARD

University of Saskatchewan Board of Governors Chair Susan Milburn (BComm'78, MBA'80) will not seek re-election to the Board of Governors in October. Having served as one of two Senate representatives for eight years, she will respect the spirit of the updated *University of Saskatchewan Act* that limits terms of U of S Senate representatives on the board to nine years.

Milburn, who is vice-president of Raymond James Ltd. in Saskatoon, was elected Senate representative to the board in 2006 and has been chair since spring 2013.

The U of S Senate will elect a new representative in October. ■

For more
information on
these and other
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stories, visit
news.usask.ca

GREAT WAR COMMEMORATION REMEMBERS THOSE WHO SERVED



A plaque honouring 18 individuals whose names were missing from existing war memorials in the Peter MacKinnon Building was revealed Aug. 7, along with a second plaque explaining the details. Pictured are (l-r) Interim President Gordon Barnhart (BA'67, PhD'98) and members of the Great War Commemoration Committee Eric Story (U of S student) and Chancellor Emerita Vera Pezer (BA'63, MA'64, PhD'77).

It was a global war that saw the end of the three of Europe's great empires. It was also a war that had a great and lasting impact on the University of Saskatchewan. Through the use of published and unpublished resources in the University Archives and Special Collections, the University of Saskatchewan Great War Commemoration Committee will tell stories of both a global and local nature.

Professor Emeritus Bill Waiser (MA'76, PhD'83, DLet'10), chairs the committee that is organizing events over the next four years to remember those who served in two thematic areas—the university and Saskatoon at war, and the war at the university and in Saskatoon.

U of S alumni and friends are encouraged to help tell the university's story by providing material, photographs and memorabilia in hope that the presentation of one-of-a-kind and rare material will advance research into and knowledge of the Great War.

Details are available at greatwar.usask.ca.



New "old" seats

Replica seats are replacing the 1924 originals in The Henry Taube Lecture Theatre, commonly known as the airplane room, in the Thorvaldson Building.

Why rain in the mountains matters on the Prairies

John Pomeroy, Canada Research Chair in Water Resources and Climate Change and director of the U of S Centre for Hydrology, is hoping his research leads to better flood prediction.

 BEVERLY FAST

 TERRY ALLINGTON



June 18, 2013: it was already raining hard at Marmot Creek, Alta. when John Pomeroy (BSc'83, PhD'88) decided to call it a day. He told his team of 15 U of S researchers spread out across Alberta's Kananaskis and Canmore areas to get inside and stay safe.

Pomeroy is one of Canada's leading hydrology experts. He studies how snow accumulates, how it is moved around by wind, how it is trapped in forests, how it melts, how rain and snow infiltrate into frozen soil, how water evaporates, and the impact on runoff and streamflow.

Looking at the rain pouring down on Marmot Creek, one of his six western Canadian research basins, he knew downstream flooding was inevitable.

"It had been a cold spring, and the upper areas of the basin were still covered by snow. In some

places, the snow pack was several metres deep. The warm rain on cold snow led to rapid snow melt and a rain-on-snow melt flood—something no one could remember happening in their lifetime," he said.

The flood came fast and furious, reaching the town of High River early on June 20. By mid-afternoon, flooding was widespread; 150 people had to be rescued from rooftops, and a full evacuation was ordered—all 13,000 residents had to leave. Similar scenes were playing out across southern Alberta.

Within days, it was clear the province had suffered a major natural disaster—the worst in its history. Could earlier warnings have mitigated the losses? Pomeroy believes so, and his research continues to build a foundation for better predictive modelling and forecasting tools. ►

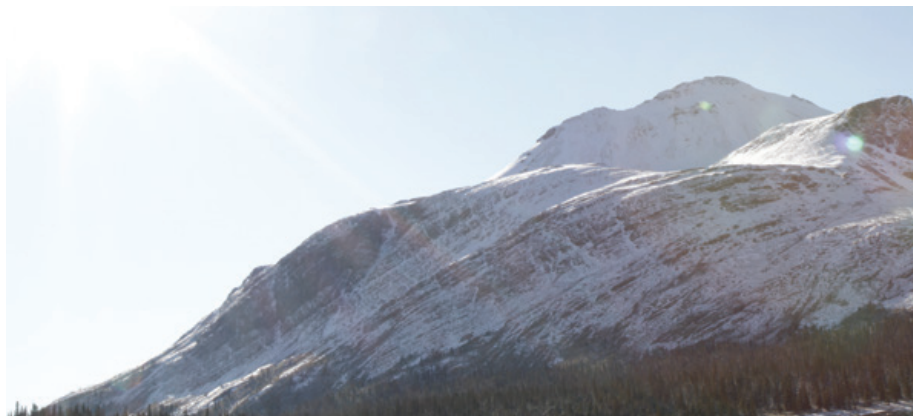




Pomeroy's Marmot Creek research site is at the headwaters of the Bow River, which is also the headwater basin of the South Saskatchewan River, the province's largest single source of water for drinking, agriculture and industrial uses. Ninety-nine per cent of the South Saskatchewan's flow comes out of Alberta, and 80 per cent of that comes from runoff from the Rockies, which is mostly snowmelt water. This means that what happens high up on the slopes of the Rocky Mountains directly impacts all of us hundreds of kilometres away on the prairie.

Pomeroy's interest in hydrology began as an undergraduate in the U of S Department of Geography, where he routinely canvassed faculty looking for research opportunities. "I worked on several different studies, but one I remember in particular was the baseline study of river resources for the Meewasin Valley Authority, which was just getting started."

The project, along with the university's stellar reputation in hydrology research, influenced Pomeroy to choose the field for graduate studies. He was co-supervised by two of the field's most respected researchers, Professors Don Gray and David Male (PhD'67) in the Division of Hydrology. In 1988, Pomeroy earned a PhD in agricultural engineering on the basis of his thesis, *Wind Transport of Snow*. "I studied how much of the snow that fell on summer fallow fields would blow away and how much would sublime (transfer back into air). It was important to show farmers that they were losing almost a third of



their annual snowfall to sublimation, and how leaving tall stubble would let them hold most of their snow pack in place, so the snow was available as moisture in spring."

After his PhD, Pomeroy spent a year researching blowing snow storms and acid snow in the Scottish Highlands as part of a NATO science fellowship, did a short stint with the US Forest Service and then returned home to continue his research at the National Hydrology Research Institute. In 2000, he was recruited by the University of Wales. He might have stayed but for a telephone call, out of the blue, from MP Peter Adams, chair of the federal Government Caucus on Post Secondary Education and Research. "He said the federal government had established the Canada Research Chair program especially to bring guys like me back home, so why hadn't I applied? I didn't even know about it," Pomeroy said.

Soon after, he was contacted about a research chair in the U of S Department of Geography. In August of 2003, Pomeroy returned home as a Tier 1 Canada Research Chair (CRC) and set about establishing the Centre for Hydrology.

Developing a cold region hydrological model

Pomeroy's CRC research focuses on the hydrological interactions between landscape and atmosphere, particularly the physical processes governing snow-cover. Rain-on-snow events, while just one aspect of his work, are of particular importance in flood prediction. "It's critical that we understand because the rain-on-snow event was something we hadn't seen before in the Canadian Rockies, and it really enhanced the size of the June 2013 flood," he said.

While his work includes developing better predictive modelling, Pomeroy said he didn't start off as a hydrologic modeler. "In the 1990s, I was frustrated with the available models because they seemed incapable of predicting the type of floods we had on the Prairies, which tended to be due to snow melt over frozen soils. Existing models weren't good at predicting where snow

accumulated and couldn't deal with frozen ground—the whole reason we get spring run-off is that snow melt doesn't enter frozen soil very readily."

Pomeroy's work led to development of the Cold Regions Hydrological Model (CRHM), a software platform for building physically based hydrological models over small- to medium-sized basins. CRHM will model blowing snow, snow interception in forest canopies, sublimation, snowmelt, infiltration into frozen soils, hillslope water movement over permafrost and more. It's proving an effective tool for simulating the cold region hydrological cycle for prairies, boreal forest, Arctic and sub-Arctic regions, and mountains.

Adapting to a changing climate

It's standard terminology: the 1-in-100-year flood. The term expresses probability, but a common interpretation among the general public is that such an event happens once every 100 years. We've just had the flood of a lifetime (or drought, snow storm, etc.), so we're safe for a while, right?

In fact, a 1-in-100 year event has a one per cent probability of occurring every year—the probability is even higher after a big event. Given a changing climate (according to Pomeroy, average temperatures in the Kananaskis region are 2.5 to 3 degrees warmer than in the 1960s), historic measurements are no longer a dependable means of predicting future floods.

While Pomeroy continues to advocate for more monitoring on more mountain streams, he also continues his research to better understand, describe and model the hydrological cycle and its underlying processes on the prairies, forests and mountains of Western Canada. Better modelling can lead to better flood forecasting tools. Given the changing climate in Canada's Rocky Mountains, we're going to need them. ■

Learn more online.
 ■ alumni.usask.ca/pomeroy

Adding up the human cost

The official estimate of the cost of the June 2013 flood is \$5 billion.

Pomeroy thinks the actual total will be nearer \$10 billion.

Behind the dollar signs are the human lives. The flood forced 100,000 Albertans from their homes, including the entire population of High River.

Some returned home to minimal damage, others lost their homes, and four residents lost their lives.



Robert Delanoy (BComm'73), a High River resident since 1976, was one of the lucky ones. "On the morning of June 20, I heard the radio news say there was a risk of flooding; 2005 levels were expected. I was not too worried. In 2005, my sump pump did not even come on. So if that was all that was coming, no big deal."

"At about 7:30 am, I looked out our upstairs window. All of a sudden, I could see water rolling down Baker Creek, an overflow creek that runs down our back yard. I thought, no, this does not look like 2005!"

Delanoy set up extra sump pumps and generators. "A dyke had been built around our area to protect us from a 1-in-100 flood. By 2:00 pm, the flood topped our dykes. From my son's cell phone communications, we knew the town was under a huge emergency, the downtown was flooded, and boats and combines were being used to rescue people."

Damage to his home was minimal: two feet of sewer back up. Fixable, and yet the Delanoy's will still lose their home. Beachwood Estates is located in a floodway and is one of the areas targeted by a provincial government buy-out plan. "There were 31 houses in our neighbourhood. Five or six homeowners jumped at the opportunity and were gone—lost to our community. Over the past year, more have taken the buy-out. We wanted to stay, but at some point it's really not up to you. We're taking the buy-out and we'll need to move out within the next year."

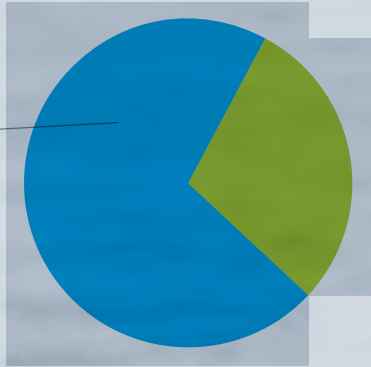
High River resident Tom Dutton (BAPE'70) has also lived through previous floods. "The 2005 flood was bad enough, but I've never seen anything like this. We were evacuated from our street in the bucket of a hayloader. At first, I laughed because it didn't seem that bad to me. Then about a block and a half away, a street that was normally just a street became a raging torrent. Seeing vehicles floating down the street while I'm riding in the bucket of a hayloader, that's an experience I won't forget—one I don't need to repeat, either."

Dutton and his wife, Lynne, spent 10 nervous days in Calgary before they were able to return home. While their home endured flooding from the sewer back up, the visible damage to their community was traumatic. "There were mounds of debris on lawns all over town," Dutton said. "There are still parts of town where businesses are boarded up and lots of empty lots where a year ago there was a house."

Despite the cost to themselves and their town, Dutton and Delanoy both say the kindness of strangers was overwhelming. "It was just huge," Delanoy said. "Everyone here was stressed out, played out and needed outside help, badly—and we got it. We will never be able to thank them enough." ■

We have the same amount of water today as we did when the Earth was formed billions of years ago.

Water covers **71%** of the Earth's surface.



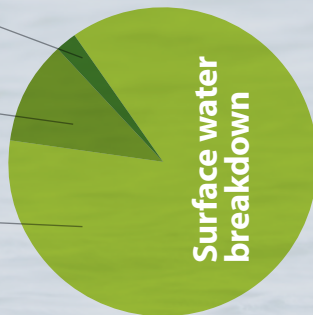
97%

of it is saline water mostly found in oceans and the other **3%** is fresh water, which is available in icecaps and glaciers (68.7%), ground water (30.1%) and surface water (0.3%).

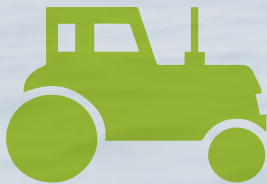
Rivers **2%**

Swamps **11%**

Lakes **87%**



Globally, **70%** of our water is used for **agriculture and irrigation**, and only **10%** for domestic use.



The five Great Lakes bordering the United States and Canada contain about **20%** of the world's available fresh water.



1 in 8 people worldwide, **about 884 million**,

do not have access to safe, clean drinking water.

37%

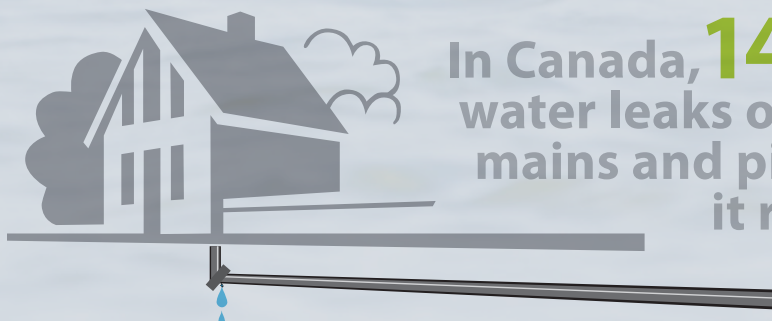
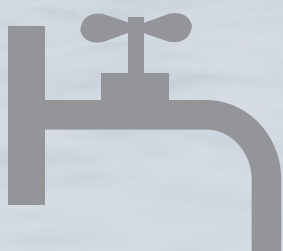
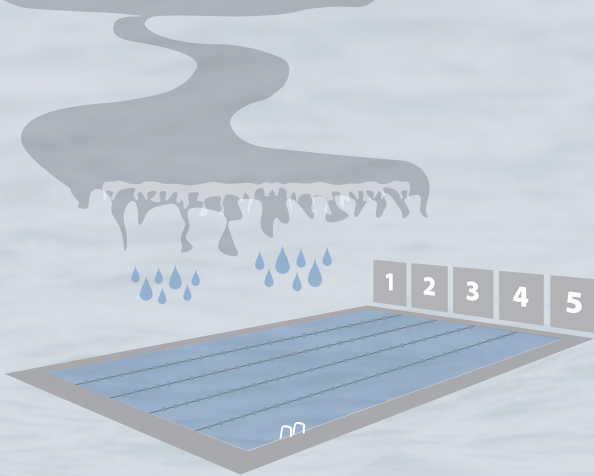
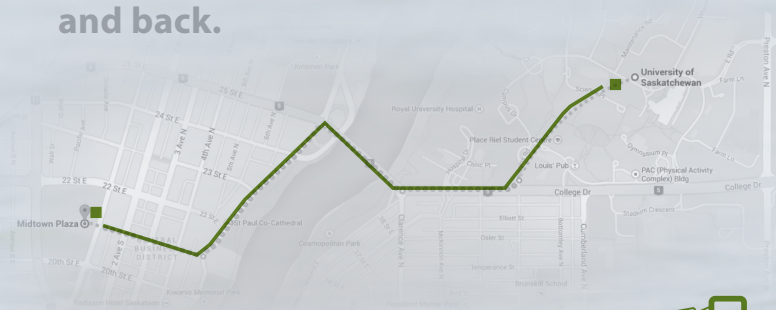
of those people

live in Sub-Saharan Africa.



The average distance that women in Africa and Asia walk to collect water is **6 kilometers**, which is about the same distance from the University of Saskatchewan to the Midtown Plaza in downtown Saskatoon and back.

The average South Saskatchewan River flow through the City of Saskatoon is 12,100,000 m³/day (12.10 billion litres/day), enough to fill 4,800 Olympic-sized swimming pools.



Water is the main ingredient in other beverages, and it takes water to process them.



It takes 6,800 litres
of water to make one
= = barrel of beer.



People and water: a dynamic relationship

 MERLE MASSIE

The boat braided a froth wake as it coursed through the intertwining channels of the Saskatchewan River delta. One of the largest freshwater deltas in North America, it sits at the exit point of the Saskatchewan River, straddling Saskatchewan and Manitoba.

Our local guide and delta champion, Gary Carrière, offered running commentary—a blend of history, ecology, politics, hydrology and memory. Here, he pointed, is a good fishing spot, where the lake and the river bleed into each other. There is Steamboat Channel. Hudson Bay Company steamboats used to chug up and down the Saskatchewan River between Edmonton and The Pas.

Not even a canoe can get through that channel now. Change is a constant in the delta—some natural, some as a result of human decisions. Carrière, and the delta, know both.

The passion, energy, and knowledge of locals like Carrière drives a new research direction at the University of Saskatchewan's Global Institute for Water Security (GIWS)—socio-hydrology. While water research can, and often has, focused on the more traditional water sciences of climate, hydrology, toxicology and ecology, something is missing.

Graham Strickert, research associate at GIWS, explained, "It's really about trying to incorporate humans as a part of how water flows through systems.

"More than ever, humans have significant control." We use water for municipal, agricultural and industrial purposes, and manipulate environmental flow. "We have to understand the different drivers, to see what influences how and why we manage water the way we do.

"If we can understand that, we can understand better how the physical hydrology works." Connecting science with society is how Strickert and the U of S water team define socio-hydrology.

"If we only look at the physical hydrology, we only understand part of the system."

While water science remains central, socio-hydrology aims to find the values and attitudes that underpin different decisions. How do people use water? What are the values and hard lines that people draw around water? When does the science feed into policy and politics—and what else needs to be considered? Who is making the decisions, and what are decision-makers considering? When do people upstream think about the people downstream—or do they? Where do water security, sustainability and the economy intersect?

Lori Bradford, a socio-hydrology research associate with the university's School of Public Health, expands the research in a new direction: time.


"The values and attitudes of one generation help to feed into the next generation, and teach them the drivers, of how they're going to use water in the system," she said. Socio-hydrology is intergenerational.

Yet, sequencing water values through generations does not mean they are the same. "We're already seeing that the next generation is different." The next generation's values around water security and prioritizing water use points to future change, something that socio-hydrology aims to track.

Bradford also identified a major challenge around water security: communication. "Because we all have different values and attitudes, it's



Solomon Carrière, hunting outfitter, takes U of S researchers out on the water in April 2014.

 JAY SAGIN

Learn more online.

 Watch the *Downstream* trailer at alumni.usask.ca/downstream

often hard to come to a bargaining table and make decisions about water, and to be able to put yourself in somebody else's shoes.

"If we, as socio-hydrologists, can come up with different ways to help with that communication, then that should help us make better decisions."

One socio-hydrology project was the live drama *Downstream*, which toured Western Canada in the spring of 2014. Using responses from a variety of people living along the Saskatchewan River basin regarding water security (collected in 2012), the socio-hydrology team partnered with the U of S Department of Drama to create a play with a bit of a satirical edge.

Interactive and deliberately stereotypical, and driven by audience participation and decision-making, Bradford said the play "tested how we can communicate better, to bring those values and attitudes to a wide audience."

The socio-hydrology team is continuing work on strengthening communication, finding common ground, and helping groups upstream and downstream really think about the others' needs.

To get there, there needs to be accurate hydrological data and a clear understanding of—

and empathy with—the complex (and sometimes opposing) needs of different people and places within a water system.

Socio-hydrology was not part of the original function of the global institute, but its role and importance have been increasing, highlighted by Strickert receiving the U of S Award for Distinction in Outreach and Public Service this fall. Strickert said, "They quickly realized, at the very beginning, that we need to incorporate the human dimensions." Focusing on community-based research, the team works with people in the communities to come to a broader understanding and more workable solutions.

Strickert said that the holy grail of their research program is to help all those who make decisions about water to "make decisions that share the risk, without regret, in real time."

An ambitious goal, but, as Strickert and Bradford point out, the practical application is huge.

Students aiming for environmental management positions, as well as scientific researchers, respect and appreciate the importance of balancing science with society.

The institute, coupled with the university's School of Environment and Sustainability, is

a training ground for both present and future environmental and water resources managers. "We've got really difficult trade-offs around water.

"It's more than just having the right amount of water in the right place at the right time," Strickert said. "There is a cultural shift going on in water management now to address the fact that systems have become really complex and really connected.

"What is it that will enable all these people to work across sectors? If we can figure that out, then we're on our way."

Bradford goes even further. "I feel a real satisfaction, a real duty to prepare the next generation of socio-hydrologists, I call them blended scientists, to think more broadly about water problems. We need to think beyond the technical fix."

Carrière—long used to listening to the Saskatchewan River delta tell its stories through water, through fish and birds, animals and plants, through culture, and through memory—might agree. We too need to listen, to the whole story, to both science and society, if we are to make good decisions for both present and future generations. ■


Preserving Saskatchewan's prairie jewel

 ANDRÉA LEDDING



 JOHN PERRET (BED'74)

Learn more online.

 alumni.usask.ca/hudson

Fresh water: we can't live without it. The human body is made up of 65 per cent water—roughly the same proportion of Saskatchewan's population that relies on the Lake Diefenbaker reservoir for fresh water—including local lake communities and those further downstream, such as Saskatoon, and Moose Jaw and Regina via Buffalo Pound Lake.

Water from Diefenbaker is also a source for agricultural irrigation, mining and industrial use, fish farm operations, and recreation. And all of these stakeholders are looking to the reservoir more and more: a growing population needs more fresh drinking water; potash and other mines want more water for increased production; farmers want to double irrigation; fish farms are expanding to meet consumer demand; and developers are seeking the ever-attractive lakefront property.

"Lake Diefenbaker is called Saskatchewan's prairie jewel, and it really is; it's an oasis," noted biologist Jeff Hudson, lead limnology (fresh water) researcher at the University of Saskatchewan's Global Institute for Water Security. But we could be in danger of losing our oasis if we do not better understand how to manage it. "The World Wildlife Fund considers the South Saskatchewan one of two Canadian rivers most endangered for flow due to heavy development. So there are many reasons to show regard and proper planning. When we have a rapidly growing province, [fresh water] must be a consideration, thinking long-term with this non-renewable resource."

The lake is the result of the Gardiner Dam, finished in 1967 to both control water levels and provide hydroelectricity. But the dam also has some negative side effects: it draws water from the mid-section to release back into the river system, causing cooler overall temperatures in summer and warmer temperatures in winter, which affects seasonal ice formation and the lake's habitat and inhabitants—large and small—year-round.

We also need to realize the human risk if a water source so much of our population depends upon were to be compromised, either from a shortage or contamination.

"There are all types of reasons to be prepared, and to minimize our use," Hudson said. "Most cities are done in a matter of weeks without water. If we don't take it more seriously, we may find ourselves without the water we need to survive, and this is what limits population size."

Jania Chilima (MES'11), a graduate student in the School of Environment and Sustainability running research focus groups on water use and management, echoed Hudson's concerns. She grew up in a large city in Tanzania where water rations were in place, boil water advisories were constant and it wasn't guaranteed that turning a tap would result in water coming out.

"Here, you just open your tap, get your glass and drink the water," she said. "You don't think about it if you live in cities. It doesn't always cross my mind that I shouldn't let the water run too long so it doesn't run out for another person."

Hudson explained that beyond basic drinking water, water shortages affect basic hygiene "because we don't have outhouses anymore"—along with many industrial processes, from agriculture and irrigation, to potash and mining, to water-cooled chambers at the university, to steam-powered turbines at coal-powered electricity plants, and the Gardiner Dam hydroelectric plant which cannot generate power at low water levels.

Water shortages are already occurring in the United States because demand is outstripping fresh water supplies. Reservoirs are not being replenished, and some river systems, such as the Colorado, are in severe distress, noted Hudson.

"The [global] water situation is pretty dire, but people are still not realizing how dire. We have to set an example. We want to be able to exercise conservation, because we may have to, and it's better to have those practices already in place."

Part of the challenge is sharing our river system with Alberta and Manitoba. Urban growth and heavy agricultural and industrial use in southern Alberta impacts the entire waterway. During the 1998-2000 drought, Alberta used up more than its agreed upon 50 per cent base flow, which could happen again. And we need to be aware of the quantity and quality of water we are passing to our neighbours to the east.

Understanding what goes into the water is just as important as understanding how we use it. The past four years have seen surplus water from Alberta's heavy glacier melt, snowmelt and precipitation.

"Living with a continental climate, you never know what kind of year you're going to have, and all these weather conditions change the properties of the reservoir," Hudson explained. "It's a privilege to work on the system and make that contribution to the province. It's a very dynamic system so we have to sample frequently to capture the constant changes going on."

With funding secured for two more years, Hudson hopes to gather valuable data from lower water levels to balance the extreme conditions of the past four years. Both heavy and minimal flows impact the oxygen and temperature levels

of the reservoir, which in turn can impact algal blooms and nutrient storage. Phosphorus enters the reservoir and settles on the bottom. But when oxygen levels are too low—and they are becoming quite low near the lake bottom—the phosphorus that has entered the system is released, providing conditions for heavy algae growth. When the algae dies, it settles to the bottom, further depleting the oxygen levels in a negative cycle. Hudson's research, along with modelling from fellow U of S researcher Karl-Erich Lindenschmidt and his team, is examining what water levels are optimal to maintain water quality, especially with factors such as climate change and competing demands for water use.

"The goal is to first of all capture the status quo and make sure we can mimic the key processes responsible for the quality of the lake right now, and then incorporate some climate change and land use change scenarios and see how the quality of the lake may change in coming years," explained Lindenschmidt. "Meteorological climate change data and land use: trends, how things change in the catchment upstream of Lake Diefenbaker with trends to intensification of agriculture, population growth, urbanization, all of which increase the loadings into the lake from the upper South Saskatchewan River."

Lindenschmidt emphasized the importance of identifying and reducing negative nutrient inputs through better management of landscapes.

"Waste-water treatment plants and lagoons, agriculture" contribute to the nutrient load according to Lindenschmidt. "Blackstrap has stopped using sewage fields, and now the sewage is being pumped away, but is everybody doing that? Anybody close to a river or lake, are they still using fields? Then there's industry. Everybody's in some way or form inputting nutrients into the catchment."

Hudson agreed, noting that the reservoir has been under-studied for a long time, but it's an essential part of the economy and social fabric of the province.

"Ecosystems have an incredible ability to take our abuse and purify the water, but if we disturb those, there is a point of no return."


With ongoing research guiding our use of this precious resource, it's becoming apparent we all play a role in preserving our prairie jewel. ■



Prairie flooding: preparing for the unpredictable

 ASHLEIGH MATTERN

The community of Alida, Sask. under water after
torrential rain in the summer of 2014.

 DON HEALY, CP IMAGES

So much rain fell on southeastern Saskatchewan and western Manitoba that more than 60 communities declared states of emergency.

The water blocked and washed out highways, flooded basements, disrupted flights, and destroyed eight to 10 per cent of Saskatchewan crops. In one weekend, anywhere from 100 to 240 millimetres of rain fell—that's two to four times what would typically fall in an entire month.

The circumstances that led to the flooding at the end of June and beginning of July 2014, started before a drop of rain fell, said Kevin Shook (BE'84, PGD'91, MSc'93, PhD'95), research scientist at the University of Saskatchewan's Centre for Hydrology.

Winter snows had created a sizable snow pack, and when the snow melted in the spring, the deep prairie soils became saturated. When the rain fell, it had nowhere to go.

"We're living in a very complicated climate," explained Shook. "People think the Prairies are simple because they're flat, but hydrogeologically, they're one of the most complex places around, and a lot of the things that people do in the rest of the world don't work here."

Elsewhere in the world, water basins flow down to a stream, which leads to a river, which eventually reaches the ocean. On the Prairies, water gets held in sloughs and depressions until it overflows.

"Only when all of those puddles and sloughs and wetlands connect together can water travel across the land into the stream," said Shook. "The contributing area of the basin changes dynamically, which makes trying to model the effect of the prairie basin difficult to do."

Shook said the flooding that happened in southeastern Saskatchewan and western Manitoba is not like the flooding in Alberta near the Bow River. In Alberta, the water was trying to get to the river. In southeastern Saskatchewan and western Manitoba, the water was going overland because there are no streams.

Geologically speaking, the drainage system of streams and networks on the Prairies is young, said Cherie Westbrook, associate professor of wetland ecohydrology in the Department of Geography and Planning at the U of S. The glaciers that formed the prairie landscape didn't cut small stream channels.

"The water doesn't have a channelized network to flow through like it would in Ontario," said Westbrook.

Human impact

Westbrook's research focuses on understanding how water is stored and moves through wetlands, and how that affects the ecological functioning. One possibility she has studied is whether human alterations to the landscape can have an effect on the way water moves.

That does seem to be the case in the Smith Creek basin—a watershed found along Highway 16 near the Saskatchewan-Manitoba border. The area has seen major changes in the past 50 years, transitioning from woodland and wetland to grain and oilseed crops through extensive draining.

"Humans are changing the drainage patterns on the landscape, and what we're trying to understand is what kind of an impact that's going to have on the hydrology of the basin," said Westbrook.

The research is not far enough along to know for sure if human actions had an effect, and once they have results, it will only apply to that specific water shed. But Westbrook noted that understanding the physical processes will help officials make land management decisions.

While it's difficult to know how to prepare for such severe, unusual weather as seen during the 2014 floods, the research Westbrook and others are doing can help communities prepare when faced with flooding from snow melt.

Because snow can be measured, in 2011, communities in the Smith Creek basin knew there would be flooding in the spring. Researchers worked with community leaders to figure out how much water was on the land and helped them to physically manage the water release through the site. The community of Langenburg had to make some hard decisions, like choosing who would lose income by rerouting the water through farmland, but in the end, their efforts helped save the town.

Helen Baulch, assistant professor at the School of Environment and Sustainability at the U of S, said part of the solution to protect communities and farmland from flooding is to ensure there is water storage in the landscape. Since the Prairies do not have a well-developed network of streams, most of the water is stored in the landscape. When wetlands are destroyed, that water storage is also destroyed. Restoring and maintaining wetlands would create water storage and protect against flooding.

She also noted that land and water management practices can have a big influence on nutrient transport. When water moves through the landscape, it carries with it nutrients from the places it has been. This can mean big problems for the bodies of water downstream.

"For example, systems like Lake Winnipeg, in extremely wet years, receive more nutrients [from run-off], and that makes problems associated with algal blooms in the lake worse," said Baulch.

Algae grows naturally in the lake, but when run off from farms increases the amount of nitrogen and phosphorus, the algae grows excessively, releasing toxins that are dangerous for humans and other species. Restoring and maintaining wetlands also helps reduce nutrient run-off into lakes, and part of Baulch's work is to figure out how to control nutrient inputs to try to maintain clearer waters.

Uncertain future

Shook said climatologists are predicting wetter weather for the Prairies: the trend is toward more rain than snow in the spring and fall, and more multi-day rain events. Hydrologists like Shook, Westbrook and Baulch are charged with figuring out how all that extra water is going to affect the landscape and what that means for the people who live in the Prairies.

"People have to think about how they want to adapt to changing conditions," said Westbrook. "I think that people across the Prairies have realized now, with a number of events happening in different communities in the last five years, that the infrastructure we have in the Prairies is not set up to deal with these kinds of events."

Westbrook said that water research is grounded in problems facing real communities, not only on the Canadian Prairies, but internationally. "Water researchers here at the U of S are very practical minded."

She has empathy for the people who are impacted by flooding, but she still finds the opportunity to learn from these events scientifically exciting. Some of the predictions and hypotheses about how the watershed would function when wet—based on more than 40 years of hydrology research in the Prairies—are not holding up. "We have noticed that the hydrology of the Prairies is changing, and changing quickly." That lack of certainty is what makes the research compelling. ■

Congratulations to the 2014 U of S Alumni Association's Alumni Achievement Award recipients.

A reception will be held to honour our recipients on October 23.

Expanded biographies and reception information can be found at alumni.usask.ca/achieve.



Leanne Bellegarde
(LLB'91)

for her leadership in advancing Aboriginal partnerships.

After being admitted to the Law Society of Saskatchewan in 1993, Leanne has spent her career developing and advancing professional opportunities for the Saskatchewan's First Nations, Métis and Inuit people.

Leanne has been a negotiator and advisor, a solicitor, and has owned her own law firm. She also led Aboriginal initiatives for the University of Saskatchewan's Edwards School of Business.

Currently serving as the director of Aboriginal strategy for PotashCorp, Leanne builds and maintains crucial relationships with First Nations and Métis communities, with an emphasis on building economic prosperity through employment and business opportunities directly with PotashCorp and as part of the local supply chain.

Her contributions and leadership have been recognized with the Business and Professional Women of Saskatoon's Athena Award, the Federation of Saskatchewan Indian Nations' Circle of Honour Award and a Queen Elizabeth II Diamond Jubilee Medal.



Merlis Belsher
(BComm'57, LLB'63)

for his dedicated service and philanthropy to the University of Saskatchewan.

Merlis became a chartered accountant in 1960 and was admitted into the Law Society of Saskatchewan in 1964. He is still involved in the professional associations for both specialties.

For 43 years, Merlis owned and operated Weldon's Concrete Products, a precast concrete manufacturer in Saskatoon. He grew the company and earned the reputation as a well-respected employer and member of the business community.

During the 1990s, Merlis served on the College of Commerce Dean's Advisory Council and currently serves on the College of Law Dean's Advisory Council. He is also a board member for the Law Foundation of Saskatchewan.

Merlis supports many charitable organizations, including Luther College in Regina (where he attended high school) and the University of Saskatchewan, where he has generously supported capital campaigns, scholarships and established the Merlis Belsher Access to Justice Fund.



Young alumni
recipient*

Shannon Dyck
(BA'09, MES'12)

for her volunteerism and commitment to environment and sustainability initiatives.

While studying studio art and art history, Shannon became involved in politics. She was vice-president of student affairs with the University of Saskatchewan Students' Union on 2008-09. She served on the School of Environment and Sustainability Students' Association while pursuing her master's degree.

Working as an environmental coordinator for the City of Saskatoon, Shannon designs and manages environmental education programs, works with community groups in sustainable projects and events, and researches areas such as waste-reduction.

Shannon volunteers for a wide range of organizations such as the Mendel Art Gallery and the Saskatoon Fringe Festival. She is a member of Radiance Cohousing, an innovative condominium building concept, and, as an active member of the arts community, she has exhibited her own art and facilitated art workshops for elementary school students.

*Young alumni recipients are subject to the same criteria, and they must be under 35 years of age and have graduated from the U of S no more than 10 years ago.



Fred Fulton (BSA'50, PGD'68, MCgEd'72)

for his significant contributions to the University of Saskatchewan and the agricultural industry.

As a faculty member of the School of Agriculture (which ran certificate and diploma programs) for almost 40 years, Fred spent his summers on the farm and winters at the U of S teaching classes ranging from public speaking and parliamentary procedure to rural life and crop disease.

In 1982-83, he served as the school's acting director and president of the Saskatchewan Institute of Agrologists, an organization with which he has a long-standing relationship.

Fred was on the executive for the Saskatchewan Agriculture Graduates' Association (SAGA) and the board of the U of S Alumni Association, including a year as president for both organizations.

Fred and his wife, Norma, have been generous donors to the U of S. They established the Fred Fulton Family Scholarship, were members of the Sodbusters Club that funded architectural drawings for the new Agriculture Building, and were supporters of the subsequent construction of the building.



Dr. Donald Greve (BA'58, MD'60)

for his leadership as a community builder and commitment to the arts.

As a family physician in Rosthern, Sask. and area for 45 years, Donald is experienced in everything from pediatrics to geriatrics. He estimates he has delivered 1,800 babies—more than the town's current population.

Donald helped train and mentor University of Saskatchewan medical students, has sat on various committees with the College of Physicians and Surgeons of Saskatchewan and still serves as a coroner.

Donald is a leader in revitalizing his community, serving on town council and chairing the economic development committee. He played key roles in three major developments for the town: Seager Wheeler Farm, the Station Arts Centre in the refurbished CN train station; and the Valley Regional Park.

Awards and honours recognizing Donald's service include the Saskatchewan Centennial Medal, Queen Elizabeth II Golden Jubilee Medal and Rosthern's Citizen of the Year.



The Hon. Terry Lake (DVM'86)

for his dedicated public service and community leadership.

Terry worked as a veterinarian in Alberta and BC, owning and operating a clinic in Coquitlam, BC before becoming a faculty member with the animal health and technology program at Thompson Rivers University. He served his profession by taking leadership roles in provincial, Canadian and world veterinary associations.

Terry was elected a city councillor and subsequently mayor of Kamloops, BC. He was then elected a member of the provincial legislative assembly in 2009, and re-elected in 2013.

As MLA, he has served as parliamentary secretary for the ranching task force during the outbreak of mad cow disease in Canada; on committees for Aboriginal affairs, health and early childhood education; as minister of environment; and currently serves as minister of health.

Terry received the BC Veterinary Medical Association Award of Merit for Service and the Queen Elizabeth II Diamond Jubilee Medal.



Scott McCreath (BComm'69)

for his professional excellence, community involvement and philanthropy.

With 45 years of service in the financial services industry, Scott currently works with BMO Nesbitt Burns, where he is a member of chairman's council, an 18-time recipient of the Deane Nesbitt/Charles Burns Award as an exceptional advisor, and in 2011, was recognized as one of the world's top financial services professionals with the Brendan Wood TopGun award.

At the U of S Edwards School of Business, Scott is member of the Dean's Advisory Council, serves on the governance committee of the George Dembrowski Student-Managed Portfolio—that gives students real world experience managing an investment portfolio—and is the college's executive in residence.

With his wife, Grit (BEd'91), the McCreaths are volunteers and financial supporters of a variety of art, education and social causes. They are proud U of S ambassadors, and the university is a significant beneficiary of their generosity. ►

Congratulations to the 2014 U of S Alumni Association's Alumni Achievement Award recipients.



Young alumni
recipient*

Heather Morrison (BFA'08)

for her volunteerism and her contribution to theatre and the arts.

Heather, a graduate of the Globe Theatre Actor Conservatory, is an award winning actress and producer, working with many Saskatchewan theatre companies.

As artistic producer for Sum Theatre in Saskatoon, she helps produce free performances in local parks through its Theatre in the Park program. Heather also teaches drama for local theatre companies. And she is budding playwright; her first play, *Thicker than Water*, was featured at Saskatchewan Playwright's Centre's spring festival in 2014.

As co-host of the morning show at Saskatoon's Cool 98 FM, Heather volunteers her time and talents for dozens of organizations and charities every year. She also promotes theater and the arts on other local media outlets.

She currently serves on the board for the Broadway Theatre in Saskatoon and Nuit Blanche, a nighttime arts and culture festival.



Mike O'Kane (BE'92, MSc'96)

for his role as a global leader in business and industry.

Mike is president and CEO of O'Kane Consultants (OKC), a global leader in the environmentally sustainable design, construction and monitoring of mine closure systems.

He has designed systems to monitor and interpret reclamation performance that OKC uses in over 75 sites around the world for a variety of materials in a wide range of climate conditions. OKC's client list includes all the major operators in the Alberta oil sands industry and extends to coal and metal mines throughout Canada, the United States, Australia, New Zealand and South America.

Mike is the lead author on four guidance documents that have become the industry standards, and he contributes regularly to research and scholarly work.

With over 50 employees, OKC boasts that the majority of its three dozen professional staff are U of S graduates.



Sheila Pocha (BE'd'86, PGD'97, ME'd'00)

for her leadership and contributions to Aboriginal initiatives and education.

Sheila has had several positions in which she was able to advance the innovative use of Indigenous culture, language and tradition in classrooms.

As a teacher, she was able to foster an affirming cultural identity for First Nations and Métis students. As coordinator of the Saskatchewan Urban Native Teacher Education Program and sessional lecturer at the U of S, she was able to teach, mentor and instill a strong cultural identity in future teachers. In her current role as school principal, she is able to engage First Nations and Métis parents in their children's education and be an advocate for curricula and policy changes that will meet the needs of Aboriginal students.

Sheila has served on the U of S Senate and on several boards, including the Gabriel Dumont Institute, Station 20 West, Quint Development and SaskCulture.



Andrew Schmitz (BSA'63, MSc'65, DLitt'99)

for his significant contributions to education, agriculture and economics.

Andrew is a world-renowned scholar specializing in international economics, marketing, and public and agricultural policies. He has held four endowed chairs: two at the U of S, one at the University of Florida, Gainesville, which he currently holds, and one at the University of California, Berkeley.

He has authored or co-authored over 20 books and 200 professional journal articles that have won six research awards and is a fellow of the Canadian Agricultural Economics Association.

He is a respected consultant for hundreds of companies and agencies including the World Bank, the Economic Council of Canada, Agriculture and Agri-Food Canada and the United States Department of Agriculture.

For over 20 years now, Andrew has led an annual conference in Moose Jaw, providing a forum for policymakers, academics and farmers to discuss agricultural issues.

*Young alumni recipients are subject to the same criteria, and they must be under 35 years of age and have graduated from the U of S no more than 10 years ago.

Alumni Association president's message



The sun sets earlier and swatting mosquitos is no longer the most common outdoor recreational activity—telltale signs fall is upon us. And more indicative of autumn is the buzz of activity on campus.

Students are back in full force, and the U of S Alumni Association is continuing our efforts to educate students that they will soon join our ranks as proud U of S alumni.

We are students for a short time, and alumni for a lifetime.

During Welcome Week, we sponsored the annual pancake breakfast, feeding 2,500 hungry students. The homecoming football game was that evening, and we were proud gameday sponsors. It is great to help maintain traditions like homecoming and the halftime toga run for students living in residence.

The Alumni Association will continue to be visible to students throughout

the year at Huskie games for all sports, by providing healthy snacks during final exams, by sponsoring the Graduate Students' Association's awards gala and by partnering with the USSU for the Young Alumni Excellence Award.

Congratulations to all of this year's Alumni Achievement Award recipients! Eleven U of S alumni (see pgs 24-26) will be recognized at the annual Honouring Our Alumni reception on October 23. Please join us to celebrate the accomplishments of your fellow U of S alumni.

In a few short years the Alumni Association will be celebrating its centennial. We are forming a committee to plan a variety of celebrations to mark the occasion. If you are interested in volunteering on the committee, or in any other capacity with the Alumni Association, please contact the alumni office at alumni.office@usask.ca.

Sincerely,

Wayne Evanisky, BComm'77

U of S Alumni Association President

HONORARY ALUMNA



Rae Bourner will be recognized as an honorary member of the U of S Alumni Association at the Oct. 23 Honouring Our Alumni reception. Rae started working at the U of S almost 40 years ago, spending most of her time with the College of Medicine where she is manager of undergraduate medical education. She described her job as ensuring "everyone is in the right place doing what they need to do." Her dedication and personal approach has garnered the respect and affection of students, staff and faculty—and even some invitations to students' weddings and visits with their newborn babies.

U OF S SENATE ELECTION RESULTS

Five new members-at-large were elected to the U of S Senate in June. They are: Jenalene Antony (BA'10), Davida Benthall (BA'13), Richard Rempel (BA'58), Michelle Thompson (BA'13, BA'14) and Joyce Wells (BEd'75).

Nominations for select district representatives are now open. See pg 36 for details.

Stay in the know

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2014-15 U of S Alumni Association Board of Directors



(l-r) Gord Blackmore (BSA'82); Tracy Sletto (BA'94); Peter Stroh, past-president (BA'70, BEd'75, MEd'85); Jan Williams Russell (BSHEc'73); Wayne Evanisky, president (BComm'77); Jim Blackburn (BSP'60); Tanyann Belaney, vice-president (LLB'05); Kelly Strueby (BComm'84); Chris Unsworth (DipAgB'12); missing from photo are: Dr. Garth Bruce (BA'66, MD'70); Judy Buzowetsky (BEd'67, BSHEc'67); Sean Junor (BA'00); Pajje McGrath (BE'99); Peter Zakreski (BA'61); Judy MacMillan (BSA'79)



Not your typical prairie tale

 DERRICK KUNZ

"I'm from Saskatchewan, but I'm not from the Prairies," Merle Massie stated emphatically.

Tell someone you are from Saskatchewan and the reaction is usually the same: people ask where you parked your combine or if you grew up near the tree, and the joke about watching your dog run away for three days never gets old.

Massie (BA'93, MA'98, PhD'11), an environmental historian who grew up on a farm along the fringe of boreal forest just north of Prince Albert, paints a much different picture of the province she proudly calls home.

Living where the prairie meets the forest means you approach the land and farming a little differently. "I grew up on an Old MacDonald had a farm type of farm; we had a little bit of everything," Massie said.

She's more comfortable in a canoe than a combine. Her father and three older brothers made sure she could fish and hunt—either with

a rifle or along their trapline near Prince Albert National Park. And the history of the place she calls home is quite atypical for most of us.

The traditional prairie stories of people fleeing the dust bowl or of pioneers' perseverance riding out the depression are well documented. But Massie chronicles a lesser known story of a boom along the boreal fringe in her book titled *Forest Prairie Edge: Place History in Saskatchewan*.

"The Prairies were the place my grandparents abandoned because the landscape was broken by the drought" said Massie.

"They stripped their farm and filled a boxcar with settlers' effects because they couldn't see a future" on their Weyburn-area farm. "They left in April 1934, during a legendary dust storm. There was so much dust they couldn't see the caboose of the train, and dust settled as far away as New York, Washington and even on boats in the Atlantic."

After the two-day journey north, they opened the boxcar door to find the dust replaced by two feet of snow on the ground. She described the contrast as "the difference between a landscape that rejects and one that accepts" because of the absence or presence of water.

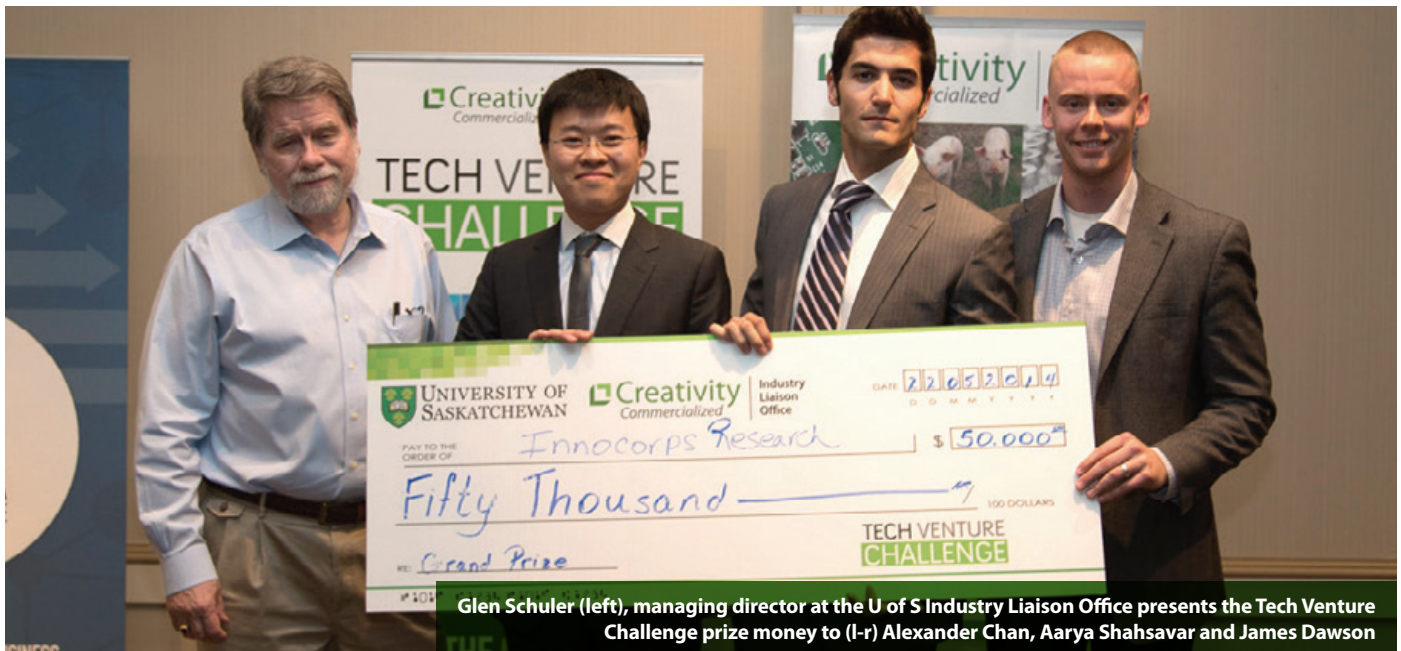
"It wasn't all sunshine and roses." Settlers had the added task of clearing trees off the land before they could work it. Year-to-year living may have been more modest and consistent compared to prairie grain farmers who had more cash flow but were more susceptible to vast cyclical fluctuations.

Massie hopes that writing about the varied use of land will broaden the perspective of what Saskatchewan is. "Saskatchewan is so much more than prairies. I want to blow apart stereotypes."

After several years of city living, Massie is back on the farm near Biggar, Sask. "I identify myself as a farmer. It shapes the way I think about history and the land, the landscape and the seasons; it all comes out in my writing.

"I want to tell the story of what it was like, not what happened." And her next project will tell the story of what it was like to haul overland freight in northern Saskatchewan prior to the 1950s. "You know the show *Ice Road Truckers*? Well, think of that but with horses and Caterpillar tractors."

Not your typical prairie tale. ■



Glen Schuler (left), managing director at the U of S Industry Liaison Office presents the Tech Venture Challenge prize money to (l-r) Alexander Chan, Aarya Shahsavar and James Dawson

Mobile water treatment solution could be a game changer

DERRICK KUNZ

A group of young, entrepreneurial engineers sound remarkably like marketing graduates, talking about finding the right product for the right customer at the right time.

It is no coincidence. Aarya Shahsavar (BE'13), Alexander Chan (BE'13) and Dawson James (BE'12), founders of Innocorps Research, learned these and other essentials of business planning on their way to winning the 2014 Tech Venture Challenge business plan competition.

The three U of S alumni—who worked together on extra-curricular activities like the U of S Space Design Team and the Huskie Motorsports as students—have developed a mobile water treatment system for oil service companies. Their initial focus is on hydraulic fracturing, more commonly known as fracking, which uses a high pressure mixture of water and chemicals to fracture rock formations and release oil or gas through the newly formed cracks.

“Our system will treat wastewater so it can either be reused in the process or reintroduced into the original water source,” explained Shahsavar, president of Innocorps.

Still in the prototype phase, the system will offer dual benefits. “It decreases the amount of

water required to take out of aquifers or lakes and decreases the amount a company needs to dispose of,” said Shahsavar. “On-site treatment options are cheaper than off-site treatment” to keep the water clean and prevent clogs to the fractures the process creates. It also decreases the number of trips needed to transport waste to a safe storage facility.

Serving the needs of North America’s fastest growing sector of the oil industry happens to be the right customer at the right time for Innocorps. The fracking process uses large volumes of water, and, according to Shahsavar, the advantages of on-site water treatment and recycling are amplified in places like oil-rich Texas. “Water scarcity there is a big problem, now and for the foreseeable future,” said Shahsavar. Add in water rights and disposal regulations, and Innocorps’ patent-pending system looks even more attractive.

Like all good entrepreneurs, the trio has their sights set on other business opportunities. Shahsavar anticipates their system could benefit other sectors of the oil industry, potash mining and desalinization for coastal areas with little access to fresh water.

Shahsavar credits the Tech Venture Challenge for helping him and his partners focus their business plan and set a solid strategy for growth. “The Tech Venture Challenge has been a game changer for us. Learning from experienced entrepreneurs and going through the process has focused our strategy and opened up opportunities we wouldn’t have had without the competition.”

Even though the business opportunity lies within industry, Shahsavar’s passion for water is more simple and altruistic. “Water is essential in everything we do. It’s not the fracking industry that I care about. It’s providing cheap, clean water and providing a basic standard of living.”

The Tech Venture Challenge, run by the University of Saskatchewan Industry Liaison Office, is an annual business plan competition that gives entrepreneurs the opportunity to launch their technology-based business idea. It is open to anyone with a University of Saskatchewan affiliation: employees, researchers, students and alumni. The application deadline is Nov. 28. Visit alumni.usask.ca/tvc for details. ■

Share your story

Tell us the recent highlights of your career, achievements and personal updates.

Your story will be shared online in class notes and may be published in the next issue or in college publications. Visit alumni.usask.ca/classnotes.

1940

Chancellor Emeritus Ted K. Turner, D/Agric'48, LLD'89, of Regina, SK, has written his memoir, *Beyond the Farm Gate: The Story of a Farm Boy Who Helped Make the Wheat Pool a World-Class Business*.

Mrs. Betty C. Riddell, BSP'49, BusCer'62, of Saskatoon, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Alan Vanterpool, BA'48, MA'51, of Edmonton, AB, recently published his fourth book, *Rivers and Rails*, detailing Edmonton's historic railways.

1950

Mr. Keith K. Downey, BSA'50, MSc'52, PhD'61, DSc'94, of Saskatoon, SK, was nominated by the Saskatoon Chamber of Commerce for the 2014 Oslo Business for Peace Award.

Mr. Harold W. McClelland, BSP'53, of Calgary, AB, recently retired after 60 years of service to the pharmacy profession. He practiced in Moose Jaw, Medicine Hat, Edmonton and Calgary, where he owned and operated Simons Valley Drug Mart.

Mr. Don D. Bateman, BE'56, DSc'14, of Bellevue, WA, USA, received the 2013 Elmer A. Sperry Award for Enhancing the Art of Transportation by developing life-saving technology that has prevented aircraft accidents and saved thousands of lives.

Mr. Dick E. Moskalyk, BSP'56, MSc'59, of Edmonton, AB, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mrs. Ursul R. Fowler, BSP'57, of Burlington, ON, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Frank S. Abbott, BSP'59, MSc'62, PhD'66, of Vancouver, BC, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Dean Emeritus John A. Bachynsky, BSP'59, of Edmonton, AB, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

1960

Mr. Jack W. Dancey, BSP'60 (D), of White Rock, BC, posthumously received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Prof. Emeritus Dennis D. Johnson, BSP'60, MSc'62, of Saskatoon, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Prof. Ronald C. C. Cumming, BA'62, LLB'63, LLM'67, of Saskatoon, SK, received the Master Teacher Award from the University of Saskatchewan at 2014 Spring Convocation ceremonies.

Prof. Emeritus Delwyn G. Fredlund, BE'62, of Saskatoon, SK, was appointed a principal of Golder Associates in Saskatoon.

Mr. Ken J. Fyke, BSP'62, MHSA'71, LLD'99, of Victoria, BC, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Ms. Sara E. Williams, BA'63, BSA'87, MSc'97, of Grasswood, SK, known for her books on prairie gardening, recently published *Saskatoon Forestry Farm Park and Zoo: A Photographic History*.

Mr. Dallas J. Howe, BA'65, MA'68, LLD'14, of Calgary, AB, received an Honorary Doctor of Laws from the University of Saskatchewan at the 2014 Spring Convocation ceremonies.

Mrs. Pamela G. Bradley, BSP'66, of Regina, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mrs. Mary C. Lindberg, BSP'66, of Niagara Falls, ON, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. George F. Peters, BSP'66, of Regina, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Prof. Emeritus Lorne A. B. Babiuk, BSA'67, MSc'69, PhD'72, DSc'87, DSc'14, of Edmonton, AB, received an Honorary Doctor of Science from the University of Saskatchewan at the 2014 Spring Convocation ceremonies.

Mr. Gordon L. Barnhart, BA'67, MA'77, PhD'98, of Saskatoon, SK, was named a member of the Order of Canada by the His Excellency the Right Honourable David Johnston, Governor General of Canada.

Prof. Beth E. Bilson, BA'67, MA'70, LLB'77, PhD'82, of Saskatoon, SK, received the 2014 Women of Distinction Award in the Leadership, Management and Professions category from the Saskatoon YWCA.

Mr. Brian B. Keegan, C/Educ'67, BAPE'67, BEd'74, of White Rock, BC, was inducted into the Saskatchewan Baseball Hall of Fame.

Mr. Bill J. Paterson, BSP'67, of Regina, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Ms. Dorothy L. Smith, BSP'68, of McLean, VA, USA, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mrs. Sheila D. Early, BSN'69, of Surrey, BC, received a 2014 Employee Excellence Award in Teaching from the British Columbia Institute of Technology, where she is coordinator of the forensic health sciences two-year, part-time study certificate. She is also president of the International Association of Forensic Nurses.

Prof. Emeritus Dennis K. Gorecki, BSP'69, PhD'73, of Saskatoon, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Wilf A. Keller, BSA'69, PhD'72, of Saskatoon, SK, received the 2014 Saskatoon Shines! Tourism Award for his role as president of the Agricultural Biotechnology International Conference.

Mr. Brent B. Savard, BA'69, of Calgary, AB, is employed as a social worker in the intensive-care unit of the Foothill's Medical Centre.

Mr. Wayne D. Simpson, BA'69, Sc'70, Arts'71, of Winnipeg, MB, received the 2014 Mike McCracken Award for Economic Statistics from the Canadian Economics Association.

Dr. John H. Wedge, MD'69, BSc'73, LLD'14, of Toronto, ON, received an Honorary Doctor of Laws from the University of Saskatchewan at the 2014 Spring Convocation ceremonies.

1970

Mr. Glen B. Baker, BSP'70, MSc'72, PhD'74, DSc'00, of Edmonton, AB, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. David G. Ford, BE'70, of Brandon, MB, completed a three-month, 8,300 km group bicycle tour from Shanghai through southern China, Vietnam, Laos, Cambodia, Thailand, and Malaysia to Singapore.

Mr. Keith A. Foster, BA'70, Arts'74, of Regina, SK, had his award-winning article about the North-West rebellion/resistance, *Thunder on the Prairie*, published in *Canada's History* (formerly *The Beaver*).

Mme. Justice Connie D. Hunt, BA'70, LLB'72, LLM'75, of Calgary, AB, retired from the Alberta Court of Appeal after serving nearly 24 years as a judge. She also received an Honorary Doctor of Laws from the University of Calgary.

Ms. Marlene I. Fehr, BSA'71, of Melfort, SK, received the President's Service Award from the University of Saskatchewan at the 2014 Spring Convocation ceremonies.

Ms. Elinor M. Florence, BA'71, of Invermere, BC, has written an historic novel, *Bird's Eye View*, to be released in October.

Mr. Eugene Hritzuk, BAPE'71, BEd'72, MEd'81, of Saskatoon, SK, will be inducted into the Saskatoon Sports Hall of Fame.

Mr. Justice Tom W. Wakeling, BA'71, LLB'74, LLM'82, of Edmonton, AB, was appointed a justice of the Court of Appeal for Alberta, Northwest Territories and Nunavut.

Ms. Toni R. Beerling, BSN'72, of Saskatoon, SK, will be inducted into the Saskatoon Sports Hall of Fame.

Mr. Ronald J. Kruseniski, JD'72, of Regina, SK, received the 2014 Community Service Award from the Canadian Bar Association, Saskatchewan Branch.

Mr. Bev E. Allen, BSP'73 (D), of Kuroki, SK, posthumously received the Centennial Alumni of Influence from the University of Saskatchewan College of Pharmacy and Nutrition.



Elizabeth (Liz) Dowdeswell, O.C. (BSHEc'66, LLD'94)

On September 23, Elizabeth (Liz) Dowdeswell, O.C. was installed as the 29 lieutenant governor of Ontario. Her career has spanned provincial, federal and international borders and transcended traditional disciplinary lines.

Early in her career she was the deputy minister of culture and youth with the Government of Saskatchewan and served as assistant deputy minister at Environment

Canada. She was the founding president and CEO of the Nuclear Waste Management Organization, undersecretary general of the United Nations, executive director of the United Nations Environment Programme and executive director of UN-Habitat.

She also led a number of public inquiries, including on Canada's unemployment benefits program and federal water policy. ■

Prof. Terry S. Tollefson, BSc'72, SC'73, MSc'76 (D), of Saskatoon, SK, was posthumously awarded the University of Saskatchewan 2014 Provost's College Award for Outstanding Teaching, College of Agriculture and Bioresources.

Mr. Fred G. Cardwell, LLB'73, of Kelowna, BC, was inducted into the Saskatchewan Baseball Hall of Fame.

Dr. Marilyn P. Caughlin, BSP'73, MD'79, of Regina, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Glenn R. Ponomarenko, BComm'73, of Winnipeg, MB, has retired. He was vice-president and regional manager for Manitoba and Saskatchewan at the corporate office of Royal LePage Residential Real Estate Services Ltd., and broker/owner of Royal LePage Top Producers Real Estate in Winnipeg.

Ms. Barbara J. Shea, BSP'73, of Ottawa, ON, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mrs. Janet A. Bradshaw, BSP'74, of Dysart, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Robert L. Coffin, BSP'74, BEd'75, MEd'97, of Prince Albert, SK, was inducted into the Prince Albert Sports Hall of Fame in the Builder category.

Mr. Wayne E. Gauthier, BEd'74, BA'76, of Red Deer, AB, recently retired from the Wolf Creek School Division, near Red Deer, after 40 years of teaching.

Mr. Gordon S. Stueck, BSP'74, of Leader, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Ms. Marianne L. Greer, BSP'75, MCTgEd'84, of Saskatoon, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Garth L. McCutcheon, BSP'75, of Kuroki, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Ms. C. Jane Richardson, BSP'75, PhD'86, of Saskatoon, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Ms. Lorraine L. Cathro, BEd'76, MEd'80, PhD'93, of Calgary, AB, has published her family history and memoir titled *Roots and Adventures: A Prairie Childhood*.

Ms. Della R. Croteau, BSP'76, MCTgEd'88, of Toronto, ON, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Gary G. Kachanoski, BSc'76, MSc'80, PhD'84, of St. John's, NL, was appointed president and vice-chancellor of Memorial University for a second five-year term, concluding in June 2020.

Ms. Debbie L. McCulloch, BSP'78, of Rosetown, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Kim K. Anderson, BSPE'79, LLB'88, of Saskatoon, SK, was appointed Queen's Counsel by the Government of Saskatchewan.

Mr. Bob D. Burnyeat, BA'79, of Saskatoon, SK, is a principle architect and managing partner with aodbt architecture + interior design. He is also president of the Saskatchewan Association of Architects, was recently named to the College of Fellows of the Royal Architectural Institute of Canada and made an honorary life member of the Saskatoon Construction Association.

Ms. Karen L. Goa, BSP'79, of Auckland, New Zealand, has just published an e-book titled *My Father's Ears*.

Ms. Marion R.C. Mutala, BEd'79, PgD'94, MEd'95, of Saskatoon, SK, wrote the third book of her trilogy, *Babas Babushka: A Magical Ukrainian Wedding*, which was nominated for a High Plains Book Award in the Best Children's Book category.

Ms. Linda A. Sulz, BSP'79, of Regina, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Ms. Laurie A. Wadsworth, BSHEc'79, MSc'86, PhD'97, of Antigonish, NS, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

1980

Mr. Garnet Garven, MBA'80, of Regina, SK, is dean emeritus of the Paul J. Hill School of Business and the Kenneth Levene Graduate School of Business at the University of Regina.

Mr. Robert S. Silzer, BComm'80, of Saskatoon, SK, was inducted into the Saskatchewan Baseball Hall of Fame.

Ms. Joanne M. Kloeble, BA'82, of Gatineau, QC, is acting client services co-ordinator for undergraduate studies in the Faculty of Arts, University of Ottawa.

Ms. Verna L. St. Denis, BEd'82, MA'89, of Saskatoon, SK, received the University of Saskatchewan 2014 Provost's Award for Excellence in Aboriginal Education.

Mr. Barry D. Taman, BSPE'82, of Regina, SK, recently become co-owner of Laurie Artiss Ltd., The Pin People, one of Canada's premier lapel pin production companies. They are the official licensee for TO2015 Pan Am Games and the Canadian Olympic Team.

Ms. Donna M. M. Woloschuk, BSP'82, Pharm'88, of Winnipeg, MB, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Ms. Helen M. Pridmore, BMus'83, MMus'92, of Regina, SK, was appointed an associate professor of music at the University of Regina.

Mr. Grant J. Kook, BComm'85, of Saskatoon, SK, received the Saskatoon Shines! Tourism Leadership Award for chairing the PotashCorp University Cup in 2013 and 2014.

Mr. Douglas J. Sellinger, BSP'85, of Regina, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Robert A. White, BComm'85, of Solihull, UK, is director of the National Audit Office's Department of Health in London, UK.

Mr. Ken K. Dalgarno, BA'86, of Moose Jaw, SK, published his new book *Badlands: A Geography of Metaphors*.

Mr. Kevin D. Karr, BComm'86, of North Vancouver, BC, has joined JET Group Brands as chief financial officer.

Mr. Larry D. Lynd, BSP'86, of Vancouver, BC, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Judge Byron D. Wright, LLB'86, BComm'86, of Saskatoon, SK, was appointed judge of the Provincial Court of Saskatchewan.

Ms. Zeba T. Ahmad, BSc'87, of Saskatoon, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Ms. Cathie J. Borrie, JD'87, of North Vancouver, BC, will have her memoir, *The Long Hello*, published by Simon & Schuster Canada in January, 2015.

Mr. Ross A. Demkiw, BA'87, BComm'90, MBA'92, of Kabul, Afghanistan, recently started a one-year diplomatic posting as first secretary (political) at the Canadian Embassy in Kabul. He joined the Department of Foreign Affairs and International Trade in 2007.

Mr. Jeffery T. Dumba, BSc'87, Arts'93, MA'95, of Saskatoon, SK, was appointed associate vice-president, financial services at the University of Saskatchewan.

Ms. Margaret H. Gray, BSP'87, of Edmonton, AB, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Digvir S. Jayas, PhD'87, of Winnipeg, MB, received the 2014 Kishida International Award from the American Society of Agricultural and Biological Engineers for his distinguished leadership and outstanding record of international collaboration in grain storage research and education.

Ms. Karen L. McDermaid, BSc'87, BSP'91, of Moosomin, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Ms. Carolyn A. Gray, BSP'88, of Regina, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Ronald W. Henseleit, BE'88, of Baton Rouge, LA, USA, recently moved to Baton Rouge to lead all functional test centres for Electronic Arts, which includes Baton Rouge, Romania and Hyderabad, India.

Mr. Mike J. Hoffort, BSA'88, of Buena Vista, SK, was appointed president and CEO of Farm Credit Canada.

Mr. Russ S. P. Isinger, BA'88, MA'97, of Saskatoon, SK, received the 2013-2014 Doug Favell Staff Spirit Award from the University of Saskatchewan Students' Union.

Ms. Kim D. Smith, BSP'88, of Regina, SK, obtained the certified diabetes educator designation from the Canadian Diabetes Educator Certification Board in July.

Ms. Jacqueline R. Ackerman, BMusEd'89, MEd'09, of Saskatoon, SK, received the 2014 Women of Distinction Award in the Education category from Saskatoon YWCA.

Ms. Patricia M. Chuey, BSNutr'89, MSc'94, of Lantzville, BC, was named a fellow of the Dietitians of Canada and received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Dr. Caroline G. Krivovozoff-Sanderson, DMD'89, of Red Deer County, AB, was recognized by the Alberta Dental Association and College for 25 years of dedicated service to the public and the dental profession in Alberta.

1990

Mr. Carson D. Demmans, BComm'90, LLB'91, of Regina, SK, has co-authored *You might be from Saskatchewan if... volume 2*, featuring original, uniquely Saskatchewan cartoons.

Mr. Joel L. Lanovaz, BE'90, PGD'92, MSc'97, of Saskatoon, SK, received the University of Saskatchewan 2014 Provost's College Awards for Outstanding Teaching, College of Kinesiology.

Ms. Kendra J. Townsend, BSP'90, of Wynyard, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Rich K. Gabruch, BA'91, LLB'94, of Saskatoon, SK, was elected to the 2014-15 board of directors for the Greater Saskatoon Chamber of Commerce.

Mr. Bradley R. Meier, BSPE'91, BEd'92, of Calgary, AB, an NHL referee since 1999, was chosen to referee men's hockey at the Sochi Olympics, where he officiated several games, including the gold medal game.

Ms. Charlotte A. Pilat Burns, BSNutr'92, of Saskatoon, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. John A. Virgi, MSc'92, PhD'97, of Saskatoon, SK, was appointed a principal of Golder Associates in Saskatoon.

Ms. Loleen D. Berdahl, BA'93, of Saskatoon, SK, received the University of Saskatchewan 2014 Provost's College Awards for Outstanding Teaching, College of Arts and Science, Social Science.

Ms. Merle M. Massie, BA'93, MA'98, PhD'11, of Biggar, SK, has had her PhD thesis published into a book titled *Forest Prairie Edge: Place History in Saskatchewan*.

Dr. Robert P. S. Skomro, MD'93, of Saskatoon, SK, received the University of Saskatchewan 2014 Provost's College Awards for Outstanding Teaching, College of Medicine.

Ms. Serese A. M. Selanders, BA'95, MBA'13, of Saskatoon, SK, received the Saskatchewan Business Challenge grand prize for the company she founded, Kasiel Solutions Inc.

Mr. Scott J. Smith, BComm'95, of White City, SK, was appointed to the SaskTel Pension Plan board of directors for 2014-15.

Mr. Sean M. Webster, BSc'95, MA'99, PhD'04, of Calgary, AB, was appointed a principal of Golder Associates in Calgary.

Dr. Sarah E. Boston, DVM'96, of Gainesville, FL, USA, has authored her first book, *Lucky Dog: How Being a Veterinarian Saved My Life*.

Ms. Janine M. Montgomery, BEd'96, PhD'08, of Winnipeg, MB, was awarded the Psychology Department Teaching Award and the Annual Outreach Award in 2013, both from the University of Manitoba.

Ms. Lana M. Moore, BSNutr'96, of Rosetown, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Ms. Kimberly L. Sentes, BSP'96, of Regina, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Ms. Allison L. Cammer, BSNutr'97, BA'03, MSc'07, of Saskatoon, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Chris A. Woodland, LLB'97, of Saskatoon, SK, was re-elected to the 2014-15 board of directors for the Greater Saskatoon Chamber of Commerce.

Mrs. Natasha Haskey, BSNutr'98, MSc'07, of Saskatoon, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Karl V. Miller, BA'98, BComm'01, of Saskatoon, SK, was re-elected to the 2014-15 board of directors for the Greater Saskatoon Chamber of Commerce.

Mr. Marty W. Seymour, BSA'98, of Regina, SK, was named one of CBC Saskatchewan's Future 40 for 2014.

2000

Ms. Angela M. E. Gardiner, BE'00, MSc'02, of Saskatoon, SK, was named one of CBC Saskatchewan's Future 40 for 2014.

Mr. Robert A. Innes, MA'00, of Saskatoon, SK, received the 2014 Saskatoon Shines! Tourism Award for chairing the 2013 Native American Indigenous Studies Association Conference.

Ms. Leanne C. Thompson, BSA'00, MSc'03, of Ceylon, SK, was a finalist for the 2014 Outstanding Young Farmers' Award.

Ms. Candice P. Yeudall, BComm'00, of Saskatoon, SK, received an MBA in Information Technology Management from Western Governors University in August.

Ms. Silvia L. Martini, BusAdm'01, CEBA'14, of Saskatoon, SK, was re-elected to the 2014-15 board of directors for the Greater Saskatoon Chamber of Commerce.

Ms. Jennifer D. Pereira, BA'01, LLB'03, of Saskatoon, SK, was named one of CBC Saskatchewan's Future 40 in 2014, and she received the 2014 Saskatoon Shines! Tourism Award for her role as chair of the board of directors for Persephone Theatre.

Ms. Nuyn L. Peters, BA'01, of Rockville, MD, USA, was named vice-president (development) at the University of Calgary on July 15, 2014.

Mr. Tom Z. Regier, BE'01, MSc'04, PhD'13, of Saskatoon, SK, was named one of CBC Saskatchewan's Future 40 for 2014.

Ms. Heather M. Hynes, BSNutr'02, MSc'09, of Saskatoon, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Ms. Chelsea R. Willness, BA'02, of Saskatoon, SK, received the University of Saskatchewan's Award for Distinction in Community-Engaged Teaching and Scholarship at the 2014 Spring Convocation ceremonies and the university's 2014 Provost's College Awards for Outstanding Teaching, Edwards School of Business.

Ms. Kelly E. Bode, BA'03, Arts'03, LLB'06, of Saskatoon, SK, was re-elected to the 2014-15 board of directors for the Greater Saskatoon Chamber of Commerce.

Ms. Lynette R. Kosar, BSP'03, MSc'08, of Saskatoon, SK,

received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. Joe W. Henley, BA'04, of Saskatoon, SK, published his debut novel, *Sons of the Republic*. He has spent the last nine years as a writer and editor in Taiwan, and he has toured Asia and Europe as a member of various punk and metal bands.

Mrs. Sally R. Meadows, BEd'04, of Saskatoon, SK, was short-listed for the 2014 Word Awards' Terence L. Bingley Award for Best Song Lyrics for her song *This New Year* from her album *Red & White*.

Ms. Rachel R. Engler-Stringer, PhD'05, of Saskatoon, SK, received the Centennial Alumni of Influence award from the University of Saskatchewan College of Pharmacy and Nutrition.

Mr. James W. Smith, MPAcc'05, of Saskatoon, SK, received the 2013-14 University of Saskatchewan Students' Union Teaching Excellence Award.

Ms. Jan M. Gelech, BA'07, of Saskatoon, SK, received the University of Saskatchewan 2014 Provost's Outstanding Graduate Student Teacher Award.

Ms. Ainsley K. Robertson, BComm'09, of Calgary, AB, was recognized as Enactus Canada Business Advisory Board Member of the Year.

Ms. Nicole L. Sarauer, JD'09, of Regina, SK, was named one of CBC Saskatchewan's Future 40 for 2014.

2010

Ms. Gisele A. Lalonde, MEd'10, of Saskatoon, SK, received the 2014 Saskatoon Shines! Tourism Award for her role on the planning committee for Festival Cinergie.

Ms. Sheila A. Watts, MN'11, of Saskatoon, SK, received the 2013-14 Academic Advising Award from the University of Saskatchewan Students' Union.

Ms. Tansley R. David, BA'12, of Saskatoon, SK, received the 2013-14 Teaching Excellence Award from the University of Saskatchewan Students' Union.

Mr. Anas El-Aneed, MBA'12, of Saskatoon, SK, received the University of Saskatchewan's 2014 Provost's College Awards for Outstanding Teaching, College of Pharmacy and Nutrition.

Mr. Dawson James, BE'12, of Calgary, AB, won the 2014 Tech Venture Challenge as co-founder of Innocorps Research Corporation.

Mr. Alexander J. H. Chan, BE'13, of Saskatoon, SK, won the 2014 Tech Venture Challenge as co-founder of Innocorps Research Corporation.

Ms. Mairin K. J. Loewen, MA'13, of Saskatoon, SK, was named one of CBC Saskatchewan's Future 40 for 2014.

Aarya Shahsavar, BE'13, of Saskatoon, SK won the 2014 Tech Venture Challenge as co-founder of Innocorps Research Corporation.

Correction

Mr. Bernard E. Flaman, BA'81, of Southey, SK, was awarded the 2014 Distinguished Book Award by the Center for Great Plains Studies at the University of Nebraska for his publication *Architecture of Saskatchewan, A Visual Journey*. The book was also nominated in three categories for the 2014 Saskatchewan Book Awards.

The Alumni Association has noted, with sorrow, the passing of the following graduates.

1930

Bellamy, Lorna E.
Bie, Jean A.
Blaser, Lorenz P.
Cooper, Ruth E.
Levin, Myrna H.
Mongeon, Lawrence J.

1940

Beckett, Glenn A.
Berry, Lucille M.
Brant, David J.
Coffey, Vincent O.
Colquhoun, Gordon S.
Crofford, Gerald F. (Gerry)
Crowe, Justine D. (Dolores)
Davis Hildred, Marjorie J. (June)
Deutscher, Anton F.
Elcombe, Marie A. (Alberta)
Geddes, Howard M.
George, Kenneth L.
Halliwell, Edna M.
Handegord, Gustav O. (Gus)
Hardstaff, Laurene V.
Hodges, Kenneth P.
Holmes, Merle G.
Johnson, Laura E. (Elaine)
Keal, Janice H.
Koester, Edwin G. (Gerry)
Larson, Harold W.
Little, Robert B.
MacKenzie, Archie M.
Markham, William E.
McEwen, Lilian M.
Morrison, Wilma J.
Neville, Raymond J.
Newyar, Donald J.
Pedersen, Bert H.
Probert, Lloyd A.

Reid, Kenneth G.
Richardt, Grover A.
Ringheim, Andrew S.
Rugg, Barry C.
Sefton, Albert E.
Stephens-Newsham, Lloyd G.
Stitt, William D. (Bill)
Stobart, Gloria M.
Surkan, Metro
Vinge, Daniel J.
Watt, James A.
Webster, Gordon F.
Westgate, Frederick G.
Wiggins, William R.
Wilson, Harry S.
Wood, Marcia

1950

Aldous, Herbert D.
Anderson, Eldon G.
Antonio, Harry
Aylesworth, Eileen M.
Banks, Averil U.
Boyce, Howard J.
Bredahl, Arve
Buvik, Roald K.
Colton, Arthur E.
Edwards, William H.
Ehrlich, Carl
Elliott, James A.
Ellis, James G. (Jim)
Flynn, Joseph J. (Joe)
Galvin, Sherwood J.
Gislason, Bjorn G.
Harder, Henry W.
Hay, Mary S. (Sue)
Hleck, Harry M.
Horner, Ralph B. (Byron)
James, Edward H.
James, Phyllis J.

Kelly, Clifford J.
Klein, Kenneth D.
Lee, George E.
Mayell, Robert W.
Moar, John R. (Bob)
Obach, Adolph
Paterson, John E.
Rebeyka, William M.
Rein, Valdemar A.
Roberge, Robert P.
Rongve, Herbert W. (Wayne)
Rushford, Robert J. (Jack)
Schmidt, Alan H.
Stokke, Terrance J.
Suggitt, Richard M.
Surkan, Helen I.
Turnbull, Ian S.
Volk, Nicodemus B. (Nick)
Wooff, David S.

1960

Angene, Manfred G.
Barnet, John R.
Bealey, Olga J.
Boland, John E.
Bowman, James A.
Brehon, Lilah V.
Causier, Howard W.
Coates, Walter H.
Courtice, John C.
Cox, Neville W.
Crepeau, Paulette G.
Donohue, Geraldine A.
Edgar, David W.
Emery, Warren R.
Falconer, Robert A.
Funk, Garth L.
Garchinski, Peter J.
Gaudet, Fabien F.
Geist, Olga

Gerwing, Raymond J.
Green, Lois B.
Heggie, David F.
Horner, Norval A.
Husulak, Terrance P. (Terry)
Jamison, Robert A.
Janssen, Willam P.
Janzen, William R.
Kaweski, Peter
Kolla, Carmelita
Kulrich, Kenneth L.
Lahti, Johan L. (Lloyd)
Lang, Hellmut R.
Loewen, Verna E.
Loewen, William G. (Gerald)
Mandryk, Harry S.
McAskill, Donald J.
McRobbie, William A. (Arnold)
Muzika, John F.
Olineck, Peter
Perzow, Sidney M.
Pfeifer, Leonard R.
Rashleigh, Donald A.
Richards, Clinton D. (Dale)
Riffel, Lawrence A.
Robinson, Alfred G.
Rudolf, Hubert R.
Schuster, Eveline C.
Sells, Betty A.
Shepanik, Ian R.
Sherman, Sergei L.
Shewfelt, Patricia M.
Vandenberghe, Douglas G.
Varnam, Margaret A.
Wagner, Ronald S.
Wasylik, Stella.
Wawra, Margot L.
Wieder, Ruby
Wiens, Reuben P.

1970

Anderson, Lynn I.
Archer, Lillian C.
Benns, Paul H.
Bohrson, Leslie T.
Boileau, Sandra L.
Boyle, Carol A.
Bray, Catherine L.
Breadner, Albert W.
Dosedall, Lloyd M.
Ellingham, Eroca
Enns, Elfrieda L.
Gidluck, Barry E.
Gordon, William I.
Hanchar, Terence P. (Terry)
Johns, Ernest W. (Ernie)
Kae, Sunny L.
Labenskaskas, Andrius K.
Lavigne, Jeannette M.
Leibel, Veronica
Mallaghan, Patrick J.
Mathias, Dwight R.
McLoughlin, James
Melnyk, Carl M.
Ogilvie, Rodney G.
Perran, Marine M.
Reid, Grant S.
Rushbrooke, Daryl E.
Ryder, John P.
Sarich, Timothy
Shenton, Pamela M.
Smith, Audrey A.
Stopa, Patrick J.
Urquhart, Ronald G.
Wyspianski, Martin A.

1980

Allan, Mary A.
Avann, Thomas A.
Bentley, Myrna J.
Callahan, Michael J.
Cherneski, Robert
Elkow, Joseph H.
Friesen, Ellen M.
Hattie, Ruth E.
Joie, Yeongching J. (Kris)
Karwacki, Edith J. (Edie)
Kidd, David H.
Kreiser, Elizabeth V.
Lyon, Deanna J.
May, Beth E.
Ness, Milton D.
Peters, Dennis W.
Pilling, Margret K.
Schmeiser, Douglas C.
Sherwood, Betty J.
Smith, Lee W.
Uriarte, Laurie A.
Heiber, Karen A.

1990

Breckner, Gloria P.
Webb, Bradley E.

2000

Bauer, Lana M.
Flaman, Nicholas T. (Nick)

2010

Machell, Tina M.

The Alumni Association has noted, with sorrow, the passing of the following faculty, staff and friends.

Baird, Leo R.	Murphy, Margaret O.
Finn, Wilfred T.	Partridge, Irene L.
Hildebrandt, John	Peters, Herbert D.
Horel, James D.	Seemann, Karl F.
Johnson, Hubert C.	Thomas, Garth H.
Livingston, Alexander (Alex)	Varewyck, Augustine C.

Prof. Emeritus Dufferin (Duff) S. Spafford, BA'59, MA'61, died May 14, 2014, 14 months after being diagnosed with a primary brain tumor.



As a student, Spafford was editor of *The Sheaf* in 1956-57. He taught at the U of S for 40 years—first in the joint department of economics and political science, then in political studies.

After retiring in 2002, Spafford spent much of his time with University Archives to help tell the story of the U of S and its people. He was perhaps most proud of spearheading the alumni book project, a collection of 3,000 books (with almost 1,000 books in a physical collection) authored, edited or illustrated by former U of S students.

Cheryl Avery (BA'82, Arts'85), university archivist, said, "The university matters to him; and it matters to him that we tell its story well. He helped us do so." ■

Editor's note

In response to a frequent and long-standing request, we have listed all the names of deceased alumni since the last issue. Names are listed by decade of receipt of their first U of S degree.

To accommodate this change, degrees, date of death and city of residence will be listed online only.

usask.ca/greenandwhite

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Canada Research Chair in
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Email: shirley.zhou@usask.ca



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Nominations open for University Senate members

Help bring your community's voice to the U of S

Senate is 'the university's window on the province and the province's window on the university,' and has authority over matters such as selections of the chancellor, awarding of honorary degrees, and making regulations concerning non-academic discipline for students.

An election will be held in the spring of 2015 for five (5) Senate districts and five (5) member-at-large positions that expire on June 30, 2015. Elected Senators serve three-year terms beginning July 1 and are eligible for re-election to a second consecutive term.

Saskatchewan District Senators

The five districts in Saskatchewan that are open for nominations are:

- District 1** **Weyburn – Estevan – Carlyle**
(Postal codes beginning with S0C, S4H, S4A)
- District 5** **Kindersley – Delisle – Lucky Lake**
(Postal code beginning with S0L)
- District 6** **Wynyard - Esterhazy**
(Postal codes beginning with S0A and S3N)
- District 10** **Sandy Bay – Creighton – Stony Rapids** (Postal code beginning with S0P)
- District 13** **Saskatoon**
(Postal codes beginning with S7R, S7P, S7L, S7K, S7S, S7M, S7N, S7H, S7J, S7T, S7V, S7W)

All of the Senators currently representing these districts are eligible for re-election. They are:

- Theresa Girardin (District 1);
- Russ McPherson (District 5);
- Adelle Kopp-McKay (District 6);
- Janice Jonsson (District 10); and
- Jim Pulfer (District 13).

Only members of Convocation¹ residing in the above electoral districts are eligible to nominate and vote for the member of the Senate to represent the above electoral districts.

Members-at-Large

There are currently five member-at-large positions expiring on June 30, 2015. All current Senators are eligible for re-election. The incumbents are Doreen Docken, Stephanía Fortugno, Deborah Mihalicz, Karen Rooney and Lenore Swystun.

These positions are nominated and elected by all members of Convocation. There are no restrictions as to where these Senators reside.

1. Convocation includes the Chancellor, members of Senate, and all graduates of the University of Saskatchewan.

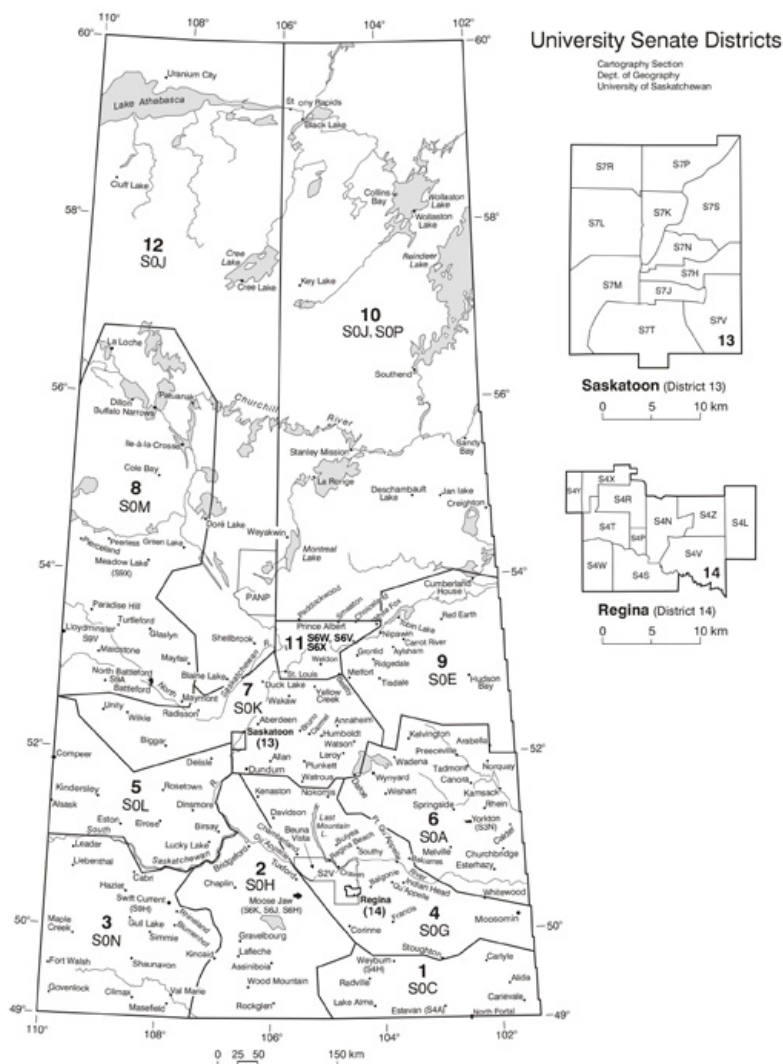
Election Procedures

Nominations for Senators must be signed by at least three (3) qualified voters and endorsed by the nominee. Nominators should clearly indicate their name and address on the nomination form. Each nomination should be accompanied by a biography of the nominee.

Nomination forms are available from the University Secretary's Office website usask.ca/secretariat or call 306-966-4632. You may also draft your own.

Please send your nomination by March 1, 2015 to:

Elizabeth Williamson, University Secretary
University of Saskatchewan
Room 212 Peter MacKinnon Building
107 Administration Place
Saskatoon, SK S7N 5A2
Phone: 306-966-4632 Fax: 306-966-4530





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Your gift to the Annual Campaign for Students 2014-15 gives hard-working students a little more light when they need it most—from tuition assistance for those in need of financial support to scholarships for remarkable academic and artistic achievements.

Make your gift today. You can help give students a brighter future, and that helps make a brighter future for us all.



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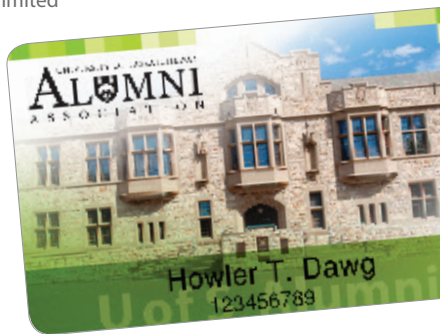
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¹ membership fees apply

² electronic access is limited



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*No purchase is required. There is one (1) prize to be won. The winner may choose between an amount of \$60,000 CAD to build a dream kitchen of his/her choosing or \$60,000 CAD cash. The winner will be responsible for choosing a supplier and for coordinating all of the required work. The contest is organized by Security National Insurance Company and Primm Insurance Company and is open to members, employees and other eligible persons who reside in Canada and belong to an employer, professional or alumni group which has entered into an agreement with the organizers and is entitled to receive group rates from the organizers. The contest ends on October 31, 2014. The draw will be held on November 21, 2014. A skill-testing question is required. Odds of winning depend on the number of eligible entries received. The complete contest rules are available at melochemonnex.com/contest.

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A woman with long blonde hair, wearing a white lab coat, is standing in a greenhouse. She is looking up and reaching out to touch a tall, thin green plant. The greenhouse has large windows and several hanging grow lights. The background is slightly blurred, showing more plants and the structure of the greenhouse.

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“ I developed my passion for agriculture growing up on a small farm near Fairlight, in southeast Saskatchewan. The hard work was challenging at times—but I loved every bit of it.

That passion is what brought me to the University of Saskatchewan to study plant sciences. My research focuses on cleaver weeds in Western Canada. As I learn more about this species my project expands. In fact, it's grown so much that I hope to convert my master's thesis into a PhD soon.

However, I wouldn't have been able to pursue these dreams without the support of scholarships, which have had a profound effect on my life, my studies and my career. There is absolutely no way I would be where I am today without this support.”

– **Andrea De Roo, B.S.A. 2013, M.Sc. Candidate**

Legacy gifts allow students to pursue their passions and fulfill their educational and career aspirations. Andrea De Roo received scholarship support through the Douglas Christie Ferguson Fund, which was established through a generous bequest gift.

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